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An Ontology of Space: Methodological Recursiveness and the Diagram

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An Ontology of Space:

Methodological Recursiveness and the Diagram

by
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A thesis submitted to Plymouth University
in partial fulfillment of the degree of
Doctor of Philosophy

Transtechnology Research
School of Art and Media
Faculty of Arts and Humanities

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transtechnology research

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Author's Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

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Relevant academic seminars and conferences were regularly attended at which work was often presented; external institutions were visited for consultation purposes and several papers prepared for publication.

A selection of full papers presented and published during the course of this research, which underpin much of the current thesis, are documented in the Appendix.

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Abstract

Current debates on space reveal a dichotomy between two apparently conflicting understandings of space: on the one hand, space is understood as a physical, tangible entity that has an impact on how we perceive, feel and emotionally inhabit the world, and on the other hand, space is conceived as an abstract entity, suggesting that space has no active role (a productivity) within everyday life, being solely a conceptual product of intellectual reasoning. As a result, the commonly used word: 'space', will be discussed as an ontologically paradoxical, ambiguous and elusive concept; a concept that cannot be captured within a single definition. This thesis consequently researches the ontology of space by informing a framework that embraces the complexity of space as an ambiguous and unrepresentable entity. It aims to reconcile the multiple understandings of space, liberating it from the binary thinking that opposes the abstract to the physical, disclosing its potential productivity.

This thesis thus proposes a methodology departing from a transdisciplinary approach that addresses the variability, multiplicity, paradoxicality and ambiguity of space through a 'bastard' epistemology that defies binary logic by considering what falls out of order and norm. To research an ontology through a bastard epistemology is to work outside of (but in combination with) the intelligible and sensible realms, through a framework that is non-representational, but instead enactive and performative, driven by experience, affect and aesthetics; thus allowing access to an entity that is both ambiguous and also unrepresentable. In doing so, this thesis argues that space is diversely implicated in the constitution of research methodologies through its interactions with order and structures, as well as agential in the constitution of understandings of human interactions with the world; and therefore, it will be argued, space has methodological purchase. The consequence of this methodological purchase is that space can reveal itself if a research strategy is implemented that works through the multiple dimensions of space. Within this context the diagram will be introduced as a productive path because enables a bastard epistemology to work through the multiplicity of space, since the diagram, is a performed, materialised outcome of multiple experiences of the making of order through the interaction between physical and conceptual dimensions. In synthesis, the diagram is used to recursively research an ontology of space, showing the main contribution of this thesis: of how without negating its complexity and multiplicity, space can be useful, constructive and productive within contemporary contexts of research methodologies.

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Introduction

As a practitioner (a sculptor) working within an artistic framework, my curiosity has been fired by the paradoxical nature of what is called ‘space’, and it has become an increasingly important presence in both my practice and my thinking. Although it was a somewhat concealed presence at first, the concept of space has always, in some sense, underlain my artistic practice, especially in the exploration of site-specific works and their different implications – notions that were broadened through my interest in the idea of landscape and the artistic practices related to it, particularly in the associations with walking and movement. The idea of landscape was further extended to other dimensions such as the city. Because of its specific spatial characteristics, the city became a privileged site (and idea) for my exploration of the interactions between site, place, landscape, dwelling and inhabitation, focusing on the notion of public art. These artistic explorations were also fuelled by a curatorial practice. This thesis therefore concerns the latent imperative behind my artistic practice and its trajectory: the need to understand the reasons behind the ubiquitous presence of this concept (space) has been the spur to my attempt to render it visible.

The question is, why is it that space is not seen as part of the everyday? Anthropologist Tim Ingold (2011) expresses a similar awareness of the absence of space in everyday thought. However, for Ingold, such absence is symptomatic of a negative aspect in the concept of space that results from its connection with abstract thinking and intellectual activity – activities that are detached from the everyday. However, if space is an abstract and intellectual notion, how is the feeling of ‘spaciousness’, described by anthropologist Yi-Fu Tuan ([1977] 2008), to be

explained? This thesis takes as its starting point these two apparently conflicting understandings of space: on the one hand, space as a physical, almost material entity that has an impact on how we perceive, feel and emotionally connect to sites and places, and on the other, space as an abstract entity, purely the outcome of the human intellect. How can two such disparate, possibly conflicting, understandings of space (the material and the abstract) co-exist? Are both understandings referring to the same thing or are they two entirely different things that are, or have been, related in some way? This problematic provides the point of departure for this thesis, and in response to my artistic background, it has become the central question, the placeholder, guiding the research. In relation to the challenge of the ambiguous and paradoxical nature of space, the first question this thesis asks is: can space be used as if it were a material, and if so, how? Or, to pose the question in a less challenging way, how can space be used as a device, how can it be employed productively?

Not only does space have different, distinct and opposing understandings in its mundane, everyday existence, a disciplinary enquiry shows that multiple understandings and approaches to space also permeate the disciplines across the sciences, humanities and arts, revealing differences both between disciplines and within them. Despite the fact that it is considered a fundamental concept, space is not fully understood or controlled by any one of the disciplines. However, two distinct positions towards space are visible. On the one hand, many disciplines ignore the gap that exists between the many ways of knowing space and take their own definition and understanding of the concept of space for granted. They generally proceed without either questioning what space is or its implications for their own epistemological and methodological frameworks. Space is taken as a given. On the other hand, space is directly recognised as complex and difficult to understand,

express or know. Consequently, just as it is in the context of mundane, everyday life, space although seemingly knowable is only partially realised in the disciplinary context.

The many different cognate terms that refer to some dimension of space (such as those the author's artistic practice has revealed – site, place, location, landscape, territory – and others such as outer space and the cosmos) and the multiple understandings of space itself are symptomatic of the fact that space is not fully realised. This becomes apparent if we observe the way the different conceptualisations, meanings, interpretations and uses of the word 'space' have been researched over time, both in disciplinary discourses and in common parlance. There is no agreed definition for what seems to be an ubiquitous term which, on the face of it, appears to have universal significance.

Given the wide range of understandings and degrees of existence attributed to space – varying from a physical, almost material, primordial entity, which influences how human beings perceive, feel and emotionally connect with the world, to an overtly abstract construction with no connection to everyday life, a concept that is purely the outcome of the intellectual mind – the commonly used word, 'space', seems to stand for a puzzling, ambiguous, elusive concept. This is the paradox from which the first proposition of this thesis emerges: these opposing understandings of space allude to the idea that although space plays a major role in our understanding of and consequent interactions with the world – as a primordial entity that we both confront and are confronted with when constructing our perceptions and cognition of the environment in which we live, a necessary constant in our interaction with the world and our understanding of this interaction, an entity with affect – it is not possible to pin-down what it is. As a result, space emerges as ontologically

paradoxical and ambiguous, a concept that cannot be captured within a single definition. But if this is so, how can space be used or spoken about? What then is it?

Instead of regarding this as problematic for the research, the result of a failure in the way the concept has been articulated, this thesis begins by turning the problem around so it can be opened up to an understanding of and enquiry into space. Despite trying to grasp the nature of space, such an enquiry cannot be embarked on with the aim of reaching a single, predetermined, unchanging and straightforward definition, as this would constrict the subject of the research itself. Rather than simplifying the problem (in the usual reductive, analytical way), the research can only gain a purchase if the subject is allowed to remain at a certain level of complexity. This implies embracing its complexity, conducting the enquiry in a way that ensures that space is not deprived of its variability, multiplicity, paradoxicality and ambiguity.

While maintaining the complexity inherent to space, this thesis takes as its foundational impetus the ontological question: what is space? However, as ontology is part of the subject matter of metaphysics,¹ which deals with what exists and how it exists, this thesis falls within the remit and agenda of the metaphysical realm; that is, in the realm of questions without a single, definitive and reproducible answer as it is to some degree unanswerable. This raises the query of how a metaphysical question can be answered in the context of a thesis: how can an unsolvable matter be approached through research? The awareness that in order to move towards other, more pragmatic questions the research needs to revisit and investigate the

¹ By metaphysics within this context is understood a philosophical area of enquiry that studies reality and existence from a meta and abstract level, asking questions as: what does it mean to exist, or to be real? However, behind a metaphysical enquiry exists a meta-metaphysical one that questions the plausibility of answering a metaphysical question, thus establishing a problem for this thesis. In addition to this use of the word metaphysics, after the introduction of this thesis the word is used with a different connotation; it is used to express what lies beyond the physical.

metaphysical dimension has led to the realisation that, although it concerns a specific subject (space), this project is also about the methods and methodologies required to approach space as a metaphysical question. This means discovering how space can constitute an object of research. As such, this thesis is driven by the need for a fuller methodological reflection and critique. The reasoning behind such a decision lies in two major realisations:

1. The concept of space is inconsistent with a single definition, and this demands that the enquiry maintains a level of complexity in order to avoid depriving space of its variability, multiplicity, paradoxicality and ambiguity.
2. The methodology used to reflect on and research this complexity, given the fact that there is a methodological question (how can space be researched?) underlying the ontological one, needs to mirror and incorporate this variability, multiplicity, paradoxicality and ambiguity.

Consequently, this thesis starts from the point of view that metaphysical questions can be (or arguably should be) discussed from positions other than that of the discipline of philosophy, and that other strategies and approaches can be used to hold a metaphysical discussion. Indeed, this is not a thesis on philosophy: it does not follow the processes and methods of the discipline of philosophy, although philosophy is helpful in understanding the problem and the type of question to be asked. In contrast to philosophy, this thesis draws from the author's artistic background to shape its methods, using notions such as diagramming and drawing, affect, (bodily) experience, performance and enaction to inform the research process. This is supported by a methodology that allows the adaptation of disciplinary methods

and the exploration of knowledge across disciplinary boundaries; that is, a transdisciplinary methodology.

Changing the framework in which the question of how to research space is placed allows this thesis to make a detour away from the traditional routes used to approach the ontology of space and enables it to bring its two initial questions together. These are: 1) can space be thought of as productive and 2) what is space ontologically, given its apparently paradoxical and ambiguous nature? As such, this thesis approaches the research into the ontology of space – with the aim of disclosing its potential productivity – through an artistically based approach that liberates it from the binary thinking that opposes the abstract to the physical, and instead embraces the complexity of space as an ambiguous, indeterminate, unrepresentable and unknowable entity. It asks the question: *how can space be understood ontologically, without losing its complexity, paradoxicality and ambiguity, so that it retrieves its productivity?* However, although it concerns an enquiry into the ontology of space, this thesis is also about discovering a possible process, a methodology, through which to research the topic. That is, it also asks the question: *how can a paradoxical and ambiguous entity such as space be researched?* In synthesis this thesis asks: *How can space be understood ontologically so that it retrieves a productivity?*

Interactions Between the Problematic of the Ontology of Space and the Methodology

Methodologically, this thesis uses an artistically based approach to discuss a metaphysical question (as mentioned above). However, the author's background and

the artistic foundations from which the enquiry arose, as well as the need to use artistic processes to develop the research, did not determine the nature of the research. It did not entail that this thesis be researched and developed in the artistic domain as either a practice PhD or as theoretically driven by artistic disciplines or disciplines associated with the arts; instead, this thesis uses a methodology that is consonant with and receptive towards an artistic practice and thinking, and through the exploration of this methodology, the artistic background emerged as a privileged and necessary position from which to develop its main concerns, exploring the specificity of the enquiry, through transdisciplinarity. As such, the arts are present in this thesis through the position and perspective that the author brings to it in order to explore these concerns – they act as an epistemological determinant, bringing to the fore the aesthetic, affective and experiential dimensions of the investigation. Due to this epistemological framework, the arts are also present in the approaches and methods chosen to develop the research. As a consequence, the visual (and written) elements presented in this thesis should not be seen as an intended artistic outcome, as works of art, but as part of a research methodology which is inclusive of artistic methods.

There is a strand of transdisciplinarity which focuses on strategies that enable academic environments to engage with each other in an integrated way and on the exchange of research processes and knowledge between stakeholders (academic and/or non-academic institutions, and more generally, society), exploring the dimensions and types of collaboration and the importance of their contribution (Nowotny, Gibbons, among others). However, this is not the approach this thesis adopts for its methodology; it does not develop through the establishment of a collaborative framework in which to research its concerns – a strand of research that Nicolesco (2008, p. 12) calls ‘phenomenological transdisciplinarity’. In contrast, this

thesis follows a theoretical transdisciplinarity, which Nicolescu (2008, p. 12) says implies both a “general definition of transdisciplinarity and a well-defined methodology (which has to be distinguished from ‘methods’; a single methodology corresponds to a great number of different methods)”.

Empirical transdisciplinarity creates the impression that transdisciplinary research requires a collaborative project, involving multiple institutions, even when it involves research with special particularities. Theoretical transdisciplinarity, however, dismantles this notion. Hence, in this thesis, transdisciplinarity stands for both a methodology with implications for the kind of knowledge produced and a process that reflects upon that production. In contrast to Nicolescu’s approach, because it sees methodology as a framework informed by a given epistemological and ontological system, which is expressed in the research through the choice of methods and strategies, transdisciplinarity in this sense stands for a methodology and not a theory. This does not mean there is no collaboration; rather, it involves a collaboration that does not imply the need for multiple institutions to physically participate in the construction of a project. It is a silent collaboration – it takes place through the silent exchange of knowledge between disciplines, or more generally, the exchange of contexts of knowledge production. As such, this thesis involves a collaborative process in that it integrates the knowledge produced by multiple disciplines.

But what is it that distinguishes transdisciplinarity from multi-, inter- or cross-disciplinarity when all these approaches seem to derive from the connections and interactions between disciplines? In contrast to multidisciplinary, transdisciplinarity does not only concern the establishment of collaborations between disciplines. It is not about approaching a problem or topic developed within a particular discipline by using several disciplines at the same time (Montuori, 2008, p. ix; Nicolescu, 2008, p.

2). In multidisciplinary, the topic is still located in the main discipline (and only this discipline) but is enriched by the insights of other disciplines; despite the extension of the enquiry into multiple disciplines, its goals still remain fixed in the discipline leading the enquiry (Nicolescu, 2008, p. 2). It is also different from interdisciplinarity, a topic-led approach that works through the transference of methods and concepts from one discipline to another, but which is still centred on and led by the main discipline (*ibid.*). Instead, transdisciplinarity

... leads to the transformation of the very identity of disciplines by identifying new topics and concerns. Transdisciplinarity extends the scope, methods and perspectives of existing disciplines whilst at the same time respecting and using the existing disciplinary frameworks. (Blassnigg and Punt, 2013, p. 2)

Transdisciplinarity is a practice that is complementary to disciplinary and other approaches, such as those using multi-, inter- and cross-disciplinary frameworks (*ibid.*). As such, it does not reject a disciplinary approach, but dismisses a reductive understanding that relates to disciplines as if they had always existed the way they do today, as if they did not have a history and have not been subject to the transformations associated with the fact that they exist in a changing world.

Transdisciplinarity also opposes the epistemological separation of disciplines because, as Blassnigg and Punt (2013, p. 1) state, “no discipline is ever completely isolated and has to be understood always in relation to other knowledge practices”. For Nowotny (2006), knowledge itself is transgressive as it cannot be contained by any one discipline but can emerge from anywhere; there are no specific areas that determine what knowledge is. Transdisciplinarity implies, therefore, that no strand of knowledge is the domain of a specific discipline, even if that discipline has been the only or main area researching a specific topic. However, while questioning the static boundaries

and limits of disciplinary frameworks, transdisciplinarity also relies heavily on the knowledge produced by the different disciplines. What is under question is not the knowledge itself; the aim is to use this knowledge to open up further avenues. In this context, transdisciplinarity aims to find to the ‘blind spots’ that disciplines, given their paradigms, methodologies and boundaries, cannot see (Montuori, 2008, p. xv).

Thus, transdisciplinarity is a methodology that

...forge[s] innovative approaches to research collaboration that is enquiry-driven and seek[s] to identify new topics and concerns. In this way transdisciplinarity is sought to bridge disparate areas of discourse and research topics not merely by transcending or transgressing disciplinary boundaries around problem-driven inquiries, but by letting the inquiry in itself drive the methods, tools and theoretical formation”.
(Blassnigg and Punt, 2013, p. 3)

For Montuori (2008, p. xi), the fact that transdisciplinarity is enquiry-driven and not discipline-driven implies that knowledge is produced for the purpose of acting in the world and this requires that the paradigms guiding the research are interrogated and questioned from a meta-dimension. Therefore attention must also be paid to the context and connections of knowledge. As Piaget (cited in Nicolescu, 2008, p. 11) states, transdisciplinarity is a “total system without stable boundaries between the disciplines”. This does not imply the creation of a super-discipline: transdisciplinarity does not represent the practice of laying one discipline beside another, but neither does it create a meta-discipline that surveys all the others (Nowotny, 2006, p. 1), despite the fact that transdisciplinarity interrogates its topics from a meta-dimension. The fact that transdisciplinarity is enquiry-driven and integrates a meta-dimension into its processes – that is, it is a total system – does not mean that the intention is to develop a meta-knowledge base (Montuori, 2008, p. xv). In drawing from other

disciplines, the aim is not to produce a globalising description or map of all the knowledge produced by the disciplines the enquiry looks at; rather, the intention (as stated above) is to identify new topics and concerns by finding the ‘blind spots’ that disciplines cannot see, given their specific paradigms, methodologies and boundaries. This is achieved through discovering what other directions can be discovered in the intersections, gaps, overlaps and erasures of existing knowledge – in sum, by observing what is on the other side (‘trans-’) of past and present knowledge.

Consequently, in researching the ontology of space and its productivity, this thesis does not proceed by constructing an extensive list of different definitions and understandings from all past and current disciplines or of what has been written on space and by whom, even if such a task were possible (as it cannot be, given the immensurability of the framework of the research). Thus this thesis does not intend to map all, or even the most important, understandings of space, but instead to investigate the ontology of space by using the literature and knowledge produced in multiple disciplines. It does this by identifying the key operators and reducing the literature to what is sufficient to highlight the problematic. This could be described as a ‘sketching’ procedure, preliminary to exploring the problematic through means that fall outside the literature and disciplines used (despite their intimate relationship with it).

The aforementioned intentions of transdisciplinarity are extremely important to bear in mind in order to avoid the accusations of superficiality that are still levelled by those sceptical of the use of such a methodology. Despite the processes used to sketch the problematic, transdisciplinarity is a way of approaching a problem without reducing its complexity; on the contrary, it encompasses this very complexity – the uncertainty of the world and its plurality – while also recognising the presence and

agency of the enquirer (Montuori, 2008, p. ix). Sketching a problematic through a survey of the different disciplines is not a simplified or superficial way of exploring a subject, but a way of revealing a problematic that is not situated in any single discipline – or even in the sum of all these disciplines. As such, in order to find the problematic it is fundamental, as Montuori (2008) says, to recognise the presence and agency but also to accept the limitations/constraints of the enquirer. No one researcher can be expected to know and have full dominion over all the disciplines they use or their knowledge – as is the case for the author of this thesis. To recognise the presence, agency and limitations/constraints of the enquirer is to know where the strengths of the enquiry lie, as well as its anchors. This will overcome any accusations of superficiality, because the investigation is driven by the expertise of the enquirer, not their particular discipline or the disciplines used in the research. In the case of this thesis, as mentioned above, the expertise of its author lies in the field of the arts and its related practices, not in all the other disciplines it uses, and this is why in this thesis transdisciplinarity is particularly driven by artistic methods and concerns.

Accepting the agency and constraints of the enquirer is not merely a question of recognising and establishing the limits and grounds of the research, but it is also part of the transdisciplinary epistemology and ontology:

With the integration of the cognitive, affective, and physical dimensions, and of the subjective/objective, inquiry moves into a new realm. Inquiry is now not just directed ‘outwards’ towards the external world, but it is rather seen as an ongoing process, a dialogue that engages knower and known, inquirer and inquiry. (Montuori, 2008, p. xvi)

It is through this dialogue that transdisciplinarity becomes enquiry-driven, as it lets the interaction between researcher and enquiry build the path for the researcher to

follow in a self-reflective and recursive way. Recursiveness is

... a general principle of transdisciplinarity research... It points to the iterative procedures that characterises both the entire research process ... and its individual phases. This implies that the research process has to be shaped in such a way that concepts and methods can be repeatedly tested. (Pohl, Hirsch Haddorn *et al*, 2008, p. 430)

As such, questions that emerge from the research are not seen as problems to be resolved and swept away or transferred to another research framework; they become incorporated into the research itself (Blassnigg and Punt, 2013, p. 3), following a process of ‘bootstrapping’.

The notion of recursiveness is crucial to this thesis: it entails stepping outside the notion of a meta-enquiry that is driven by the conception of an exhaustive knowledge base, informed by the multiple understandings of space or a taxonomy of cognate concepts. This thesis, rather, undertakes a process of continued exploration and self-reflection, revisiting the underlying principles and assumptions regarding the notion of space throughout the enquiry. There is never a fixed, stable position that cannot be changed because the enquiry constantly returns to what may be classed as the ‘beginning’, albeit a beginning without origins (an idea that is explored in the second chapter). Following a transdisciplinary methodology means that it is only through such a process that the limits of both the research process and the comprehension of the concept of space can be revealed, and a wider understanding of the problematic achieved.

It is also important to state again that it is intended that the methodology should mirror and reflect the topic of research. It is not merely a case of using a

methodology that enables the researcher to conduct a complex and dynamic enquiry, but such an enquiry requires a methodology that reflects the variable essence of the concept of 'space' across its many different disciplinary understandings, becoming coincident with and a replica of the concept itself. Consequently, the necessity of using a recursive methodology in this project is embedded in the paradoxical understanding of space and arises from its paradoxical nature.

Given the two hypotheses presented earlier – that the concept of space is inconsistent with a single definition and demands an enquiry that maintains a level of complexity so that space is not deprived of its variable, multiple, paradoxical and ambiguous nature, and that the methodology chosen to pursue the enquiry is one that embraces and mirrors this nature – the purpose of this thesis is not to solve the problem of the ontology of space, providing a solution to the question of what space is. This position is in tune with the second article of the fundamental principles of transdisciplinarity, developed by the First World Congress of Transdisciplinarity held in Portugal in 1994. The article states:

[T]he recognition of the existence of different levels of reality governed by different types of logic is inherent in the transdisciplinary attitude. Any attempt to reduce reality to a single level governed by a single form of logic does not lie within the scope of transdisciplinarity. (Freitas, Morin and Nicolescu, [1994] 2008, p. 262)

This thesis does not intend to map the concept of space (as discussed earlier) or to deepen any one aspect of the existing definitions of space; instead, it chooses to approach the problematic transversally by creating a 'corral'. A corral is built to pen an animal – not to prevent it moving but simply to delimit the territory in which it can move. In addition, because it is a delimitation of territory and not of the animal itself,

the attention placed on the activity of creating the corral is displaced from the animal to the territory. As such, by creating a corral around the problematic, the aim of this thesis is not to constrain the variable nature of the concept of space in a single definition; rather, this method is a strategic move to allow research into the variable nature of the concept – that is, in order to show the dynamic and variable nature of space (as with the movement of the animal), it is better to displace attention away from the concept of space itself to the other elements that comprise the corral. An analogy that helps explain this strategy can be found in the activity of drawing (discussed further below).

In this regard, the work of Michel Serres (1982) is central to the approach of this thesis, particularly his theories on the porous nature of knowledge and the notion that it is not static or constrained by boundaries, and therefore the researcher can displace, twist and be creative not only with the production of knowledge but with the use of that knowledge which has already been produced. A methodology can thus be something perverse, out of order, a ‘bastard’ (see Chapter Two for an explanation of this term) methodology that does not respect established norms; a methodology through which frameworks for action (for the use of knowledge and production of new knowledge) can be applied. The mixing of systems, however, requires consistency, which Serres (1982) found by using mathematics as a structure in which different theories and principles could be used to test and reflect upon a current reality/topic. As stated earlier, this author’s expertise lies in artistic practice. Consequently, and also crucially, this thesis adds artistic and creative discourses and practices to the process of the research and its discussion and understanding of space.

The artistic methods used in this thesis developed out of the interactions between the author’s artistic background and the perceived problematic in a process

of continual evaluation and self-reflection. Using artistic methods means that 1) the aesthetic dimension of all material sources – not only those falling within an artistic framework, such as paintings, sculptures, architecture, film, design, and so on – can be used creatively in the enquiry and in the construction of the argument. Thus, sources are not read and interpreted, but all their dimensions are explored, including their affective, experiential, sensuous and aesthetic dimensions. In addition, sources are also made to work by accepting and recognising their agency. This implies 2) using imaginative processes that extend beyond logical and analytical systems to include the paradoxical and mythological or a ‘bastard’ epistemology (a notion developed in the second chapter of this thesis).

Furthermore, the use of artistic methods recognises that the expertise of the artist lies in a practice, a tacit knowledge, and as such, artistic methods 3) rely on the development of a critical mass through an artistic practice. Consequently, the practice of producing any kind of artistic outcome can be used as a means by which to understand, explore and employ the materials, ideas and contexts presented in the enquiry. Artistic methods are used as a means of experimentation, of research, and not just as a means to produce a work of art. This implies a non-separation between practice and conceptualisation, and the acceptance of an enacted world composed of multiplicity and multidimensionality, and therefore the dissolution of the notion of representation. Such is the case with this thesis, as theory and practice work together: the practice is not an outcome of a theoretical exploration, an example of the theory; neither is the theory a post-hoc rationalisation and explanation of the practice.

Exemplary of this interaction is the use of drawing within this thesis. Throughout the enquiry into the ontology of space the practice of drawing was used in multiple ways. On one hand, by reflecting and observing drawings, primarily

scientific ones, informed by the practice experience of the author of this thesis with drawing within a artistic, but also scientific, context. This form of analysis and reflection guided and stood at the basis of discussions about the necessity of a non-representational epistemology, one that is driven by performance and enaction. These discussions are more visibly present within the two papers in the appendix, but their implications within this thesis are revealed on Chapter One and ultimately lead to the emergence of the notion of the diagram. A notion that reveals itself crucial to the development of the argument and enquiry on the ontology of space but also to the implementations and exploration of the methodological implications of space as having a productive potential.

The practice of drawing, particularly in its interactions with the diagram, was situated throughout the enquiry to deepen and reflect upon the insights of the enquiry. This practice was specifically explored to think upon the interaction of all the elements, notions, ideas, areas of knowledge, paths explored and produced insights in order to create a coherent and consistent whole, asking questions as: what is the core of an argument and where can this core be placed? Which interactions can be created between the core (centre) and what produces the core (the areas that lie next to the centre but also at the periphery and margins)? How do the multiple parts of an entity differently inform a whole and how can this be structured and revealed? These diagrammatic drawings are appended to this thesis, providing a visual reference to the importance and role of drawing and diagramming within this thesis. Through them it is possible to observe not only the explorations of formal solutions that express, reveal and perform an idea, but also a genealogy of some of the concerns and insights fundamental to the creation of the work *The Mouth of the Monster and the Hollow Body*.

The strategies described above, which are used to ‘perform’ the transdisciplinary methodology – the idea of building a corral and using artistic methods alongside more traditional ones such as a literature review that transverses several disciplines – seems to follow the overall epistemology of transdisciplinarity, particularly in so far as article 4 of the First World Congress of Transdisciplinarity is concerned. This article states:

The keystone of transdisciplinarity is the semantic and practical unification of the meanings that *traverse* and *lay beyond* different disciplines. It presupposes an open-minded rationality by re-examining the concepts of ‘definition’ and ‘objectivity’. An excess of formalism, rigidity of definitions and a claim to total objectivity, entailing the exclusion of the subject, can only have a life-negating effect. (Freitas, Morin and Nicolescu, [1994] 2008, p. 263)

It is also crucial that transdisciplinarity looks to overcome dualistic and dichotomous thinking and instead aims at thinking by means of interactions (Montuori, 2008, p. xii), using dialogic processes to develop the enquiry. Morin describes the term ‘dialogue’ as

... [the] equivalent or the heir of dialectic. I intend ‘dialectic’ not in the reductionist fashion in which we currently understand the Hegelian dialectic – namely, as simply moving beyond contradictions through synthesis – but as the necessary and complementary presence of antagonistic process or instances ... thus here too we have the possibility of reconnecting ideas without denying their opposition. (Morin, 2008, p. 26)

As such, transdisciplinarity is a methodology that

...departs from an integrative model of engagement that accommodates difference, paradox and speculative research. Proceeding from this we take the view that a key aim of transdisciplinarity is to facilitate emergent insight, knowledge and interaction

that could not have been foreseen or designed in anticipation of a specific outcome or solution to a problem. (Blassnigg and Punt, 2013, p. 3)

Several methods are used throughout the chapters of this thesis to drive the central argument as part of this transdisciplinary process. Sometimes a general overview is given through a transversal literature review; at other times it falls into almost intimate conversations with other scholars. Sometimes speculations and thought experiments are used; at other times the discussion is led by the arguments, concepts or ideas established in different disciplines. Sometimes visual materials are used to explore ideas; at other times they used to inform the framework of the research, supplying the enquiry with questions. This panoply of methods is used to support a methodology that aims at an engagement with ideas that transverse many disciplines – turning on their persistence and consistency or their tensions and discrepancies – instead of being situated within a single disciplinary discourse.

The intention therefore is to build a coherent and consistent whole, a ‘cosmology’, in which space can be discussed on multiple levels – retaining its paradoxical, ambiguous and variable nature – through a methodology that mirrors and reflects this very nature without limiting or constraining the topic of enquiry. The necessity for coherence and consistency is first addressed in this thesis when discussing the *Timaeus* in the second chapter. The *Timaeus* is shown to be a work in which the argument is repeated and re-presented through all the various elements that constitute the piece of writing: it was not sufficient to speak of the argument but it also had to be shown and put into practice.

The creation of an integrated and consistent whole is also the aim of this thesis. It seeks to construct an ontology of space, attempting to avoid limiting and

defining this ontology at the same time as giving it a unity. The idea is that the ontology of space can be researched through several elements, dimensions and levels of existence, as alluded to in the notion of the corral. However, each of these elements not only provides access to the ontology of space, to the whole (despite displaying different facets of it), but they also comprise space: the corral is the animal and the animal is space, despite the fact that neither one of them equals the other. As will be reiterated throughout this thesis, an understanding of the ontology of space cannot be driven by continuing to enforce the split between the physical and the conceptual, because they co-constitute and co-construct each other. Thus, the interplay between the construction of a thesis and that of a discussion on the ontology of space cannot be seen as simply an analogy, because this thesis and the discussion it contains are co-constituted and co-constructed.

The Interactions Between this Thesis Outline and the Methodology

Chapter One introduces the central problematic of this thesis: the impossibility of defining space and, given its paradoxicality, ambiguity, variability and unrepresentability, of fully knowing what it is. In accordance with the previous discussion, instead of presenting it by mapping all or even some of the most important understandings of space, the chapter reveals indications of the problematic through an exploration of the impact of the ontology of space – how this notion is used – in the humanities, focusing on how the disciplines of geography, anthropology and

sociology approach the concept. However, because the aim of the chapter is to illustrate the nature of the problematic rather than provide an extensive knowledge base – following the transdisciplinary methodology as discussed in the methodology section of this thesis – the names of many scholars who have conducted other discussions on the topic are not included as the main intension is to reveal the identified problematic and not to be expositive of multiple understandings and appropriations by disciplines and scholars², deepening disciplinary understandings of the space.

Consequently, this chapter begins to approach the impossibility of reaching a full understanding of space by revealing how this problematic is reflected in and has impacted on how scholars from the twentieth century onwards have thought of and used space. It reveals the existence of a crucial tension among contemporary scholars: a split regarding the significance of the concept, epitomised by the respective work of Doreen Massey and Tim Ingold, the former recovering the concept of space and the latter dismissing it. Nevertheless, when this separation is put to the test by enquiring into the physical constitution of space, it emerges that there is no clear, consensual understanding of what physical space is and why it is seen as distinct from conceptual, metaphysical space. As such, this thesis understands as being

² Within this framework the work of anthropologists as Edward Twitchell Hall ([1966] 1988) (who developed the concept of proxemics –the different and multiple uses of space by an individual and those by the individual within his cultural framework) is not discussed, as it does not provide a discussion of what — ontologically — may constitutes space but instead a discussion of space through its categorization within a cultural and sociological framework, which is not the framework of this thesis. Because a discussion of space through a cultural and social framework is not the intention of this thesis, and given the political dimension of much of the work produced within this environment, also scholars as Michel de Certeau ([1984]1988) (social scientist) or Nigel Thrift (2007) (geographer) have been left out of this enquiry. In addition, and because this thesis specifically aims to discuss the singularly the notion of space and not the interactions of space with either of its family cognates or associated concepts, also scholars who do not present a direct discussion of what space is understood to be, by addressing other concepts as landscape, place, geographies, territory and maps have been addressed, or just briefly as guiding anchors through the argument.

fundamental, within the context of enquiring the ontology of space, to re-think the interaction between space as a physical, 'real', thing and space as an abstract, conceptual, thing. This is approached within this thesis from the perspective that in order to research and re-think ambiguous entitys as space, is required an enquiry on engagement, materiality and existence, driven by a non-representational epistemology and an enacted ontology that is based on the emergence of multiple realities from interactions amongst their constituents.

This realisation enables the chapter to focus on the notion of structure, exploring it from the perspective of a non-representational epistemology and an enacted ontology. The notion of structure is revealed to be present and relevant, in discussions of the ontology of space, particularly within structuralist and post-structuralist contexts. However, if structures brought into the discussion of space the idea of a system of relations their dependence on closed systems, a-temporality and synchronicity need to be questioned. Structures are then discussed from a framework built over the notions of lines, maps and drawings from which emerges the idea of the diagram as a possible way of overcoming the separation between the physical, 'real', and abstract, conceptual. The diagram is thus understood as an enacted, non-representational, material outcome of the process of experiencing and perceiving order through interaction between the two realms of the physical, 'real', and the abstract, conceptual. More simply put, a diagram combines the practice of drawing with structures from the point of view that the two realms are co-constitutive and part of a same whole process.

In the second part of the chapter, the work of Annemarie Mol and John Law, in particular, provides the opportunity to think anew about the relationship between space and structures by addressing in a positive way the possible interactions between

physical, 'real' space and abstract, conceptual space when constructing topologies. Their notion of 'fluid space' is of particular importance as it integrates continuous and discontinuous processes, creating a framework in which dichotomies are seen as non-conflictual. As a result of their work it is possible to conceptualise space outside of its representational limitations, as an active entity with epistemological purchase. This segues into one of the main questions of this thesis: how can we consider space as productive?

This first chapter therefore provides the grounds for a notion to emerge which, it argues, is a critical determinant in thinking about the ontology of space: representation. A second notion emerges more clearly in the second chapter: language. Both these ideas will be discussed in different instances throughout this thesis due to their importance to the ways in which space has been understood and can be understood today and in the future. Both ideas traverse this thesis as an inescapable or inexorable presence in the discourses it surveys, not only in isolation but also, and most relevantly for this thesis, in combination. Representation is seen as a guiding principle underpinning contemporary understandings of space, in particular those that derive from a modernist epistemology. Within this representational epistemology things need to be represented as there is a separation between Man and world, subject and object, conceptual and physical; for something to be represented (presented again) it is necessary that the thing, subject of representation, exists as part of a detached and static realm, the 'real', that is conceptually accessed by a knowing Man who is able to re-produce the thing either directly or indirectly (as for instance through language). As such it is required to freeze meaning and consequently notions and understanding of the thing also becomes static and unchanging. However, sustaining the separation between physical and abstract – that this thesis argues against – deprives space of its

multiplicity; by observing space as something static that can be represented, it denies variability (contingency) and provisionality to space and while separating humans from the world it also dismisses the notion of a co-construction between them, negating agency to space within this co-construction. As such, representation, acting as an epistemological and ontological filter, has prevented the full emergence of other (non-representational) epistemologies. Further, the importance to observe these two concepts extends beyond this, because in order to understand space, it is necessary to understand the limitations of language and linguistic models, when addressing the issue of inaccessible and unrepresentable entities as space is shown to be in Chapter Two. In order to step outside a representational epistemology mediated by linguistic models it is necessary a non-representational epistemology in which new understanding of what is materiality³ are integrated – as Karen Barad (2007) discusses in its interactions with language and Tim Ingold (200, 2007, 2011) in its implications within anthropology.

Chapter Two reveals that space is an ambiguous and unknowable concept; one, however, that plays a productive role in the constitution of epistemological and methodological frameworks. The chapter approaches the literature review on the ontology of space by focusing on the Platonic concept of *khora* (one of the ancient Greek words for space), which is imbued with a set of characteristics that make *khora* emerge as something other, as a third thing, between the realm of the sensible and that of the intelligible, connecting, while at the same time keeping its distance, but potentiator of transformation – a ‘bastard’ kind of reasoning, as Plato presented.

³ As Diana Coole and Samantha Frost (2010) highlight, a new thinking strand is emerging: new materialism, that is rethinking matter, materiality and materialization; putting forward an ontological and epistemological framework that from a post-humanist perspective observes matter as something alive and with agency within everyday life.

Khora therefore exists outside a binary epistemological system. This otherness of *khora* has however given place to a difficulty in approaching and understanding the concept, becoming thus the concept the subject of debates and appropriations that are revealing for an enquiry on the ontology of space.

The difficulties in conceptualising *khora* are revealed in Plato but also throughout time, as revealed within scholars interpretations, which struggle with the spatial connotation of the term, thus revealing a set of preconceptions in relation to what space is, and is not, about. This struggle, and supporting the findings of Chapter One, is based on a persistence in the separation between realms that supposedly are conflicting and thus cannot come together within a single concept as that of the physical and the metaphysical, the material and the immaterial, the intelligible and the sensible. In addition, the debates reveal a multiplicity of understandings and conceptualisations that also support the findings of the first chapter in relation to the ambiguity, unattainability and indeterminacy that sustain the difficulty in pinning down the ontology of space. Importantly then to overcome this perspectives on *khora* (and space), is the work of contemporary scholars as Jacques Derrida ([1993]1995), for whom *khora* becomes a placeholder to designate the unutterable, highlighting the limitations of language in expressing that that is unreachable, unknowable, evasive and thus unrepresentable.

In the second part of the chapter, the work of Peter Eisenman and Jacques Derrida (1993) for the Park de la Villette shows how a representational and linguistically based approach towards the concept of *khora* hinders the recognition of what it means to build space (architecturally). This question of what space means, and the implications of materialising it, reflect the intention of this thesis to explore a conception of the ontology of space as productive. As such, Eisenman's and Derrida's

project raises the question of the nature of a practice that would research space by embracing and reflecting its ontological conundrum (in contrast to the aborted Park de la Villette garden), approaching it not as a representational concept but as a performative and productive entity.

Nonetheless, interventions about the practical potential of *khora* in questioning knowledge and setting frameworks of research, point towards the idea that *khora* - space- cannot be approached directly, only laterally, building a corral around it. However, through the analysis of *khora*, and supporting the findings of the first chapter, becomes possible to assert the possibility of a framework to explore space as a productive methodological device that brings together the constitution of order within a context that defies binary logics, linearity and the existence of an origin – thus a ‘bastard’ self-reflexive and enacted order. If space through its interaction with structures and diagrams can then be thought as something with methodological purchase is a matter of discussion throughout Chapter Three and further explored in the second part of this thesis.

Chapter Three begins the work of constructing such a corral by displacing the discussion of space into the context of an historiographical discussion on the nature of history. The chapter starts by verifying the spatial productivity described in the first two chapters by placing it in those epistemological frameworks that deal with ambiguous or unattainable concepts. This is done by drawing an analogy between the ambiguous nature of space and the ambiguity of the past, using the insights of historiography, a field that specifically addresses the implications of building a discipline (history) out of such ambiguity. It is crucial to understand, however, that this analogy is not intended as a way of researching historical understandings of space; rather, it is used to observe the problematic of space in a new light by

displacing it into the realm of an historiographical debate about the ontology of the past. The importance of such displacement, apart from aiding in the construction of a corral in which to research space, lies in the fact that historiography discusses the ontology of the past in relation to its own research. By approaching the discipline of history, this thesis uses the transdisciplinary methodology to facilitate the emergence of insights that cannot be found within the disciplines that take space as their primary concern.

Thinking in terms of a methodology to research space leads the chapter to discourses that discuss the implications of methodologies in historiography, from those of Michel Foucault to Hayden White, and more recently Frank Ankersmit and Alun Munslow. These discussions have prompted methodological shifts not only in the practice of history, but also in the approaches of other disciplines towards history and historical objects. Thus, using this discussion, the chapter enquires how an ambiguous entity can be methodologically researched. The historiographical context prompted the question of the possibility of researching space outside a linguistically and representationally driven framework: what are the limitations of these methodologies in relation to space and how can a model of research be based on an emergent process instead of a representational one?

Displacing the discussion from space to the past liberated a set of concerns and insights that ultimately led to a major realisation: that the productivity of space could be found in a methodological context. The provisional hypothesis, which is researched in the following chapters, is that space is an entity that is ambiguous, evasive, un-representable and unknowable, and yet has a methodological purchase, as it reflects the frictions and tensions between the multiple and multidimensional realms that inform everyday life. In the previous chapters, space emerges as a concept that is

related to order, classification and structuring activities. This sets the stage for a conception of space as a concept that plays a role within disciplinary epistemologies and thus has a productive methodological purchase. As such, this thesis not only concerns an enquiry into the ontology of space, but also asks what the methodological framework would be if the ontology of space were to be reframed – if space were seen to have a methodological purchase. As a consequence, the transdisciplinary methodology becomes fully performed, as the methodology of this thesis embodies its problematic, creating a recursive, self-reflective process, a *mise-en-abyme* in which space researches itself, placing the main intervention of this thesis within a methodological context.

This ontological and methodological insight is further encouraged by another methodological turn: in order to explore the possibility that space has a methodological purchase it is necessary to perform this productivity. In the context of this thesis, this entails approaching such an exploration through merging the practices of drawing and structuring in a diagram. Inspiring this methodological turn is the specific methodology that art historian Aby Warburg used to create his Mnemosyne Atlas, which is discussed in the **Preamble** to the second part of this thesis. Thus, **Part Two** of this thesis introduces a way of researching an ontology of space through a speculative and experimental practice-based enquiry, driven by an aesthetic analysis of visual artefacts. The focus is on finding a path by which to research the ontology of space by looking not at space itself, but at the objects and artefacts that surround it and are affected by its productive nature. As such, the second part of this thesis presents an artistic experiment, *The Mouth of the Monster and the Hollow Body*, which comprises a visual diagram, an encyclopaedia and an allegorical story composed of a set of meditations.

Throughout this thesis – at different moments for different purposes and in different forms – images, drawings, artefacts of material culture are brought together, creating a platform to be worked with, from and through, following the artistic approach that this thesis brings to the transdisciplinary methodology. As a result, a combination of two research paths inform *The Mouth of the Monster and the Hollow Body*: the first is a research into how a diagram is created and through its application explores the potentiality of space as a methodological tool and the second is a research into the ontological possibility of space as ambiguous and with multiple existences, while being a unified entity.

Chapter Four introduces the speculative experiment – a diagram entitled *The Mouth of the Monster and the Hollow Body* – through a discussion of its constitution and the interaction between the visual structure and the materials. This discussion is conducted by means of the creation of an encyclopaedia, which becomes a constituent part of the overall work. The encyclopaedia is a textual experiment that not only presents the captions describing the materials that make up the diagram, but also reveals the presence of multiple structures and grids, showing how space is at work in the construction of order. Through the encyclopaedia, the productivity of space as a methodological device is simultaneously revealed textually and performed, by highlighting the non-linear, recursive, indeterminate and non-representational dimension of *The Mouth of the Monster and the Hollow Body*. As such, this list of entries is informed by the attempt to capture the materiality of the images as they unfold endlessly from medium to medium, in intervention after intervention, through a process of shared authorship. The encyclopaedia works through the possibilities and potentialities of each image, which being decontextualized lacks origins, thus becoming an archaeological artefact that is enhanced by its interactions with the other

images, in an imaginary and aesthetic realm. The archaeological nature of the images and the non-linearity of their interconnections enable the creation of *The Mouth of the Monster and the Hollow Body* as a *mise-en-abyme*⁴ in which the multiple images construct a wider, recursive, infinite whole, created from the infinite narratives of each image and the infinite associations and relations between them.

As such, this chapter puts forward the diagrammatical side of *The Mouth of the Monster and the Hollow Body*, as a discussion of the possibilities of space being methodologically productive, as the diagram allows the formation of a strategy that is based on a framework that is: archaeological, self-reflective, aesthetically driven, in which disruptions and jumps are welcomed and that remains in constant formation. This is possible as the diagram is informed by a concurrent coexistence of multiple structures, each of them presenting different dimensions of space, working on an integrated, interactive and non-hierarchical mode. Through the diagram *The Mouth of the Monster and the Hollow Body* bypasses the impossibility of utterance by presenting a single unity constituted by non-unifiable but interactive, infinite dimensions, thus enacting the paradoxical and impossible nature of space. Consequently, Chapter Four presents space as having methodological purchase when informed by an open and accepting conceptualisation of space as informed by a multiplicity of dimensions and facets that nonetheless still constitute a single entity.

Chapter Five presents the artistic outcome of the notion of space as a methodological device or strategy with which to research the ontology of space itself. It is the outcome of applying the diagram as a spatial methodological device that

⁴ The concept of *mise-en-abyme* is explored throughout this thesis but explained fully in Chapter Two.

works in a non-linear, discontinuous, archaeological, recursive mode and uses aesthetic affect to reach a conceptualisation of space. This chapter follows from the necessity of constructing a corral in which to approach space. This corral is informed by displacing the ambiguity, unattainability and indeterminacy of space onto the notion of the monster. This displacement allows a way (through the figure of the monster) to interrogate space, an interrogation that concerns the possibility of multiple existences that nonetheless coexist. Thus it is possible to explore through this figure a wide array of situations in which the physical, the material, the abstract, the conceptual, the imaginative, the affective, the experiential and the aesthetic interact, as traces of the monster can be found in the processes of transformation and metamorphosis that occur in the interaction, friction and tension between the physical, the material, the abstract, the conceptual, the immaterial, the metaphysical, the imaginative, the affective and the experiential that inform everyday life; that is, the frictions, tensions and interactions between multiple dimensions of existence. These multiple existences all constitute the monster as a single entity, just as the multiple existences of space constitute the single entity of space. The work of Chapter Five therefore is a written thought experiment that draws from the speculative artistic practice of *The Mouth of the Monster and the Hollow Body* as a mode of research.

Part One

Chapter One

Problematics of the Ontology of Space

This chapter presents a review of Western literature dealing with the concept of space from the perspective of the humanities, focusing particularly on the scholarship that has emerged from the so-called ‘spatial turn’ of the twentieth century. It therefore takes as its point of departure the belief that, over time, space (as an idea) fell into neglect, until the mid-twentieth century attempt to recover and re-conceptualise it. It observes the implications that such a recovery – driven by its opposition to modernist conceptions of space as a static entity – has had on contemporary thought, and is motivated by the desire to reveal the set of elements, concepts and notions that form the basis of current reflections on space.

In reviewing the literature, and in particular through a close reading of the work of Doreen Massey and Tim Ingold, two concepts emerge as fundamental to contemporary thought relating to space: representation and structure. These notions seem to underlie contemporary conceptualisations of space, particularly in the discussions that distinguish space from other family cognates: space is frequently defined by opposing it to place, site, landscape, region or location, as well as other concepts that are frequently thought of in relation to space, such as limit, boundary and distance. Two findings surface in the analysis of these discussions. The first is that when discussing space there is generally a separation between physical or ‘real’ and abstract or conceptual understandings. This separation, with its non-integrated perspective, has led to the formation of two antagonistic positions towards the role of

space within contemporary epistemologies. The work of Massey illustrates one side of the argument: she calls for an urgent recovery of the concept of space from the notion of it as a static container. The other view, illustrated by Ingold, argues that because of the weight and persistence of understandings of space as an abstract, representational, lifeless concept, it is better to dismiss the term ‘space’ altogether. The second finding, however, suggests that the separation between physical/‘real’ and abstract/conceptual space is symptomatic of a problem that goes far deeper than a mere linguistic insufficiency. The problematic underlying the separation is the lack of consensus over what physical space is, because it does not seem possible to pin down a referent. Space, in its totality, emerges as something ambiguous and unknowable.

In order to dispel the tension provoked by this ambiguity, the second part of the chapter will investigate Ingold’s work more closely, alongside that of Annemarie Mol and John Law. Together, their work provides a practical framework for an ontological discussion in which it may be possible to overcome the separation of physical/‘real’ and abstract/conceptual space. This framework segues into the intention of this thesis to discuss space as a methodological device. Adopting a dialogic rhetoric, this thesis introduces the notion of the diagram as an enacted structure that can be used as a methodological device to embrace both the physical and abstract dimensions of space. As such, it takes the position that instead of simply separating the concept of space from the idea of it as representation, a more productive outcome can be achieved if representation is also re-thought, moving towards the idea that space is non-representational (as Ingold suggests). This implies that a different way of understanding engagement and materiality is needed in order to work with, and think productively about, space – a concept that is ontologically ambiguous. It also assumes that the notion of structure can be positively re-thought.

This notion, when associated with the act of drawing, becoming a diagram, can be used to catapult us into thinking of space as a methodological device – that is, into thinking of space productively.

Space and the Difficulties of its Conceptualisation Amongst its Family Cognates

During the second half of the twentieth century, a new awareness of space emerged within the humanities, which led some scholars to take a different approach in the hope of re-empowering the concept. This movement arose as a response to the modernist paradigm, which it believed had disempowered the concept of space. As Massey ([2005] 2010) reveals, contemporary scholarship deemed it necessary to re-think the concept after a perceived change in the relationship with space in the nineteenth and twentieth centuries, when it became a symbol of modernity. This was primarily due to the effort to revolutionise the concept of time – an attempt that was mainly driven by the concerns of process philosophers and thinkers such as Henry Bergson and Alfred North Whitehead. To some extent, as Massey ([2005] 2010) shows, the nineteenth and twentieth centuries became time-focused and time-orientated: in the words of Edward S. Casey, the last two hundred years have been dominated by ‘temporocentrism’ (Casey, 1998, p. x). According to Casey (1998, p. x), and also Massey ([2005] 2010), at stake was the liberation of time from, on the one hand, the constraints of chronology, which deemed time to be a passive,

utilitarian device, and on the other, the scientific conception that time had to be stopped or put on hold in order to allow reality to be isolated for scientific analysis and the writing of results and conclusions.

As a result of modernity, time was seen as regulated by science. Changing this situation, rethinking time, opened up the possibility of also changing the modern scientific paradigm (Massey, [2005] 2010). Time could then be conceived of as a process, as ‘temporality’. However, in order to facilitate such a conceptual transformation, it was necessary to set it against a perspective that would stand for the old paradigm. As a by-product of this agenda, the modernist perspective came to be symbolised by space. This was due to the rationale that when time is put on hold the result is the creation of space (Massey, [2005] 2010). Consequently, space came to be understood as something that stands in opposition to time; it came to represent all the things that time is not – namely, the static, the fixed, the immutable. Warf and Arias (2009) refer to the same underlying notion that space had become subordinate to time in nineteenth century thought. They identify the historicism of Hegel and Marx, as well as the Whiggish accounts of history, as the driving force behind this process of subordination. This, they believe, was due to a de-spatialisation of the social and cultural realms by linear, teleological accounts (Warf and Arias, 2009, p. 2), an understanding that the twentieth century inherited, but which the humanities has subsequently, since the second half of the twentieth century, deemed problematic.

Several voices began to emerge in the effort to recover the concept of space from this approach; they were intent on forming an understanding of space from the perspective of the humanities, as distinct from the spatial understanding of the sciences. This movement for the re-instatement of space came to be known as the ‘spatial turn’ (referred to above), whereby space came to be seen as a social and

cultural construct (Warf and Arias, 2009). The spatial turn, according to Warf and Arias (2009, p. 1), is a movement in the humanities, particularly within the disciplines of geography, sociology, social science, anthropology, history, art history and cultural studies, which claims that a spatial awareness is necessary in order to overcome universalist and single-voiced narratives within epistemological frameworks. The underlying assumption is that space is important, “not for the simplistic and overly used reason that everything happens in space, but because where things happen is critical to knowing how and why they happen” (*ibid*).

Possibly the most recognisable of these voices is that of philosopher and sociologist Henri Lefebvre. In his work, *The Production of Space* ([1974] 2005), Lefebvre wants to rescue space from the conceptual domain (particularly that of the sciences, led by mathematics) and bring it into the practical domain. However, the practical domain, for Lefebvre, is the domain of the social. Despite the reduction of what ‘practical’, or in his words, ‘real’ space can be, Lefebvre expresses the following aspiration:

The project I am outlining, however, does not aim to produce a (or *the*) discourse on space, but rather to expose the actual production of space by bringing the various kinds of space and modalities of their genesis together within a single theory. (Lefebvre, [1974] 2005, p. 16)

In other words, he wishes to set space free from existing discourses in order to give it its own authority. Despite the impact of the publication of *The Production of Space* ([1974] 2005), Warf and Arias identify an earlier movement in the 1920s among sociologists and geographers of the Chicago School as the first attempt to recover the concept of space. It was only later, however, in the 1960s and 70s, that the work of

Lefebvre, in conjunction with that of Michel Foucault and David Harvey, provoked the stirrings of a wider discussion (Warf and Arias, 2009. p. 3). Their work was continued by a multiplicity of scholars, who – to a greater or lesser degree – gravitated around the discipline of geography. Despite interventions from other disciplines and academic fields, contemporary thinking about space has remained fundamentally driven by geographical concerns. The impact of this is better understood by considering the relationship between space and place.

The act of bringing the concept of space into the humanities released another concept – ‘place’ – into the discussion, through a focus on the relational aspects of space within social, cultural, political and economic structures. This has generated confusion between the terms: the two concepts are used indiscriminately, with little clarity or precision, not only in daily parlance, but also within the humanities.

Hubbard and Kitchin, in the introduction to *Key Thinkers of Space and Place*, state:

In popular discourse, space and place are often regarded as synonymous with terms including region, area and landscape. For geographers, however, these twin terms have provided the building blocks of an intellectual (and disciplinary) enterprise that stretches back many centuries. (Hubbard and Kitchin, [2004] 2011, p. 4)

Hubbard and Kitchin thus separate space and place from other terms, attributing them a greater importance within geography-driven discussions (this view can however be extended to the humanities in general). Nonetheless, a separation between the two terms themselves is hard to pin-down and the differentiation between them has been left to paradigm changes inside the discipline of geography. However, due to the broad use of these terms in the humanities, scholars from diverse disciplinary backgrounds – such as historian of philosophy Keimpe Algra (1994), geographer Yi-

Fu Tuan (2008), anthropologist Tim Ingold (2011) and philosopher Edward S. Casey (1998) – believe it is necessary to draw a clear distinction between space and place.

The tension between space and place is an old one in the history of Western thought. For instance, Plato and Aristotle took distinct positions on this subject: Plato developed the notion of *khora* (which is explored in greater detail in Chapter Two), a concept that is closer to the idea of space, while Aristotle advocated the idea of place or *topos*⁵. For Casey (1998, p. ix), place as a concept has been subordinated to space, due to its ubiquity and pervasiveness that derives from the very fact that “[t]o be at all – to exist in any way – is to be somewhere, and to be somewhere is to be in some kind of place”. And, given the scientific understanding of space as an absolute, space emerged with a stronger presence. Casey (1998, p. ix) states that the concept of place was understood as a ‘modification’ of space, which triggers Casey to show how the notion of place was present throughout history in the thinking of some of the best-known philosophers dealing with the idea of space.

Addressing the concept of place, anthropologist Marc Augé ([1992] 2006) makes a distinction between places and non-places; however, it becomes necessary to ask whether non-places are ‘spaces’ or ‘sites’. Thus another concept emerges between space and place, that of ‘site’, which instead of clearing the path for a distinction between space and place only makes it more diffused and unclear. According to Algra, in *Concepts of Space in Greek Thought* (1994), what governs the decision to use the term ‘space’ or the term ‘place’ is the fact that space is generally assumed to be broader and more inclusive than place. Furthermore, he declares that

⁵ The discussion between Plato and Aristotle and the potential misunderstanding of Plato’s *khora* by Aristotle when pleading for the primacy of place is a matter of in-depth study by Algra (1994).

... 'place' is rather used in a relational setting (place being, either potentially or actually, the place *of something*) whereas 'space' rather refers to an underlying frame of reference or to the sum total of all places. (Algra, 1994, p. 20)

The same idea is put forward by Tuan:

[T]he meaning of space often merges with that of place. 'Space' is more abstract than 'place'. What begins as undifferentiated space becomes place as we get to know it better and endow it with value. (Tuan, 2008, p. 6)

Place then emerges as a site or location which is invested with historical and cultural meaning; in distinction, the abstract nature of space connects space to the idea of an absence of human emotions and thus as playing a role in everyday living.

The distinction between space and place has therefore diminished space, to the point that, in his book, *Being Alive* (2011), Ingold includes a chapter on space entitled, 'Against Space'. He argues that when someone wants to refer to the way we inhabit the world in everyday speech, the word 'space' is rejected in favour of terms that are more specific, grounded and related to practice, such as environment, land, earth, field, country, landscape, indoors, sky, air, place, site or room (Ingold, 2011). Thus according to Ingold, because we have all these other terms that are much more closely linked with the experience of, and everyday activities involved in, inhabiting the world, space – in its relationship with modernity – has kept its meaning as an empty and abstract concept, one that is detached from experience, and even from life itself. This conceptualisation of space as divorced from the everyday realm, trapped within a representational paradigm and deeply connected with modernist thinking, leads Ingold to (once more and despite the spatial turn) disempower space by deeming it unnecessary.

A closer look at Ingold's thought proves fundamental to comprehending the contemporary understanding of space and recognising how space has once again become disempowered through the tensions created between space and place, and the idea that it is necessary to opt for one or the other because they each stand for distinct ontological and epistemological positions that are irreconcilable – particularly in relation to the perceived division between human beings and the world. This thesis, however, argues that space and place do not represent different understandings of humanity and the world, and the interactions between them. Each word has a meaning that reflects such understandings, but as both are historically contingent, there is no clear-cut boundary between them, and consequently there are dimensions that are currently attributed solely to place which are also shared by space, particularly when dealing with the physical, material and everyday dimensions of spatiality. This distinction anticipates an important differentiation: the misleading use of these two concepts reveals the existence of a relationship between the way that human beings experience, interpret and connect with the world (and with existing and emerging conceptualisations) and the attribution of meanings to words.

The dis-empowerment of space

When portraying space as a concept of modernity, Ingold, in *Being Alive* (2011), departs from the relationship between the terms 'space', 'place' and 'room'. In the modernist epistemology, Ingold (2011, p. 146) argues, space is the container of more

than one place, there are places nested inside other places (like a Russian doll); in such a system, each time we move upwards and outwards we become more and more detached from the Earth, from real and lived experience, moving into increasingly rarefied levels of abstraction. For Ingold, this succession of spaces creates the notion of continuous, infinite space – something that is constantly present but, because it contains all places, is at the same time necessarily infinite and absolute. “Space is nothing, and because it is nothing it cannot truly be inhabited at all” (*ibid*, p. 145). The notion of space as infinite, absolute and abstract leads Ingold to perceive it as something without materiality or physicality. Thus, in terms of a discourse on everyday praxis, space becomes an unnecessary idea. According to Ingold, we have ended up with this abstract and reified concept because of an epistemology in which human beings are seen as separate from the world. Due to this sense of separateness, we occupy the world but do not inhabit it. Ingold (2011, p. 148) says, however, that our daily experience of inhabiting the world is one of constant movement, not of living inside bounded domains, and consequently we cannot separate off places, moving from one to another; instead, our movements constitute a place in themselves.

Ingold explains this notion of place by means of the word ‘room’, in the Germanic sense of the term ‘living space’, in which ‘room’ and ‘life’ are part of the same concept (*ibid*, pp. 145-147). This combination of life with place allows Ingold to reframe of the notion of ‘dwelling’, which for him means the process of inhabiting the Earth and is associated with an absence of boundaries and limits, since life is not lived in enclosed spaces. According to Ingold, place is a concept that reflects the inhabitation of Earth, while space is completely detached from this dimension, and hence is an abstract and empty concept. Thus, for Ingold, we have gone from a notion of room as something that is open, a way through life, to a notion of space that is

closed as it represents the suspension or enclosure of life. What space lacks is the notion of life as movement and process, in the sense of something that is lived and constructed through inhabiting a site. In losing this dimension of movement, of passage, space has gained boundaries or limits and become enclosed – somewhere we can place other things. This concept of space is a product of modernity, since the above epistemology is paradigmatic of modernity (*ibid*, p. 145).

Ingold's position, however, threatens to lead us once again towards a disempowerment of the concept of space, obliterating its presence from the contemporary epistemological system – particularly given the current sensibility towards and awareness of the idea of change, movement and process (especially when thinking about the everyday). However, not everyone takes the same position, and scholars such as Massey have investigated ways of rethinking space in order to instigate its re-empowerment. As such, Massey ([2005] 2010, p. 13) argues for an understanding of space not as static, but as a product of relations, associated with a set of terms relating to process, such as heterogeneity, relationality and coexistence. Massey sets out the three propositions that inform her understanding of space. The first is that space is “the product of interrelations”; the second, that it is “the sphere of possibility of existence of multiplicity”; and the third, that it is “always under construction ... a simultaneity of stories-so-far” (Massey, [2005] 2010, p. 9). These three premises derive from questioning the preconceived ideas of space, but particularly from an interrogation of the association of space with representation and structures. For Ingold, the absence of life in the concept of space is a reason to deem it unnecessary; for Massey, by contrast, this lack of life is simply a by-product of a certain epistemology – the concept of space is not necessarily lifeless, and if it is, this is only a temporary situation until it becomes detached from this epistemology.

The re-empowerment of space

In her work, *For Space* ([2005] 2010), Massey presents her arguments for the urgency and importance of re-thinking space in terms of its place in politics. She identifies representation as the guiding principle underpinning contemporary understandings of space, in particular those that derive from a modernist epistemology. Massey ([2005] 2010, pp. 26-7) identifies two steps in the process of equating space with representation: first, representation is concerned with fixing meaning, and second, this representational process (of constructing frameworks outside time; frameworks that do not incorporate notions as movement, temporality, and hence life itself) is equated with space. Agreeing with Ingold, Massey argues that this association with representation has turned space into a concept that is about fixing the meaning of things, extracting the life from them. In developing her argument, she accepts the first step in the process, but contests the second. For Massey, it is the fact that space is associated with representation – informing the understanding of space as static, lifeless and limiting – that led nineteenth century process philosophers such as Bergson to place all the value on time, to the detriment of space.

Massey argues that in the process of releasing time from the constraints of modernity (as discussed above), space has been neglected, left behind in the movement towards process. Time needed a point of opposition from which it could move away, departing from the static conceptualisations that previously constrained it as a concept – and that point was space. Space then became the opposite of time, its negation, and came to signify the non-temporal (Massey, [2005] 2010). Recognising the interdependence of space and time – despite the implications this conception

possessed in the past, when space was confined in the notion that it is omnipresent and immutable – Massey argues for a concept of space which is also about processes. She take her lead from the movement against modernity in order to argue for a notion of space that is non-static and living, and thus for its re-empowerment.

In bringing space to life, Massey recovers the idea of process through temporality. In so doing, she follows a strategy that is dependent on the association of space with time. Consequently, she traces the understanding of space through its recent connection with time, showing the multiple ways in which the relationship between space and time has been conceived of negatively. However, in her reading, space is constantly contrasted with time and temporality. She therefore not only sees space as informed and defined by temporality, but by following this strategy Massey in turn limits the formation of the concept of space to that of time and time's conceptualisation as temporality. Thus space is prevented from claiming a distinct ontological imaginary and establishing its own authority over what constitutes it.

In Massey's battle to rescue space from its association with representation, a particular notion emerges: that of the 'container'. This notion of space as a container is one of three understandings of physical space that Algra (1994) identifies as present in Western thought (he distinguishes physical from metaphysical conceptualisations of space). However, despite the fact that Massey addresses conceptual understandings of space, what appears obvious is that her battle to dissociate space from representation is a battle against the conception of space as a container. The equation of space with representation does not simply arise from its appropriation by modernist preoccupations – an idea that rests on the assumption that, up until that moment, space was an empty concept waiting to be filled with meaning. The idea of space already carried associations with stasis and connotations of it as a container, as Algra (1994)

shows in his enquiry into physical understandings of space in ancient Greek thought. In the Greek context, when space is associated with the idea of a container it emerges as the place in which all things exist – because everything must exist within something.

The idea of space as a container can be found in two instances in which the concept of space is associated with representation. The first instance is frequently called the *bird's eye view*, a position in which the subject is distant and separate from the object under observation. This perspective is associated with the idea that human beings are distinct from the world and are therefore able to observe it as if existing independently of it. This understanding of space has been associated with the emergence of the subject/object divide in modernity, whereby an enquiring subject can stand outside a container and look into it, observing the things that exist within it. This perspective equates representation with the notion that, because the observer is detached from the observed object, it is possible for an undistorted, rational and logical knowledge to emerge, and through this knowledge, the object can then be reproduced, reconstructed and re-presented in its entirety. The second instance in which space is connected with representation arises from the idea of space as a background. In this perspective, space is the medium in which things are brought together. As such, it could be called the *blank page* conceptualisation. In contrast to the first perspective (although they are related), space does not necessarily contain things that can be looked upon, but receives them. As a consequence, the enquiring observer does not only have a delimited framework within which these things can be observed, but also acquires the possibility of choosing what can be placed inside the container.

Modernity's efforts to construe a way of understanding the world encouraged

an epistemology in which the subject, Man, is perceived as existing outside and apart from the world, the *bird's eye view*. Therefore, it was thought possible to construct frameworks, the *blank page* perspective, that could be suspended and detached from reality, in order for Man to observe and understand it. This meant that Man could re-construct parts of reality – that is, nature or the world – in order to represent it. In both instances, space is understood not only as an entity that is static and passive, but one that also allows things to be controlled and constrained in order to be observed, understood, identified and categorised; thus conferred with an identity and a meaning.

The central problem with equating space with models of representation is that it reveals the persistence of the modern epistemology. As Ingold (2011) argues, representation is the position of being everywhere at the same time – an omnipresent and immobile position that allows apprehension but at the same time generates distance. This stance, for Ingold, contradicts the concept of dwelling/life. Concurring with this position, Massey ([2005] 2010) argues that when understanding the world through representation (and in materialising that understanding) it is necessary to freeze meaning, and this presupposes that our understanding also becomes static and unchanging in relation to the objects thus represented. As a consequence, both Ingold and Massey argue that this is an epistemology that sets itself against life, and both these understandings of space are therefore abstract, conceptual constructions of space that are deprived of life.

Massey ([2005] 2010) associates this deprivation of life, or separation from life, with the notion of structure, another product of the modernist epistemology. As representation became associated with space through the modern definition of space, so structure (as a practice fundamentally identified with modernity) also became associated with space. If representation was the way in which fixed, static knowledge

was presented as a synthesis, then structure was the way in which such fixed, static knowledge was acquired. As with representation, this structure became intimately related to the concept of space within the modernist epistemology. The reason behind the identification of space with the notion of structure is, Massey argues, because structures are directly related to the notion of the static – they are seen as lifeless tables, where things are placed in order to be analysed, or as devices that slice through time to stop its flow, enabling the observation of whatever is captured in that specific slice of time. More importantly, structures create a framework in which meaning can be fixed, or through which it was believed that the meaning of an object could be discerned. As such, structures are the epitome of the notion of “containing of the temporal” (Massey, [2005] 2010, p. 36), the underlying basis of the *bird’s eye view* and the idea of the *blank page*. Massey believes that the association of space with the static and lifeless through the notion of structure was deepened by the structuralist movement, because it not only associates space with the non-temporal but also with the a-temporal.

Massey ([2005] 2010, pp. 36-37) sees structuralism as a movement that aimed to re-instate space as a counterpoint to process philosophy that recovered time from the paradigm of modernity. Space was put forward as the banner against the two ideas that structuralism opposed: the first being the notion of causality, particularly when associated with written narratives, and the second, the idea of the linear progress of history and culture. As such, she argues that structuralism moved from the diachronic to the synchronic. However, such a shift carried with it the continuation and reinforcement of the idea that space stands in contrast to time. Synchronicity stands above and beyond the idea of a slice through the linearity of chronology, as it represents the absence of temporality (*ibid*).

As a result, Massey identifies two problems with the structuralist use of space. The first is the absence of change associated with the idea of holding the world still (*ibid*, p. 38). She sees this notion as an outcome of the binary thinking of Western civilisation, which sets the static against the dynamic, ignoring the idea that they are in fact integrated. Consequently, Massey ([2005] 2010, p. 39) rejects the idea, often offered as a solution to the binary problem, of building a bridge between the two opposing concepts through the idea of the third⁶. Massey's opposition to this idea is due to the fact that she believes that dichotomies can only be resolved through the idea of multiplicity; that is, through the dissolution of the binary system. The second problem that Massey identifies in the structuralist understanding of space is the observation of structures as closed systems that cannot accept change, as this would entail the introduction of temporality. For Massey, the fact that these structures are closed systems implies that the relations present within the system are locked, leading to necessarily essentialist perspectives. Because the relations are fixed and inflexible, not open to change, the system does not allow for juxtaposition and prevents those things that are generally regarded as unrelated from cohering (*ibid*).

Despite the problems that structuralism poses for the conceptualisation of space, Massey ([2005] 2010, p. 39) recognises that the idea of structure also contains a positive element: space is thought of in terms of relations between the elements that the structure addresses, and this means that, on the one hand, space can potentially be thought of in a productive manner, and on the other, relations can only be fully

⁶ Massey states that Plato's *khora* as the third element is an example of such a thinking-process in conceptualisations of space. The concept of *khora* will be the subject of close attention in the second chapter of this thesis. However, despite the definition of *khora* as the third element, this thesis does not take a position that, as Massey puts it, sees it as a bridge between two things. Instead, the third in Plato is considered to be a constituent of a whole, and not an external element bridging the other two elements.

understood by means of an open conceptualisation of spatiality. Thus Massey concludes her enquiry into structuralism by saying:

[S]pace is indeed a product of relations (first proposition) and for that to be so there must be multiplicity (second proposition). However, these are not the relations of a coherent, closed system within which, as they say, everything is (already) related to everything else. Space can never be that completed simultaneity in which all interconnections have been established, and in which everywhere is already linked with everywhere else. A space, then, which is neither a container for always-already constituted identities nor a completed closure of holism. This is a space of loose ends and missing links. For the future to be open, space must be open too. (Massey, [2005] 2010, p. 12)

Although recognising the importance of relations, Massey dismisses their connection to structure, which she discards. But is not the notion of structure essential to the conception of relational systems? Thus the first proposition of this thesis arises from Massey's discussion of structuralism. Instead of arguing for the severance of the relationship between structures and space (a relationship that is fundamental to a discussion on the ontology of space), this thesis takes the position that it is more productive to re-think the notion of structure, particularly in relation to space. Re-thinking structure therefore is at foundation of this thesis: it investigates the forms and shapes structures take, and how models of change, multiplicity, multidimensionality and relationality can be integrated with them. It asks how a structure can be contingent, provisional and indeterminate. Ultimately, this thesis explores whether, through re-conceptualising structure, space can be conceived of as an instrumental element, particularly in terms of the emergence and use of knowledge, and whether it can therefore provide a new framework for a discussion on the ontology of space itself.

A second realisation that arises from this chapter's close engagement with the work of Ingold and Massey is the fact that the relationship between abstract space and physical or 'real' space remains unresolved. Whereas Ingold makes the separation between them clear when he dismisses space as an abstraction in favour of life or the fabric of the everyday, the separation is more hidden in Massey. However, her argument concerning representation and space can only be pursued if the idea of representation remains unquestioned. Things can only be represented in a framework in which there is a separation between the conceptual and the physical, as the representation is the conceptual counterpart of the 'real'. It is only through a representational model that a separation between the conceptual or abstract and the physical or 'real' can be sustained – conceptual, abstract space is a representation of what is viewed as physical, 'real' space. Thus only conceptual, abstract space is associated with representation, not 'real' space – precisely because it is 'real'. This framework becomes more evident when Massey discusses Lévi-Strauss's use of the concept of space. Massey ([2005] 2010, p. 38) argues that Lévi-Strauss's interpretation of space is a taxonomic one and does not involve 'real' space. This taxonomic space is, for Massey, just a representation or a grid that is applied to 'reality' without engaging with it; the result, she believes, is that Lévi-Strauss works "through an imagination of the spatial as a synchronic *closure*".

Thus a notion of 'real' space emerges, one that is distinct from conceptual space, despite the fact that it is neither clearly presented nor discussed. However, contrary to Lefebvre, for whom 'real' space is social, Massey identifies it as belonging to human geography. This, however, begs the question of what it is in the 'real' world that is identified as the 'real' space that is then conceptualised or represented by the notion of conceptual space. Furthermore, if these different spaces

are observed as separate things, what is separating them and how are they related – in other words, why are they both called space? This thesis therefore interrogates the validity of the separation of and distinction between these two understandings of space. It also looks at how a different representational model could impact on the relationship between physical and conceptual space – a model that is non-representational, in which humanity and the world are not seen as separate entities but are instead mutually informed, each by the other. As a consequence, it argues, the idea of bounded entities would dissolve, so that knowledge would no longer be seen as the product of human actions but as emergent in this mutual construction.

The importance of ‘physical’ space

Despite the fact that when discussing the everyday the humanities turn with interest to space, it is most frequently examined using the notion of ‘place’ (even if the notion is unstated and the word ‘space’ is used instead). However, the observation of what appears to be the ‘real’, concrete dimension of the world, the everyday, does not replace the idea of physical space, which still needs to be factored in as a constituent of the everyday. Algra (1994), in his study on ancient Greek conceptions of space, looks at notions of physical space or how space was conceptualised as existing in the physical world. He identifies three distinct categories into which concepts of physical space before the twentieth century – in the ‘pre-Einstein era’ – were divided (Algra, 1994, p. 15). According to Algra, until the nineteenth and twentieth century

developments in mathematics and physics, theories about the ‘functions’ of space in Western thought were limited and rooted by everyday experience and parlance.

Consequently, space was observed as:

- (a) a kind of prime stuff or ‘reservoir of physical possibilities’, or
- (b) a framework of (relative) locations, or
- (c) a container, the ‘fixed stage where things play out their comedy’, a space in which things are and *through* which they can move, to paraphrase Epicurus. (Algra, 1994, pp. 15-16)

There is a striking resemblance between this division of conceptualisations of physical space and the conceptual understandings that Massey presents: the idea of space as a container, which runs through the notion of the *bird’s eye view* and idea of the *blank page*; the structuralist idea of relational space; and most evidently, the fact that the opposing notions of content and container bring forth a third idea bridging the two – the relation between them. This reveals that beneath both the abstract conceptualisations of space and the understandings of space that derive from everyday experience lies a starkly binary system which is only mitigated by the introduction of a third element. It also reveals how muddy and undefined the distinction between physical/‘real’ space and abstract/conceptual space is. This is because understandings of space that derive from everyday experience have informed physical theories of space, which in turn inform the abstract conceptual understandings that the humanities on one hand seem to resist and on the other to adopt. The blurred, fuzzy distinction is made even more obscure when Algra (1994, p. 19) argues that the reason for the lack of integration in Einstein’s understanding of space is that non-classical physics “has hardly any connection with everyday experience or with common parlance”. Thus an

understanding not only of what physical, ‘real’ space might be, but also of what separates these two dimensions of space, appears increasingly distant and seemingly unachievable.

Physics does not seem to provide the means to fully understanding space in a ‘real’ sense; it is unable to justify the separation between physical/‘real’ and abstract/conceptual space. To start with, when thinking about what ‘real’ space could be, it is possible to agree that there are sensations and feelings, if not of an entity, then of something that is referred to as ‘space’, although – as we have seen so far – it does not appear easy to identify it precisely. Therefore, although it might be difficult to pinpoint space, there is a belief in something with a physical existence that is called ‘space’, to which we can attribute a set of properties, if only provisionally and contingently. But what are these physical or material properties that allow us to think, imagine and feel that space has an existence? What are the things that may have led to these multiple understandings of space? And can an enquiry into what might constitute a sensation of space provide some answers?

A sensation of space

In order to answer these questions this thesis has surveyed literature across psychology and the cognitive sciences relating to the perception of space, in particular work that introduces the perspective that space should be considered using a non-static model – for example, through movements such as walking. This derives from

the assumption that the perception of space should not be equated with visual perception alone, but that other sensations, experiences and affects should be considered. However, the literature appears to have a deficit in this approach: when psychologists and cognitive scientists use the term, 'perception of space', they generally appear to be referring, firstly, to a visually dominant perception and, secondly, to the use of the visual perception of objects to understand and discuss systems of relations and distances (Bugmann and Coventry, 2008; Carlson and Van Deman, 2004; Coventry et al., 2008) and the way this third dimension, space, is perceived (Judd, 1898; Mavridou, 2007).

A potentially productive discussion of spatial perception through walking is thus reduced to a system of visual relations between objects, driven by the equation of space with distance, and approached through a correlation between the notions of sensed distance and physical distance. This begs the question of whether it is only possible to think about and discuss the perception of space through visual perception and the perception of things, or if there is a perception of space beyond the visual. For instance, how do blind people perceive space: if space is just a system of distances, how do they perceive or measure these? Can it be said that blind people do not have a concept of space, or is it still possible to talk about a concept of space that is not a matter of visual perception or the creation of a system of distances? The investigation into how formerly blind people who have recovered their sight construct their visual perception of the surrounding environment is especially critical for this discussion. It is reported (Sendon, 1960) that at first they face great difficulties in making sense of the information gathered by their visual senses, and in creating a correspondence between the visible world and their former perceptions of it. These difficulties are compounded when it comes to moving objects, leading to problems in understanding

the way a whole exists three-dimensionally, or in other words, making sense of objects that have multiple and disconnected existences (Sacks, 1995). This provokes a certain suspicion as to the reliability of understanding spatial perception through notions like distance, which are dominated by a visual framework.

Orientation is connected with the notion of distance. However, the idea of orientation seems to be potentially more productive in terms of thinking of a physical, ‘real’ space when it is associated with sensations that arise from the connection between our vertical walking position, the laws of gravity and the perception of directions such as up, down, left, right, in front or behind, as Franklin and Tversky (1990) show. Their study raises the question of whether we perceive and feel these directions in a distinct way according to how the body is positioned, not only in the ecosystem, but also in such exceptional environments as zero gravity and in non-referential environments. However, in order to derive any conclusions from this perspective that relate to what physical space could be, it is necessary to first conceptualise the body in relation to its environment, and then to explore how this relation is a symptom of space – a subject that is not addressed in the literature. Thus we still need a model of space. The main conclusion that can be drawn from this is that every discipline appears to take for granted its own specific understanding of space. So the question is: how does the notion of distance or orientation come to constitute space, and in which particular framework is space equated with these notions? There appears to be no discussion of these questions, leaving the enquirer to either simply accept that notions like distance, orientation and gravity constitute physical, ‘real’ space, or to wonder whether these are the only elements that constitute space, and, if there are more ways of perceiving it, what these are and just how distinct they might be from the conclusions that physics draws.

One finding in particular surfaces when looking at the research into physical or ‘real’ space in psychology and the cognitive sciences: despite the fact that these discussions exist within a spatial framework (that is, they use spatial terminology), what is understood as ‘physical space’, a concept that is used to support and construct this framework, is never openly presented or discussed. As a consequence, none of these approaches to the perception of space appear to acknowledge the “feeling of spaciousness” that Tuan identifies ([1977] 2008). This is the feeling that the architect Bernard Tschumi points to when describing the perception of a white cubic room from the inside:

No, You don’t really see the cube. You may see a corner, or a side, or the ceiling, but never all defining surfaces at the same time. You touch a wall, you hear an echo. But how do you relate all these perceptions to one single object? Is it through an operation of reason? (Tschumi, [1975] 1998, p. 232)

This interrogation leads Tschumi to suggest that these feelings or sensations may in fact be an operation of reason that precedes perception. However, instead of following the route of arguing which activity takes precedence, Tschumi takes the position that perception is a construction that emerges through interaction, and asks whether this feeling of spaciousness is a shared or even a universal one, despite being contingent and provisional. In other words, does physical, ‘real’ space lie in a constant relation to, interaction with and co-construction of an active and responsive human being through an active and responsive environment?

Ingold provides some important insights into this question when observing the concept of landscape. In *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill* ([2000] 2010), he takes, at a certain point, an ontological

discussion of landscape as the grounds for a discussion on the disciplinary and historical implications that unfold if it is re-thought in terms of temporality and rhythms, a place where anthropology and archaeology meet. The development of landscape as temporality, as a process, is supported by the notion of rhythm, “as rhythm, by contrast [with the metronome], is intrinsic to the movement itself” (Ingold, [2000] 2010, p. 197). This position allows Ingold to argue for a conceptualisation of landscape that goes beyond viewing it as just a cultural and symbolic construction. He argues that if we move beyond a representational epistemology to one in which there is no separation between the inner and outer worlds, then the landscape becomes part of an organic process in which multiple rhythms become congealed.

However, the solidification of such rhythms does not come through the imposition of either nature or human actions, but as part of a continuous process of dwelling that informs the constitution of the landscape (Ingold, [2000] 2010, pp. 193-200). For Ingold, this process requires the action of an agent or agents. However, this agent(s) does not need to be human, as rhythm it is not limited to human life – seasons, winds, tides, the cosmos, all have their own rhythms which inform and become imprinted on the landscape. Thus, although it requires agents for its formation, these can be any kind of force, making the landscape a process that is part of the world, which Ingold perceives to be a living organism. He therefore argues that the landscape is the emerging form that comes out of the constitution of the environment (the interaction between the organism and nature). For Ingold, the recognition that landscape possesses a temporality means that it can be thought of as the solidification of the processes that constitute the environment, according to a different set of rhythms. It is through the notion of landscape’s temporality that Ingold is able to bring together anthropology and archaeology as disciplines that have a share

in the same enterprise. In so doing, Ingold ([2000] 2010, p. 208) suggests that it is possible to not only move beyond the idea of the scientific as a-temporal, observing nature as if it were a static entity, but also beyond the perspective that the calling of the humanities is to study a history that does not recognise materiality.

While developing this notion of landscape's temporality, Ingold considers rhythm (using music as a metaphor) as a continuous process, despite the fact that

... there may of course be rests or sustained notes within a piece, but far from breaking it up into segments, such moments are generally ones of high tension, whose resolution becomes ever more urgent the longer they are held. (Ingold, [2000] 2010, p. 197)

However, by adopting such a perspective, landscape becomes tainted by linearity, as there are no discontinuities, no disruptions. By using this notion of rhythm, in which breaks and rest are seen as negative, not sustainable and to some degree non-existent, landscape comes to share the same dimensionality as place. Both landscape and place are continuous processes, the outcome of the interaction of multiple agents that co-constitute each other. This interaction Ingold (2011; 2012) calls the 'meshwork', a confluence and entanglement of lines that are in constant construction, interacting with each other, informing each other, sometimes diverging, at other times forming knots. Consequently, place becomes not a geometric circle on a map, but a knot that arises from the interweaving of several lines representing the pathways of its inhabitants (Ingold, 2011, pp. 148-9). In this way, landscape becomes not the cultural and symbolic framing produced by a glance over the Earth, but the continuous solidification of multiple forces (natural, cultural, social and imaginary) (Ingold, [2000] 2010).

Ingold ([2000] 2010, p. 191), however, conceives of space within this framework in the same way as he does in his discussion of place (reviewed earlier in the chapter); that is, as something that does not exist in this dimension. He dismisses it from the perspective of his meshwork epistemology, arguing that landscape is ‘dwelling’ while space arises from a necessity to represent. Nonetheless, Ingold presents a non-representational epistemology, in which the human and the environment are not separate but co-constitutive, using such concepts as place and landscape that are deeply related with space. This opens up the opportunity to re-think space in its dual dimension of the physical/‘real’ and the abstract/conceptual through this epistemology. Thus space can be understood without any distinction between its aspects if it is thought of as a porous and ambiguous entity that is informed by a set of elements that derive not only from the physical, ‘real’, sensory and even material dimensions of both the human being and the environment, but also from their abstract, conceptual, imaginary and metaphysical dimensions. In this sense, we can find a degree of plasticity that allows us to manoeuvre and push the concept into other dimensions, letting space emerge in its full potential – that is, as potentiality for conceptualisations of order and organisation in the world, and of the relationship between human beings and the world. Hence, despite the impossibility of a consensus over what it is, this thesis argues that space can be observed as a productive concept.

Space Through the Practice of Lines, Maps and Topologies

The first part of this chapter has discussed the ambiguity of space, and the difficulties

associated with the separation of physical/‘real’ space from abstract/conceptual space. The second part will carry this discussion forward through a re-conceptualisation of structures from the perspective of drawing. It intends to explore the interaction between the idea of structures and the conceptualisation of space in order to 1) open up a path by which space can be understood as productive, despite its ambiguity, by 2) establishing a framework in which there is no separation between physical space and abstract space; instead, these will be conceived of as co-constitutive and part of an overall process – the process of space. The impetus behind this exploration of the interaction between structures and space through drawing will be a close reading of and dialogue with Ingold’s work on structures and lines, which he characterises through the notions of the ‘network’ and the ‘meshwork’.

As discussed above, Ingold sustains the separation between abstract space and everyday place, in which the first is associated with the static and the absence of life, and the second with process and being alive. However, as seen in his discussion of the landscape, Ingold argues for an epistemology, and consequently an ontology, in which there is no separation between humanity and the environment – as they do not exist independently – in terms of their formation and agencies. Thus Ingold’s work can in fact provide a framework in which space can be unleashed from conceptualisations that either reduce or dismiss it.

Space, drawing and diagrams

In *Being Alive* (2011), Ingold refers to the drawing of a line to exemplify what he

means by ‘living through’ or the interaction between the human (organism) and the environment. When using this analogy, Ingold distinguishes between two different kinds of lines, the hand-drawn and the abstract. For him, a drawn line is a continuous movement that does not stop, even if the line that has just been drawn is a circle (Ingold, 2011, p. 148). This notion can be better understood through figure a (below). Such a line, Ingold argues, is antagonistic to the notion of a perfect geometric circle, a figure that is completely bounded and enclosed (figure b), where the line stops and does not flow.

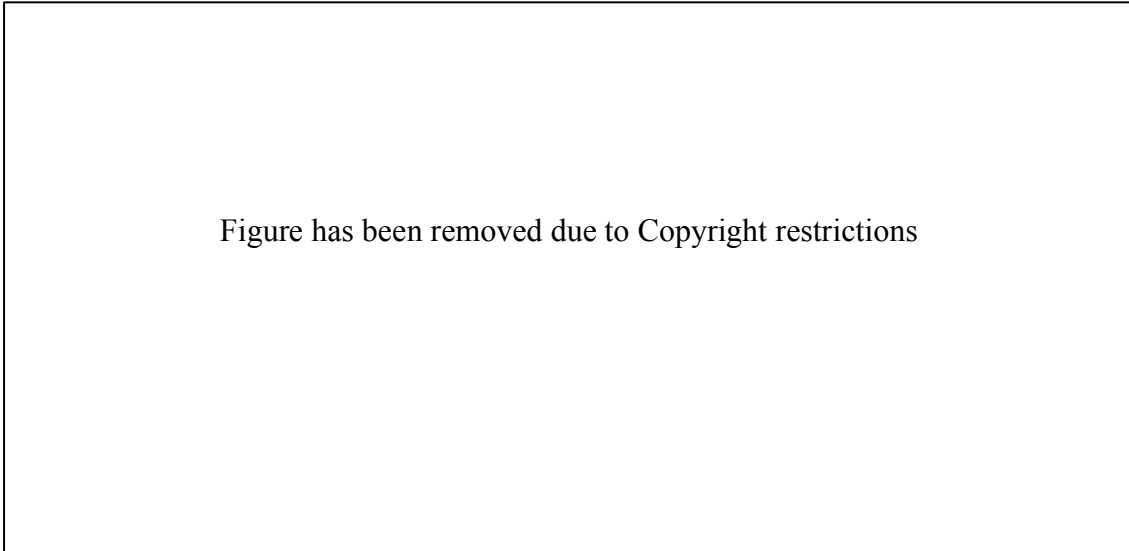


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Fig. a (left): A circle as a pathway; Fig. b (right): A geometric circle

According to Ingold (2011), the movement required to make the circle in figure b is one that does not exist in life, because it is impossible to draw a perfect geometric circle by hand; the geometric circle, therefore, is something that only exists in the abstract, not in everyday life. By contrast, everyday life corresponds to the movement of encircling, a movement that does not cease; although it creates a shape

that is recognisable at any point, the line cannot be reduced to the shape created by its movement. The line of its formation remains as a path that predates the shape and that will continue after the shape is drawn. Consequently, for Ingold (2011, p. 148), as the line is a path, so a place is a pathway and not a bounded entity (as seen earlier). We exist in the same way as the line does: through gesture and movement. The geometric circle not only stands for the bounded but also for the static; it exists on the plane of the paper but is lifeless in itself because it lacks movement (*ibid*). Ultimately, this leads to the notion that there are *a-priori* instances – because there appears to be no movement (that is, no intervention by an agent), the perfect geometric circle is seen as a ‘given’, as something that pre-exists; it is *a-priori*. As such, it leads to the extension of this perspective of the bounded, static and *a-priori* to an understanding of life itself.

The framework that Ingold (2011, p. 150) chooses to work within and that supports his study of lines is, in his words, that of “growth and development, or of self-renewal” – a processual epistemology. However, within this line study but also within this epistemology, periods of rest or pauses are identified as moments of tension. They are seen as negative and unsustainable moments, as tension always requires new movement; consequently, there are no actual moments of rest or pause, but just the tension of the creation of a new movement forward. The tension of the pause is characterised by Ingold (2011, p. 150) as a dotted line (figure c), which he perceives as lacking in movement because it is interrupted by pauses. The creation of a dotted line, for Ingold, has no fluidity and no continuation but comprises instead a set of broken movements; the movement towards the next dot is incidental and not connected to the line itself. As a result, the movement in the creation of a dot in a dotted line is a non-existent movement that is not part of the earlier movement that made the previous dot (*ibid*). Thus Ingold does not recognise the potential for a dotted

line to possess the same validity as the line itself.

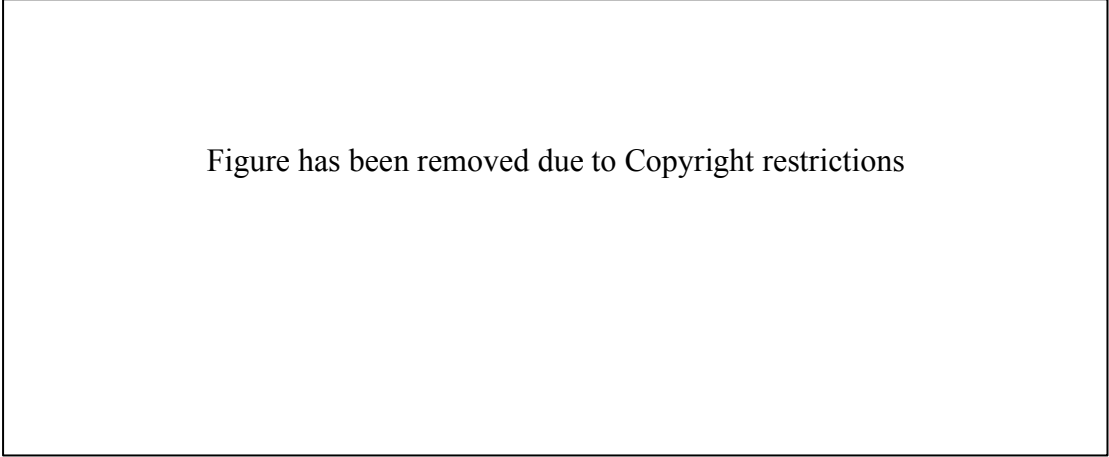


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Fig. c: A dotted line conceived without movement and a line conceived with movement (Ingold, 2011, p. 150)

However, in observing lines from this perspective, if only for the purpose of creating an analogy, Ingold 1) reduces the activity of drawing to the inscription of movement, which has epistemological consequences because 2) process becomes impaired by linearity and continuity. Drawing (as in the creation of a line) is a matter of presenting a given movement; however, if movement only exists in the gestures of hand drawing, then movement itself is seen as something that can only be the outcome or expression of a physical, ‘real’ activity. Nevertheless, if movement is detached from the idea of it as merely a physical activity, then, in terms of drawing, both the creation of a fluid circle and the creation of a geometric circle correspond to movement. These are necessarily different types of movement but both are equally important, not because they correspond to different epistemological positions, but precisely because, ontologically, they aspire to different outcomes, or evidence different aspects of the same life. The geometric circle can exist hand-in-hand with

the fluid one and they do not need to be observed as mutually exclusive. Just as the fluid circle points to a continuation of movement, but a movement that extends beyond the circle, thus creating a transient circle, so the geometric circle can also be seen to point to a continuation of movement, a movement that goes beyond the circle itself, creating a perpetual motion that is stabilised in the creation of a form – a movement that uses a form to support its own formation. Both circles have meanings: it is possible, with both, to encircle things and to see beyond the line or the form.

As with circles, a dotted line does not necessarily need to be posed, epistemologically, in opposition to a continuous line. A line can be discontinuous, with different intensities of movement, and still be part of the same movement. Further, if the dotted line were to be considered as a combination of several disrupted movements, would that necessarily be negative, of less importance and less expressive? Is such a line limited in its possibilities and affect? In a drawing, both kinds of lines are used; they are not necessarily exclusive, neither one should be privileged over the other. There are no higher instances of mark-making. There are no hierarchies between different kinds of lines, or between lines and other forms of expression such as dots. A drawing cannot be defined by the combination of lines that comprise it, not only because a drawing is not just made out of lines, but more importantly because a drawing is not about the marks that are created on paper through movement.

The absences, suggestions, desires and intentions, what is expressed and what is absent, left on hold or even stopped, all have the same importance, all have affect. In Ingold's *Looking for Lines in Nature* (2012), there is an emerging sense that a drawing cannot be defined by a certain kind of line, since it contains multiple lines. However, Ingold only recognises the existence of 'animated forces' in the line,

instead of seeing the line as a part of a process – the process of drawing (the result of a meshwork of elements) – that, as a whole, is an expression of these animated forces. Thus even for the purposes of analogy, the activity of drawing should not be simplified, not only for the sake of drawing itself, but also for the sake of the other elements in the process. The implication of this simplification is that it limits an epistemology driven by process to an infinite and continuous ‘line’ that denies the existence of disruptions, breaks and pauses, including the ultimate break of death. Also, the simplification of drawing through the establishment of a category division between physical – hand-drawn – and abstract – geometric – drawings leads to the perpetuation of the division between the physical or ‘real’ and the abstract or conceptual.

An understanding of drawing that incorporates both physical/‘real’ and abstract/conceptual dimensions is discussed in previous work by the author of this thesis (see *Disclosing Space: Order and Mediation From Hand-Drawn Scientific Illustration to Geometry* (Appendix A) and *Earth-Sky Cosmologies: A Reflection on Cosmology Through Human Practices (Part I)* (Appendix B)). Seen through this perspective, drawing is not just the inscription of movement and life through lines, but is also an enacted performance that exists as the expression of an interaction between what Foucault ([1966] 2002) identifies as the ‘encoded eye’, ‘reflexive knowledge’ and the experience of order in its multiple modes. This is because, in a drawing, abstract, conceptual processes exist alongside physical, material ones, and thus it cannot be categorised as being either expressive with movement, therefore alive, or abstract, conceptual and static, therefore dead. For the same reason, a drawing is not a representational activity, but a non-representational one. The drawing of a line, like that in figure a, is also an abstract, conceptual process, while the drawing in figure b is

equally filled with unlimited movement and life.

The foregoing arguments, discussed using the analogy of drawing, can be further developed in terms of the points made in the first part of the chapter – particularly those concerning the distinction between space and place – through a consideration of map-making. The implications of a limited approach to drawing are reflected in a similar approach to the map. For Ingold (2011), a map is illustrative of the modernist epistemology as it upholds the unsustainable position that places can be observed as dots on its surface. In order to show why transforming a place into a dot is problematic, Ingold draws from nomadic understandings of place, movement and life, as these are often contrasted with Western ways of living and of perceiving the world.

According to Ingold, nomadic peoples carry a process epistemology in their way of living. Such ways of life are set within an idea of inhabiting the world that arises from their practical and daily interaction with the environment, informing their perspective of the world as co-constituted (Ingold, 2011, pp. 149-152). The inhabited place, the home, is not defined by a physical site or a set of physical sites but through a sense-construction that derives from their everyday inhabitation. Observing the perspective of a people that have a way of inhabiting that requires extensive, continuous movement encourages an understanding of the inhabited place as something that is also extensive and processual, that feels unlimited and boundless, and that therefore can exist everywhere (*ibid*). On the other hand, to say that someone lives everywhere, in a Western epistemology, would be inconceivable, as that would equate to the idea of living nowhere. For Ingold, the nomadic perspective of ‘everywhere’ is distinct from that of ‘nowhere’; *de facto*, it is in opposition to nowhere. The ‘nowhere’ is seen as another dimension that hovers over the ‘real’

world of the everyday as a rationalisation and abstraction. As a result, ‘nowhere’ is a non-existent position that can only come into being with a perspective of inhabitation that is detached from practical, everyday life – a perspective that is abstracted instead of being grounded (*ibid*). According to Ingold, ‘nowhere’ equals space, while ‘everywhere’ is place. As noted earlier, this corresponds to the abstract space of modern epistemology, which in this case, is able to transform ‘everywhere’ into ‘nowhere’, and thus unite them. For Ingold, the Western notion of inhabitation is one that is bound to a specific site on the surface of the Earth, a site that is occupied, delimited and therefore can be circled geometrically on a map. Consequently, in Western societies, the term ‘everywhere’ is conflated with the term ‘nowhere’ because we can only live within bounded sites, and neither term can be constricted into a site that can be represented on a map. This creates tension as both ‘everywhere’ and ‘nowhere’ become empty entities that cannot be lived in because they cannot be localised and pinned down representationally.

But does the movement characteristic of nomads constitute the only way in which one can conceive of inhabitation, of a home, as being everywhere? Does one need to be a nomad in order to understand the idea, even to feel that one can live, or lives, everywhere? If the answer is no, then the problem, the tension, does not come down from the need for Western civilisation to understand inhabitation as situated, or as the marking of a dot on a map. What emerges through asking such questions is the necessity to assess the equation of site with place (the distinction between a physical location – site – and the quality of the experience of inhabiting that location – place). Place and site are two distinct concepts: place, on the one hand, can be understood as a meshwork of lines of inhabitation, the constant qualitative construction of a sense of belonging out of an interaction with a multiplicity of factors, as exemplified by the

nomad. Site, on the other hand, is a physical location on the surface of the Earth. The fact that we can distinguish between these two notions does not mean that they have distinct and separate existences; rather, the two seemingly distinct concepts have both emerged from the process of interaction with the environment and refer to distinguishable parts of that process. As such, each of these notions can be (either independently or in their interrelationship) depicted and marked on a map. Consequently, when using indeterminate concepts like ‘everywhere’ and ‘nowhere’, we should consider the specific interaction between the concepts of place and site at the moment of use, as there are multiple correlations between them. For example, in saying that he/she lives everywhere, the nomad is most probably referring not to actually living everywhere, but to a sense of possibility given by a specific understanding of life that is built into everyday experience. The idea that one’s place is everywhere still derives from the inhabitation of a specific site or sites, which is not the same as the action of physically inhabiting every single existing site on the surface of the Earth. In parallel, as the term ‘everywhere’ can be understood either through place or site, so ‘nowhere’ can also be understood through place or site. If ‘nowhere’ in terms of site is seemingly impossible, in terms of place it is plausible that someone feels that they live nowhere; that they have no place, no home. However, if both terms can be meaningful, how do the two become conflated, giving rise to the idea that neither of them can be pinned down on a map?

As discussed above, Ingold, in presenting the distinct epistemologies of nomads and Westerners, refers to the map in order to reveal the incongruities of Western thought, as the map is exemplary of a Western abstract epistemology. But what is a map? Ingold, despite a lack of clarity about which kind of map he is referring to, seems to be using the example of a cartographic map: a bi-dimensional

surface that stands for the flattened surface of the Earth, on which locations are inscribed. The depictions of a surface on another surface might seem to have a direct reciprocity, as if the surface of the Earth had been compressed into the bi-dimensionality of the paper, and as a consequence the map is seen as an exact depiction of the surface of the Earth, a representation that stands for the ‘real’ thing. From this perspective, a map could be said to be a scientific drawing, in the sense of the belief in the possibility of depicting things objectively, without any subjective intervention, as if the object had chosen to present itself through the form of a drawing. However, in a map, as with scientific drawings, there is no direct reciprocity between the drawing and the depicted object, as each constitute their own realm. This is a realm that is not representational but is multi-layered – what this thesis calls a ‘diagram’. A diagram, like a drawing, is the making visible of multiple structures: an enacted, materialised outcome of multiple experiences of order through the interaction between physical and conceptual dimensions (the idea of the diagram will be discussed in more depth in the second part of this thesis).

Following the framework of the diagram, the map can then be described as a bi-dimensional surface on which is inscribed a multi-dimensional realm or set of realities. The referent elements are flattened or displaced into another realm through a process of abstraction, in which symbols and signs do not bear a direct equivalence to the referent. A cartographic map, specifically, combines the geometric flattening of the surface of the Earth with a multitude of symbols and signs that address a multiplicity of things (the actual and potential interrelations among them), but also a diversity of dimensions or realities that, once inscribed, open up layers of discourse. However, Ingold seems to disregard the interplay between abstraction and action (drawing/inscription) that enables and empowers a multiplicity of dimensions and

realities to cohere on a map. Instead, he assumes that neither ‘everywhere’ nor ‘nowhere’ (in whichever combination of the notions of place and site) can be inscribed on a map, but only physical locations. As such, for instance, the physical ‘everywhere’ (all possible existing sites) would be tantamount to the entirety of the map, which would be pointless. It would also be pointless to depict a physical ‘nowhere’ (a non-existing site) on a map.

Nonetheless, if what is being inscribed on a map is either imaginary or potential, everywhere or nowhere, then there are no possible constraints. If the flattening of the Earth is detached from the blank surface of the inscription, then the blank surface opens itself up to other inscriptions, to other layers, realms and realities, even to the possibility of inscribing the physical ‘everywhere’ and the physical ‘nowhere’. Yet the map even goes beyond this, allowing further inscriptions, as the every-site and no-site can be related with the every-place and no-place – and not only with each other, but also with other dimensions, realms and realities. Consequently, the tension deriving from the depiction of everywhere and nowhere on a map only seems to be possible if *where* is observed as a place instead of a site, while being inscribed on a map as a site instead of a place – but this results in incongruence. In conclusion, the conflation of everywhere and nowhere can only take place 1) if it derives from the misleading term *where*, by which place and site are not seen as distinct notions (although they are related), and 2) if a map is seen as a one-dimensional and reciprocal representation of a single reality, instead of a non-representational activity of multiple realities.

In order to understand Ingold’s resistance to the map we need to go back to the discussion of the circle and the line. As seen earlier, Ingold tends to privilege an understanding of the line as a linear process, disregarding pauses, breaks and

discontinuity. The tension that Ingold observes in the pauses and breaks of a dotted line, or in the bounded and abstract geometric circle, are recognisable in his work in the tension between two different types of structural frameworks: the meshwork and the network. For Ingold (2011, 2012), a network is a kind of structural framework that aims to create points of connection between elements; thus the elements are seen as static and lifeless. The notion of the meshwork, on the other hand, provides a structural framework in which each existing thing is a line, with a movement that flows and grows, becoming at certain moments entangled with other lines and creating knots (Ingold, 2011, 2012). Consequently, in the meshwork, the direction, shape and texture of a line is affected by such entanglements and interactions, in distinction to the network, where each element is a dot which is separate and different from the line that connects it to another dot. As a result, in the meshwork – and again in distinction to the network – there is no room for breaks, ruptures, cuts, pauses or disruptions; it is a continuous, infinite process of growth (Ingold, 2011, p. 150).

If the tension between the network and the meshwork is observed through the discussion in the first part of the chapter concerning the tension between the physical or ‘real’ and the abstract or conceptual, then the meshwork is associated with the animated everyday, as characterised by nomadic peoples, and the network with the lifeless, abstract and rational realm of Western civilisation. Consequently, the privileging of the meshwork over the network emerges from the difficulties of considering abstract thought in relation to everyday life. The epistemology of the nomad, whose path is a continuous process of a “practical understanding of the life-world” (*ibid*, p. 154) – that is, the meshwork – lacks the dimensions of abstract, conceptual thought of Western civilisation, as well as the discontinuous, the static and the lifeless, which are also part of the process of living.

Thus it is necessary to have an understanding of the development of the interaction between the abstract or conceptual and everyday, physical ‘reality’ when creating structural frameworks. The idea of the integration of the network and the meshwork is fundamental to the perspective of this thesis, as thinking solely through continuous, uninterrupted lines hinders the construction of a disconnected reality; in other words, the possibility that coexisting multi-layered realities are not necessarily always connected as they do not emerge from a continuous, infinite, single process. The integration of the network and the meshwork can thus be realised in the map as a diagram. From the paradoxical and inexplicable to the identification of patterns and categories, everything becomes integrated and potentially relatable. How, then, can the network and the meshwork, as structural frameworks, be related to an ontology of space?

Space, topologies and structures

In using the meshwork and the network as structural frameworks (or as systems of knowledge), epistemology and ontology become deeply connected, as both the meshwork and the network also exist as outcomes and structures of two different ontologies. The association of the meshwork with the relationship between organism and environment provides a framework in which to observe them as co-constructed and continuously undergoing change. As both organism and environment are not restricted to a biological, physical existence alone, but also have social, cultural and

imaginary dimensions, the meshwork provides a way of understanding how things come into being. This is a distinct ontological position from that of the network, which aims at understanding what something is in terms of a system of relations in which it can be compared with similar entities. An ontology that is based on the idea that entities exist independently of their environment, or can be abstracted from it, allows their displacement from their constitutive framework in order to compare them with other entities that might be similar. Ultimately, the notion of the network creates the logic of the container, as discussed in the first part of the chapter, in which people are receivers of knowledge, which they then pass down to another receiver.

Therefore, and most importantly for this thesis, the meshwork differentiates itself from the network through its inseparability from the environment. An entity cannot be accounted for outside its environment because the environment is part of what it is. As a result, the ontology of something, or what something is, is apprehended by learning how it came to exist in a certain place, and consequently its ontology is inseparable from the ontology of the environment. Furthermore, in thinking of an ontology of the environment, it is not possible to detach it from the notion of place, landscape and an ontology of space (as seen in the discussions in both the first and second parts of this chapter). This correlation is particularly evident, as Ingold reveals, in the conception of the everyday, physical, ‘real’ side of the ontology of space.

Despite the importance of the idea of the meshwork to thinking through the ontology of space in its everyday, physical, ‘real’ dimension, the full conceptualisation of space can only be complete with the integration of its abstract, conceptual dimension; that is, the integration of the network and the meshwork as part of the same ontology or as part of the ontology of space. However, despite Ingold’s

recognition that both network and meshwork have a place, his presentation and defence of the meshwork is achieved only through setting it in opposition to the network. He sees these as separate concepts when in fact they work together; they simply do different things. For Ingold, the identification of a structure is deeply related to epistemology, as structures express and reflect a direct relation with the practices with which they are associated and for which they stand. A structure, he states, is an orthogonal grid in which there are vertical and lateral lines:

[T]o the laterally integrated geography of locations there corresponds a vertically integrated classification of the things found in them. The former is held together by chains or networks of point-to-point connections, the latter by the taxonomic aggregations and divisions of the database. (Ingold, 2011, p. 154)

Ingold (2011, p. 154) argues that this orthogonality allows us to gain some knowledge, but he says there is also another kind of knowledge that does not follow this grid and cannot be encapsulated by it: the knowledge of the inhabited or the meshwork. The activities of a way of being, of living practices, are translated from the marks and traces they leave behind, leading to a particular structural framework. Consequently, structures are not a means of researching – a research device – or a way of observing and testing ideas and thought experiments, but a direct expression of a way of being. As such, he believes the network and the meshwork possess distinct epistemological frameworks.

A different position, however, can be found in the work of Mol and Law. In *Regions, Networks and Fluids: Anaemia and Social Topology* (1994), they accept the coexistence and productivity of these distinct positions, but they do not describe them as opposing one another. As these authors demonstrate, different structural

frameworks provide different answers to either different concerns or to the same concern, and as such, different questions should be posed to each structural framework. Each framework is therefore seen as representing a distinct approach to different dimensions of the same thing. This perspective helps alleviate the tension generated by observing the network and the meshwork as opposed epistemological and ontological positions, and opens up the possibility of different structural frameworks. The creation of such an opportunity is fundamental to a discussion of the ontology of space, given the interaction between structures and the ontology of space (discussed earlier), as well as providing a framework in which to think of space productively. This thesis therefore argues for an ontology of space in which, while recognising the inseparability (due to their co-construction) of organism and environment, it is nevertheless still possible, as part of the process of exploring the unknown dimensions of the entity or organism (and also of the environment), to compare it with other entities that do not arise within the same environment.

Mol and Law (1994) argue for the idea that sociological space is topological; however, as there are multiple kinds of topologies, there are also multiple types of social space. In taking this position they show, on the one hand, a possible relationship between physical space and conceptual space, and on the other, the importance of structures to the apprehension of the ontology of space. A connection between structures and space can be established through the notion of topology (borrowed from mathematics). A branch of mathematics that they define as “[a field] that doesn’t localize objects in terms of a given set of coordinates. Instead, it articulates *different rules for localizing* in a *variety of coordinate systems*” (Mol and Law, 1994, p. 643). This opens up the traditional grid of X, Y, Z to a multiplicity and variability that otherwise could not be accounted for. The multiplicity and variety

these mathematical spatial structures reveal, over and above the traditional ones, provide Mol and Law with a platform on which multiple topologies can be used as a model, or research device, to analyse and re-think social spaces. According to Mol and Law, there are multiple ways in which space is used within the social sciences; however, it is generally used to ‘frame’ differences and similarities, creating a grid through which these can be read. As such, topological structures do not stand for a specific epistemology but are research devices that work through analogy. These are not structures that impose a certain way of thinking; they are simply guides for thought experiments. Not only can things change and move, but the guide itself can also assume multiple forms and characteristics. In their use of structures, Mol and Law show the different layers in which the physical/‘real’ and the abstract/conceptual are related. In other words, they show that there are multiple ways in which the physical/‘real’ and the abstract/conceptual interact and are implicated in each other’s co-constitution.

In their work, *Regions, Networks and Fluids: Anaemia and Social Topology* (1994), Mol and Law present what could be described as a two-way study: two different objects (anaemia and social topology) are analysed through a study of their interaction with a common denominator. On one layer, there is anaemia, as seen through the perspective of social spaces, and on another layer, there is the notion of social spaces, explored through the methodological device of topology. However, these two layers are interrelated and inform each other throughout the study as they unfold through a common element: the blood. At the layer of the study of anaemia, blood is part of the subject itself as anaemia is a blood disorder; however, the different understandings of this disorder necessitate the exploration of multiple structures of interaction. Thus an ontology of blood (as seen through anaemia) necessitates in turn

a topological exploration. At the layer of re-thinking social spaces, the ontology of blood informs the conceptualisation of three different topologies, importantly that of fluidity. These three topologies are then translated into different kinds of social spaces (regional space, network space and fluid space). Thus the ontology of blood, by enabling the exploration of different topologies, informs the re-conceptualisation of social space. By exploring a common denominator – blood – Mol and Law construct a multi-layered study that applies on different, multiple levels of interactions between the physical or ‘real’ and the abstract or conceptual.

According to Mol and Law (1994, p. 643), two kinds of topologies are traditionally used in the social sciences. The first is the traditional physical/‘real’ topology of the land, the site, which is determined by boundaries and in which certain events take place. This first kind of spatial topology creates its boundaries by distinguishing ‘here’ from ‘there’ – what Mol and Law (1994, p. 646) call a ‘regional topology’ – and this is used to enquire about the fabrication of the region and its boundaries, or “how regions are averaged and fixed” (*ibid*, p. 663). The second topology is the place of relations, the network, in which the tangible and intangible distances between the various elements are measured (*ibid*). This second kind of spatial topology therefore moves across boundaries to establish relationships. The network space says that although regions (the first kind of topology) exist, they are not intrinsic, nor do they exist by themselves, as a given, but they are in fact informed by networks (*ibid*, pp. 648-649). These networks, corresponding to the second topology, are built from a multiplicity of elements, ranging from words and gestures to machines, and their relations are not driven by the constitution of meaning but by their co-constitution (*ibid*, p. 649). As such, the network is not informed by the notion of physical proximity and metric distance, but by the concepts of similitude and

difference, formal and informal. As a result, the network has a coherence that is independent of its location in different regions and so allows these different regions to come together. However, a network, though not restricted by boundaries, is fixed, as “its elements do not change and the relationship between them is not altered” (*ibid*, p. 649); the elements have invariable connections (*ibid*, p. 663). A problem then emerges, as the network requires the integrity of its elements, independently of its locations, and this may not always be possible to secure (*ibid*, p. 652). A network therefore cannot fully account for the changes in the elements and in the relationships between them, particularly when it is dislocated (*ibid*, p. 655).

The limitations of the network can sometimes be solved by creating new networks, which, when interwoven with the old, can be made to account for mismatches. However, Mol and Law (1994, p. 658) suggest a different path – a path that is informed by structures, by “*variation without boundaries and transformation without discontinuity*”. This suggests something like a fluid. In this way, taking a position that there are multiple kinds of topological spaces, they introduce the idea of fluid space as a third topology. In this third topological space, the distances within the structure are not fixed; neither do they always connect the same elements:

[N]either boundaries nor relations mark the difference between one place and another. Instead, sometimes boundaries come and go, allow leakage or disappear altogether, while relations transform themselves without fracture. (Mol and Law, 1994, p. 643)

Thus fluid spaces account for invariant: transformation (*ibid*, p. 658).

According to Mol and Law (1994, p. 659), there are three main characteristics that make fluid space (the third topology) distinct from regional space (the first

topology) and network space (the second topology): the malleability of the boundary; the multiplicity of possible mixtures; and the robustness of the whole. The fluidity informs a transformational space in which boundaries cannot be determined because the elements that constitute fluid space are not stable in their definitions and meanings. These elements are inconstant, and it is not possible to distinguish stable differences or similarities between them that could determine either their identity or any kind of boundaries (*ibid*, p. 660). The indeterminacy and inconstancy of the elements that constitute fluid space therefore determine that the boundaries of this space are malleable in their form, thus overcoming the danger of breakage. However, the fact that its elements have such characteristics, also means that “it may or may not be possible to separate a fluid into its component parts [a]nd it may or may not be possible to mix these in with the components of another fluid” (*ibid*). But this also means that a fluid is not defined by any specific and determinate element, and thus any of its elements can be replaced or become superfluous. Consequently, there are multiple combinations and mixtures that can constitute fluid space. Finally, because the existence of fluid space as an integral whole is not dependent on any specific element, there is the possibility of continuous transformation without discontinuity: “There is no single strongpoint to be defended in order to preserve continuity” (*ibid*, p. 662). As such, fluid space is a robust whole, a thing in itself that, as a structure, is not informed by the unity of its elements but by the overall form of an entity that is flexible enough to keep its integrity despite the changeability of its constituent elements.

In terms of the argument of this thesis, the importance of fluid space lies in the fact that it is able to combine continuity with discontinuity, movement with stasis, and in creating a consistent whole out of these dichotomies can overcome the problems

alluded to in the first part of the chapter when discussing the limitations of structures. For example, it is possible when watching a cloud or the flow of blood to observe how change depends on the way we look at things. Although blood is constantly flowing, it is still possible to determine patterns in it – an indefinite number of patterns – and to momentarily fix a dimension of blood without restricting the understanding of it to a specific pattern. Similarly, a cloud can become denser at a certain moment, and in the next, more rarefied; its shape constantly changes with the wind or the different currents of air. Despite these changes, it is still possible to see and play with the shape of one particular cloud: it may turn from white to grey and rain may fall, it may lose its boundaries and become indistinguishable from the sky, merging with other clouds; however, we can still pursue it and imagine it as the same cloud, as the cloud that we have defined and delimited. In this way, our cloud exists as a unified presence and will appear to last as such even though it is constantly in motion, constantly changing. If this approach to structures – as things that are diversely informed and follow different kinds of rules and norms – is added to the idea that they are detached from a representational model (as discussed earlier in Ingold's notion of the meshwork), then structures can become an important device through which to analyse and explore the ontology of space.

Mol and Law (1994, p. 663) conclude their study by highlighting the fact that these three topologies “have *intricate relations*. They co-exist”, and thus fluid topologies are not better than the other two topologies or any other kind of topology. In rejecting the idea of a hierarchy between these structures, Mol and Law open the way to a perspective in which all kinds of structures can be integrated and used to observe aspects of a reality that is itself multi-dimensional. However, Mol and Law apply, conceive and use these structures or topologies without any discussion on how

they are a result of understandings of space that allow the combination of physical/‘real’ space with abstract/conceptual space. In their work, they undertake this conceptualisation in relation to blood, but not in relation to space.

Mol and Law therefore do not conceptualise the ontology of space itself, as the notion of topology is conflated with that of space. However, a topology is not only a set of elements but also the rules that determine the relationships between those elements. Thus a topology is a structure, and a structure, although related to space, is not space. Many notions have been associated with space, as discussed in the first part of the chapter, such as locations, regions, distance, boundaries, connections, topologies, but how do all these constitute space? Using Algra’s three-fold categorisation of physical space, it is possible to recognise *type c* in the regional space, *type b* in the network space, and *type a* in the fluid space. But overriding the composition of each structure or each kind of space is the mathematical notion of topology, and this is a relational type of space, or *type b*. The topologies that Mol and Law use are multiple variants of a single understanding of space – a relational understanding – even if each of these topologies are themselves guided by other types of space. So when using the word ‘space’ to refer to different structures, Mol and Law are not conceptualising the ontology of space, but multiple formats of the same kind of space. The multiplicity of spaces therefore comes from the different forms that are given to the same understanding of space. Nonetheless, they provide, within that variety, a panoply of ways in which the realm of the physical, the ‘real’, the everyday and that of the abstract and conceptual can be integrated.

Conclusion

The literature reveals that space in its abstract and physical dimensions is an undefinable concept that scholars have been struggling with for a long time. As Algra puts it:

The problem of space has not yet stopped worrying philosophers. The fact that space is on the one hand an ineliminable part of the furniture of the physical world – or at least an ineliminable aspect of the way in which we experience the world – whereas on the other hand it proves extremely difficult to reach a consensus about what it actually is, has fascinated many thinkers from the times of Parmenides to the present day. (Algra, 1994, p. 2)

Moreover, these conclusions can also lead us into thinking that the perception of space *per se* does not exist and, as a consequence, to begin to conceptualise space as something that is not a specific and determined entity but a multiplicity of entities, and therefore that is ambiguous, fuzzy and not a totality, despite the possibility of it possessing the sense of a totality. As a result, what becomes interesting is the exploration and analysis of this concept in the duality and conflict, discrepancies and disruption of these two possibilities of space: physical or abstract. From the perspective of this thesis, this demands re-thinking the interactions between abstract space and physical space since the idea of them as co-dependent is fundamental to a discussion on the ontology of space. In this context, the work of Ingold, particularly his discussion of the line, hints at a framework outside the representational, opening up a discussion on the ontology of space that does not rely on the separation of the abstract and the physical – despite Ingold's own dismissal of the notion of space due to his perception of it as abstract and detached from everyday life. Meanwhile,

Massey's conceptualisation of space reveals the importance of structures to reflections on the ontology of space. In addition, Mol and Law, by addressing positively the potential interactions between the physical and the abstract within structures, open the way to thinking anew about the relationship between space and structures. In this way, they allow for the possibility of transforming space into an active methodological device. By combining Ingold's take on lines and the everyday with Massey's search for a relational structure and Mol and Law's explorations with topologies, the diagram emerges as a possible way of overcoming the void between the physical and the abstract. It does this by combining the practice of drawing with structures. The interaction between thinking about the ontology of space and thinking about structures through the notion of the diagram seems to be a productive path to follow. By re-thinking space from this perspective, it then becomes an element with a methodological purchase at the level of disciplinary epistemologies.

In conclusion, this overview of disciplinary approaches to space has revealed that the concept is only partially realised in disciplines that work with and through space (and/or the concept of space). The lack of a consensual understanding, however, is a manifestation of something deeper than a language/meaning problem, as the problematic is the very entity of space itself. Chapter Two will expose in greater detail the lack of consensus and understanding, affirming that space is not fully knowable and, in its entirety, escapes description. Nonetheless, this thesis argues, most notably in its second part, that aesthetics and art might alleviate the tension and potentially access space through a sensuous, experiential and imaginative exploration. It proposes that this can be achieved by a convergence of conceptual and physical accounts of space, particularly through their recovery in visual, diagrammatic, structures. This enquiry into the characteristics of what makes us conceive of space as

either physical or abstract is intended to release a provisional understanding of space – an understanding that neither brings together nor separates but steps outside this distinction altogether. It is precisely by working between the physical and the abstract, with the uncertainties that make it possible to conceive of space as both, and by acknowledging both the interconnections and the contradictions and discrepancies between these two understandings, that it becomes possible to enquire into the ontology of space.

Chapter Two

Space Through *Khora*:

The Possibility of Space as a Methodological Device

The previous chapter discussed how space has been understood from the point of view of the Earth; that is, it looked at the everyday perspective of space guided by disciplines such as geography, anthropology and sociology. It observed how contemporary thinkers have moved away from a modernist epistemology towards a paradigm in which humanity is not separate from the Earth (the inhabited environment) but both are co-constructed, each being dependent on and an agent in the other's formation, and it discussed the impact of this perspective on conceptions of space, particularly in relation to structure. The following chapter develops the argument by dismantling the dichotomy between space and Earth: the separation of Earth, where we dwell, from outer space, where the sky and cosmos exist. It shows how the relation of space to structures spans different modalities of thought that are not restricted by this Earth-sky split.

An historical perspective of the emergence of the word 'cosmos', particularly in relation to cosmology, reveals a further dissociation apparent in the perception of space: the dichotomy between that which is known and with which we interact (Earth) and that which is unreachable and unknowable (the sky). In this thesis, the term 'cosmology' is understood to represent a philosophical system that explains how the world has come into being, bringing together the physical, cosmogonic dimension (whether logical or mythological) and the metaphysical. The way these dimensions interact reveals the rules or norms that guide how human beings should live. An

analysis of cosmology therefore clarifies the Earth-sky dichotomy but also brings to light another dimension that has particular significance for a discussion on the ontology of space: the idea of the unknown and unknowable. It reveals that the sky has not only been associated with the idea of the untouchable, unreachable and unknown, but it is similarly related to the idea of space.

An understanding of the relationship between the unknown and space is an important theme of this thesis: it raises the question of whether space is unreachable and unknowable, and if the answer is ‘yes’, how it is so. The previous chapter pointed to a deficit in the understanding of the relationship between physical space and conceptual, abstract, metaphysical space, and how, despite the everyday use of the word, there is no consensus on the nature of space. This chapter intends to explore the possibility that not only do we not know what space is or how to use it, but also that space itself might be a concept that expresses the unknowable. The idea of space as an unreachable dimension, impossible to apprehend, will be more closely explored by way of the key concepts of Plato’s cosmological work, the *Timaeus*. This work will be used throughout the chapter as a framework for a discussion on the different dimensions and implications of this question, particularly in relation to the interactions between the idea of the *arche* (or first cause) and the emergence of a third element within the Platonic Theory of Forms, *khora*.⁷

The *Timaeus* is recognised as a work that has played a major role within European Christianity, but it has also recently assumed an important place in theories about the limitations of language, particularly the idea of ‘unutterability’, and in the development of rhetorical strategies. The different interpretations of *khora* allow this

⁷ A discussion of the meaning of this term is developed throughout the chapter.

thesis to discuss not only the possibility but also the limits of using the concept of space as a methodological device. This dimension is specifically approached in the second part of the chapter through the work of Rickert, which brings together within the sphere of invention the work of contemporary scholars such as Jacques Derrida, Julie Kristeva and Gregory Ulmer. The difficulties of conceiving of space as a methodological device, given the impossibility of fully reaching and materialising space (and Platos's concept '*khora*') is further analysed through a study of the collaborative work of philosopher Jacques Derrida and architect Peter Eisenman.

However, in this chapter, and in the thesis as a whole, the stress is not on understanding *khora* in its spatial dimension – *khora as space* – in order to intervene in the discussion on whether the concept can be identified as space or not, but to speculatively explore the ontology of space through the multiple perspectives on and interpretations of *khora* that have emerged over time, and thus to understand space *through khora*. This does not necessarily imply a 'charitable' rational reconstruction of past theories (as Algra (1994, p. 74) puts it) but, rather, a dialogue with them from the position that it is not possible to fully account for the past.⁸ As such, this perspective generates a way of deepening the understanding of the ontology of space and furthering the exploration of its potential as a methodological device. The framework provided by Plato's *khora* (and by contemporary discussions on the concept) opens the way for an investigation into the idea of space as a conundrum, a paradoxical and unknowable realm, based on the understanding that all conceptualisations of space are related and simply present different dimensions or facets of the same thing – one, however, that cannot be identified as a single entity.

⁸ This position will be particularly addressed in Chapter Three by observing contemporary discussions on historiographic positions towards the past, history and historical narration.

Cosmological Aspects of Space

Cosmology and the displacement of the unknown to space

According to philosopher and philologist Remi Brague in his work, *Wisdom of the World* (2003), the word ‘cosmology’ – as opposed to ‘cosmography’ and ‘cosmogony’⁹ – has its origins in the mid-seventeenth century, when it arose as a description of the accounts, particularly historical ones, of Man’s existence in the world. However, its first recorded use as a working concept within a discipline dates from 18th-century German philosophy. The fact that its emergence coincided with the coming of the modern age is telling: it reveals the underlying conditions that guided the formation of the term and its discipline. Brague (2003, p. 4) alerts us to the fact that cosmology, “as is implied by the word *logos*, is not that of a simple discourse, but a reflection on the nature of the world that as a world must be expressed”. As such, cosmology entails that in order to consider what the world is, it is necessary that human beings recognise their own existence and observe themselves as beings in the world. The existence of a human subject who is separate from the object of reflection is a necessary condition for the conceptualisation of the world. As a consequence, cosmology becomes a discourse not only of an ontological but also of an anthropological order, as it primarily concerns the relationship between Man and the world. The rise of ‘Man as subject’, and the consequent separation of Man from the world, was fundamental to the emergence of cosmology alongside modernity (Brague,

⁹ Brague (2003, p. 3) defines cosmography as “the drawing or description (*graphein*) of the world as it appears at a given moment”, and cosmogony as “the story of the emergence of things or, perhaps, the story of cosmogenesis ... [the explanation of] how things come to form (*gignesthai*) the world as we know it, in the structure in which we find it today”.

2003); however, as Brague remarks, such a separation has a longer history, in which the emergence of the word 'cosmos' itself played a fundamental role.

The foundations of cosmology, as well as its limits, lie in the origins of the word 'cosmos' in Greek civilisation when it was primarily related to the word 'world' and only secondarily associated with the sky. Brague (2003) provides evidence that prior to ancient Greek civilisation a term to describe the world as the totality of all existing things did not exist. He explains such an absence by reference to the thought of Brunner-Traut (2000), which associates the non-existence of such a concept with the fact that although phenomena were observed, understood, explained and integrated into an overall system, this understanding did not require that human beings perceive the system as a distinct unity, as if observed from a single exterior perspective. Consequently, such an independent structure could neither be conceptualised nor named. According to Brague (2003), however, the observation of an independent world is fundamental to the conceptualisation of the whole as a unity, as it is first necessary to see the entirety of that unity from the outside. More precisely, the whole only becomes such if it is conceived as an object that is separate from the thinking subject. The concept of the 'world' could only emerge with the shift of perspective that allowed an understanding of human beings as distinct from the rest of the totality. This shift came with the ancient Greeks, and the word chosen to express the unity of the whole, '*kosmos*', is one that reflects the idea that the entirety of things needs an organising structure – the word itself meant 'harmonious order'. It is thus possible to conclude from Brague's work that the word 'world' was born of the need to designate a possible model for a structure or order in which the entirety of things could be organised and observed as a unity. As a consequence, the emergence of the word 'cosmos', the 'ordered world', goes hand-in-hand with the creation of the

dichotomies of the inner and the outer, and of Man and the world.

Brague (2003) argues that the transformation of the idea of an ordered whole, the cosmos, into a synonym for the world depended on two fundamental ideas that came into being during Socrates' time. The first, mentioned above, was the separation of human beings from the natural world – that is, from the entirety of things that constitute the whole. The second was the belief that nature was unknowable and consequently unreachable. These two ideas occurred when Socrates observed that it was only possible to know and discuss Man in his ethical dimension, and therefore the domain of physics and nature were truly unknowable as they were not subject to humanity's moral laws. It is important to note, as Brague (2003, p. 29) points out, that the Socratic understanding broke from the dominant paradigm whereby "[t]he Greeks believed that the world and its human subjects were primarily connected through the existence of laws that governed them all, and that those laws were of a moral nature". Such a transformation in belief created a chasm separating the laws of Man from those of the physical world, and ethics from physics and nature. The first outcome of this was a symbolic deferment of the world – the cosmos – to the sky. The physically distant sky came to symbolise the unreachable and consequently the unknowable (Brague, 2003), and as nature itself became unknowable, what once had been the immediate and perceptible domain of earthly, everyday phenomena became merged with the unreachable domain of the heavens. Nature and heavens, Earth and sky, were now part of the same domain. The second outcome was that Man became an entity that was independent of the whole – that is, of the world or cosmos, a world that existed symbolically in the heavens.

Nevertheless, it was only with Plato that the idea of the cosmos as the world (and the beginnings of cosmology) occurred – or more precisely, with his work, the

Timaeus. Brague (2003) regards the *Timaeus* as the first cosmological work written in the West because it represents the moment in which the world was first reflected upon and characterised as such. However, in order to present the world as a whole, Plato had to bridge the chasm Socrates had created and establish a relationship between human beings and the world (the cosmos), reconciling humanity with the ordered structure of the whole while still keeping them in separate domains. He achieved this by integrating morality into the structured order of the whole, introducing the idea of ‘good’ as the ruling principle of the cosmos (Brague, 2003; Cornford, [1937] 1997).

The *Timaeus*

In the *Timaeus*, divine regulatory deeds betray an inherent purpose: they are the fruit of the intelligible, ‘good’ design of a single Craftsman, bringing order to chaos. As such, the cosmos is presented as an hierarchical construction where things and beings mirror the prior realm of creation, albeit each time in a less and less perfect fashion as they become increasingly distanced from their ideal forms. In the *Timaeus*, therefore, Plato creates a macro-micro correspondence where both the physical and metaphysical realms are regulated by the same rational, harmonious rules, which are expressed through mathematics. Consequently, as the scholar of ancient philosophy Francis M. Cornford says:

... [t]rue morality is not a product of human evolution, still less the arbitrary enactment of human wills. It is an order and harmony of the soul; and the soul

itself is a counterpart, in miniature, of the soul of the world, which has an everlasting order and harmony of its own, instituted by reason. (Conford, [1937] 1997, p. 6)

The presence of this ‘world soul’ is reflected in the macro-micro correspondence within human beings, and this enables Man to acknowledge the cosmos; the human soul shares in the divinity of the world soul and, in so doing, partakes in the realms of both Being and Becoming, of ideal forms and their counterparts, the individual instances of these forms. Similarly, it also enables human beings to acknowledge the ideal society, because the world soul is also present in social organisation (Kavanaugh, 2007, p. 19). It can be said that the *Timaeus* contains the notion of a ‘distributed soul’, albeit present in differing degrees of perfection; however, the Platonic soul is more of an ideal pattern, a cosmic architectonic,¹⁰ perfectly ordered and harmonious, which in being “embodi[ed] in the world of instances” (Findlay, 2007, p. 161) assumes distorted shapes. The soul of each thing within the cosmos is an imperfect reproduction of the world soul.

Although, Plato bridged Socrates’ chasm in the *Timaeus* by presenting an ordered world that is regulated by an ideal pattern (the world soul), it was still necessary to define a system whereby the order and harmony of this world soul, manifest as ‘forms’, becomes the soul of ‘instances’ (for example, the human soul) within the realm of the sensible. If the microcosm of life on Earth is but an imperfect copy of a ‘macrocosmos’, a world soul, there must be laws determining this reproduction. The ambition of Plato’s cosmological work, therefore, is to present a system that explains how the rules of the cosmos operate in the pragmatic organisation of life on Earth, both at the level of the individual human being and at

¹⁰ The term is borrowed from Kavanaugh (2007).

the level of society. However, as seen above, Plato first had to solve the problem of the transformation of forms into instances and that meant it was necessary to address the primary cause that motivates this transformation. Plato says:

We must, then in my judgement, first make this distinction: what is that which is always real and has no becoming, and what is that which is always becoming and is never real. (Plato trs. in Cornford, [1937] 1997, p. 22)

If the static, unchanging and perfect world of forms is the beginning, how does this become the constantly changing realm of instances?

A cosmological work discussing the genesis of the world thus proved fundamental to observations concerning the idea of a world soul and its implications. As the world soul caused the world to be created as a ‘good’ world, a discussion of the world’s genesis – of the first cause that is also the necessary cause – provided the perfect metaphysical ground for an explanation of how forms become instances. The *Timaeus* is therefore a reflection on beginnings and origins, presented on different levels, using multiple strategies. Yet it also shows how a beginning is something indeterminate. Cosmology consequently becomes an inherently metaphysical enterprise. The ideas concerning the genesis of the transformation of forms into instances, and the way that good becomes present in the soul, are presented not only through the *Timaeus*’ cosmogenic argument (the content of the work), but also by means of its rhetorical structure and dialogic form.

The *Timaeus* as the search for the *arche*

From its very beginning the *Timaeus* is concerned with the problematic of beginnings. The dialogue opens with the continuation of a discussion that Socrates had begun on the previous day – thus even before it starts, it has already begun. Due to its chronology and subject matter, many scholars argue that the discussion in the *Timaeus* unrolls from that of Plato's earlier work, the *Republic*,¹¹ in which Socrates expounds his view of the ideal city. This city, however, had remained in the realm of ideas. Thus the problem that Plato has Socrates put to his three guests at the beginning of the *Timaeus*, after a brief recapitulation of the arguments of the day before, is how this ideal city can become a living reality. To understand the importance of this question it must be noted that the term 'city' refers not just to the city itself, as we would understand it nowadays, but to the city-state. The problem Socrates poses goes beyond the local and pragmatic; it is a question directed at Greek society. The city question exceeds itself, expanding to the domain of the state, and from there to the constitution of the cosmos, replicating the question of how forms become instances. The fundamental question of the transformation of forms into instances is therefore twofold: on the one hand, it begets a quest for the beginning, the first cause that makes the reproduction endure; on the other, it is a practical question of how to create a perfect civilisation, how to realise the ideal city in practice.

After setting the scene, the *Timaeus* follows with a concealed introduction to the overall problematic that the three guests are about to discuss and Socrates to

¹¹ The connection is not only at the level of the continuation of the argument, but is also a temporal one – the continuation of the action from the *Republic* to the *Timaeus*. It is a continuation not only in terms of the development of a theory, but also at the level of the themes under discussion.

receive.¹² It is presented through an account by Critias of the origins of Greek civilisation, foregrounding the mythological dimension that will later imbue the *Timaeus*. Critias highlights the idea that the Greeks have forgotten their origin; it can only be retrieved through the writings of the Egyptians: “The Egyptian priests found it necessary to recount to [Solon] the genealogy of the ‘first man’ because the Greeks had forgotten their own heritage” (Kavanaugh, 2007, p. 22).

According to Critias, due to the absence of written documents and their reliance on oral tradition, the Greeks continually forget their past and have to re-start over and over again, never reaching maturity as a civilisation, remaining like children (Kavanaugh, 2007, p. 23). Greece (that is, Athens) is cyclically re-born; it has multiple beginnings, and as a result, is constantly trapped within a process of Becoming, never attaining Being. This account of the birth of Greek society is a premonition of the kind of story that will be needed to account for the origin of the cosmos: later in the dialogue, the discussion turns to the idea that *Timaeus*’ account of the cosmos is also a ‘likely story’, a *mythos*, just like that of Critias, and this in turn will provide the paramount opening for Plato to intervene in the conjecture over the nature of the *arche*. The significance of Critias’ story is that it starts to clarify the kind of knowledge that the *mythos* represents in the context of Greek society.

As Kavanaugh (2007, p. 25) notes, “what is ‘unrecorded’ is considered ‘a true story’, recounting orally the true genealogy of the Greeks and the origin of the society based upon the law and first principles”. Critias tells us that it is not possible to know the true origin of the Greeks; however, because the narratives (the *mythos*) the

¹² This act is a premonition of the notion of *khora*, which is discussed later in the work. *Khora* therefore begins to be put in place from the beginning. But the concept is also embodied by Socrates, as Derrida ([1993] 1995, p. 109), Rickert (2007, p. 260) and Kavanaugh (2007, p. 28) highlight, both through this act and Socrates’ later absence from the dialogue.

ancestors passed down have been kept alive, their account not only of the genealogy of the gods, but also of the descendants of the gods (humanity), is believable. These narratives are not the same as the truth conveyed by the *logos*, but they hold plausibility as stories that have been kept alive generation after generation. Consequently, despite following another system, another kind of understanding, these stories are authentic because they are in contact with the origin, with divinity, and have the legitimacy of custom (Kavanaugh, 2007). However, they do not reveal how the Greeks can emerge from the loop of Becoming, how the ideal state can be achieved in practice.

Such is the concern of Socrates: after his presentation of the ideal city(-state), he wishes to see such a city(-state) in practice as he believes that this would represent a way of overcoming Greek civilisation's cycle of Becoming. In order to respond to Socrates' call, however, the discussion has to start at the very beginning, at the creation of the world. As a metaphysical enquiry presented in the form of a cosmology, the *Timaeus* approaches the problematic of beginnings as concerning the creation of order, of how chaos became an ordered cosmos. Given that the cosmos is ordered at its origin according to rules that structure it both as a thing in itself and as the total of all existing things, what is the relationship between the form and the instance, in terms of the genesis of the latter? The *Timaeus* is thus not so much a quest to define or discover the *arche* itself, but an attempt to reveal how it set in motion the genesis of the first instance, the cosmos, and all subsequent instances. The first guest to speak is Timaeus, a cosmologist, and so it falls to him to present the workings and formation of the world – the cosmos – and the *arche*.

Timaeus says that the cosmos is the work of a Craftsman, who has created it according to a perfect design. As such, it is the primordial instance, that which

necessarily constitutes the only instance of its form – the reason why there is only one world (Cornford, [1937] 1997). Throughout his life-work, Plato defined instances as belonging to the realm of the sensible, and as they are subject to change and consequently only accessible through the senses, they can never be truly known (Patterson, [2009] 2012; Kananaugh, 2007). As it is the primordial and most perfect instance, where all other instances exist and from which they derive, the cosmos is unique – but it is still part of the realm of instances. As the cosmos, the world, is subject to constant change, it is an impermanent entity, a Becoming. This Becoming, however, cannot be interpreted as a process of progressively drawing closer to the realm of forms until it ultimately reaches it, because this is not the ideal towards which the instance is evolving (Cornford, [1937] 1997). The Becoming represented by the cosmos should be understood as a process of transformation that is inherent to its nature as a copy, an imperfect and therefore ‘unstable’ thing that has become, that has a genesis. Yet, as Cornford argues, this genesis is not the product of a Maker, but of a metaphorical Craftsman, and this necessitates a re-evaluation of what both the *arche* and the Maker are.

According to Cornford ([1937] 1997), the world cannot have been created following a plan by an omnipotent and omniscient being because the Maker is not a literal figure but a metaphor, a placeholder, part of the construction of the *mythos* that, as a *mythos*, cannot be disclosed to the workings of the *logos* (or reason). The Maker, the Craftsman, *is* the ideal form – it is Being itself. The ontological status of the Craftsman negates the determination of a first cause in the genesis of the cosmos because, as Plato says in the *Timaeus*, existing entails a three-fold process of generation: Being, *khora* and Becoming (Cornford, [1937] 1997; Kavanaugh, 2007, p. 66). This process could possibly be told as a *mythos*, but the locus (in place and time)

of the *arche* is left open and unclear. If the process of genesis is seen as causal – that is, one in which forms dictate the nature of instances as properties – then the system, as Patterson ([2009] 2012) shows, would fall into regression as the forms would be self-exemplifying. However, if there is no first property dictating the instance but only something that represents the common element in a group of things, and whose existence is dependent upon the constitution of the group, then there is no regression (Patterson, [2009] 2012, p. 19). However an *arche* is still required for Being to generate Becoming. As such, in the *Timaeus*, the *arche* is conceived of not as the first cause of a linear sequence of cause and effect, but as a first or fundamental principle that guides the organisation of the structure but does not generate anything other than the rules of generation. It does not give birth to a sequence of events, it just sets the guidelines that inform the structure. As a result, although the cosmos came to be, was begun, it is difficult to determine the locus of its beginning, indicating instead an extended, indeterminate beginning without a start or end.

The beginning-without- apparent-beginning of the *Timaeus* alerts us to the fact that the beginning cannot be localised. As Rikert states,

[a] ‘beginning’ as a singular, locatable moment is missing; what emerges instead is a distribution (or matrix) of beginnings. The insinuation is that a beginning is but an idea materialised in rhetorical space and character (Rikert, 2007, p. 257)

The problematic of beginnings is mirrored or reproduced in the three new starts that Timaeus needs to make to tell his story. The beginning, or the lack of a location for a beginning, is thus solved through repetition, or as Derrida ([1993] 1995, p. 113) says, through *mise-en-abyme*, “a series of mythic fictions embedded mutually in each other”. The *arche* constitutes itself: encapsulating all possibilities, it repeats and

reveals what it already is – a beginning.

Another implication of the fact that the cosmos is an instance is the idea that, in being impermanent, it cannot be known; there can be no rational or immutable account of it. For Plato (as noted earlier) although instances exist, they are not real but illusory; only forms are real because they are everlasting and immutable. It is possible to give an unchanging, logical and therefore true account of forms; however, it is not possible to give a true account of an instance. As the cosmos concerns the realm of instances, Timaeus' account, like the story told by Critias, can only be a probable account. As such, the birth of Greek civilisation mirrors the birth of the cosmos, and the question of how the ideal city-state can be realised in practice is a dimension of the question of how instances are generated from forms; it is a way of reinforcing through a rhetorical strategy the macro-micro schema of the genesis of instances. It also represents the complexity of the process of formation: not only is the *arche* itself indeterminate, but what it gives origin to is also unknowable. Consequently, the place given to these two stories or mythical accounts in the dialogue is important. These are plausible mythical accounts, but they are not fictional,¹³ because – as opposed to fiction – myth can still be believed. The mythological is not tantamount to the fictional. However, in order to grasp the role of the mythological as representing a different method of understanding, Plato introduces the fundamental element of *khora* into the dialogue. This is something of a third kind or *genus* that stands alongside Being and Becoming at the *arche*, generating the cosmos, and it is known by means

¹³ The distinction between the mythical and the fictional is crucial to an understanding of the dialogue and its main elements: Being, Becoming and the third element, *khora*, which is introduced later, in the second beginning. The *Timaeus* is a mythical story, but it is not presented in opposition to science, because science, being an account of the physical world, cannot be true either. Therefore science is itself mythical.

of a ‘bastard’¹⁴ sort of reasoning. Thus *khora* becomes fundamental to Plato’s Theory of Forms, because if

the body of the universe is not reduced by Plato to mere extension, but contains motions and active powers which are not instituted by the divine Reason and are perpetually producing undesirable effects (Cornford, [1937] 1997, p. 176)

there must be something that accounts for this process.

The *Timaeus* and the notion of *khora*

In accounting for the generation of instances from forms, it is necessary to explain how movement, or the process of Becoming, is introduced into the system. How did the everlasting and unchanging forms generate perishable and changing instances? As discussed above, the pragmatic dimension of the question that Socrates presents to his three guests – how to bring the ideal city to life – goes hand-in-hand with the need to explain the existence of change and movement within the cosmos, and it is in order to account for this ontological process of formation that Plato introduces the new element of *khora* into the system. This third element, which lies at the core of the *arche*, along with forms and instances, has been the subject of multiple analyses

¹⁴ Despite the apparent strangeness of the term, this is the word used in the translations of Plato by all the scholars referenced in this thesis. In the context of this thesis, the term ‘bastard’ stands for a type of order. This order, however, is one that is abnormal and strange, not formed out of logical reasoning and thus difficult to recognise as such. ‘Bastard’ is not a synonym for chaos or noise; nonetheless, the case could be made that these two notions, chaos and noise, are an extreme example of what this notion signifies, as they represent orders in which no order can be identified.

holding disparate positions on its ontology. Plato's own description has fuelled the debate about what it could be; the evasive, arcane language he uses reflects its nature as a spurious or 'bastard' kind of entity. As a consequence, the task of describing this elusive third element presents the same kind of difficulty as does that of locating the *arche* – it is almost impossible. In order to describe it, Plato resorts to several metaphors, and as discussed later, the difficulty of dealing with this concept is inherent to the term he finally chooses to give it: *khora*, or space. The fact that both the *arche* and the third element are so difficult to describe and locate provokes further reflection about the intrinsic relationship between space and beginnings.

In order to understand the role of the third element, the *arche*, and space within this framework, it is necessary to examine Plato's metaphorical descriptions of it. It is first presented as the receptacle, the bearer, the nurse of all Becoming, determining its position as that which receives; it holds the process of generation of instances from forms. However, as the various metaphors reveal, this is a special kind of receptacle. The first metaphors for the imprint-bearer are: gold; the base of unguents or perfumes; and other plastic materials.¹⁵ Gold, as with any other plastic material, can be continuously transformed and moulded to assume multiple shapes – Plato's expression is that of "having moulded all figures out of gold" (Kalkavage, 2007, p. 82). However, the gold itself – the material in which the shapes are formed – does not change; it always remains gold. The idea of a receptacle, a place of transformation, that is neither transformed nor altered by what it receives, is echoed by further metaphors. Plato extends the notion with his metaphor of the mother, or more precisely the mother's womb, which nurses and holds the embryo until the

¹⁵ The translations of the metaphor vary from clay to wax. Although the process of working with these materials is very different, the general idea is that of a material with a high degree of plasticity.

moment of birth. As Kavanaugh (2007) reminds us, in ancient Greece, the role of the mother in the process of conception was as a receptacle for the man's seed, holding and nurturing it until its transformation into a baby. The crucial point of these metaphors is that the receptacle can take any form yet remain neutral and unaltered; it simply allows transformation to take place. As a consequence, although it is a place of transformation, the receptacle does not materially participate in the process, neither receiving anything from nor giving anything to that which it receives. Nonetheless, as with the mother's womb, or gold, or any other plastic material, the third element or receptacle retains an existence of its own.

Finally, after presenting these metaphors, Plato concludes by naming the receptacle as '*khora*', one of the ancient Greek words for space. In identifying the receptacle thus, Plato describes it as that which:

... always is, admitting not of destruction and providing a seat for all that has birth, itself graspable by some bastard reasoning with the aid of insensibility, hardly to be tested, the very thing we look to when we dream and affirm that it is necessary somehow for everything that is to be in some region or to occupy some space and that that [which] is neither on earth nor something in heaven is nothing. (Plato trs. in Kalkavage, 2001, pp. 84-85)

This description is the result of a systematic process of constructing the idea of the third element as *khora*/space through a succession of metaphors, gradually rarefying the concept, distinguishing it at each step from the previous one (Cornford, [1937] 1997). The need for such a careful construction is arguably due to the difficulties Plato experienced in attempting to access space – to fully grasp it – through language. According to Algra (1994: 94) the inarticulate way in which the receptacle is presented is the fruit of "Plato's attempts to cope with the problems of space within a

historical and philosophical context, in linking them up both with his own metaphysical system and with the ordinary usage of spatial terms in his own time”. Nonetheless, Aristotle credits Plato as the first philosopher in ancient Greece to strive to come to terms with the concept of space rather than simply using the currently available spatial terms. For Cornford ([1937] 1997, p. 177), however, the difficulty is associated with Plato’s intent to reveal the nature of this kind of space, which is “more ‘obscure and difficult’ than geometrical space” – a ‘nature’ that flickers between the physical and the metaphysical realms. Part of the difficulty of grasping this third element resides in the problem of understanding what it means for the receptacle to have an existence of its own, particularly when it is presented as simultaneously space and part of the *arche*. This has been a matter of extensive debate throughout the history of the dialogue’s interpretation, particularly the interpretation of this passage, and it comprises the subject of the following paragraphs. As the metaphors used by Plato appear to bear traces of the idea that dimensions or degrees of the third element embody *khora*, or space, the discussions concerning the ontology of this element are fundamental to an analysis of the difficulties encountered in discussing the ontology of space.

The metaphors presented thus far, including the idea of the receptacle, comprise the passage (48e to 52d) traditionally considered as the one in which Plato introduces and defines the third element of the *arche*. However, in order to fully understand its designation as ‘*khora*’, it is necessary to look ahead to the summary that immediately follows the passage, where Plato re-states the idea of the third element as space and introduces a final metaphor, that of a winnowing basket, to indicate the process through which the receptacle participates in the *arche*, in the generation of instances out of forms. This metaphor conveys the process of “swaying

and sorting, winnowing and separating” (Kavanaugh, 2007, p. 64) to which the receptacle subjects what it receives, but to which it is also, sympathetically, subject. As with a winnowing basket, this movement allows what is similar to come together and what is different to be separated.

The metaphor reinforces the idea that something is received in the receptacle. But what are its properties? Plato says that it receives the four elements, which, according to Cornford ([1937] 1997), should be conceived as qualities rather than material entities. The receptacle receives the imprint of these qualities but is not constituted by them. However, referring back to the gold metaphor and the process of modelling, Plato uses the expression ‘out of’ – specifically, ‘out of gold’ – to describe the way the different shapes begin to surface. According to Algra (1994), the gold metaphor points to the idea that what comes out of the receptacle is material, despite the fact that what enters it is not. The apparent discrepancy over what emerges from the receptacle is therefore accompanied by an uncertainty over what goes into it, prompting Algra (1994, p. 105) to speculate that it remains ambiguous as to whether what enters the receptacle are qualities, which he identifies as ‘instantiations’, or instances themselves. Such apparent incongruities beg the question of where exactly the receptacle exists. As Cornford ([1937] 1997) recognises, this is a three-fold question: it is necessary to understand the nature of the receptacle’s existence, its relation to forms and instances, and how we know it. As seen earlier in the *Timaeus*’ presentation and discussion of the *arche*, ontology goes hand-in-hand with epistemology throughout the dialogue, because what something *is* is limited by *how* it is known – that is, by the system of knowledge to which it belongs.

Despite the difficulties in understanding the ontology of the receptacle, Plato does, however, describe it as something that is everlasting, indestructible and

immutable. Also, as his metaphors show and as Cornford ([1937] 1997, p. 178) points out, “the receptacle itself alone has some sort of permanent being”. It is “invisible and has shapeless form” (Plato trs. in Kalkavage, 2001, p. 83) and is not constituted by anything. These characteristics point to the idea that the receptacle shares the same hierarchical position as forms, as these are also indestructible, everlasting, invisible and truly real. As such, the receptacle is distant from instances and the realm of Becoming, which are visible, tangible and subject to mutation and decay. Kavanaugh suggests:

Chora [*sic*], in fact, participates in the ideal forms, therefore is unchanging and prior/original to all material considerations. The chora is a ‘thing-in-itself’, except to say that the chora is also prior to all ‘thing-ness’; therefore, the chora has neither qualities nor characteristics nor predicates. (Kavanaugh, 2007, p. 57)

How then can we account for the perceived material dimension encountered in the previous paragraph? And how can something be a ‘thing-in-itself’ and at the same time be prior to ‘thing-ness’? As a consequence, the idea of the receptacle appears confusing and “very hard to apprehend” (Plato trs. in Cornford, [1937] 1997, p. 186). It is something that by its very strangeness is set apart from its constitution and is ‘formally’ distinct from forms and instances. The receptacle is not a multiplicity as it is not constituted by a set of elements in the way forms and instances are, and therefore its ‘name’ does not refer to a category of things but only to itself. As a result, the receptacle does not seem to belong to the same type of ontological family as Being and Becoming. Such distinctiveness, according to Kavanaugh (2007, p. 55), has prompted some scholars to claim, in opposition to Cornford and Kavanaugh, that the receptacle might be a ‘non-being’ (in contrast to Being and Becoming). Rickert (2007) suggests that it is a ‘non-place’ between forms and instances. In order to

further understand the receptacle, therefore, it is necessary to investigate the relationship between the receptacle and forms and instances, Being and Becoming.

Although the receptacle and forms seem to exist, ontologically, on the same hierarchical level, their role in the *arche* sets them apart. Forms, as described by Plato, never enter into anything nor do they receive anything into themselves. They resemble a pattern, model, plan or design that is followed in the construction of something. Instances, however, are the entities that are generated from that design. As such, they bear materiality and consequently need to exist somewhere, because as Plato (trs. in Kalkavage, 2007, pp. 84-85) says when describing *khora*, whatever constitutes the cosmos must exist somewhere, otherwise it is nothing. The question that immediately emerges is whether *khora*, as space, is the receptacle that contains the cosmos – that is, all existing instances. Algra (1994) believes there are passages that can be interpreted this way – suggesting that the receptacle is the container of the sensible world – but there are others in which Plato takes a different position, where he appears to say that the receptacle is a *constituent* of the sensible world because it is constituted by qualities that are present within instances. However, as seen earlier, the receptacle receives the qualities and not the instances themselves. If it were to receive the instances, it would share their fate and belong to the realm of Becoming. Also, it would be necessary for a model for *khora* to exist, in which case *khora* could not be seen as analogous or parallel to forms. This does not seem to be the case because, as the previous paragraph shows, *khora* would not then be part of the *arche*, alongside Being and Becoming, but a part of Becoming, and it would be difficult to reconcile this with the structuring role of the receptacle, ordering the qualities of instances.

This conundrum leads to the third question of *how* the receptacle is known – or what it means for *khora* to be to apprehend by a “sort of bastard reasoning” (Plato

trs. in Cornford, [1937] 1997, p. 192), as stated previously. The difficulty of grasping *khora* and its workings has prompted Kavanaugh (2007, p. 58) to say that “the chora [*sic*] is ‘hardly real’, meaning that it does not participate in the intelligible although it is eternal and formless”. The terms and expressions Plato uses throughout the passage to refer to *khora* alert us to the difficulty of apprehending the receptacle, and point towards the unknowable and intangible.¹⁶ This opens the way to a conception of the receptacle as a ‘bastard’ entity, that is “*neither this nor that or that it is both this and that*” (Derrida, [1993] 1995: 89). Derrida’s position is that *khora* is neither part of the sensible nor the intelligible but is precisely an intermediate or third kind of entity, ‘another’. This also seems to be Kavanaugh’s (2007: 59) position: she states that the receptacle “is precisely the third term – intermediary between *Being* and *Becoming*, between the eternal Same and the generated and continually changing Different”. Although taking a different approach to Kavanaugh and Derrida, Cornford ([1937] 1997, p. 193) also adopts a ‘middle’ position: he believes that the receptacle is a factor in the visible world despite being everlasting and indestructible. However, it also partakes in the intelligible, although it does so in a puzzling way, leading Cornford to associate the participation of *khora* in the *arche* with a process of abstraction. Thus it seems possible to say that *khora* is neither an object of rational understanding, as forms are, nor an object of belief, apprehended by the senses, as *Becoming* is; instead, it is something else that despite not being perceivable can be understood as active in the world by means of a different kind of reasoning, a ‘bastard’ reasoning. As such, can we ever say what *khora* is? Would not such an effort immediately contradict *khora*? Following Derrida’s ([1993] 1995) line of

¹⁶ Although this is not expressed in Plato’s philosophy, it further denotes the importance of ‘unknowing’, or of other kinds of knowing that are not logical or rational, as discussed by Derrida ([1993] 1995).

thought, it seems that *khora* points to the impossibility of naming, of language, to an aporia of knowledge.

The ambiguity of *khora* as that of ‘space’

The ambiguity present in Plato’s description makes the idea of the receptacle difficult to apprehend. This difficulty is evident in the way that scholars have thought about the ontology of *khora*. Although the receptacle is usually connected with spatiality by means of the concept of *khora*, different scholars have distinct, sometimes opposing, understandings of the meaning of the word, and this has led some to dismiss the idea of it as space. *Khora* has become the most iconic and identifiable element of Plato’s description, the term by which the receptacle has come to be known and referenced; it has thus become the actual name of the receptacle. The act of naming is of course never innocent or flawless: the word has therefore become detached from its original meaning, creating a chasm between the word itself, what Plato was trying to refer to by means of the word, and its actual meaning. However, this confusion has provided fertile ground for the emergence of multiple interpretations which afford fruitful material for a reflection on the ontology of space.

According to Kavanaugh (2007, p. 55), *khora* came to be ascribed over time to six different things: matter; a medium; space; the void or non-being; the ‘obscure’; and both space and matter. Algra (1994) approaches this disparity in understandings by investigating the arguments of different scholars in combination with his own

analysis of the *Timaeus*. In particular, he focuses on three accounts of *khora*: those that see it as a kind of matter, those that see it as space, and those that see it as both. By focusing primarily on these approaches, all of which are informed by the opposition between matter and space, Algra discusses the difficulties in understanding physical space. He believes this separation is actually based upon

...wrongheaded (essentialist) presuppositions concerning the ‘real nature’ of space and matter, [that have] as a corollary, premature conclusions about the incompatibility of space and matter as labels of one and the same thing (Algra, 1994, p. 77)

According to Algra (1994, p. 78), those who say that Plato’s receptacle solely comprises matter ignore its spatial dimension on the basis that space and matter are incompatible, and hence neglect evidence of the spatial terms Plato used to define the receptacle – *hedra* and *khora*. Algra examines two particular arguments holding this position in order to reveal the presence of preconceptions about the nature of space and matter. The first holds that space is not the receptacle’s actual nature but one of its functions, thus implying a separation between the nature of something, its essence and its function. Algra (1994, pp. 78-81) believes this ontological separation cannot be found in Plato’s description of the receptacle. The second argument is based on the notion that matter and space are incompatible because matter is corporeal (Algra, 1994, pp. 81-83). However, although later observers took for granted the idea that matter is corporeal, there is no evidence that this was the case in the *Timaeus*; the definition of matter has varied greatly throughout time and it has not always been associated with corporeality (Algra, 1994, p. 82).

By contrast, those who identify the receptacle with space dismiss the presence of materiality in Plato's metaphors, particularly the expression 'out-of-which', which can be associated with a material dimension (Algra, 1994, p. 83). Those scholars who take their stand on an exclusive association of *khora* with space perceive the use of material metaphors and the expression 'out-of-which' as an unavoidable result of the expressive limitations of Plato's metaphors (Algra, 1994, p. 85). However, and more importantly for the discussion, this position is also based on the idea of the incompatibility between matter and space, due to the fact that space is regarded as absolute (Algra, 1994, p. 84). However, Algra (1994, p. 84) suggests that if space is not seen as an absolute container, and if matter is generally thought of "as the 'underlying constituent of physical reality', we may recognize that within different physical systems different 'things' answer this description", and these 'things' could also serve as space.

Algra (1994, p. 89) concludes that if we look at Plato's account of the receptacle, without adopting preconceptions about the nature of space and matter, we can see that he does not present the receptacle as any one of the mutually exclusive notions mentioned above. "The receptacle might be at the same time matter and space, though not with respect to the same things" (Algra, 1994, p. 83). For Algra (1994, p. 118), the perspective of the receptacle as matter and the perspective of it as space can be combined if the 'in-which' expression that leads to the position that the receptacle as space is associated with immanent forms or qualities, and the 'out-of-which' expression that leads to the position that the receptacle as matter is associated with phenomenal bodies from the perspective of the *type a* (extension) of space. However, in order to achieve this perspective it is necessary to understand the receptacle *as if* it were the extension of an individual physical body, instead of "a kind

of absolute extension underlying physical change and motion” (Algra, 1994, p. 92). This would then mean that Plato was presenting a metaphysical theory of space not a physical one, and would imply that it is impossible to use this concept to explain the motion and location of an object. Cornford concurs with this position, stating:

Plato’s Space is not a void which remains completely distinct from particles moving in it; it is a Recipient which affords a basis for images reflected in it, as in a mirror – a comparison that could not be applied to atoms and void. Space is to him the ‘room’ or place where things are, not intervals or stretches of vacancy where things are not. (Cornford, [1997] 2007, p. 200)

However, as Algra (1994, p. 118) shows, Plato did not keep to this metaphysical perspective throughout his description of the receptacle. In the *Timaeus*, the receptacle is also seen as a receiver of phenomenal bodies, making the receptacle a *type c* space (a container). Algra (1994, p. 74) explains this incongruence – and its incompatibility with other conceptualisations of space – by the difficulty that Plato faced in attempting to “cope with the problems of space [in his] historical and philosophical context ... linking them up both with his own metaphysical system and with the ordinary usage of spatial terms in his own time”. Algra believes Plato’s difficulty in attempting to explain the relationship between intelligible Being and sensible Becoming through *khora* were tantamount to the problems he encountered in explaining the *arche*. This explains Plato’s description of the receptacle as something obscure. Given the incongruence and incompatibility in Plato’s descriptions, Algra (1994) says it is not possible to present the notion of the receptacle as a coherent theory of space. As such, the various positions taken by scholars in relation to the receptacle, which are often incompatible, are the result of “over-charitable interpretations, each of them singling out and working out what is in fact only one

among several coexisting characterizations applied to the receptacle by Plato himself” (Algra, 1994, p. 72). This has led Kavanaugh (2007, p. 55) to claim that Algra avoids giving any kind of definition of or attribution to *khora*, apart from the observation that it is “difficult and obscure”.

Nonetheless, and as Algra (1994, p. 99) points out, it is possible to bring the two perspectives of the receptacle together as both metaphysical and physical theories by dislodging them from the position that the receptacle is considered as “*nothing but aggregates of qualities in space*”. Alongside this understanding is Kavanaugh’s (2007, p. 55) notion of *khora* as a medium that facilitates the process of transformation. For Algra (1994, p. 99), this perspective is distinct from that of the idea of the receptacle as both space and matter, and it therefore disregards the way that Plato presents the receptacle itself. However, Algra’s position is based on a perceived incompatibility between metaphysical and physical understandings of space, and the belief that they stand for two different things, as if they belonged to two completely separate realms without any sort of connection, interaction or dependency. Contrary to this idea, this thesis argues for the inseparability of these two realms (see Chapter One) – an argument that not only welcomes different approaches to *khora* (such as those of Derrida, Kristeva and Ulmer, which are discussed in the second part of this chapter), but also opens the way to a different understanding of space.

If one understands space as having multiple realities and facets, depending on the analytical angle we adopt, it can assume all the ‘shapes’ that the *Timaeus*’ commentators have unveiled. Thus all of the above approaches to *khora* can be said to be not only valid and correct, but also appropriate to the complexity of the concepts of both *khora* and space. Throughout his reading of the *Timaeus*, Algra sees the metaphors as descriptions of an actual entity, instead of recognising them as a

strategy, a way of approaching something without actually making it stand for the thing itself. This is the position Kavanaugh and Cornford take: they both see *khora* as part of a conceptual system that Plato constructs in order to approach specific ontological and epistemological questions. This view is supported by the fact that the metaphors Plato uses follow the logic of progressive abstraction. Derrida's understanding of the question is close to this position: he sees Plato's *khora* as a rhetorical strategy that he uses to approach something that cannot be approached through language, something that is not bound by a physical-metaphysical dichotomy – that is, to a “distinction between the sensible and the intelligible, which is precisely what the thought of the *khora* can no longer get along with – a distinction” (Derrida, [1993] 1995, p. 92). Instead, Derrida identifies it as ‘an-other’, a third thing (or kind or gender). From the point of view of this thesis, the differences between all the above positions point to the idea that the ambiguity of *khora* is not inherent to Plato's description, the real difficulty at the heart of the concept – as much now as it was then – is the ontology of space.

In order to more fully comprehend the ambiguity of *khora* in its relationship to spatiality, it is necessary to look more closely at the word Plato chose to use by placing it in the context of ancient Greece. As Algra (1994, p. 4) elucidates, until the period of the Hellenistic schools, the ancient Greeks did not have a term exclusively denoting space such as we have now, but three concurrent terms: *kenon*, *topos* and *khora*. The meaning of each word depended on its context, but they each conveyed different aspects of spatiality; the term referring to spatiality as a unified entity was therefore absent (Algra, 1994, pp. 22-24). These terms held a provisional signification that makes a simple, single translation of them appear preposterous. As such, according to Algra (1994), in a text like the *Timaeus*, we cannot directly translate

khora by the term ‘space’ because it can also be thought of as ‘place’. This difficulty is the source of Plato’s loose and evasive description of *khora* as the receptacle. However, this begs the question: is this difficulty inherent to ancient Greek – that is, is it a deficiency of an immature language – or does it signify the difficulty of grounding spatiality and trying to use language to capture its essence? Be that as it may, both then and now (as discussed in Chapter One), the concepts of space and place are used in a promiscuous way, with little distinction between them. As such, the decision to use either term in a translation is dependent on the context and not on an intrinsic and fixed signification (Algra, 1994). If *khora* can in fact be translated as either space or place, it becomes not only exemplary of this promiscuity but also of the fact that this difficulty has endured over the centuries, and reveals an essential attribute of spatiality and our understanding of it. This thesis observes that the apparent non-existence of a specific word for space in ancient Greece, and the consequent difficulties that Plato encountered, and contemporary scholars have, over what the concept of *khora* conveys (in its relationship with spatiality) illustrates the inaccessibility of space, its unattainability and unutterability. This heightens the ontological difficulties of the word ‘space’, particularly in reference to the relationship between physical, ‘real’, material space and abstract, conceptual, metaphysical space.

Despite the fact that *khora* cannot be directly translated by the word ‘space’, its actual meaning in ancient Greek as country, territory, land, region or location, and often more precisely as the outskirts of a city-state – the land that lies between the city and the countryside (Kavanaugh, 2007; Derrida, [1993] 1995) – import a spatial dimension into the *Timaeus* that cannot be disregarded. The more concrete the meaning of *khora*, the more it hurls us back to the question that Socrates puts to his

guests at the beginning of the *Timaeus* regarding the active, concrete realisation of the ideal city(-state). According to McEwen (1993, p. 82), *khora*, as the land between the city and the countryside, had a very specific purpose: it provided shelter and sanctuary, and a site for rituals and celebrations. It was through these celebrations, out of the processional walking that connected the *polis* to the religious site, that the state itself was woven. McEwen (1993) tries to understand how the connections between the city, the *polis* and this space, *khora*, can realise or are reflections of political order and the making of political order. In so doing, what she reveals is the importance of the physical location of Athens in the creation (weaving) of the political model it followed. As a result, this demonstrates one of the dimensions of space: the interconnection of the physical and material realm with the abstract realm. McEwen shows that despite space (*khora*) being immaterial (not corporeal), it is still intrinsically connected with the materialities that emerged from the movement associated with the religious practices that helped consecrate and form the city-state. This dimension of space concurs with Kavanaugh's observation:

Space as chora is not physical/material, but primordial, allowing the sensual realm to come-to-be, including its topos, belonging to it as its proper place. The material existence is intrinsically conjoined with its place. (Kavanaugh, 2007, pp. 63-64)

Another dimension that McEwen unleashes emerges when Rickert alerts us to the fact that in her account

... an instability becomes apparent in the notion of the polis, suggesting that it is always bumping up against the limits or boundary it must exceed. While retaining a dependency that it wants to overcome, the movements beyond the city boundary proper marks the weaving of the city because they are necessary for the polis to thrive. (Rickert, 2007, p. 255)

Thus an understanding of spatiality begins to surface through the notions of ‘limit’ and ‘boundary’, which arise from movement and are necessary to a city if it is to thrive. Questioning limits is not just a matter of questioning the physicality of something, but of interrogating the constraints, of whatever kind, that contain what can be done, that limit the very act of doing. Therefore the concept of *khora* itself connects, both through its common use in ancient Greece and Plato’s displacement of it in his philosophical study, the actuality of a city and the abstract conceptualisation of the cosmos. The movement that McEwen (1993) identifies between the city and the places of worship in the countryside should not be ignored when considering Plato’s choice of the word *khora* as a name for the receptacle, as the dynamics and life that Plato wants to introduce into the ideal city are but a mirror on a micro level of the processes of the *arche*. Also, it is important to point out that this perspective clarifies how the notion of the ‘in-between’ has become embedded in the word *khora*. More precisely, it shows that *khora* provides a connection between two things (for example, between city and countryside), and in so doing, participates in the creation of those two things by enabling their constant actualisation. As with its presence within the *arche*, *khora* is something that, being neither city nor countryside, works alongside them in their constitution without directly partaking in it. As Rickert (2007, p. 258) says, “we could say that the choric city is where invention comes to life”. The nuances that arise from the word itself can then be extended to the discourse, if it is understood that Plato is merging an actual place with a potential space, and using it as a setting to explore a specific problem. What he is trying to achieve through the use of the word ‘*khora*’ in the *Timaeus* is precisely this integration of changes, the necessary movement of transformation, while keeping things – the world – balanced and ordered.

By understanding the interaction between the physical and metaphysical dimensions of *khora*/space it becomes possible to release it from the pressure of its own ambiguity, perceived incompatibilities and paradoxical nature. The alleviation provided by the merger of the metaphysical and physical dimensions is built on an acceptance of this very ambiguity, and is paradoxically a reflection and expression of a larger whole (space) that cannot be fully apprehended and can only be approached by using multiple perspectives. This positive acceptance means that *khora*/space can be conceived of as possessing a productive role in the process of the creation of order. Processes such as these, however, cannot be fully understood in a rational way as *khora* (space) works through a ‘bastard’ type of reasoning, outside of (but in combination with) the intelligible and sensible realms. McEwen’s intervention in particular has enabled the observation of this dimension of space through her analysis of the movements between and across the city and the countryside in ancient Greece, which made visible the participation of *khora*/space in the production of the city-(state). It has also revealed the fact that this visibility is produced through the emergence of a type of questioning-through-engagement of notions such as ‘limit’ and ‘boundary’. The very act of questioning, reflecting on and performing the limits and boundaries of something is not only part of the process of understanding a physical realm, but also of constructing its ontology, of constructing the thing itself. Both these results give rise to the hypothesis that *khora* possesses another dimension: it may be implicated in the processes of creation. These processes, however, do not need to be constrained within a conventional framework of the genesis of the world, but instead participate in the physical, everyday realm of invention that itself constitutes an enacted cosmology, performed by multiple participating agents. This represents a ‘bastard’ ordering of the world.

***Khora* as a Methodological Device**

The first part of this chapter has established that the concept of *khora* is a notion that sheds light on the ambiguity of space. Through its intrinsic association with space, it not only reveals that space is ambiguous and indeterminate, but also that it may be impossible to reach a full understanding of it as a concept because it has manifold expressions and multiple facets. Nevertheless, *khora*/space participates in the enacted processes that create order. But even this activity has a sensuous, affective dimension, which opens up the possibility of thinking of *khora*/space as a creative device. This is the dimension now discussed in the second part of this chapter. It is in the context of this aspect of *khora*, as an asset for creative production, that the chapter turns to Rickert, who brings together the work of Derrida, Kristeva and Ulmer in order to discuss the use of *khora* as a methodological device (which is also an epistemological position) in the field of rhetoric. This approach to *khora* is further analysed through the aforementioned collaboration between Derrida and Eisenman.

In *Towards the Chora: Kristeva, Derrida, and Ulmer on Emplaced Invention* (2007), Rickert argues for a rhetorical model that integrates the contemporary notion of mind as both located in the body and dispersed throughout the environment, and social and technological systems. This idea, according to Rickert, can be found in contemporary discussions of and approaches to the concept of *khora* by Kristeva, Derrida and Ulmer. In their work, *khora* is seen as something that “transforms our senses of beginning, creation, and invention by placing them concretely within material environments, informational spaces, and affective (or bodily) registers, and in the case of Derrida, also by displacing them” (Rickert, 2007, p. 252). As such,

khora enables a discourse that moves away from discussions based on notions of representation and rationality (Rickert, 2007, p. 252), allowing for the understanding of the “emplaced (and displaced), distributed, and bodily character of rhetorical activity” (Rickert, 2007, p. 253). Furthermore, Rickert recognises, particularly in Derrida and Ulmer, a transformation of the insight that *khora* provides into rhetorical generation and practice. These authors develop inventive strategies that could be called ‘*choratic*’, in opposition to those of a ‘*topic*’ nature, because agency in such strategies is attributed to non-human agents such as language, networks, environments and databases (Rickert, 2007, p. 253). They give *khora* a methodological purchase.

According to Rickert (2007, pp. 260-261), Kristeva’s notion of a ‘*semiotic chora*’, a pre-verbal (and pre-natal) realm of meaning-making, “includes emotions, sensations, and other marks and traces of psychical and material experience” by means of which she is able to discuss the creation of signs within a linguistic framework. Rickert (2007, p. 261), however, points out that because Kristeva’s invention exceeds its subject, language, it is not able to fully account for it as a process: how can we argue for the conceptualisation and emplacement of a rhetorical (linguistic) process that is itself prior to language? Nevertheless Rickert (2007, pp. 262-263) argues that what “choric invention provides us with is a way to put invention itself back into question, not as a metaphysical problem but as an inventional problem” – as long as we do not harbour any preconceptions about what invention is. The bodily, performative, emotional, affective and pre-linguistic dimension of *khora* that Kristeva (and McEwen) suggest is then combined with Derrida’s and Ulmer’s perspective of *khora* as a rhetorical strategy which avoids “reducing invention to ideas, or perhaps more accurately, to understanding production and invention exclusively within the principle of representation”

(Rickert, 2007, p. 264.) This aspect of *khora* as a practice is therefore a fundamental one in the context of this thesis because it makes it possible to access strategies that are based on non-representational frameworks. Most importantly, it indicates how space itself – as *khora* – is an agent of the conceptualisation and emplacement of such strategies.

According to Rickert (2007, p. 264), Derrida understands Plato's *khora* as a type of invention because of its aporetic participation in the intelligible. This enables him to create a new discourse through which themes like beginning, naming, placing and inventing can be differently – *khoratically* – accessed and discussed. One of the things that both Derrida (and Sallis) argue is that *khora* is so deeply linked to the construction of the entire argument of Plato's work that it cannot be separated out into the individual passages in which it is presented; the very construction of the work is a preparation for the necessary emergence of *khora* (Rickert, 2007, p. 256).

Understanding the formation of *khora* through this perspective allows Derrida to analyse Plato's use of the concept not simply as an element within his overall argument, but as part of the very structure that builds that argument, and as a consequence, he is able to consider the *Timaeus* rhetorically. According to Rickert, Derrida believes the rhetorical problematic this raises in the *Timaeus* is that *khora*

... functions as a name for a referent the status of which is a matter of uneasy oppositions, aporia, and conjecture. Further, the question is complicated by its self-reflexivity, which gives it a form like that of a snake eating its own tail. In asking about the possibility of giving place to something that seems to have no place, he is asking about the place of *khōra*, a word that itself refers to place (i.e., "what is the place of place?"). (Rickert, 2007, p. 264)

So the problem emerges of how to put in place a rhetorical strategy that addresses something that eludes discourse (Rickert, 2007, p. 265); that is, how to rhetorically allow for the emergence of this aporetic discourse when it is not accessible through rhetorical strategies. This question leads to the apparently impossible *mise-en-abyme* that, according to Rickert (2007, p. 265), is left in the realm of philosophical enquiry. Although Derrida approached variants of this question throughout his life, his analysis of Plato's *khora* points to a way to deal with this problem using the *choratic* strategy that is put forward throughout the entire *Timaeus*, but is particularly apparent in Socrates' withdrawal from the dialogue (Rickert, 2007, pp. 265-266). This is a strategy of a continuous and recursive absence of discourse, manifest through the withdrawal of the speaker (Rickert, 2007, p. 265). Nonetheless, Rickert (2007, p. 266) believes that Derrida is trapped within a philosophical framework that does not allow him to fully explore *khora* as practice. This limitation is more clearly perceived in his contribution to a garden in the Parc de la Villette in Paris, which is discussed in more detail below.

The problems that Derrida faces when attempting to put a *choratic* rhetorical strategy into practice are, according to Rickert (2007, p. 267), more successfully addressed in the work of Ulmer. For Ulmer, such a strategy is one that is driven by self-reflexivity and allows the combination of information through associations that are "alternatives to the rationalistic methods developed for print culture" (Rickert, 2007, p. 267). It is a strategy that is based not only on logic, but also on experiential and intuitive processes (Rickert, 2007, p. 268) – a *mise-en-abyme* creation, in which the thing that is being created is used to create itself. As such, Rickert (2007, p. 270) concludes, Ulmer's work carries a positive tone: "What the chora allows Ulmer to do is theorize and practice how this seeming inconsistency or paradox is actually

productive.” In this thesis, this recursive process is seen as a necessarily spatial one, because it argues for the spatial nature of *khora* (see above). This opens the way for the exploration of a positive and productive framework, which will allow the conceptualisation of a strategy by which space can be used to investigate and construct itself.

However, what is also clear is that Rickert does not fully take into consideration the spatial dimension of *khora*: space is restricted to an analogy that is used to develop the novel rhetorical strategy and is therefore viewed simply as a means for re-conceptualisation, limiting the strategy’s spatial implications to an abstract, conceptual dimension. As a consequence, and due to the inherent linguistic nature of rhetoric, *khora* is not fully conceptualised as a spatial device, but is instead understood as a linguistic one. The concept of *khora* as space is thus limited, constricted and trapped within the linguistic domain. This is particularly evident when we attempt to relocate the *khoratic* rhetorical strategy to other realms, such as art and architecture, which require a materialisation that is not based on linguistic strategies. This failure is especially noticeable in Derrida’s and Eisenman’s collaboration for the Parc de la Villette.

Chora L Works: the impossibility of materialisation

In 1985 Bernard Tschumi, a renowned architect, invited philosopher Jacques Derrida and architect Peter Eisenman to collaborate on the design of a public garden for his

Parc de la Villette project in Paris. A dialogue between the two ensued that was triggered by the diametrical relationship between presence and absence in Eisenman's work, and on a broader spectrum, within architectural discourse. Derrida brought to the discussion an 'odd' Platonic concept he was working on: *khora*. According to Derrida (Kipnis and Leeser, 1997), this concept was particularly appropriate for the project because it seemed to reflect Eisenman's own architectural concerns. It thus became the project's theoretical program. In Derrida's (cited in Kipnis and Leeser, 1997, p.12) words, *khora* "is a space that cannot be represented, so it is a challenge to anything solid, to architecture as something built". Hence, the project was infused with the idea of exploring this architectural challenge.

The project was never built, but there remains a register of the process in the form of a book, *Chora L Works* (1997). The discussions, drawings and texts included in the work reveal the strain of the challenge – how to materialise something that cannot be represented. In the Parc de la Villette, this challenge was approached specifically through the concept of *khora*, and the strain was transferred to the question of how to render *khora* physical, how to materialise such an ambiguous entity: the project was specifically intended as an exercise in manifesting the concept of *khora* in a garden. However, throughout the discussions, and despite *khora*'s emergence as something that cannot be represented, its essential unrepresentability was never associated with space. *Khora* remained an entity with its own characteristics, and these characteristics were never perceived to be spatial ones. If they had been, then the problem that Derrida and Eisenman faced would have been transformed into a question of how to materialise space in architectural practice. Nevertheless, the discussions did bring to the surface the problems involved in putting space into practice, of actualising space. In order to grasp this concept and transform

it into a workable subject, *Chora L Works* initiated a deconstructive process that would help to forward the tangible associations.

The foundations of the project, visible in the images and the text, reveal that Derrida and Eisenman applied two strategies to the process of materialisation. The first approach was to work through a particular idea that Derrida identified in the rhetorical strategy Plato used to present *khora* in the *Timaeus*: that of multiple beginnings. This approach not only addressed Plato's strategy for dealing structurally with the concept of *khora* – enacting and presenting the concept using multiple resources and different dimensions – but it also illustrated the absent or transitory nature of *khora*. The notion of multiple beginnings was explored in different instances in the project.

As Kipnis and Leeser (1997) note, Tschumi's Parc de la Villette was from the start reminiscent of an earlier Eisenman project for the Cannaregio district in Venice, particularly in its use of similar orthogonal grids. Despite pre-dating the Parc de la Villette, the Cannaregio was manifestly similar to Tschumi's project, triggering the subversion of beginnings. This coincidence, as well as the fact that the garden was to be built on the site of a demolished abattoir (just as Eisenman's project for the Cannaregio was), led to the plan of forming an archaeology of the different edifices, enforcing ideas of displacement and misreading, and subverting ideas of authorship, chronology and space, creating a palimpsest (*ibid.*). This was consequently adopted as a working method, scaling and superimposing the different grids, which were explored and combined according to coincidences in the density of the grids, their elements and main axes. This created a partially real, partially fictional story of the two projects and the two abattoirs. This first approach was therefore formally worked through by playing with the grids of the two projects. The concept of beginnings was

explored through comparisons, replacements, simplifications, sub-sets, expansions – or more succinctly – through replacing one concept with another.

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Figure d – Sketch diagram of two Cannaregio grids, one five times larger than the other

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Figure e – Sketch of site plan showing the angular relationship between La Villette and Cannaregio grids

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Figure f – A+U drawings

The second approach that Derrida and Eisenman adopted in order to convey and materialise *khora* was the direct use of the metaphors Plato employed to describe *khora* in the *Timaeus*. In dealing with such an ungraspable concept, the project drew from the material side of these metaphors in order to fix *khora* as something concrete. This was done either through further metaphorical construction or by using the metaphor's symbolic elements. In this way, they constructed a semiotic fabric through which to materialise the concept in the form of a garden.

For example, the idea of using water in the garden, conveying ideas of erasure and transience through shadows and reflections (Kipnis and Leeser, 1997, p. 34), originated in Plato's idea of an 'imprint bearer', which retains nothing of what it holds. However, the plan to use water was abandoned and the presence of the impermanent nature of *khora* was to be manifest instead in the conceptual movement of stones between the three places that made the garden. The stones taken from the quarry (the first place) were to be left in the labyrinth (the third place), informing its nature, while leaving a trace of their passage in the palimpsest of the park (the second

place) (*ibid.*, p. 46). This idea is present in the parallelepipedic forms that at times would either raise or open holes in the ground, giving form to grids of these different times and places (*ibid.*). Also, each of the three places would formally carry the absence of the other two, creating a memory of absences, thus allowing the visitor the possibility of anticipation (*ibid.*). But the physical danger posed by the holes had to be overcome at the same time as avoiding any contradiction with the manifestation of *khora* – forbidding access to the area where the holes were would transform that part of the garden into an object (*ibid.*, pp. 90-92). The solution Derrida and Eisenman found was to deny surface access but to allow penetration from underneath. This option would make this part of the garden, as Jeffrey Kipnis (*ibid.*, p. 92) says, “the negative of itself in itself ... ‘[i]t’ is neither the positive nor the negative, yet at the same time both”. The project was finalised with the introduction of a last metaphor, the lyre, an element that emerged from the logic of the project and which simultaneously referred to *khora* in two ways: first through its sieve-like appearance, and secondly by its reference to music/sound (*ibid.*).

These were the strategies the project followed in the attempt to make the concept of *khora* tangible and workable. This thesis argues, however, that they relied on the creation of a scheme of linguistic representation: the materialisation of the garden was conceived through a strategy of translations. The reliance on language can be seen in both approaches to the challenge of materialising *khora*. The first tackled the problem through adopting the rhetorical approach of the *Timaeus*, building on the idea of a lack of authorship and translating this into practice through the interplay between the two projects. The second approached the problem through the direct use of metaphors, not only adopting Plato’s metaphors but also using his strategy to inform the whole project – that is, by conceiving metaphors as tropes that can be

represented and materialised. However, a semiotic structure is a profoundly inadequate basis for artistic practice because it does not directly confront the physical and material forces behind a project (in this case, *khora*) through experience. The project was driven by acts of translation rather than the enaction of *khora*. In other words, it rationalised *khora* through discussions based on the representation of the concept instead of letting it emerge through the active and experiential process of artistic creation, which is not limited to logical, rational and linguistic processes but is also guided by unmediated affective, sensory, emotional and experiential acts; a process of confrontation with matter and physical forces. In this project, the artistic act was not guided by a deep, active engagement with its driving forces, but comprised only detached, intellectual work. It was based on the ontology of architecture, in which elements are either in consonance or in contrast with each other, constructing a materialisation through the conscious displacement of materialities by a scheme of symbols.

Derrida and Eisenman's approach comprised, to some degree, the application of theory to practice. This was in tune with the theoretical position in art history and theory in which works of art are understood according to their socio-historical meaning. However, as Paul Crowther (2009, p. 12) says in *Phenomenology of the Visual Arts (Even the Frame)*, such reductionist approaches to art, informed in the main by poststructuralism and based on an understanding that meaning in the visual arts arises solely from the socio-historical context in which the work of art is created and received, reduce it to "its informational content and persuasive effects, and to the social and other circumstantial elements which enable these". Crowther (2009, p. 13) associates this reductionism with another, a 'semiotic reductionism' – that is, the understanding of a work of art based on linguistic models, in which the work is seen

as a text and read as such, without any discussion on what separates these mediums of artistic expression. Both these reductive approaches dismiss, in Crowther's (2009, p. 11) words, "the image's intrinsic significance" or the materialities of the work of art; they negate an engagement with its experiential and affective dimension:

[In] the very act of creating an image (irrespectively of one's practical intentions and subsequent uses of the image) one literally acts upon the world, and in so doing, changes one's cognitive relation to both the represented object and to oneself, and to existence in more general terms. (Crowther, 2009, p. 18)

What Crowther identifies here is the persistence of a way of thinking that sees art works as representations that do not have a direct relationship with what is represented or with the world itself, and thus do not have agency in the world. Crowther believes that this representational position is related to a reliance on language. It is this relationship between representation and language – as an epistemological and ontological position – that this thesis argues underpinned the creation of the Parc de la Villette project by Derrida and Eisenman, not only guiding their approach, as seen above, but also imbuing how they conceived of and discussed the project. This position, based on the association between representation and language, can be seen in Derrida's descriptions of the project in his essay 'Why Peter Eisenman Writes Such Good Books' (Derrida in Leach (ed), 2005). In his description everything turns the play of words: how they resemble one another; how they are multiply referential; how they become one another. This representational character is also seen in Derrida's description of Eisenman's working process, where he speaks of translation, transference and the transformation of motifs. The relevance given to words has its highest expression in the enthusiasm with which Derrida speaks of the title for the project: *Chora L Works*, which refers to the workings of *khora*:

[T]he structure of our title obeys the same law, it has the same form of potentiality, the same power: the dynamics of an immanent invention. Everything is found inside but it is almost unforeseeable. (Derrida in Leach (ed), 2005, pp. 321-322)

This position is further embedded when Derrida is called upon to act. At that moment he sees the challenge as if it were a written piece without words (*ibid.*), which is converted into the play of words and the formal resemblances between the idea of a sieve, one of Plato's metaphors for *khora* (discussed above), and that of a web, a grill, a grid, or a stringed musical instrument (piano, harp, lyre or human vocal cords), referring back to the name of the project, *Chora L*.

The reliance on words and linguistic structures is also present in Eisenman's working processes, as Derrida explains:

So what does Eisenman do? He interprets in his turn, actively and selectively. He translates, transposes, transforms and appropriates my letter, rewriting it in his language, in his languages ... Among all the stringed instruments evoked in my letter (piano, harp, lyre) he chooses one, whose play he reinvents in his own language, English. And in inventing another architectural device, he transcribes this linguistic reinvention, one which is his, his own. (Derrida in Leach (ed), 2005, pp. 324-325)

And again:

Among errors, Eros and arrows, the transformation is endless, and the contamination at once inevitable and aleatory. None of Eisenman's three projects presides at the meeting. They intersect like arrows, making a generative force out of misreadings, mis-spellings, mispronunciations, a force which speaks of pleasure at the same time as procuring it. (Derrida in Leach (ed), 2005, p. 326)

The relationship between language and representation is one that extends beyond the domain of the arts and has led to a contemporary movement that not only

denounces this hegemonic relationship but also, primarily, attempts to rethink the notions of materiality and reality. This movement, called Agential Realism, argues for a model of discursive practices that is not representational but performative, acknowledging the dynamism and agency of matter. One of the driving forces behind this movement is Karen Barad. In *Meeting the Universe Halfway* (2007), where Barad presents her position, she recognises and discusses the presence and implications of the association between representation and language, stating that “language has been granted too much power”:

The linguistic turn, the semiotic turn, the interpretative turn, the cultural turn: it seems that every turn lately, every ‘thing’ – even materiality – is turned into matter of language or some other cultural representation. (Barad, 2007, p. 132)

Barad (2007, p. 97) traces the relationship between language and representation back to the seventeenth century – as does Foucault in the *Order of Things* ([1966] 2002) – when the notion that there is a reality independent of our experience of it, a separation between object and subject, world and Man, came to be supported by the idea that “language is a transparent medium that transmits a homologous picture of reality to the knowing mind”. This had its counterpart in scientific theories, which believed that observation produced a faithful rendering of the world (as discussed in the first chapter). The association between representation and language consequently led to the position that language mirrors reality and, as such, is an uncorrupted way of accessing the world, of representing it.

However, during the 20th century, as Barad (2007, pp. 194-195) highlights, this position came under scrutiny in the humanities, giving rise to a movement that came to be known as the ‘linguistic turn’, which questioned the possibility of

achieving knowledge about the world. It contended that language as such does not provide access to reality but, rather, to the human subject and the representations they create. Representations therefore become entities that are independent of the world and those things within it that can be known; language, in creating representations, becomes a mediating element between the subject and the world, providing models and structures through which to explain meaning and representation. However, this position also leads to the maintenance of the relationship between language and representation, as language provides the only means of understanding the representations it has created. Thus, although the linguistic turn questioned the notion of a direct relationship between the world and language, in discussing the relationship between the human subject and language, and the way our understanding of the world is shaped, it ended up reinforcing the presence of the relationship between language and representation in Western thought, while also making the notion of direct interaction with the world implausible.¹⁷

Tilottama Rajan, in *Deconstruction and the Remainders of Phenomenology* (2002), subscribes to the same understanding of the persistence of the relationship between language and representation. Rajan describes the early French deconstructivism (of the 1960s) as a theoretical point between the advent of phenomenology and poststructuralism. In this discussion Rajan identifies poststructuralism with a return to Saussure and linguistic models in philosophy. However, in contrast to poststructuralism, Rajan (2002, p. xiv) sees the emergence of early deconstructivism “as a continuation of the phenomenological project in a period

¹⁷ This does not mean however that there are not other understandings of language, ones in which language is observed through its affective dimensions, as for instance in Fredric Jameson’s *The Antinomies of Realism* (2013). However, their existence only highlights the persistence of the representational position based on language, which still has a major influence in the creation of art and in art theory.

when philosophy in France was increasingly threatened by the human sciences as renewed and reconceived by structuralism”. As a continuation of phenomenology, deconstructivism separates itself from poststructuralism and is dismissive of a philosophy “concerned with consciousness, perception, and being [in order to move to] a discourse centered on representation and the sign” (Rajan, 2002, p. xi). Given this understanding of deconstruction (an approach that was closely identified with Derrida), Derrida appears to be in conflict with himself, or at least with his phenomenological side, in his intervention with Eisenman in the Parc de la Villette project; he seems to have been unable to step outside language and into the realm of matter and materialisation.

Although he recognises that Eisenman works with a different kind of language, one beyond speech, Derrida still refers to it as ‘language’, and although he discusses Eisenman’s work from the perspective of a collaborative process, Derrida still talks about it linguistically, from a personal point of view, from his own given background, context and comfort zone. But is it not the case that such a perspective limited Derrida? Further, did not such a perspective also limit Eisenman’s approach to the project? And has not such a strategy deeply influenced and determined all artistic discourse and practice?

It is therefore not surprising that friction emerged between Derrida and Eisenman as the project ran its course, which resulted in it being left unfinished and led to a profound scission between the two men. Their discussions make evident the tensions between language and materiality, and between the distinct understandings of deconstruction from the perspective of each other’s disciplinary position. To some degree, this tension made visible the incompatibility of approaching art as translation, as a linguistic process, and of using its representational characteristics in the

expectation of materialising a concept that cannot be represented. Derrida expressed his disappointment and frustration in a letter to Eisenman:

Naturally this question concerns also your interpretation of chora [*sic*] in ‘our’ ‘work’, if one can say in quotations our work ‘in common’, I am not sure that you have detheologized and deontologized chora in as radical a way as I would have wished (chora is neither the void, as you suggest sometimes, nor absence, nor invisibility, nor certainly the contrary from which there are, and this is what interests me, a large number of consequences). (Derrida, 1990, p. 8)

Derrida directs this dissatisfaction toward Eisenman’s (and architectural theory’s) understanding of deconstruction, or what he means by the term. The friction between the two men thus arose out of the distance between their two practices and the misunderstanding and lack of knowledge of each other’s activity – even (or precisely) when both were seemingly addressing the same themes and rhetorical frameworks.

Eisenman had to fight the materiality of architecture, because it required a different interplay or interaction between its elements: architecture, in the final analysis, does not exist in the same realm as language. In *Post/El Cards: a Reply to Jacques Derrida* (1990), Eisenman writes about the impossibility, or rather absurdity, of translation as a process of architectural materialisation. The absurdity, however, does not lie in the impossibility of the material(s) or, rather, it goes beyond it into the very ontology of creation:

[Y]ou glaze over the fact that your conceptual play with the multifaceted term *glas* is not simply translatable into architectural glass. One understands that the assumption of the identity of the material glass and your ideas of *glas*, in their superficial resemblance of letters, is precisely the concern of literary deconstruction; but this becomes a problem when one turns to the event of building. (Eisenman, 1990, p. 15)

Eisenman then continues by revealing the impossibility of employing a linguistic strategy in a framework of physical materialisation:

Yes, I am preoccupied by absence, but not in terms of this simple presence/absence dialectic, as you might think. For me as an architect, each concept, as well as each object, has all that it is *not* inscribed within it as traces. I am preoccupied with absence, not voids or glass, because architecture, unlike language, is dominated by presence, by the real existence of the signified. Architecture requires one to detach the signified not only from its signifier but also from its condition as presence. For example, a hole in a plane, or a vertical element, must be detached not only from its signifier – a window or a column – but also from its condition of presence – that is, as a sign of the possibility of light and air or of structure – without, at the same time, causing the room to be dark or the building to fall down. This is not the case in language where you and I can play with *glas* and *post*, *gaze* and *glaze*, precisely because of the traditional dialectic of presence and absence. (Eisenman, 1990, p. 15)

As such, Eisenman uses Derrida's provocation with the term 'glass' to expose the difference between language and architecture. While language can play with the terms transparency/opacity, for example, turning one into another, architecture cannot play in the same way (Eisenman, 1990, p. 16). In order to distinguish linguistic from architectural deconstruction, Eisenman states that while language can rely on dialectics, a two-way system, architecture needs a three-way system in order to be deconstructive (*ibid.*). He calls this third way in architecture 'presentness', which he describes as:

... neither absence nor presence, form nor function, neither the particular use of a sign nor the crude existence of reality, but rather an excessive condition between sign and the Heideggerian notion of being: the formation and ordering of the discursive event that is architecture. (Eisenman, 1990, p. 16)

The dispute between Derrida and Eisenman in relation to deconstructivism is discussed by John Macarthur in *Experiencing Absence: Eisenman and Derrida*,

Benjamin and Schwitters (1993). In describing deconstructive architecture as being about the 'pleasures of absence', Macarthur argues that this has become reduced to a simple formalisation of absence and the materialisation of experience. In criticising architectural deconstructivism, he is particularly referring to the goal of building the 'palpable experience' of the absence of the human subject (*ibid.*, p. 103). Macarthur (*ibid.*, p. 104) says that, for Eisenman, deconstructivism meant the building of emptiness: that is, only when we become indifferent towards the dichotomies that have informed architecture, "can [we] begin an exploration of the 'between' of these categories". At the core of his critique of Eisenman is the idea of experience, which Macarthur (*ibid.*) believes is not fully realised in Eisenman's architecture: "Experience is demonstrably reduced, and "theory" elevated to the category of an object of experience." For Macarthur, when experience or the construction of an experience through the use of architectural dichotomies is completely ruled out, then architecture stops being intelligible to those experiencing it.

Macarthur highlights the discrepancies between Derrida and Eisenman, alerting us to the fact that although Derrida speaks of absences, the absences he refers to point towards the fact that what are perceived as opposing terms in fact comprise two connected paths to one and the same thing. It is necessary to have multiple, or even distant, ways of accessing the same thing due to the surplus that each oppositional term constructs around itself (*ibid.*, p. 102). Therefore presence and absence are not merely opposing concepts in which the deficit of one highlights the presence of the other, but the pair in fact address the same thing, and the existence of the two terms is but a by-product of our inability to express or attain that single thing at the same time as recognising each terms' individual autonomy and power. Using this particular understanding of Derrida, Macarthur (1993) argues for a non-separation

of thought and experience, criticising deconstructivism in architecture for only caring about one side of the opposition instead of accepting both opposing sides as necessary parts of the same thing.

As such, despite the importance of language within deconstructivism, the thesis argues that linguist models and strategies should not have guided the project, because on the one hand they reduce artistic creation and theory to semiotics, negating the experiential and affective dimensions of artistic practices and theories, and on the other, they dismiss the discussion of matter. This is because underlying the use of linguistic models is the idea that materiality/matter has no agency or historicity – it is passive, inert and subject to human agency (Barad, 2007, p. 132), and thus belongs to an independent, separate realm of reality which human beings can only discover or access in representational form through the mediation of language.

In order to overcome this representational epistemology, Barad (2007, p. 49) suggests a performative epistemology, in which knowledge emerges through a “direct material engagement with the world”. Barad observes that, in contrast to representation, performativity is a belief that places human beings not outside and/or above the world but inside it, as part of the world in which human beings exist through practices of engagement. Neither language nor observation or theory exist independently of this world. Therefore, “...performativity is precisely a contestation of the excessive power granted to language to determine what is real” (Barad, 2007, p. 133). This position is consonant with Ingold’s, discussed in Chapter One, and his notion of the meshwork.

In the context of Crowther’s critique of the reductionist understanding of art, Barad’s discussion of language, materiality and representation, and Rajan’s insights

into deconstruction and poststructuralism, and given the descriptions of the creative process behind Derrida's and Eisenman's project for the Parc de la Villette, this thesis suggests that the project was approached through the perspective of how to *speak* of *khora*, rather than how to *experience* it and its *affective* dimensions. This raises the question of the materiality of *khora* (space). Through the linguistic strategies used in the project and the support of a 'reductive' semiotic art theory, *khora* came to be represented through language. What is meant by the notion in this context is that 1) when a work of art is either understood or created (as in the case of the Parc de la Villette) with an underlying representational theory supporting the idea that language is a mediating element between the world and human beings, or between experience and reality (even if this mediating element is recognised as far from free of failure), it results in the embedding of the reduction of what the work of art is or can be, negating its active and direct intervention in the world, its agency; and 2) when a semiotic strategy is applied to the creation of a work of art, even to a practice, they are equally deprived of their experiential and affective dimensions and only come to exist or be understood through language.

This has profound implications for a discussion of *khora* (space). It brings to the fore the idea that *khora* needs to be represented in order to be known and that language provides the best (if not the only) way to represent it. However, this idea has a profound dissonance with *khora*, as well as space, as these are concepts that escape representation – an idea that also supported, and was of the utmost importance for, Derrida's theory of deconstruction.

Eisenman's and Derrida's project for the Parc de la Villette, and their consequent discussions during and after the project, highlight not only the difficulty of bridging different disciplinary discourses, but also 1) the problem of relying on

linguistic practices in artistic processes of materialisation and 2) how this reliance reinforces the persistence of a representational model, particularly when ambiguous and fugitive concepts like *khora* and space are at issue. As such, this thesis argues that a performative, enactive, epistemological and ontological model – instead of a representational one – is vital for a discussion of the ontology and productivity of space (*khora*), particularly when such productivity is approached and achieved through an artistic perspective (as in the second part of the thesis). To materialise does not equate to representing, as the process of engagement, interaction and mutual formation of human beings and things can be generatively materialised. This, however, does not imply that experience(s) can be constructed, only that a different ontology of matter might be necessary. In terms of this thesis, such an epistemological move could be fundamental to considering the ontology of ambiguous, even impossible concepts like *khora* and space. However, as Rickert points out so lucidly, it is difficult to escape Derrida's problematic of realising the impossible:

Derrida as a philosopher is certainly interested in beginnings, creation, and invention, but he confronts a limit with productive arts such as rhetoric and architecture. In part, this is because he is interested in inventing the impossible. The chora for Derrida is precisely such an impossibility, and the conflicts that emerge with Eisenman stem from Derrida's attempt to realize this impossibility leavened with an intuition that it cannot be realized – that it remains impossible. Derrida's chora inhabits an impossible place, one that governs, in a manner nearly meta-metaphysical. (Rickert, 2007, p. 266)

Is the realisation of space therefore an impossibility? We are constantly confronted by this question concerning the impossibility of accessing space or its materiality, and the impossibility of presenting *khora*. This problem will be specifically discussed in Chapter Three.

Conclusion

The analysis of *khora* has allowed us to find a locus from which to deepen the discussion in Chapter One (concerning the ambiguity and the lack of a unified understanding of the concept of space) and to tackle the difficulty of its ontology. The extent of this difficulty is evident in the arduous task scholars recognise that Plato faced in his attempt to account for the concept of *khora*, illustrated by his evasive descriptions of it. It is also evident in the way contemporary approaches to the concept are enveloped in confusion, evincing conflicting ideas about, and distinct and sometimes opposing positions on, its meaning – which at times lead to the dismissal of the very idea of *khora* as space. However, this thesis argues that this is due to the difficulty of understanding space itself and not something that is only characteristic of *khora*. Indeed, the analysis of *khora* reveals the panoply of understandings of space. Therefore, instead of defining space through a single position, it is more productive to assume that all conceptualisations of space are related. In this respect, contrary to Algra's argument, if *khora* is conceived of as a coherent approach to space, space in turn can be analysed not only through multiple positions but, more importantly, all these positions represent potentially different dimensions and expressions (or facets) of the same phenomenon – which, however, remains unidentifiable as a single entity. Furthermore, the study of *khora* reveals the possibility that the concept of space, despite the many different approaches towards and understandings of it, might at some level of its constitution carry traces of all these understandings; that is, space might not only have an historical, contingent and provisional dimension, but also a primordial one.

Also, in relation to the ontology of space, the analysis of *khora* reveals the persistence into contemporary times of the idea of the separation and incompatibility between the physical and metaphysical realms as far as the conceptualisation of space is concerned (as discussed in the first chapter). However, through the work of contemporary scholars and their use of the notion of *khora* it is possible to realise ways in which these two dimensions come together. McEwen, Kristeva and Kananaugh overcome the division by acknowledging the presence – and importance – of the physical, ‘real’, everyday realm alongside a primordial and sensuous one in the performative and changing process of order-making. Also, in the context of the separation between the physical and metaphysical dimensions of space, it is important to highlight how, through Plato’s description of *khora* and the work of Derrida, *khora* emerges as something ‘other’ – a third element. This disrupts binary logic, and even the very construction of knowledge itself, with its persistence in distinguishing between *mythos* and *logos*, between the sensible and the intelligible. Due to the intrinsic relationship between *khora* and space, these contemporary discussions of and attitudes to *khora* can thus be situated in a discussion about space itself, opening up the notion that space is something that is not only ambiguous and not fully attainable, but also productive precisely because of its unattainability. It channels the desire to approach the unknown (while keeping it ambiguous and unreachable) through a sensuous, affective dimension that is produced out of the processes of transformation and change between the physical and metaphysical realms.

The productivity of space is first perceived in the work of Plato, who used the concept of *khora* to facilitate his discussion on the *arche* (the origin of the world) and the interactive process of generation between forms and instances, Being and Becoming, the sensible and the intelligible, in the framework of an indeterminate

genesis without beginnings. *Khora* plays a hierarchically equal role in this process, alongside Being and Becoming, by enabling this process of transformation. However, in a second instance, placing *khora* within a discussion about beginnings means it emerges as something that is constantly falling into itself, Derrida's *mise-en-abyme*. If Brague observes that the sky has become the locus of the unknown (as noted earlier), in Plato's cosmological work the sky is transformed into *khora* (space) through the creation of an ambiguous 'bastard' element in the *arche*. Space becomes the locus (*locos*) of the unknown. *Khora* thus becomes not only a means to discuss beginnings, or the lack of beginnings recognised by contemporary scholars, but also a discussion about the unknown, or how to approach the unknowable (space). Nonetheless, instead of making *khora* – and space – expendable and sterile, this perspective has led to its emergence as a productive concept in contemporary discourses on methodologies and approaches to knowledge, particularly as a creative strategy in rhetorical frameworks.

The discussions on *khora* as a rhetorical strategy have opened a way to read the discussions in the first part of the chapter as providing the foundational elements needed to think of space productively. However, situating *khora*, and space, within a language-oriented discourse and framework denies the experiential, physical, 'real', everyday dimension of space as well as its sensuous, affective dimension, and this not only diminishes the potential of space as a methodological tool, but also the very conception of space itself. This thesis argues, therefore, that if the experiential, sensuous and affective dimensions are taken into consideration, this can allow a different take on space as a methodological device, achieving a novel epistemological impact. Despite the fact that Derrida and Eisenman never acknowledged *khora* as space throughout their collaboration on the Parc de la Villette garden, the project itself reveals important findings in the context of accessing space and conceiving of it as a

methodological device. In using *khora* as the project's theme, Derrida and Eisenman set themselves the challenge of materialising an ambiguous and evasive concept. The failure of the project indicates the difficulty, if not impossibility, of such a task. This might have to do with the methodology they used, particularly its reliance on linguistic strategies, which, instead of liberating the project, constrained it in a representational practice, thus revealing that such a methodology is profoundly inadequate for the task of undertaking an in-depth discussion on *khora* or space.

Thus the second part of the chapter has revealed that while there is a positive possibility of thinking of space as a methodological device (as seen in the work of Rickert), it also emerges – at a certain level – as impossible. Is then the only way to materialise space through the possibility that exists in the attempt (as Rickert declares) but which can never be fully actualised? This seems to be the case, especially if the challenge is taken literally, as it very easily falls into linguistic processes of representation. This thesis argues that if a different approach is adopted, using artistic practice to investigate space and its productivity, it might be possible to reach a different result. This would involve a shift in epistemological models, from language-based meaning-making to the exploration of both the experiential, physical, 'real', everyday dimension of space and its sensuous, affective dimension. However, it might be the case that to access space (or to address it) it is necessary to constantly avoid it, to make a detour around it, to construct a 'corral', a *mise-en-abyme* or a 'bastard' kind of order – as with Plato's enaction of *khora* in the *Timaeus*.

In addition, through partaking in the constitution of the cosmos – of the *arche* – *khora* becomes inevitably cosmological, an element in the creation of the order of the world. This dimension (when used in combination with a productive methodological framework, which particularly addresses the absence of an origin or a

beginning, and a recursive and ‘bastard’ epistemology that defies binary logic) provides the thesis with a framework through which to approach space as a methodologically productive device in the conceptualisation of ‘bastard’ performative systems of order. Despite its ontological indeterminacy, *khora* presents itself as a potentiality – the potentiality of transformation, of moving between different realms or dimensions – and while doing so it transforms whatever it comes into contact with, all that it brings together from multiple realms and which it transforms. As such, *khora* as space is not itself a structure, a matrix, but a concept that allows the act of constituting and experiencing order. Hence, the analysis of *khora* has opened a path to an ontological discussion of space through its interplay with structures that are enacted materialisations of performed, experiential archaeological genealogies (or formations) of order-making that are yet without an origin or beginning¹⁸.

¹⁸ This discussion is undertaken in the second part of this thesis

Chapter Three

The Past as an Analogy of Space: Unveiling Strategies on How to Approach Ambiguous Entities

The first two chapters of this thesis have approached the discussion of the ontology of space directly. First, they considered contemporary concepts of space and revealed their underlying problematic: space has an ontology that is intrinsically ambiguous, evasive and indeterminate, defying representation. Secondly, they explored the notion of *khora*, a specific understanding of space that embraces its ambiguity, unrepresentability, unknowability, and even impossibility. In the process they revealed that, despite its ambiguity, space can be understood positively: it has productive potential. By building on these discussions, Chapter Three brings the two previous chapters into a single framework – that of a methodological discussion on how to research ontologically ambiguous entities by displacing the problematic of space to the past; thus informing a corral around space (idea presented in the introduction).

The first chapter revealed the importance of the notion of structure for discussions on space and, in relation to this notion, how non-linear and non-representational frameworks are fundamental to the constitution of open and dynamic structures that can be used in research practices. The second chapter, concerning the unattainability and unknowability of space, revealed both the importance of the presence of space in discussions about the possibility of genesis without a determined, single origin and the limits of linguistic approaches and models in accessing non-representational, ambiguous entities. These findings (and ideas), which inform the

conceptualisation of the ontology of space as ambiguous, evasive and non-representational, are also present in discussions concerning the ontology of the past and can be found in historiographical enquiries that challenge the traditional historical methodologies.

Non-linearity, the absence of origins, non-representationality and non-narrativity are central themes in contemporary historiographical debate, particularly in discussions about the ontology of the past and how history constructs its own research object. In questioning the relationship between the past, history, the writing of the past and the role of the historian, historiography has prompted an awareness of the subjectivity of the historian, the representational paradigms present in language, the strategies of narration and conscious and unconscious structures, and most importantly, an awareness of the ambiguity of the past itself. This is because something that no longer exists provokes different understandings of what it means to exist (or no longer exist) and this opens the way to multiple, distinct understandings of the past and how it can be accessed and researched – if it can be at all. Consequently, the past has become an ambiguous entity, and this dimension of historical enquiry has engaged historiographical researchers and thinkers as they seek to reconcile the ambiguity of the past in a productive fashion with the enquiry itself. Thus, the historiographical explorations of the ontology of the past and how to research it have enabled this chapter to establish an analogy between the past and space. As such, historiography provides the basis on which the two previous chapters converge, helping inform the discussion on how to research ambiguous entities.

The analogous relationship between space and the past raises challenging questions about the object of research, such as: if the historical object is a construction, where can its origin be located? Is there a single origin that can be

located in time or does it have a distributed, non-linear history, in which the past is no longer that which existed previously? How can the past be accessed if it no longer exists as a given? How can we access a past that goes deeper than history – further back where no written sources exist and further beyond, into the future, the place that shelters expectations and desires? However, it is important to highlight that such analogy does not have the purpose of addressing any historical implications of space, or of its research. The intention is also neither to understand how space can or has been researched and understood historically. Of importance to this thesis is how the analysis of the *discussion* of the past itself, and its research, reveals the presence or traces of the present within the making of history and consequently how this revelation has been crucial to develop research methodologies that concern the present (and future) – such as media archaeology. As such, in asking how ambiguous entities can be researched by establishing an analogy between past and space, this chapter also seeks strategies on how research outside of a purely historical enquiry (as the case of this thesis research on the ontology of space) can also be undertaken through history; using not only its objects, notions, knowledge, ideas, but also methodological debates.

Within this context and contributing to it, historiography has developed a series of productive frameworks that are based on 1) the notions of non-linearity and non-causality, questioning teleological accounts and exploring the notion of multiple and alternative histories (Manuel De Landa, Michel Foucault); 2) using archaeological and genealogical frameworks to challenge the idea of a singular and determinate origin for an event, idea, paradigm, object or thing (Foucault, media archaeology); and 3) analysing the role narrative plays in historical accounts in order to explore unconscious structures and the non-representational – but performative and

affective– dimensions of making history (Hayden White, Frank Ankersmit, Alun Munslow). These frameworks reveal a plurality of points of view; further, by revealing the plurality of existences they open the way to observing ontologically ambiguous entities, such as the past and space, without the need to first dismantle or deny their ambiguity. As such, these historiographic frameworks are fundamental to this chapter because they indicate the sort of methodologies that could form a point of departure for research into the ontology of space in the framework provided by the first two chapters. Crucially, displacing the discussion of the ontology of space onto that of the past, and examining it through historiography, reveals another important implication for this thesis: the possibility that space has a methodological purchase.

Because of the interaction between space and notions such as structure, non-linearity, non-causality, absence of origins and non-representationality (as discussed in the first two chapters), and given the importance of such notions when reflecting on and developing epistemological frameworks and methodological approaches (discussed here through historiography), this chapter finds that space has a productive potential in the methodological context. This shift, however, leads into a *mise-en-abyme*, in which space embraces itself, constructs itself – a suggestion that will be explored in the second part of this thesis.

The relationship between the methodological purchase of space and historiographical strategies is further developed and discussed in the second part of this chapter through a speculative reading of an excerpt of Marguerite Yourcenar's *Memoirs of Hadrian* ([1951] 2000) – a fictionalised history of the life of the Roman emperor Hadrian – alongside descriptions of Yourcenar's writing processes. The exploration of this excerpt and the descriptions of how the author wrote it should be seen as an example of an historiographical discussion about the multiple dimensions

of the past and its ambiguity rather than a literary analysis of either Yourcenar's overall *oeuvre* or this specific work. The speculative exploration of this excerpt is intended to reveal how the multiple dimensions of historical methodologies, used as means to approach an ambiguous past, cohere and coexist in reflections on the past (both in thinking about how to access the past and express it through writing fiction, as well as in the fiction *Memoirs of Hadrian* itself). This exploration begins from the perspective that if the barriers between history and fiction have been broken (as the 'narrative turn' suggests), then it is possible to use fiction to ask questions about how the past is constructed and exists in such stories.

Of particular importance to this thesis is the fact that the speculative exploration of this specific excerpt of Yourcenar's work and her descriptions of the process of writing also reveals the participation of space in the conceptualisation and exploration of the multiple existences of the past and in the process of accessing it. As such, it shows how space can be active and productive in methodological frameworks – as the analogy between space and the past established by means of historiography and its epistemological and methodological discussions suggests. In this speculative exploration, space is seen as methodologically productive in two instances: firstly, in Yourcenar's description of the process of accessing the past in order to inform her historical account, even if it is a fictional one; and secondly, in the fact that space is also seen as methodologically productive in the novel, where different dimensions and understandings of space are used to access and describe temporal historical experience. Both these instances highlight the need for a performative and enactive epistemology (as discussed in the previous two chapters), which places the experiential and affective dimension at its foundation in order to explore ambiguous entities without constraining or limiting them. As such, this analysis explores

strategies for accessing the past that do not rely merely on language.

Through her description of the process by which she wrote *Memoirs of Hadrian*, Yourcenar shows the importance of not only actively engaging with material sources (most specifically, artistic ones) but also of visiting and experiencing historical places. This experiential and affect-based research informs the excerpt (the subject of the analysis) through the construction of a historical space in which the past is interrogated. As such, this speculative exploration presents a reflection on the past that is researched through space and presented through space. The framework of research is implemented through the methodological purchase of space, and the outcome of the research is presented through the constitution of a space. Most importantly for this thesis, these spaces are not only abstract and conceptual (that is, the construction of structures of categorisation and order-making), they are also physical, ‘real’, experiential, affective and performed. As a result, the various dimensions of space coexist, interacting and informing each other, revealing space to be both multiply agential and a methodological device.

The Analogy: the Past as Ontologically Ambiguous

The second chapter raised questions regarding the participation of space in the understanding of origins, and this raised further questions about the sort of processes, rhetoric and methodologies that might be used to approach an origin without a beginning. Such questions resonate with the debates among historians and

philosophers of history concerning the ontology of the past and the making of history. As such, these enquiries into the ontology of the past and the study of history (in the context of constantly shifting ideas about what constitutes the past) provide a framework in which to take the debate on the ontology of space further, particularly regarding the question of how space can be researched. First, however, it is necessary to draw an analogy between space and the past by revealing the past's ambiguous ontology, observing how approaches to it have differed, and how the past itself has different degrees of existence and many different shades according to where it is placed and how the historian has tried to reach or access it. This chapter therefore will now turn to illustrating some of these many understandings of the past.

Alun Munslow (2007, p. 4) describes the practice of history as “the representation of something in the past”. Despite the transformation of its purpose, function, methods and beliefs over time, it can generally be described as the practice of writing down the past in the form of a narrative (or presentation) (*ibid.*, p. 1). The fact is, however, that not all historians agree on what is it that they, as historians, should be doing, how they should do it and what its purpose should be. The disagreements spring from deep epistemological differences not only concerning how the historian understands the past and the knowledge that is generated by their engagement with it, but also how this knowledge should be presented, as well as what is presented. If historical knowledge is a representation, this comes in the form of a narrative, and most of the time, as a text. But how many narratives of the past can exist? And to what degree do they ‘speak for’ the past, and are they speaking for or about the past? Is the past something that can be known? Is it a single reality or a multiple reality? Is the past even real? What then is the relationship between representation, narrative and the past, or between the past and history? For Munslow

(2007, p. 5), “while the past defined as a period of time during which many things happened is not invented, history, on the other hand, is a constructed narrative representation (a narration) *of* it or, to be more precise, *about* it”.

However, if the past is a period of time, when does it finish and the present begin? What are the limits of the past, how are they informed, and who or what informs them? According to Munslow (2007, p. 5), Paul Ricoeur argues that it is not possible to engage with the past but only with ‘temporality’, which includes past, present and future, and it is only possible to engage with temporality in the form of narrative; however, if in order to engage with temporality the researcher needs sources (because history is a story that is the product of historical sources), it follows that knowing the past is impossible. The impossibility of knowing the past is, according to Munslow, the idea that informed Nietzsche’s genealogies. The relevance of this is the fact that Nietzsche inspired not only Foucault’s own genealogies, but also Warburg’s methodological approach – two approaches to history that will later be revealed as fundamental to the development of the belief that space has a methodological purchase.

Munslow (2007, pp. 10-11) concurs with Ricoeur and argues that three approaches resulted from the movement against a modernist epistemology. Modernism regarded knowledge as existing independently of the intervention of the subject, making it possible to arrive at a true knowledge of phenomena and of the world itself as such knowledge represents them fully. The linguistic turn (Munslow designates its historical variant as the ‘narrative turn’ due to its role in questioning the historical narrative) produced three main positions on how the text produced by the historian represents the past. Historians have always been concerned with clarifying their role in the writing of historical texts and in debating the ontological nature of the

past and history, but the linguistic turn and postmodernism raised new concerns. Historians could no longer ignore the multiple layers involved in a text, some of which, arguably, the historian does not control. As such, according to Budd (2009, p. 344), postmodernism has invited historians – but on a wider scale other scholars too – to interrogate the “very notion of ‘the past’ by questioning the terms by which we have thought about ‘history’ as a concept and as practice”. However, alongside these concerns, new ideas and understandings of history and how it should be approached started to emerge.

In the first approach, the past is accessed through the ability of the historian to empathise with its events. This is possible if the past is observed as containing elements that are familiar to those living in the present (Budd, 2009, p. 349). For this reason, the past is understood as being the ‘same’ as the present (Ricoeur, [1984] 2009). The past, although gone, can still be known because the affective and agential human dimension of the past can be re-created – in Ricoeur’s words, ‘re-enacted’, and in Munslow’s, ‘reconstructed’. An example of a scholar who took this kind of approach was the early twentieth century historian R. G. Collingwood. He believed that historians have an “emotional and intellectual ability ... to experience elements of the past and to communicate effectively the insights that sensibility provides” (Budd, 2009, p. 349). As such, when the historian writes about the past he/she is giving a true account of it, or the best account, because it is also their own. The historian assumes that by means of language and the historical text it is possible to ‘speak’ the past, and this can be done by reconstructing it with the help of their imagination and experience of familiar events in combination with a rigorous interpretation of sources, according to a relationship of cause and effect. The historical narrative therefore presents an actual trace of the past, and in this way it

replaces the past as “description equals history and history equals the past” (Munslow, 2007, p. 12).

However, because the narrative is thought to present the past, it follows that it is not subject to any influences or biases from the present, including those of the historian. One of the problems with this approach is that it fails to recognise that the historical text is a representation of the past and not the past itself. Also, Collingwood’s idea that the past can be re-enacted presents a problem as “representation through re-enactment only uses those parts of the trace that are available for interpretation: this distorts the past by ignoring those parts of it that cannot be interpreted” (Budd, 2009, p. 349). This approach, according to Ricoeur ([1984] 2009), destroys the distance between past and present, nullifying the difference or ‘otherness’ of a past that can never be the present. It is based on the claim that there is a single past reality that the historian can reach through an objective reading of the historical sources (Munslow, 2007, p. 11).

In the second approach, the past is seen as inaccessible and can never be fully retrieved (Budd, 2009, p. 349). The past is therefore distinct and separate from the present; it is something ‘other’ (Ricoeur [1984] 2009) that can only be represented through careful analytical conceptualisation. Although still recognising the importance of empirical studies, this approach argues that knowledge is also analytical or theoretical (Munslow, 2007). The historian thus plays an active role in the writing of the historical account because he/she is the one structuring or constructing the past in order to make sense of the present (*ibid.*). The intention is that while presenting a truthful account of the past the historian also takes into consideration the influences they are subject to. As a consequence, this approach recognises that the account might contain the historian’s own biases.

However, for Ricoeur ([1984] 2009), this conception of the past makes it difficult to comprehend the presence of its traces, because without an understanding of what a trace meant in the past, the historian cannot understand what it means in the present. According to Ricoeur ([1984] 2009), the historian Wilhelm Dilthey exemplified this approach. Although distinct from the first position, the second approach still supports the idea of the existence of a single reality, external to the historian, and consequently the presupposition of a representational relationship between this reality and the historian's account (Munslow, 2007, p. 13). According to Munslow (2007, p. 14), this second approach has been very efficient and diligent in introducing innovative methods by which to understand historical evidence and in constructing frameworks that reveal and explain the evidence according to overarching theoretical structures.

In contrast, the third approach, according to Munslow (2007), does not believe there is a correspondence between a past reality and the historian's account because there is no single past reality to be accounted for, and as such, the historian is constructing not an explanation of reality but a narrative in written form. This does not constitute an account of the past but an account of the present knowledge of the past. As a result, such an account is a relativistic one, and in being so, it allows for "radical and experimental history practice" (*ibid.*, p. 14). In the third approach therefore the past is an analogue, as the historian is able to access the past but only through the transformation of metaphorical associations; the past is metamorphosed into a familiar experience (Budd, 2009, p. 346). The past is represented, but only through allusion (*ibid.*, p. 349). Ricoeur ([1984] 2009) points to Hayden White as an example of a historian who takes this third position. Accounting for the relationship between the historical text and the past, White ([1978] 2009, p. 358) says that "the

historical narrative does not *image* the things it indicates; it *calls to mind* images of the things it indicates, in the same way that a metaphor does”. By interpreting historical texts, the historian can discover the metaphorical constructions that were used and thus uncover the past through an understanding of language. However, in this conception of the past, its traces only exist within language, and for Ricoeur, this eliminates the possibility of the historian’s agency (Budd, 2009, p. 349). This notion is underlined by the belief that “meaning is generated through symbolic representation” (*ibid.*, p. 348).

The ambiguity of the past: problematics and strategies

In order to understand the implications of these three positions in relation to the past as ambiguous and the making of history (to its writing), we need to understand their interaction with language, through such notions as text, narration, tropes and fiction – subjects that the linguistic turn of the twentieth century explored. Within this context discussions about the historical approach of historicism reveal to be crucial given the interplay that historicism prompts between the past, textual interpretation, historical writing and the present, that is implicated by the presence of the historian. However, and as a result of the differences emerging from the interplay, this approach is a multifaceted one and multiple understandings of its meaning exist.

For Paul Hamilton ([1996] 2005, p. 2), historicism is “a critical movement insisting on the prime importance of historical context to the interpretation of texts of

all kinds”. Hamilton believes that historicism, although not new, is not the way history has always been done, and it emerges out of a critique of those practices that derive from the idea that there are *a-priori* principles ruling the lives of human beings. As a consequence, historicism developed most prominently as a criticism of idealist and evolutionist conceptions of the world that were informed by the emergence of the scientific paradigm in the seventeenth century, in which the world was seen as being structured according to an underlying set of rules, norms and laws. Historicism was a paradigm that became particularly important to Romanticism as it supported the idea that there was something greater in human beings that was both unreachable and immeasurable (Hamilton, [1996] 2005, p. 2). Consequently, history concerned the immeasurable in humanity, which nonetheless could still be accounted for through truth claims. However, with historicism, this meant that what surpassed the physical and measurable in humanity could only be found in textual accounts.

Munslow ([2000] 2006) agrees with Hamilton’s position regarding historicism’s opposition to the scientific paradigm; for him, historicism defended the absence of a single reality, a universal structure that could be observed. According to Munslow ([2000] 2006, p, 140), historicism is the “act of perceiving historical periods in their own terms rather than any imposed by the historian”. This means that the historian should observe the evidence in its own context without imposing his/her own framework and context. This position then led to the understanding that each period informs its own system of knowledge and truth, and therefore there are multiple systems of knowledge production and truth, as otherwise they would be universal or transcendental.

Frank Ankersmit, although agreeing with the notion that historicism opposes transcendentalism and the belief in universal truths, analyses it from a slightly

different position. For Ankersmit (2012, p. 1), “[h]istoricism ... is the view that the nature of a thing lies in its history”. As such, Ankersmit’s historicism is one in which the object of historical attention is generated throughout time, being the origin that is nevertheless always present in the object itself. Consequently, the time and process of this generation is present in the object as its ‘real’ nature, and history tells/presents this nature. This means that “phenomena are defined by their place in a process of development or change” (*ibid.*, p. 10).

However, according to Ankersmit (2012, p. 10), the notion that things change throughout time has been radicalised in historicism to the point where there is not any longer a referent for what constitutes an object. The end result is an impossibility of delimitation, of setting its origins, of closure. As such, the identity of the historical object can only exist as an *a-posteriori* example through its recognition in the historical narration of its past. Thus, its history cannot be separated from the present, daily experiences of the historian (*ibid.*, p. 2). This means there are no universal truths, as nothing can exist independently of its past and therefore of its formation. Thus, historicism is opposed to transcendentalism as things do not have a fixed and *a-priori* ‘nature’, but there is also no correspondence between how we understand the world (or our knowledge of it) and the world itself.

The idea that the history of something cannot be separated from the historian and his or her own daily experiences, according to Hamilton ([1996] 2005, p. 3), has led to a double suspicion of truth. Historicism is not only concerned with placing the object of research in context, but also in how the researcher’s understanding of it is dependent on the context in which they are working, hence the necessity for them to be aware of and to question how the research itself is biased. In addition, as Hamilton ([1996] 2005, p. 3) points out, historicism has a double suspicion of presuppositions

and determining paradigms because it believes that not only does the research object lie in the text but also, because it does, the past needs to be understood and interpreted as text. Consequently, the role of the historian is to point out the places in which interpretation has consciously or unconsciously changed the meaning of the text, whether at the time of production or during other periods' readings of it, including present-day ones (*ibid.*).

Questioning historicism, Hamilton ([1996] 2005, p. 4) asks whether in fact this hermeneutical process is not a cyclical one, and therefore if historicism, in recognising this, is able to break the cycle and reach a "real meaning, unclouded by that original audience's or any subsequent period's ideology". This problem is also raised by Munslow ([2000] 2006, p. 141) when he claims, "[w]hat is at issue with historicism is the question of epistemological relativism: how accurately can we represent the-past-as-history through our words and concepts in the here and now?" For Hamilton, historicism, particularly nowadays, seems to believe that these methods are able to break with ideology, exposing its true face, because they are informed by a postmodern suspicion of modernity's faith that the 'new' can overcome the 'old'. Nevertheless, this still does not address the problem of how to break the cycle of double suspicion, because even when the researcher recognises that he/she has their own assumptions, this does not prevent these assumptions from appearing in their work. Therefore, it is still necessary to find solutions that are able to show what is different in the researcher's work in order to break out of the cycle.

Agreeing with Hamilton, Munslow ([2000] 2006, p. 142) argues that the implication of assuming that it is not possible to give an accurate representation of the past is that history can become hostage to a linguistic understanding of meaning-making and more about the multiple meanings to be found in the 'text'. In such a

framework, “the essence of history is hermeneutic not factual, linguistic not empirical, fictive not real”, and as such it becomes impossible to fully access the past because “history *is* conceived in the historian’s mind, history *is* literature, and history *is* generated in here and now” (*ibid.*).

According to Munslow, the ‘narrative turn’ (history’s version of the linguistic turn) has raised two questions that directly address the problematic that historicism raises. The first is whether the past constitutes a story that can be discovered (and therefore told); the second is whether the sequence of historical methodological operations – reference, explanation, meaning and its narrative presentation in prose – constitute all that is possible in terms of historical methodologies (Munslow, 2007, p. 3). This has implications for the understanding of what a story and narration are in relation to the practice of history: “[a] story is the recounting of a sequence of events. This is what is told. Narration, on the other hand, refers to the manner in which a story is told” (*ibid.*, p. 4), and this is an important distinction because *how* something is told or narrated is as important as *what* is being told.

In his systematic enquiry into the relationship between history, story and narration, Hayden White makes a fundamental contribution to this discussion. As Budd (2009, p. 343) puts it, White is one of the most influential thinkers associated with the linguistic turn as he argues that historical writings are better understood through an artistic lens than a scientific one because history is pre-science. White states that “in refusing the real (which can only be symbolised, never represented) history refuses the *possible*, as it is precisely this refusal that prohibited history from becoming a *modern science*” (White, 2005, p. 147). Along with historicism, White asserts that it is not possible to omit the writer, the historian, when observing an historical text: the historian, in the process of research and writing, subjects the text to

interpretation and explanation because it is not transparent and needs to be understood in light of its linguistic structures (Budd, 2009, p. 344).

For White history is a type of consciousness, and as such, the historian needs to be aware of how this consciousness is informed, how it is structured by the interventions made by all its contributors through their interpretations and subsequent writings (Budd, 2009, p. 344). Historical consciousness is thus the creation of a constructive cycle of interpretation and presentation (reading and writing). The historical text is subject to imagination and to the kind of construction of reality that literary tropes allow. However, Budd (2009, p. 344) alerts us to the fact that White did not think that historians were not able to uncover the past or that what they wrote was fiction; rather, because they convey their findings through writing, their work should also be considered as an imaginative and creative endeavour. Munslow (2007, p. 5) shares Budd's perspective on White's intervention. He believes that White does not argue that history is fiction; indeed, they cannot be equated as history respects the facts of the past.

For White, therefore, interpretation is not just a question of comprehending the meaning, even a meaning, but is also the unconscious subjugation to structural linguistic and narrative norms. These norms are present not only when writing the historical text but also when reading (interpreting) historical documents. However, by using those same structures, the historian is also creating them. Consequently, historical narratives are partially invented and partially found (Budd, 2009, p. 345). As such, there is no generalisable and unchanging truth to be found in historical narratives. This position in relation to the historical text supports White's claim that history is provisional and contingent.

For White the problem with not recognising the influence of linguistic and narrative structures is that the past comes to be seen as a narrative in itself (Budd, 2009, p. 346). The constructed narrative of the historian is taken for the thing that it is trying to convey and thus the past is transformed into a linear and logical sequence of events and consequences. In order to avoid this, historians need to recognise the kind of construction used, and this has been the contribution of the linguistic turn: it provides a recognition of the rhetoric contained in a text (*ibid.*, p. 347). Moreover, historians in their double role as both readers and writers excel in narrative strategies, and they are able to recognise a society's episteme through the meta-narratives that support it, as the narrative strategies are widely known and embedded in a particular society's fluency in narrative/storytelling/language (*ibid.*). The kind of stories told and their rhetoric has been rehearsed over and over throughout history. As such, the historical understanding and comprehension is not of the historical event itself but of its narratives. Because the practice of history is normally conducted through writing and reading, those histories that do not have linguistic foundations need to be 'completed' through language or linguistic structures (*ibid.*). As such, White sees the linguistic turn as challenging "authoritative claims of historians both to understand and to communicate knowledge through language: it also leads us to reconsider the linguistic nature of our own historical understanding" (Budd, 2009, p. 345). However, it also reveals an inability to understand and generate historical accounts of the non-linguistic in the past, and this becomes reflected in social consciousness both at an epistemological and an ontological level.

The visible parallels between historical narrative and fictional narrative expose the porous nature of these ontological categories, a fact that will be further explored in the second part of this chapter through the work of Yourcenar. Furthermore, the

investigation into the boundaries and interactions between past, history, representation, narrative and language has revealed the existence of a resistance to approaching history through means that are not textual or linguistic. In order to discuss how the past can also be accessed by means other than language, involving the study of materials in their own terms, we need to turn to the field of ‘media archaeology’. While accepting the general epistemological framework of the new historicism, media archaeology goes beyond the notion that artefacts can be read, and thus beyond historical analysis based on textual and linguistic strategies.

In *What is Media Archaeology?*, Jussi Parikka (2012, p. 2) introduces the discipline as “a way to investigate the new media cultures through insights from past new media, often with an emphasis on the forgotten, the quirky, the non-obvious apparatuses, practices and inventions”. Because of its use of digital media and technology – as well as its desire to have an active impact on contemporary media practices and culture – media archaeology is not only a theory but also a methodology (*ibid.*, p. 5). However, despite its focus on digital media culture, media archaeology particularly studies the nineteenth century, as it regards this period as the “foundation stone of modernity in terms of science, technology and the birth of media capitalism” (*ibid.*, p. 2).

However, before discussing further the implications of media archaeology as a theory and a methodology, it is necessary to turn to the work of Michel Foucault. Arnold I. Davidson argues that Foucault’s methodology is grounded in the Anglo-American tradition of analytic philosophy, which Foucault (cited in Davidson, 1997, p. 3) describes as a philosophy that “does not give itself the task of considering the being of or the deep structures of language; it considers the everyday use that one makes of language in different types of discourse”. Foucault then transposes this

understanding of analytic philosophy into one that can analyse the everyday interactions of society's power players (*ibid.*). This philosophy, which is concerned with relationships and resists making statements about the ontology of language, comes from a position in which language is the element through which we understand, perceive and become conscious of the world. Davidson (1997) also points out that Foucault speaks of, discusses and uses the idea of structure, of being analytical, but without being a structuralist (highlighting his French influences); Foucault saw structuralism as a philosophy that was crystallised in the term 'analytic reason', and which he opposed to humanism, anthropology and dialectical thought. As such, Foucault (cited in Davidson, 1997, p. 7) tries to reveal the structures (the laws and determinations) that exist below the conscious level. Importantly for this thesis is the fact that Foucault, as Davidson (1997) shows, assumes that a structure from one epistemological framework can be transposed into another because they possess an underlying core of reality.

In discussing Foucault's position on structuralism, Roger Paden (1986) presents the *Order of Things* as a work with an overarching structure rather than a disconnected one, a structure that Foucault uses to criticise structuralism. According to Paden (1986), Foucault starts with an analysis of Velázquez' *Las Meninas* in order to set up a discussion about representation as the modernist subject *per se*. Over the course of the book, he discusses the three sciences using a structuralist approach to construct these synchronic objects, and establishes a distinction between the classical age and modernism. This discussion reveals how, in the modern age, a problem with representation emerged that had not previously existed. Through *Las Meninas*, Foucault shows how the classical period recognised the different levels of representation, although they were not addressed directly, but indicated through

absence and “thus, the activity of representing, which makes knowledge possible, is not represented” (Paden, 1986, p. 23). However, if it was recognised during the classical age that the production of knowledge also carries invisibilities, in the modern period, which takes representation as its core subject, the activity of representation is no longer be seen as inaccessible (*ibid.*). Foucault, following an analogical strategy, argues that “if modern structuralism is similar to those sciences which were based on the classical episteme, and if it was impossible to represent the activity of representation within that structuralist episteme, then it might also be impossible for modern structuralism to represent this activity” (*ibid.*). As a consequence, the attempt to create a universal structure that would reveal the origin of a given object is condemned to failure (*ibid.*).

Agamben (2010) situates the search for origins as an epistemological issue in Kant’s concept of an ‘archaeology’ of knowledge. Kant sought to construct a philosophical history of philosophy. However, according to Agamben (2010), he created a paradox by attempting to look to the past to trace such a history: it is not possible to find a first cause or origin in the past when the issue is the emergence of a thought or idea (philosophy), because reason cannot be situated historically. There is a constant present-ness in the role of the philosopher that cannot be historical. As such, for Agamben (2010), this is the source of Foucault’s problem with the issue of origins: how can we find this present-ness in the past? In terms of the history of ideas, how can we construct the historical object if it does not have an origin?

According to Agamben (2010), Overbeck suggests that although we can look into history, there is also a pre-history. This is not something that is necessarily prior to history; rather, it is a set of conditions out of which the historical events arise (*ibid.*). Thus, it is possible to observe a displacement of origins into the idea of an

emergence of something, and how this emergence is constructed. As such, in discussing genealogies, Agamben (2010) makes a detour into psychoanalysis and Freud in order to discuss a subject that appears to engage all those who think about origins: what can this pre-history of history be? In other words, what is the conscious and the unconscious of history? Events happen at certain moments and may later be forgotten, but they still continue to play an active role in history and the making of history (*ibid.*). Thus Agamben (2010) alerts the historian to the presence of an unconscious in history; history is in a constant process of construction because everything is constantly being remembered and forgotten; history is a synchronicity of the unconscious and the conscious.

Agamben (2010) goes on to say that archaeology is concerned with bringing this unconscious to the surface: archaeology is not about looking for an underlying universal structure that gives origin to both the continuous and the discontinuous, but instead is a process of observing how this unconscious is constantly present. Traditionally, archaeology has been seen as a process that looks for disruptions and creates discrete, isolated objects. This is generally thought to also be the Foucauldian method, but Agamben (2010) shows that Foucault may actually be criticising not only the continuous, the teleological, but also the discontinuous, the disruption model. He is seeking an integrated system and not observing either model in isolation. As such, the historian neither looks for disruptions nor a continuous narrative of cause and effect, but rather seeks to understand through the idea of the conscious and the unconscious how ruptures and continuities occur simultaneously.

Foucault has therefore had a major influence on media archaeology because his work provides a methodology with which to research the multiple paths of existence that a discourse, idea, object or media takes (Parikka, 2012, p. 6). Another

important influence is that of Friedrich Kittler who, as Parikka (2012, p. 6) observes, applied Foucault's method of researching written documents to investigating the emergence and persistence of media and material objects. Kittler also introduced the genealogical dimension of Foucault's work into media archaeology, as the conditions of emergence of hidden or unconscious origins. This has led to the writing of alternative histories that run counter to the dominant narrative: media archaeology is able to use Foucault's genealogical method to question the notion of a single origin and the idea of a teleological history (*ibid.*, p. 13). The work of Walter Benjamin has also been highly influential in this field. His discussions on modernity have inspired several media archaeology studies considering what it means to be modern: questioning modernity's paradigms, exploring the reasons for their persistence, and investigating their impact on cultures and ways of perceiving the world, particularly in the postmodern era (*ibid.*, p. 7). The main areas of research using Benjamin's framework have been nineteenth and early twentieth century technologies.

As an important technology of modernity, film and cinema (and more recently television) has also been a key subject of research in media archaeology, particularly in the context of the discourse on non-narrativity and non-linearity. This is because the work in film studies, particularly since the 1990s, has highlighted the presence of unconscious dimensions in technology, and hence the presence of the past in the present (*ibid.*, p. 5). As such, cinema (and its techniques) has proven a productive field in which to explore the multiplicity of media and multidimensionality of technologies in relation to the image and perception in more general terms.

Building on these influences, media archaeology strives for new ways of understanding media and technology that diverge from the path of a linear understanding of history in which old technologies are seen as a part of the past that

has been overtaken by the new; instead, media archaeology looks at the old and the new as following parallel tracks (lines) (*ibid.*, pp. 1-2). As such, it also has no interest in discovering a universal explanation or a grand theory about media; it is more interested in what falls outside the norm, the mainstream, and in ‘excavating’ paths previously unconsidered (*ibid.*). In order to excavate such paths through history, media archaeology conceives of time not as straight but in folds, sometimes leading to an overlap between past and present as the old is discovered and seen as new while the new is sometimes perceived as obsolete and old (*ibid.*, p. 3). Thus, media archaeology questions the boundaries between past and present, old and new, to the point where the difference between old and new media and technologies becomes indistinct.

To achieve this position, according to Parikka (2012), media archaeologists should position themselves in the middle, neither working as an historian nor observing only the new and emergent technologies and media, but instead seeing the interaction and dynamics between old and new as a complex system, and embracing it. Consequently, media archaeologists are not only interested in the past but also in the present and future, and in the multiple histories of the present. This concern with the present is part of the influence of Foucault who claimed that “all archaeological excavations into the past are meant to elaborate our current situation” (Parikka, 2012, p. 6) by asking such questions as “[w]hat is our present moment in its objects, discourses and practices, and how did it come to be perceived as reality?” (*ibid.*, p.10). As such, the narratives that media archaeology writes are not only historical ones but also composite narratives, developed by researching the wider networks of influence behind the formation of technologies (*ibid.*, p.11) and by using historical apparatuses to question the new and the present as well as the multiple histories of the

past.

However, despite these general guidelines and positions, media archaeology does not have a uniform approach; it is not a single-voiced discipline. Rather, it is a set of practices developed by researchers with distinct disciplinary backgrounds using different paths and varied approaches. As such, it is a heterogeneous discipline in which media archaeologists define their own positions and approaches, develop their own methodologies – for instance, Siegfried Zielinski, who named his approach *variantology*. Zielinsky uses *variantology* to focus on the exploration of the deeper, more experiential, bodily and material dimensions of media, a position that, as a result, also embraces perspectives on how past and present media and technology is used in creative practices, particularly by artists (*ibid.*, p. 12). With the inclusion of the arts, media archaeologists take the discussion of media and technology beyond the purely theoretical into a search for its applications, questioning what it means to create the ‘new’ (*ibid.*). As such, media archaeology is an approach and a methodology that is used not only by theoreticians but also by artists who “have been able to use themes, ideas and inspiration from the past media too” (*ibid.*, p. 2).

The fact that media archaeology is such an all-embracing field, encompassing so many researchers and practitioners from different fields and disciplines, means that its enquiries and the answers they reach lie outside a single disciplinary framework. This, however, does not mean that it rejects any of these disciplines; rather, it grounds its research in a multidisciplinary knowledge (*ibid.*). As such, media archaeology, according to Parikka (2012), situates itself in-between disciplines, as it draws from multiple fields in a transdisciplinary mode. Nonetheless, Parikka (2012, p. 15) argues that media archaeology is still a discipline in itself, albeit a ‘traveling’ one, as its themes are not located in any one specific place but in multiple places.

The Historical Novel: *Memoirs of Hadrian* and the Agency of Space

The tension between historical fiction, fictional history and historical reality discussed by White (in the first section of this chapter) is exemplified by the work of Belgian-French novelist and essayist Marguerite Yourcenar, specifically in her *Memoirs of Hadrian* ([1951] 2000). This book, which falls into the category of historical fiction, exposes the ambiguity of the past and shows how writing about history is always a process of engagement that reaches beyond the past to become a multidimensional enquiry, because – even if it does so unconsciously – it also performs the present. As such, Yourcenar exemplifies the flow and interaction between history and historiography, the challenge of understanding an event in its own context (historicism) and of writing as if living in the past. *Memoirs of Hadrian* provides a good example of such flow and interaction – and therefore of the multidimensional nature of history – from the point of view of historical fiction rather than that of history. This is because 1) the work starts from the historical sources; 2) the author embeds herself historically, as Yourcenar documents; 3) the work reflects upon the relationship between human beings and the past through its theme (the life-story of an emperor in his own words); and 4) the story, the idea, lingered with the author as a continuous, intimate presence over the thirty years it took to write, reflecting her own life/time/past and, in a way, becoming a book about Yourcenar herself. This history-story therefore combines multiple dimensions of the ontology of the past and of history. As Yourcenar says:

Those who put the historical novel in a category apart are forgetting that what every novelist does is only to interpret, by means of the techniques which his

period affords, a certain number of past events; his memories, whether consciously or unconsciously recalled, whether personal or impersonal, are all woven of the same stuff as History itself. (Yourcenar, [1951] 2000, p. 275)

As such, Yourcenar ([1951] 2000, p. 273) believed that to write historical fiction the author must “[d]o from within, the same work of reconstruction which the nineteenth-century archaeologists have done from without”.

After a period of writing spanning almost thirty years, *Memoirs of Hadrian* was finally published in France in 1951. While it takes historical documents such as the *Historia Augusta* and Cassius Dio’s *Historia Romana* as its starting point, the book is a fictionalised biography of the Roman emperor Hadrian. The novel takes the form of a letter that Hadrian, who lived between 76 and 138 AD, is in the process of writing at the end of his life to his successor, Marcus Aurelius. As a work of historical reflection, this book is not only placed in a certain historical period – the end of Hadrian’s reign as emperor – but also takes as its starting point a particular historical idea: that there was a particular time when man ‘stood alone’, apart from the gods or from God. The understanding of this historical period lies at the core of the book, alongside the historical figure of Hadrian. But beyond Hadrian the historical person was Hadrian the man. As such, Yourcenar uses a temporal trick – playing with the notions of history, past, memory, historical character and individual being – by reducing the temporal span of her contact with the man to almost an instant (that is, the time it takes for Hadrian to inscribe his memories in a letter), while at the same time describing the historical time-line of an entire life. To show how she accomplished this, she explains her working methods:

Take a life that is known and complete, recorded and fixed by History (as much as lives ever can be fixed), so that its entire course may be seen at a single glance; more important still, choose the moment when the man who lived that existence weighs and examines it, and is, for the briefest span, capable of judging it. Try to manage so that he stands before his own life in much the same position as we stand when we look at it ... (Yourcenar, [1951] 2000, p. 270)

However, the difficulty of such a task is reflected in the author's relationship with the book: she continually postponed its writing until she finally felt that she was old enough to attempt it. However, as Yourcenar ([1951] 2000, p. 271) states, "[i]t took me years to learn how to calculate exactly the distances between the emperor and myself". In the same way as Hadrian does, Yourcenar also grew older, and experienced both war and peace, and the diminishing gap between the two informed the character of Yourcenar's Hadrian as he slowly developed over the years. Yourcenar ([1951] 2000, p. 269) accounts for the difficulties of his formation by saying, "I was not succeeding in my attempt to reconstruct that world as seen and heard by one man". As a consequence, she felt the need to pursue a method that did not depend on the historical sources alone, developing a process that consisted of experiencing as much as possible of the traces his life. She describes spending the mornings ...

... at the Villa Adriana; innumerable evenings passed in small cafés around the Olympieion, the constant back and forth over Greek seas, [and the] roads of Asia Minor. In order to make full use of these memories of mine they had first to recede as far from me as is the Second Century. (Yourcenar, [1951] 2000, p. 270)

As part of this process of 'being' (with) Hadrian, Yourcenar took with her into exile in the United States not only her notes for her reading at Yale and a map of the Roman empire at the time of Trajan's death, but also a photograph of a statue of

Hadrian's lover, Antinous. When distressed, she also found comfort in a Canaletto painting of Rome (*ibid.*, p. 271). As if trying to retrieve lost memories out of a state of amnesia, Yourcenar supported the writing process by gazing at cherished works of art that carried multiple traces of or connections with Hadrian's life. One example was a Piranesi engraving of Hadrian's villa, which not only shows the villa itself, but through its depiction of Canopus' chapel also refers to Hadrian's relationship with Antinous, as this was the place where the statues of his lover, carved in the Egyptian style, once rested. Speaking of the engraving, Yourcenar declares:

Piranesi, almost mediumistic, has truly caught the element of hallucination here: he has sensed the long-continued rituals of mourning, the tragic architecture of an inner world. For several years I looked at this drawing almost daily, without a thought for my former enterprise. (Yourcenar, [1951] 2000, p. 272)

Yourcenar thus grew close to Hadrian through a process of embedding herself in his life, conflating their lives through a series of performative acts. As she says, "since one of the best ways to reconstruct a man's thinking is to rebuild his library, I had actually been working for years, without knowing it, to refurbish the bookshelves at Tibur in advance" (*ibid.*, p. 273).

This represented a sort of appropriation of Hadrian's life, but one in which the traces of Hadrian – of either the real or the fictitious man – appropriated Yourcenar in turn. The process that Yourcenar developed in order to get close to Hadrian and to write about him is one that not only goes beyond the historical sources, but also beyond representation – it is a performed process, one that works through affect, emotion and the body. This process – the search for a state of production beyond the factual and rational – is one that can also be seen in Warburg's work (discussed in the

preamble to the second part of the thesis), and is fundamental to a concept of space in which its multidimensionality can be expressed in a methodological device.

Yourcenar describes such a process in the following way:

[A]kin to controlled delirium ... and yet this term *delirium* smacks too much of romanticism; let us say, rather, a constant participation, as intensely aware as possible, in *that which has been* ... one foot in scholarship, the other in [the] magic arts, or more accurately and without metaphor, absorption in that *sympathetic magic* which operates when one transports oneself, in thought, into another's body and soul. (Yourcenar, [1951] 2000, p. 275)

She continues:

Text [(Yourcenar, [1951] 2000, p. 276-277)] has been removed due to Copyright restrictions

For Yourcenar, it is possible to shorten the distance that separates the centuries. She understands, in the process of telling Hadrian's story, that it registers the same losses as does her own biography: Hadrian's lapses of memory mimic those of Yourcenar. How is the author to speak of her own life without transferring the same faults and losses when relating someone else's, regardless of the time that separates them? What does the author know about herself, about those she has spent her life with and those whom she only knows through history and the appropriation of their historical traces? How is the author to delimit, to trace a separating line between all these lives, to know their origins, their genesis? To shorten the historical distance, Yourcenar discovered she needed to merge with the life of Hadrian – a process that goes beyond the rational or conscious and becomes performative and affective, deeply engrained in the body. Hadrian becomes one of her acquaintances, even one of her relatives; the letters and documents that Yourcenar receives, organises and destroys are not only those relating to her own life, but also to Hadrian's. Amongst the letters from her friends and relatives is the letter that Hadrian wrote, or that she is re-writing for Hadrian (that is, the book).

This is an intimate process, one of introspection. Yourcenar describes a process in which the writer of history is present in the history/story, as the past is 'time recaptured' by the writer in his/her 'inner world' (*ibid.*, p. 276). Time is no longer a limiting determinant, separating people – it stops being a matter of time, as the temporal distance is transformed simply into distance, a malleable line that can be twisted, curved and cut at will. Thus, accessing the past is no longer a process of walking along the straight line of time, but one of drawing a line – whether linear, non-linear, continuous or discontinuous – which constitutes itself in the interaction and exchanges between the writer and what is being written/researched. And drawing

a line, as seen in Chapter One, is a spatial process.

By accepting the freedom from truth and fact that fiction bestows, Yourcenar – although aiming for historical authenticity – was able to work through the small details that ornament a life, gaining the leverage to infuse Hadrian with life. This life is not necessarily Hadrian's, or not only his, but also the lives of the many other people Yourcenar has experienced her life with or through. In such a process (one that is not so much about placing yourself in the past or travelling to the past but one in which past and present cease to be the opposite end-points of a straight line), to what degree does Hadrian, the character, become closer to a 'truer' unravelling of the real life of someone long dead? 'Truer', that is, not just in terms of portraying the life of Hadrian, about which few written documents survive (allowing room for other documents beyond the written one, other strategies of enquiry), but also historiographically 'truer', because it recognises and expresses this very interaction, creating a meshwork of lives. As it is a novel, this account is open about the presence of the writer, alerting the reader to the fact that this is possibly not *the* life of Hadrian, but *a* life of Hadrian. However, in disclosing the presence of the writer, who permeates and blends with the life of the historical person, the work puts forward the idea that history may not be about tracing the origin of a past event: there are shared dimensions of existence that cut through the past, allowing the notions of past and present to dissolve into each other seamlessly.

The interaction between and malleability of past and present through the dissolution of the limits of time opens the way for space to work alongside imagination, creating a 'bastard' order and epistemology that merges different times, experiences and beings. To explore this further, the chapter turns to an excerpt from the fourth chapter of *Memoirs of Hadrian*, 'Saeculum Aureum', which demonstrates

Yourcenar's approach to the writing of historical fiction. This thesis proposes that Yourcenar makes Hadrian mimic the process she follows when constructing his character: she allows him to trespass across time to be with other historical figures from earlier eras. This process requires a concept of space that sees it as not only multidimensional, but also possessed of agency – that is, as alive and productive.

This extract is composed of two paragraphs, each of which (this chapter argues) corresponds to a distinct kind of physical, 'real' space. Both of these spaces are understood to inform our notions of place and site, as discussed earlier in Chapter One, but although they are close to each other, they are always separate, sitting side by side, in the same way as the statues of the Colossus in the excerpt. However, just as the Colossus is one monument, so these two spaces are the same: they exist in exactly the same location. One is the historical *site*, the site of the monument (the formal inscribed word), and the other is the *place* of quotidian practices, the place of the ephemeral (the anonymous scribbled word).

The excerpt is preceded by the arrival of the emperor, his wife and their suite at the Colossus of Memnon in Thebes, Egypt. The monument was built around 1350 BC and carried the legend that at each dawn a sound would emanate from one of its two statues:

Text [(Yourcenar, [1951] 2000, pp. 173-174)] has been removed due to Copyright restrictions

In the first paragraph, the visitor arrives at the site, passes through, and leaves after the visit. During the visit they can see the formal written words, even hear about the people to whom these names belonged, their kingdoms and deeds; however, one visitor – in this case the emperor – feels alienated from these inscribed lives. There is no living person behind the name, even if something is known about that person; the word has lost its meaning, its potential to be affective, mimicking the statues that do not move or breathe and whose blood does not flow. However, the cause of the emperor's emotionless state might not be the apparently disembodied facades of the elements that comprise the site, but more the framework in which they exist. Thus, it is not so much the fact that they are discrete entities (with the names A, B or C or site X or Y) that causes alienation as the fact that they are only seen as pieces of a past with a beginning and an end, a past with no relation to the present.

At the same time, this is not a strange subversion of knowledge in which the historical site stops having historical meaning and of being active in the present. There are still priests there, who continue the practices related to the site and who perform the rituals in which the emperor engages. However, possibly because he is aware that too much is unknown or forgotten, the little that is known about these historical figures does not seem to match the importance and weight of their names. It is not possible to reconcile the social, political and religious past of the site with the present social, political and religious practices. The existence of the site is thus conflicted: as a historical site it has become devoid of life, even though it has parallel lives running alongside it. It is dead while still alive. Somehow, this place is too full of meaning, yet this renders it void.

The second paragraph, however, brings a lightness to the place – because it is a *place* of the quotidian where the present needs to exist, it is lightened by

disinvesting it of history. Whatever happens in the historical place becomes present or meaningful, affective. Objects that were previously inert become activated, or at least they are affected by a different kind of activation. The past becomes not present or visible but immanent through a process by which the multiple categories of life, being, monument, memory, past and present are suspended. They are exposed as existing on the same plane, and the emperor inhabits the same space as those whose names are written on the Colossus.

This could be discussed through analysing the different effects, for instance, of printed versus handwritten inscriptions; however, the focus here is how the same location becomes open to imagination through the conflict, conflation and dissolution of spatial dimensions – that is, through the existence of a potential physical dimension of space that activates the process whereby the historical *site* becomes a historical *place*. It is not only the awareness that others have lived and constructed monuments here, but that the owners of the names in the inscriptions have been on that very same location. This gives the visitor the thrill of materiality, a materiality that has crossed history and that bears its traces. Behind and beyond, past and present coexist. There is no longer an inside and an outside as these categories have dissolved.

Although this suspension of categories is represented in the novel by the emperor pausing to rest, this is not a temporal suspension. The site/place becomes a space, and through his imagination Hadrian is freed of temporal barriers and is able to connect with different times. It therefore becomes meaningful that Hadrian himself eschews immortality by avoiding the practice of inscribing his name on new monuments: by avoiding the imprint of his name he is bypassing the process that leads a gesture or practice in the present to become a monument in an historical site. In this way, he anticipates that others in the future will be able to know him without

having access to written documents – or even to his name. The emperor will continue to live through his anonymous presence in the imaginary space created by his moment of rest. This is an anonymous immortality that can only be unlocked through affect and performance, in the way that Yourcenar does in writing her novel. Most importantly for this thesis, this unlocking has occurred in multiple dimensions, activated by a spatial agency – an activity that will be explored in the second part of the thesis.

Conclusion

By putting in place the idea of the corral as a strategy to approach space that takes it outside the framework of disciplines traditionally seen to have their object of research space, as well as existing contexts of discussion of space, it was possible to deepen the understanding on space by better understanding its productive potential within a methodological context.

Displacing the problematic of space to a discussion of the ontology of the past as an ambiguous entity, to observe how history, or more specifically historiography, has reconciled such ambiguity with its own research processes and making revealed how the ambiguity of an entity does not need to be simplified or dismantled. It is possible to inform a research framework that instead embraces such ambiguity when the entity being researched is observed in its complexity; as something with a multi-dimensional existence that is contingently informed through non-linear temporal

interactions in a process of co-constitution with the environment in which is present at each moment. In order to research this complexity notions as the non-linearity and discontinuity of existence and therefore of the history of the entity need to be included, leading to non-teleological approaches. Within this context the object of research can be observed as not having a single and determined origin — a beginning without beginning — being its existence always contingent and provisional, while at the same time constituting a single entity.

This framework opens a path for this thesis to continue the research into the ontology of space without placing it historically — without observing and contextualizing the changes and fluctuations of meaning throughout time, or to have a specific periodization. While putting forward a framework of research that does not situate its object historically, and yet not making it a-historical and universal, this chapter has also shown that such research can be done through historical artefacts and materials themselves, because they are still alive in the present. Media archaeology draws from this perspective as discussed previously, but most vividly, the agency of historical artefacts, places, ideas and even imaginaries has been revealed through the speculative exploration of Yourcenar's work and her descriptions of it. Through this speculative exploration it was possible to observe the presence of affective, imaginative and even emotional dimensions at work within a research context; further, their importance to more fully access the object of enquiry, particularly when at stake is an ambiguous entity. As such, this speculative exploration calls upon a framework of research that is informed by a non-representational epistemology and ontology that while being based on performativity, affect and experience; necessarily including the subjective dimension of the enquirer, is still conceptually rigorous, and inclusive of abstract and metaphysical concerns. A framework that maintains a

perverse attitude towards knowledge systems: a bastard epistemology as discussed in Chapter Two. An epistemology that accepts and travels through the multiple dimensions of an object of research integrating them by making them interact and interplay, as historical fiction can do, but that (and in addition) can also work outside narrative, or through multiple narratives.

While this chapter has presented frameworks and strategies to research an ambiguous entity, that of space, through an analogy with the past, it has also revealed crucial dimensions of space that are fundamental to understand and activate the productive potential of space. The speculative exploration of Yourcenar's *Memoirs of Hadrian* brought to surface how space is multiply implicated in historical research and accounts, as understandings and conceptualisations of space are necessary to inform a research framework through its affective and experiential dimension, a dimension that McEwen and Kristeva had already pointed to through their work with *khora*. Therefore, space emerges as having methodological purchase, not only through an abstract, conceptual, dimension, as that seen on Chapter One while informing research structures (topologies). As such, space is multiply implicated in the constitution of research methodologies; further, that space not only has methodological purchase but is also agential in the constitution of understandings and experiences, emotions and abstractions of a human interaction with the world. The consequence of this multiple methodological purchase is that space can recursively research itself, informing a *mise-en-abyme* as discussed on chapter two.

Chapter Three therefore makes the bridge between the first two chapters and the second part of this thesis in which the *mise-en-abyme* of space, or the notion that space as a methodological device can also construct itself in its ontological debate and investigation. Through this chapter it has been shown how space not only is already

emplaced within research methodologies through the constitution of frameworks, structures, of research, as those developed to approach the past in the formation of historical accounts, but also how space has methodological purchase when researching through non-representational contexts, thus in accessing through experience and affect, enacting objects of research. This realisation is particularly important to allow the *mise-en-abyme* to take place, as the *mise-en-abyme* needs to work through the multiple existences and complexity of space, traveling through the multiple dimension and understandings of space and maintaining and exploring its ambiguity in order not to become tautological but recursive. This strategy therefore emerges as fundamental to access and enquire an entity that being ambiguous is also unrepresentable and inaccessible through description or linguistic models and strategies as discussed on Chapter Two. A path is therefore opened for the second part of this thesis to explore the ontology of space by using a spatially informed strategy that is not linguistically based, but visually and aesthetically driven; to research space through the diagram.

Part Two

Preamble to Part Two

The second half of this thesis develops another side of the argument by enlarging on the question raised in Chapter Three: how is it possible to research the ontology of space if space is presented, and to some extent presents itself, as an ambiguous, unrepresentable conundrum? Proceeding from the third chapter, the second part of the thesis addresses the tension of the rarefied boundaries between history and fiction, particularly the point at which some of these boundaries, such as linearity, causality and the necessity of the idea of an origin, are broken. If all these limits are removed what is there for us to research through history or its archaeological artefacts? What questions can we investigate in the potentiality of its traces and what can be constructed from them? What are the multiple histories or narratives that can be told?

Chapters Four and Five therefore comprise the final discussion of the thesis, answering the questions posed by the first part. However, the discussion in the first chapters also suggested the need to approach the question of space through practice – that is, from a performative and enacted point of view – particularly in order to explore the notion of the diagram in greater depth, investigating the materiality or levels of existence of space through the affective materiality of visual materials. This second part is therefore separated from the first as it goes beyond a discussion of how to research space and puts into practice and experiments with a method (or way of doing) that could be described as a multi-faceted artistic research practice. If the first part has shown that space needs to be researched in a different way, the second part puts forward a way of approaching space that explores its ontology as a productive device. As such, the following final two chapters constitute the second part of a piece

of experimental research, using images and text to explore the ontology of space and to observe how a research practice can be challenged by moving into a spatially oriented epistemology.

The visual and textual work presented here results from an investigation that deals dialectically and heuristically with visual resources, textual academic production and a visual and theoretical reflection on structures through the notion of the diagram. This practice, however, should not be seen as an ‘art work’, but as the result of the application of artistic research methods to the questions raised in this thesis. As such, it is not only the continuation of the enquiry into the ontology of space, but also a continuation of the question of how space can be used productively through the application of visual methods that are intimately related with artistic practice and experimentation – the area in which the specific expertise of the author of this thesis lies. This question rests on the hypothesis that space can be also considered as a methodological device.

Despite the unity and integrity of the visual and textual work, the discussion and presentation of this research experimentation is extended over the next two chapters, with each making a distinct contribution to the overall argument. The reason for this division is to clarify the discussion of the visual work by separating out two of its dimensions: each comprises a version of the multiplicity of ways in which this visual work explores the questions of the thesis. Chapter Four addresses the concept of the diagram and how, as a methodological device, it can be regarded as a constituent part of space, while Chapter Five attempts to use this methodological device to research the ontology of space. As such, these last two chapters present the moment in which space as a methodological device is revealed and put into practice; in other words, it is where the work of the thesis is completed and its questions

explored through an enactive epistemology This experimental research reveals how space constructs itself, how a recursive ontology exists in which space, in both its physical and conceptual aspects, constructs what it is or can be at any given moment. It reveals space as a *mise-en-abyme* and a ‘bastard’ entity.

In developing the research experiment presented in the following chapters in answer to the questions posed in the first part of the thesis, this section – in particular the creation of the visual work – draws inspiration from the last work of the art historian Aby Warburg: the Mnemosyne Atlas. Through the Mnemosyne Atlas, Warburg found a way of exploring his own questions and anxieties concerning contemporary practices of research in history and art history. As such, this preamble connects the first and second parts of the thesis – particularly as a continuation of the discussions held in the third chapter – by drawing attention to Warburg’s specific approach to the study of the art and visual materials of the past. The thesis therefore now turns to an analysis of Warburg’s ‘method’ and his Mnemosyne Atlas, highlighting the differences between the Atlas and *The Mouth of the Monster and the Hollow Body*.

The Art Historian Aby Warburg and the Mnemosyne Atlas

Aby Warburg was an historian of art at the turn of the 20th century. However, as Woodfield (2001, p. 260) highlights, an historian of art is differs from an art historian. For the former, art is not necessarily the subject of investigation but a means to

research an historical, social or cultural event or idea, a notion that better suits Warburg as he was more interested in other dimensions of culture and the past than in the artistic one alone (*ibid.*). In addition, he also believed that works of art could not explain themselves. In order to reach them, it was necessary to navigate a web of knowledge and theories; it was necessary to resort to multiple disciplines (*ibid.*, p. 261). For Warburg, art as such was not simply a subject for research, but it was also a means, a resource to be explored as part of the process of answering questions related to the historical, social and cultural dimensions of being, particularly its psychological dimensions. Warburg was especially interested in the psychology behind the artistic process and not in the study of art *per se* (Ostrow, 2001, p. 2).

Warburg researched the psychological dimension of different modes of thought and culture, but he directed most of his intellectual energy towards exploring the persistence of pagan reasoning in Western society (Woodfield, 2001, p. 260). As Gombrich says:

By 'paganism' as we know, Warburg meant a psychological state, the state of surrender to impulses of frenzy and of fear. It was this fateful heritage he meant to study, and in this quest he freely identified the life of the individual and that of the collective mind. The drama of the revival of these impulses that had been dormant in the collective memory is mainly played out on the stage of the Renaissance. (Gombrich, [1970] 1986, p. 308)

As a consequence, Warburg's research reveals the psychological aspects of art and the conditions underlying its emergence, and is not concerned with the mapping of a linear evolution of modes of representation or analysis of the conventions controlling artistic production in a specific period (Woodfield, 2001, p. 278) – subjects that had exclusively engaged art historians up till then. By contrast, according to Gombrich

([1970] 1986, p. 185), Warburg defended that multiple styles could be found within a single period, the product of different psychological states. As a result, Warburg was not interested in the past *per se*, or in the reconstruction of an historical period; he distanced himself from historicism and the notion of the ‘spirit of an age’ (Rampley, 2001, p. 305). Instead, he investigated the interaction between past and present, and both the synchronic and the diachronic (Ostrow, 2001, p. 4).

However, such an interest in the psychological dimension of artistic creation should not be understood as standing in opposition to the study of a society’s culture in a certain historical period. The aim was not to understand and explain an artist’s individual psychological motivations; rather, it was to understand the oppositional forces that drove the civilisation the artist emerged from, because, as Rampley (2001, p. 317) notes, Warburg conflated the genesis of the individual with that of the group, as he recognised these as part of the same process. For Warburg, a civilisation was the product of the distance but also the interplay between the primal experiences and compulsions that guided the world (‘paganism’) and human reason. At times, reason was confronted with the resurfacing of these primal drives (*ibid.*, p. 313), drives that Warburg thought were particularly visible within artistic works, due to the fact that the thinking behind his aesthetic understanding was a combination of theories of empathy and collective psychology (*ibid.*, p. 315). He believed that civilisation is therefore built on the construction of the distance, or *interval*, between the mimetic impulse and its differentiation from (or negation by) the driving forces behind it. An awareness of the existence of a past contributes to the creation of such a gap (*ibid.*, p. 316). As Ostrow (2001, p. 3) states, Warburg thought it was possible to find the *polarities* that exist between the individual and the society in which the individual lives in the space between the symbolic representation and the actual event.

In the artistic domain, such an understanding of civilisation was converted into a search for the interval between a system of forces that included the preservation of the past through mimetic or symbolic representation – or the negation of the past through transformation or semiotic representation – and the subjectivities of both artist and spectator (Rampley, 2001, p. 306). In order to understand this system of forces, Warburg paid special attention to the detail within works of art as the place of the encounter between the rational and the irrational, the conscious and the unconscious, or the place where it was possible to understand and observe culture as a dynamic process in which associations exist not only in cultures of the same epoch but across different epochs (*ibid.*). For Warburg, the detail in a work of art could thus be understood as the element that allowed him to ‘measure’ the distance between these polarities and through analogy to observe their symbolic transformation over time and space (Vidal, 2009, p. 11). Warburg called the observation of this system of forces through the study of works of art the ‘iconology of the interval’, and this is commonly understood as his method, despite both Gombrich’s and Bing’s resistance to the use of such term (Woodfield, 2001, p. 260). However, this implies that Warburg retained an underlying belief in representation, which despite being an energised one, was still driven by the notion of duplication/representation and not by the processes of enaction and performance – which this thesis argues are essential prerequisites.

In order to develop his research, Warburg had to look on the image not as a product of art but as an archive of the collective memory of the past, and – as with an archive – although the things placed in it are accessible, this does not imply they possess a continuity or a universality of meaning. Instead, for Warburg, this archive was a changing one that nonetheless sustained a connection with its original meaning

(Ostrow, 2001, p. 2) or with the emergence of meaning in bodily expression and affectivity by means of the symbol. As Rampley states:

The heart of his theory rests on the notion that visual symbols function as archives of the mental state of the producer. Hence a whole range of cognitive and emotional states somehow imprint themselves on the visual symbol, in the form of 'pathos formula', the term he used to denote representation of the bodily expression of human affectivity. (Rampley, 2001, p. 319)

According to Rampley (2001), as Warburg believed the symbol to be connected to a state of primal fear, to its pagan roots, exposure to it would open the viewer up to the kind of affective experience that led to its emergence. The continued presence of its pagan roots would allow a person (that is, an art historian), through the relationships that exist between an image and the context of its existence, to perceive the primal reasoning in both the individual creator and their society (Ostrow, 2001, p. 4). However, as Vidal (2009, p. 3) points out, Warburg's 'pathos formula' is not a universal or archetype; instead, it is an event that can be localised in time and space as an emotional and artistic response, triggered by the confrontation with a similar human experience that has been passed down from generation to generation, with different levels of intensity and transformation. As such, Warburg was not searching for the universal in human action and expression, but for the patterns and systems that inform them, exploring how this becomes part of the collective consciousness through images – in other words, he was searching for the conscious and unconscious treatment that artistic depiction gives to a past era, which, although it informs the depiction, does not carry the same meaning (Rampley, 2001, p. 306). Such an understanding of images and symbols was to have great consequences for art history as it meant that Warburg saw any kind of image as relevant to his research.

Furthermore, he believed that the importance of an image or symbol did not lie in its artistic value, which a connoisseur could determine, but in ...

... the manner in which it continued to enact, or reproduce (or reference) its earlier content (world view) via the complex network of relationships that over time had come to be encoded in its form. In other words, the image world as formulated by Warburg consists of rhetorical devices that are combined and recombined in manners that both indicate changing mindsets as well as passing fashions. (Ostrow, 2001, pp. 4-5)

Warburg's understanding of psychology and culture led him to understand the image and the symbol in a very particular way (as discussed above), which had important repercussions not only on his views of and attitudes towards art, but also on his research practices. This set of practices, although possibly not developed with the intention of creating a method, nevertheless came to be known as the 'Warburg method' by later generations – not without dispute, however, as seen above. This method generally took the name of 'iconology'. However, and maybe because Warburg never presented it as a method, iconology was subject to misunderstanding – it was frequently conflated with 'iconography', mainly due to the work of Warburg's disciple Erwin Panofsky, who developed iconography. According to Panofsky (cited in Woodfield, 2001, p. 263), iconography was the study of the general reasoning of an epoch, expressed in the symbols of a given historical period, as distinct from iconology, which comprised the search for the original 'image' that led to later transformations or "the interaction of forms and contents in the clash of traditions" (Gombrich, [1970] 1986, p. 313). Rampley (2001, p. 304) therefore alerts us to the fact that Warburg's and Panofsky's methods differ from each other at the level of the formation of meaning: "While iconology analyses the unconscious assumption of symbolic codes and meanings, [iconography] tend[s] to focus on the conscious artistic

use of symbols and conventions”. The difference in the treatment and understanding of the symbolic lies at the level of its agency: for Warburg, symbols were not lifeless abstractions but the result of primal human experience (Woodfield, 2001, p. 267), part of a continuum of exchanges with the world, giving them vitality, because symbols are always active in the process of transformation in a given civilisation.

Consequently, for Warburg, the viewer of a symbolic representation stands in the presence of the tensions between the individual and their society, and between the irrational and the rational, while for Panofsky, the viewer is in the presence of an ‘a-historical embodiment’ (*ibid.* p. 263).

The ontological differences in Warburg’s and Panofsky’s understanding of the symbol were reflected in their research practice, particularly in the way they each saw the interaction of image and text. Woodfield (2001, p. 263) says that, with Panofsky’s iconography, the emphasis was on the transformation of the artistic motifs, and thus on how an image informs the text through its interaction with it. However, Warburg was more interested in an approach that proceeded from the text to the image. The difference in his understanding of the ontology of image and symbol, in combination with his epistemological approach to the image, led Warburg to search for novel ways in which to conduct research through the image, ultimately culminating in his last project: the Mnemosyne Atlas.




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Figure g – Warburg’s Library with the Mnemosyne Atlas

The Mnemosyne Atlas was left unfinished at the time of Warburg’s death in 1929. In its last form, the Atlas is composed of sixty-three panels, each containing a set of images. The panels can be divided into two sets according to their labels: three have alphabetic labels (namely, a, b and c) and sixty have numerical ones. As such, the three alphabetically labelled panels can be taken as an introduction to or presentation of the subject of the research (Gombrich, [1970] 1986, p. 292), and the other panels as the exploration of the subject. According to Gombrich ([1970] 1986, p. 283), the subject comprised the interconnections between the two main themes of Warburg’s interests, “the vicissitudes of the Olympian gods in the astrological tradition and the role of the ancient pathos formulae in post-mediaeval art and civilization”. The panels were made of wood, measuring approximately 150cm x 200cm, and were covered with black cloth, allowing Warburg to arrange and rearrange black and white photographs of works of art, maps, manuscripts, contemporary images drawn from newspapers and magazines, and cosmographic

images (Johnson, 2013) by pinning them to the wooden boards. This method of working with images gave Warburg the possibility of constantly developing new combinations (Gombrich, [1970] 1986, p. 284), helping him think through and structure the argument carried by each individual panel, as well as the overall argument. Gombrich ([1970] 1986, p. 284) puts the need for this development in Warburg's research down to his growing dissatisfaction and sense of disquiet with the linearity of the narrative in his presentations, because as far as Warburg was concerned, the complexity of the subject needed to be researched both synchronically and diachronically (as discussed above). Even in his earlier research, Warburg would use notes to "[map] out these complex relationships in diagrammatic form" (*ibid.*). In this context, the panels were primarily used as the basis for his investigations and to support his presentations and lectures; however, he also planned to publish the Mnemosyne Atlas. In fact, Johnson (2013) notes, "he planned to supplement a volume of plates with two volumes of text, containing historical and interpretive material. However, as he left the Atlas at the time of his death, the balance of word and image is decidedly tilted toward the latter."

Nonetheless – and despite the text that accompanied the panels – the emphasis was on the images and their interrelations, using these as a trigger for the viewer to experience the "same intensity to the images of passion or of suffering, of mental confusion or of serenity, as he had done in his work" (Gombrich, [1970] 1986, pp. 287-288), thus emplacing his notion of the image, the symbol and the 'pathos formula'. The idea of emplacing his theories through the process of working with the panels in the formation of the Mnemosyne Atlas can also be observed in the interaction between the title of Warburg's project, his theories and the overall subject of the Mnemosyne Atlas. '*Mnemosyne*' directly refers to the way in which the notion

of memory could be materialised in the archive of images (as discussed above).

However, two references can be found in the word ‘atlas’, each of them related to the two co-existing uses of the word.

The first use of the word ‘atlas’ denotes a collection of maps, intended to order the geographic, political, social, economic and cultural knowledge of a certain period, informing and presenting a particular understanding of the world. Through the use of the word ‘atlas’ Warburg pointed towards the formal aspect of his project, using the term to indicate the multiplicity of plates (panels), each of them – as a collection of images – mapping a specific sub-theme but all addressing the same subject through their interrelationships. In addition, he drew attention to the relevance of the map – which is not only used as a resource in some of the panels, but also as an indication of spatial (and temporal) exchanges – as well as to the activity of mapping itself (‘diagramming’) as a research strategy. ‘Atlas’, however, is also the name of the titan in Greek mythology who was forced to carry the heavens on his shoulders as a punishment. From this perspective, the word functions as a placeholder for the combination of myth, gods, the heavens and astrology (that is, the mythical) with a logical understanding of the heavens in the form of astronomy. As Gombrich states when presenting panels b and c:

[t]he idea of cosmic harmony was to be carried forward on the next plate in visual reminders of the debasement of this profound thought in fortune-telling, and of its exaltation and triumph in Kepler’s speculations which led to man’s understanding of the laws of the heavens. (Gombrich, [1970] 1986, p. 292)

Consequently, the word ‘atlas’ not only carried forward the main subject of the project, but also pointed towards the notion of polarity that Warburg used to indicate

the multiple opposing forces present in a symbol or image. As such, what initially may seem unrelated – the two notions of ‘atlas’ – come together as each of the denotations reveal and unfold a dual understanding and practice of the cosmological.

To conclude, the Mnemosyne Atlas is a mapping of associations and interactions at the level of the image and at the level of the sub-themes presented in each panel, which constitute the whole argument. This is an argument that Warburg continued to develop throughout his life and so it comes as no surprise that some of his early papers and presentations are also part of the Mnemosyne Atlas (Gombrich, [1970] 1986, p. 299). However, because he understood the drive behind his lifelong research concerns as a complex system of forces, this complexity also led Warburg to regard his questions as far from self-evident – they could only have attempted answers – and therefore he emphasised the necessity of proposing a series of hypotheses and solutions to be tested against a background of social interactions (Gombrich, [1970] 1986). This notion of a working process that is not finished and definite, but open and constantly in transformation, as described by Spyros Papapetros’ (2012), is the construction of a mosaic through accessories, or details, “fragmentary compilations of philological ‘addenda’ whose perpetual accumulation maintains the textual fabric in a perennial form of incompleteness, yet constantly in motion, and anxiously alive” (p. xiii); a process of research that the Mnemosyne Atlas shows and emplaces.

The Mnemosyne Atlas is therefore the application of an integrated system of research methods, with an ontological and epistemological position regarding the concepts of civilisation, individual and collective psychology, images, symbols and the ‘pathos formula’ – or Warburg’s cosmology. This thesis then proposes that the notion of the Mnemosyne Atlas as an integrated system when seen in relation with the

previous discussion about Warburg's method, and the resistance to call it a method, suggests that at stake in Warburg's work is not so much the development of a method, as a specific procedure to answer a problem, but a methodology as the system, or discourse, that allows the integration of methods within an ontological and epistemological framework, providing therefore the basis for the coherence, adequacy and pertinence of the chosen methods. A methodology is thus a research cosmology and also, from this perspective the Mnemosyne Atlas is a methodological device, a system that can be used, performed, and that reveals, or (re)produces a methodology. Framing the Mnemosyne Atlas within this perspective provides inspiration for this thesis as a path to follow in searching for performative and productive methodological devices that put in action transdisciplinarity.

Approaching the Mnemosyne Atlas as the opening of a path for this thesis is supported by the scenery of contemporary research on Warburg. Warburgian scholars have had to rely upon a few finished pieces of writing that Warburg left, in contrast with the vast amount of written notes, through which there is a strong sense of uncertainty and openness towards Warburg's ideas and thoughts. This openness towards the understanding of Warburg's work in combination with his research approaches have led contemporary researchers within art history (Didi-Huberman) and architecture (Papapetros) to approach Warburg's legacy not only with the intention to research his work, but also as an inspirational source within their own researches, sustaining the life of Warburg's process of research,. As Silvina Vidal (2009) points out, Warburg's ideas have provided contemporary researchers across a number of disciplines with a strategy to combine detailed information, localised phenomena and short period events with a wider understandings of historical change, but also a way of doing so in which the historical writing of explicative models can be

supported by empirical research, particularly the use of visual materials (2009, p. 1). Following these examples, this thesis takes on-board this openness as an invite to look into the Mnemosyne Atlas as an inspirational element to reflect on the importance of the usage of visual materials when researching and to devise a hands on approach that uses visual materials in research, instead of trying to interpret and analyse the Mnemosyne Atlas, or to use Warburg's distinctive iconological methodology.

The Mnemosyne Atlas and *The Mouth of the Monster and the Hollow Body*: Distances

The result of the interaction with Warburg and the Mnemosyne Atlas is the work that is presented and discussed in the following chapters: *The Mouth of the Monster and the Hollow Body*. As the end of Chapter Three discussed it is crucial to research the ontology of space through a framework that is non-representational, but that instead works through an enactive and performative epistemology, driven by experience, affect and aesthetics and not based on linguistic models of approaching the visual; or in synthesis to research space through the diagram. Warburg's approach embodied within the Mnemosyne Atlas have provided this thesis a point of departure to explore visually the question of how to research a non-existing object, as space. However, as there are points of contact between the project of the Mnemosyne Atlas and the research experiment that guides the following chapters, *The Mouth of the Monster and the Hollow Body*, there are also important differences between the two, both formally and methodologically (in terms of its epistemology, questions, intentions and working

approach)

As Matthew Rampley (2001) points out, Warburg – as Foucault later – gleaned inspiration from Nietzsche when looking into the past, also following a path of genealogy in which a search for origins is replaced by an analysis of the interplay between continuities and discontinuities (p. 312), giving the formal similarities place to transformations of meaning. Within the context of this thesis it is crucial such interplay between continuities and discontinuities as to inform the possibility of bringing together synchronic and diachronic dimensions; to explore multiple lines of connection between the elements brought together, making jumps and pursue connections that are not limited by territory, time periods or cultures. However, *The Mouth of the Monster and the Hollow Body* is not intended as a strategy to research a subject throughout an historical context, or to place the object of research historically as it is neither the intension of this thesis of *The Mouth of the Monster and the Hollow Body* to make an intervention within history, art history, or the history of art. Consequently the disciplinary framework is different from the one guiding this thesis, which is not driven by disciplinary context, questions or boundaries in developing theoretical frameworks and research methods – instead guided by transdisciplinarity as presented in the introduction. As such, while Warburg is interested in analysing works of art for what they may say about a certain society through the wider connections — networks that run under when informing the creation of such works — this thesis through *The Mouth of the Monster and the Hollow Body* is interested in using the potential of images to create new ideas, suggestions and concerns. Consequently, if, as the scholarship surrounding Warburg suggests, Warburg was interested in through the image to trace the gestures, movements, the unconscious animation of the body as primal responses to stimuli being therefore the image subject

of analysis a way to observe the interval between the individual and the collective psychology (the ‘pathos formula’ through symbolic transformation); within this thesis, the image is something that is active, that has a suggestive and affective potential that can be used to prompt thought experiments, triggering associations through not only its historical and cultural connections with wider networks, but also in the fact that an image itself has multiple meanings (and these are expressed through an affective, aesthetic dimension; or its very materiality).

The purpose and intensions of the research undertaken within this thesis are distinct from those of Warburg, as the intention of *The Mouth of the Monster and the Hollow Body* is to continue to make a corral around space, this time displacing it to the notion of the monster in order to 1) explore the productivity of space as a methodological device through the diagram as a an enactive and performative epistemology, driven by experience, affect and aesthetic dimensions and 2) through the interactions between the images used to allow the emergence, in a speculative way, of an ontological discussion about multiple existences of a single entity, a theme that is neither historical, nor that the images themselves address – in order to research the ontology of space as an ambiguous entity. Summarising, the two following chapters are part the result of a transdisciplinary methodology informed by a bastard epistemology through a recursive approach that became performed and materialised through the exploration of the diagram in *The Mouth of the Monster and the Hollow Body* to research the ontology of space as a productive device; or more simply put: the *mise-en-abyme* of space.

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Chapter Four

The Encyclopedia of *The Mouth of the Monster and the Hollow Body* and Space as a Methodological Device Through the Diagram

This chapter introduces the part of *The Mouth of the Monster and the Hollow Body* that comprises the captions explaining its images. The captions are driven, on the one hand, by an attempt to pin down the materiality of the constantly dislocated images, which unfold in medium after medium, intervention after intervention, in a process of shared authorship. In order to do this, the chapter either documents elements such as the title, author, date and location, or uses the caption to explain what the image is. On the other hand, in the face of the impossibility of condensing these images into captions, the captions themselves open up to reveal the wider reasons for the presence of each image in the whole – that is, in the *The Mouth of the Monster and the Hollow Body*.

The facet of *The Mouth of the Monster and the Hollow Body* that the chapter explores, however, goes beyond the composition of the captions and becomes part of an encyclopaedia, in which each image has its own entry. As in an encyclopaedia there are images, text, numbers, diagrams and above all the possibility of reading the information at random, without following a linear progression from the beginning through to the end. Instead, it provides a framework for reading in a disjointed, disarticulated fashion, allowing stated or perceived connections and relationships to act as the driving force behind the creation of knowledge. This gives the beholder a shared control (the ‘beholder’ becomes the ‘maker’) over *The Mouth of the Monster and the Hollow Body*, in order to incite – and stress the importance of – associations

and interactions between the unity and the interval, the flow and the break, the foreground and the background. But, most importantly, it situates the core of the discussion in the images themselves, both individually and as part of the whole that comprises *The Mouth of the Monster and the Hollow Body*. In doing so, it becomes a diagram that is drawn from the potentiality of each image to make visible aspects of space that, as a whole, exist in relation to a discussion of structures.

As a result, the facet of *The Mouth of the Monster and the Hollow Body* under discussion is the encounter between the diagram and the encyclopaedia. This chapter argues that the challenge produced by visually (and artistically) working through structures is crucial to exposing the interactions, folds, coalescence and evanescence of conceptualisations of space. Furthermore, the encounter between the diagram and the encyclopaedia, as structures, provides a relevant framework in which to actively explore how space can be thought of productively. From this point on, three commentaries that take the form of notes reveal the considerations that initially drove the conception of *The Mouth of the Monster and the Hollow Body* as a diagrammatic structure that exposes and reflects upon the productivity of different conceptualisations of space. After these commentaries, it is left to the beholder to take up the task of fabricating the encounter between the diagram and the encyclopaedia.

Structures and Space

As discussed in Chapter One, using the work of Massey, the modernist concept of space became close to being structural. However, during this period the emphasis was

on the association of space with a static container where time is kept on hold. The later battle the structuralists waged against notions like causality and the linear progression of history and culture encompassed the exploration of the association between space and structures. However, in investigating this association, they further enlarged the scission between space and time as they regarded space as a-temporal, leading to the conceptualisation of structures as static grids or tables, without change or movement. This understanding was then translated into the idea of structures as closed systems, with the relationships between their elements locked in binary oppositions. The problems highlighted by Massey ([2005] 2010) in relation to the structuralist perspective began to be unravelled in the work of the poststructuralists. Nonetheless, the tradition of a structure as a closed system can still be observed in contemporary approaches, and this has led Ingold to distinguish between the notions of the ‘network’ and the ‘meshwork’.

A meshwork opens up the notion of structure to change, as the connections binding and distances separating the elements are seen as “entangled lines of life, growth and movement” (Ingold, 2011, p. 63), in which “[e]very such line describes a flow of material substance in a space that is topologically fluid” (*ibid*, p. 64). In this sense, there is no distinction between a connection and an element, they are both part of the same process that is guided by animating life forces. The notion of a fluid topology was further explored in the work of Mol and Law (1994) (introduced in the first chapter). In their study, structures were analysed using the concept of topology. In doing so, a panoply of approaches emerged, enabling the conceptualisation of novel structures, such as that of a fluid topology. As seen in Chapter One, a fluid space is a structure guided by “*variation without boundaries and transformation without discontinuity*” (Mol and Law, 1994, p. 658), in which the connections and

distances within the structure are not fixed and do not always exist between the same elements, as any one of these elements or connections could be excluded. A fluid topology, therefore, is characterised by the malleability of its boundaries and the multiplicity of its possible mixtures, giving rise to a robust whole. Nonetheless, and most importantly in the context of this thesis, there are no hierarchies between structures in the work of Mol and Law; each structure represents a valid approach, as it is an aspect of a multifaceted and complex whole.

The assumption that there are multiple kinds of structures, all presenting facets of a larger whole, has profound implications for this thesis and its enquiry into the ontology of space and its conceptualisation as a productive medium. The first chapter introduced Algra's three possible understandings of space, which can be most succinctly described as the 'container', the 'contained' and the 'relation'. The argument followed in Chapters One and Two proposed that a vast majority of understandings until recently fell inside the conceptual category of space as a container, while contemporary thinking privileges the conceptualisation of space as a relation or a mediator. However, as a result of this approach, which perceives structures as possessing non-hierarchical, multiple existences, it is possible to think of them not simply as associated with a type of space, but as active and productive elements existing in the spatial realm. As such, structures not only enable the exploration of different concepts of space, but through their active productivity they can also be used to explore other spatial dimensions. Space can be seen as a multiplicity without a conceptual hierarchy, which can be explored through the interactions of these multiple conceptualisations. This is a recursive or *mise-en-abyme* (see Chapter Two) method of analysis, in which space, through its conceptualisations and agencies, constructs itself as a productive device.

Taking as its point of departure the suggestion in the first chapter (and also in this author's previous work, listed in the Appendix), structures will be understood in this chapter as constituents of enacted order, and space will be envisioned in its relational capacity as the infinite set of experiences that make up such an order, even if it is a 'bastard' or *choratic* one. In order to observe structures from this perspective, the encounter between the encyclopaedia and the diagram in *The Mouth of the Monster and the Hollow Body* will be understood as a material expression of multiple structures where all three types of conceptualisations of space exist on the same level and at the same time. This does not, however, imply a synchronicity but a concurrent coexistence, not only because it is not a matter of time (*chronos*), as chronology is in opposition to temporality, but also because they do not move at the same rhythm. In particular, the dichotomy between container and contained is dissolved because the boundaries between them become rarefied as the two dimensions inform each other. This allows not only for the presence of the two dimensions of space – container and content – but also for the physical/'real' and the abstract/conceptual dimensions of space to come together in a non-reductive, creative mode, while taking into account non-linearity, breaks and discontinuities.

In this way, this chapter presents the work, *The Mouth of the Monster and the Hollow Body*, as a compound of the structures that space fabricates in its multiple dimensions. These are made up of the interactions, folds, coalescence and evanescence of the three types of conceptualisations of space, and are driven by an enacted perspective. Through *The Mouth of the Monster and the Hollow Body* it is argued that a structure, particularly when worked on and explored through visual materials (but also artistic practice), can be used as an active methodological device to explore the ontology of space by means of a thought experiment. In this way, it

produces a ‘*choratic* ontology’ in which space constructs itself.

The Encyclopaedia, the Narrative and Non-linearity

Starting with the idea of the caption as comprising such elements as title, author, date and location to introduce each image in *The Mouth of the Monster and the Hollow Body*, and then confronting this notion with the actual visual material, this chapter has arrived at the idea of the encyclopaedic entry. The tension over the composition of the caption grew from questioning the materiality of the image – that is, asking whether the caption should reflect: 1) the initial work from which an image was made; 2) the specific digital image chosen; 3) the transformations applied to the image as they are presented in *The Mouth of the Monster and the Hollow Body*, with each multi-coloured image modified by transforming it into monotone and then attributing a hue to the monotone; 4) what is being seen, and therefore a description of the image, which in turn leads to the fact that what is being seen cannot be divorced from the reason why it is being seen; 5) the reason behind the choice of the image. However, the reason behind the choice of the image I driven itself by a multiplicity as there is 6) the aesthetic and affective dimensions guiding that choice; 7) what the image is addressing, which again provokes a set of questions concerning the thing or things that the image accounts for; 8) the multiple meanings of each image 9) and the set of constructed categories (monsters, demons, fear, hell, mouth, eating, speaking, screaming, body, blood, urine, excrement, food, medicine, illness, astrology,

metamorphosis, reincarnation, resurrection, heaven) that drive the multiple narratives present in *The Mouth of the Monster and the Hollow Body*.

In addition, all these aspects then reveal a multiplicity of authors: from the person who initially makes the work to the extended context of its creation, those who make interventions over time on what is seen, the owners of the image and the context of its fruition. As such, there are multiples images or traces (materialities) present in every image that is observed; a meshwork of forces constituting and transforming it at every moment. The image keeps unfolding in multiple directions, in an infinite process. As a result, the impossibility of containing the image in the caption impels the creation of the encyclopaedia.

Each entry in the encyclopaedia is therefore built from the reason for the inclusion of the image in *The Mouth of the Monster and the Hollow Body* as well as from scholarly textual knowledge, caption references and various sorts of literary information regarding the presence of mythological figures. Presenting all these elements combined in a single entry creates friction as they rub against each other. This is particularly triggered by the inclusion of the caption at the same level as the other elements, as a caption is usually presented side by side with the image and read in a separate moment and place to the body of the text in order not to disturb the flow of the main (apparently more important) narrative. An ambiguity is thus created over what a caption is: a description of an image, an informed piece of writing on each image or the construction of an argument? Eliminating the hierarchical subservience of the caption to the main body of a piece of writing and introducing it as a foreign element into the textual narrative(s) creates ambiguity and instability. The encyclopaedic entry is metamorphosed into a monster (one of the main elements informing *The Mouth of the Monster and the Hollow Body*). How then is this monster,

the out-of-order, ‘bastard’ element to be dealt with when reading the entry? Is it superseded, surpassed, forgotten or eliminated, hated for its disturbing presence? The impossibility of this element introduced by the visual work makes it an excellent device for working through this question; it does not hide, but on the contrary, makes explicit what could be called a ‘bastard’, *khocratic*, and therefore spatial epistemology.

Through its encyclopaedic form, *The Mouth of the Monster and the Hollow Body* intends to dethrone the notion that images can be read. It seeks to show that this is a reductive venture not only because the images do not constitute a single narrative, but also because they are not text: they do not exist on a linguistic level (or not only on a linguistic level). Discussing the images through their association with the encyclopaedic form propels 1) the idea that there is no single narrative contained within each image, just as there is no single narrative in the collected set of images, thus 2) the beholder is solicited to actively engage in the formation of multiple narratives, both present and potential. Consequently, *The Mouth of the Monster and the Hollow Body* assumes a non-linear and non-representational form, revealing its dialogic nature. This is reached through the interaction between the beholder and each image and between the images as a whole (via cross-references); the presence of multiple images in the aforementioned categories; and the presence of multiple individual and overall narratives¹⁹ about their concurrent coexistence in *The Mouth of the Monster and the Hollow Body*. As such, the encyclopaedic form dismisses intentionality as its creation is distributed over several contributors, and as a result, the structural aspect of the work is actively emplaced. How then are the encyclopaedic entries organised? The strategy is to sequence the entries as if the circle were being

¹⁹ The overall dimension of the narratives is presented in Chapter Five.

read from left to right, top to bottom. But even such an apparently simple task becomes complicated because *The Mouth of the Monster and the Hollow Body* is not an orthogonal grid. The search for such a grid, and the impossibility of constructing one, forces the encyclopaedic form to interact with the diagrammatic form.

The Circle, the Square, Squaring the Circle and the Diagram

In the *Timaeus*, Plato selected the circle as the perfect form because every point on its perimeter is the same distance from its centre. This ‘perfect’ geometry guarantees a positive outcome. In a circle, there are no privileged positions, no hierarchies, no categorical dominance and even the centre is a reproduction of the circle itself. This aspect of the circle reveals its importance when creating a structure that does not privilege a particular beginning but can start anywhere, that does not go to a specific place and that has no end. The lack of a stipulated beginning opens up the possibility for the co-existence of multiple (non-linear) narratives: interlaced stories that inform each other, that share the same elements. However, in *The Mouth of the Monster and the Hollow Body* it is not possible to define the circle precisely – to draw a delimiting border with an inside and an outside. Although we can sense the line that encircles all the images, it is only present through its perceived absence. The presence of the encircling line is at the same time absent due to the limits of its visual composition, which is informed by the distance and shape of the gaps between the individual images that constitute the overall work. As a result, the line’s visibility (and its degree

of physical existence) oscillates at times between a state of crescendo, visibility or presence and a state of dimming or fading away. Squares/rectangles (the format of the selected images) strive to fully constitute a circle, but one that is only apparent and can never be actualised. Faced with this quixotic demand, squares/rectangles open up gaps between the images, forcing them to interact with each other.

As a result, a new dimension is created – not only that of the relations, sympathetic energies and flows, but also that of the breaks, disconnections and tensions within the whole that is *The Mouth of the Monster and the Hollow Body*. The never-to-be-actualised circle creates instability and tension, in which background competes with foreground, but it also encourages an interaction that can be explored. However, even squares/rectangles are not always present: the instability, tension and interaction between foreground and background is thus augmented in some images by the absence of a geometrical framing. The removal of the square/rectangle lets the image, bereft of its own background, merge with the circle. The visual tension of circle and square/rectangle that permeates *The Mouth of the Monster and the Hollow Body* performs and informs the tensions between different conceptualisations of space, while the geometric impossibility of squaring the circle makes visible and tangible the impossibility of speaking of space (its ‘unutterability’) and of fully understanding its existence. The sense of constantly falling into itself – the *mise-en-abyme* discussed above – is mirrored in the diagram as it explores the infinitude of the image by creating a further image out of the multiple visual materials. Not only is each single image a repository of multiple narratives, each infinite in itself, but their conjugation also produces another bigger infinity – a facet of the diagram that echoes the ‘Russian doll’ image of space introduced in the first chapter. Space is therefore an infinite series of spaces existing successively one inside the other, and all these spaces

are themselves infinite.

This larger infinity is particularly enhanced by the fact that the images in *The Mouth of the Monster and the Hollow Body* have not been created in the same context or framework. Thus other systems of relations besides those of region and historical period need to be put in place, systems that even lie beyond the network formed by the connections between the words ‘mouth’, ‘monster’ and ‘hollow body’ and their adjacent categories (presented above). Each image, because it is decontextualised, is an archaeological artefact, an orphan-image whose origin cannot be traced but only imagined in all its possibilities. This process is performed through 1) the abstract, conceptual, imaginative and immaterial dimensions of the images; 2) their physical, ‘real’ materialities and the interaction between these dimensions in the act of drawing (enacting) the diagram that constitutes the whole; and 3) the extension of the diagram beyond itself, exerting its agency through the animation of the energies and imagination of those who come into contact with it and who further inform *The Mouth of the Monster and the Hollow Body* and are informed by it.

Several different topologies are activated through engagement with *The Mouth of the Monster and the Hollow Body*: the fluid blood, the gaseous cloud, the interaction between multiple types of regions and locations, and the networks of influences, institutions, technologies and actors. Nevertheless, *The Mouth of the Monster and the Hollow Body* surpasses the collection of all these combinations of structures because it is a consistent, homogeneous and affective whole that yet follows a ‘bastard’, *choratic*, spatial order. This, it is argued, is due to the impossibility of constricting aesthetic experience (in this case, the experience of visual materials) in the domain of language. Visual materials cannot be reduced to a descriptive act, whether it speaks for a part or for the totality, as they cross

dimensions that cannot be factored into such a description. Consequently, *The Mouth of the Monster and the Hollow Body* works through multiple facets of space, some of them unutterable, even unknowable, and in this way it enacts the paradoxical nature of space, in which opposing conceptualisations cease to struggle among themselves but instead work together, constituting each other.

The Encyclopaedia of *The Mouth of the Monster and the Hollow Body*

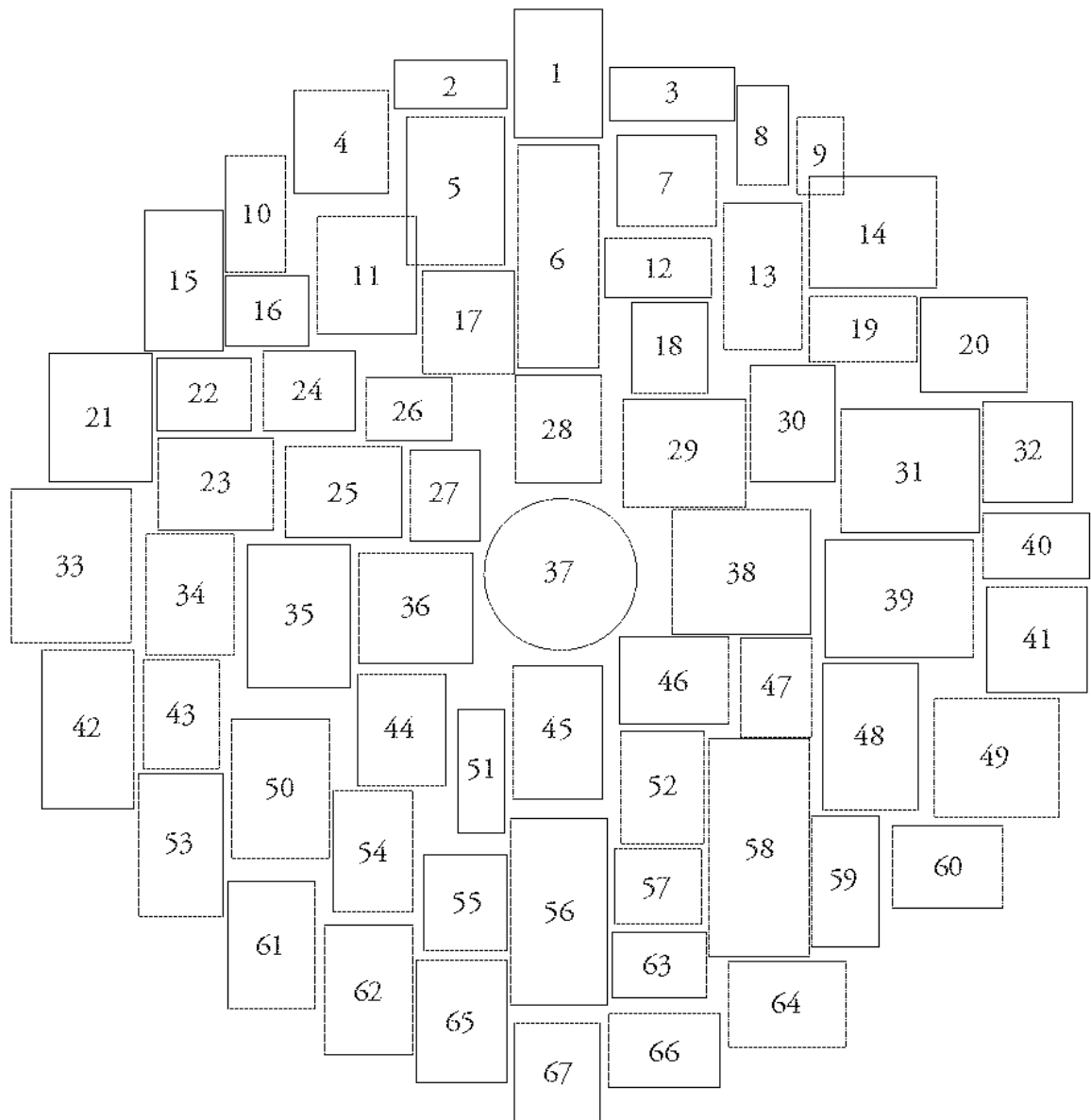


Figure h – *The Mouth of the Monster and the Hollow Body* (catalogue of images)

1 – A diagram in the form of an arrow: but to what does it signal? Does it point towards the beginning? Is it the beginning of the world? The signs or beings that constitute the circle of the zodiac – the path along which the earthly year is reflected in the sky – take the form of the human body: some crawl along, others just stand by, while yet others become inscribed in the body. Who does it welcome with open arms? Or is this body rising to the skies or to that other sky – heaven – with the force of an arrow? Maybe this arrow is just opening up room for the body to exist and breathe amongst the text that frames it. But is the man releasing the arrow to frame the text or is the arrow framing the man? The tightness in the page of the text, arrow, body and zodiac signs allows for a duality in the reading, in which the essence that controls and guides the form of each element can be inverted. The opposing or counter-actions that inform the page – the text, the arrow, the body and the zodiac signs – are caught in a meshwork of entangled forces. Such interplay can be extended to the point at which there is no direction to the reading of what informs what or where it started to take form – the conditions, limitations, axioms that shaped the context for this convergence or unity to exist. The place in which the man opens up a space for himself, and for us to follow him, is an ambiguous one. This place – the background – is a delimited shape in which a grid of vertical and horizontal lines are lightened by light-coloured dots at each intersection of lines. The tip of the arrow is vertically divided in two through the use of different colours, which are inverted on the bottom of the arrow, creating an heraldic background. However, looking at the tip of the arrow, where the grid is most expressive, the left, darker side resembles the sky bright with stars, a space that opens up endlessly; the right, lighter side almost becomes an earthly brick wall or a flattened geometric pattern that makes the arrow an arrow instead of an opening into another space, another dimension. Thus Zodiac Man, with the signs of the zodiac associated with various parts of his body, is portrayed on an arrow-shaped, parti-coloured ground with text on either side. ‘Zodiac Man’ in (late 14th century) treatise on medicine and the zodiac. The Bodleian Library, Oxford University, Oxford, MS Ashmole 391, part V, f. 9r, illus.

2 – At night, running through the high reeds – highly contrasted black and white reeds – a demon with white horns and long black hair emerges. With his arms wide open, his body (dressed in a white garment) takes the shape of a cross. Pitch-black and dazzle-white alternate and become the negatives of each other. The negation of the welcoming, wide-open arms is the barrier of unspeakable fear that only leaves room for a wide-open mouth that screams at the confrontation with the fearsome, the

unknown, the barrier that prevents the continuation of the path. *Onibaba* (still) (1964). Directed by Kaneto Shindô [Film].

3 – The separation between demon and human becomes blurred, and the way is open for human to become demon. The demon turns into a woman with a mask, maybe an evil woman with a mask; however, when the mask is taken off it does not reveal the woman but a new demon. The separation between demon and woman, however, does not only lie in the thickness of a mask that limits the extension into either side (the human side or the opposing demonic side): in order for the woman to become a demon, she needs to fuse with the demonic (as materialised in the mask) because, despite the potential for evil in the woman, it is still not enough to make her a demon. Becoming a demon not only involves making visible what has been invisible until now or in a person's transformation: that person needs to cross the limits of being human, the place which humans inhabit, a journey that can only be made through contact with a powerful being. As for the human being observing this process, witnessing the 'becoming' of the demon and knowing the process that transformed the woman into the demon is enough to enable them to articulate the experience in speech. In this new confrontation with the demon, the mouth no longer screams but speaks. *Onibaba* (still) (1964). Directed by Kaneto Shindô [Film].

4 – Food has not always – if it has ever – been just about nourishing the body. During medieval times in the West food was part of a complex system of interrelations that supported medical practice. As a consequence, a dietary system drawn up in accordance with a person's general complexion was a fundamental asset (Siraisi, 1990, p.120). For instance, Siraisi (1990, p. 121) states: "[Although] [t]he individuality is somewhat illusionary, since much of the advice comes from Avicenna (indeed, some of the dietary recommendations can be traced back to Hippocrates); but the learned medical author [Savonarola] was careful to introduce distinctions between foods suitable for nobles such as Borso and their courtiers and those appropriate for lesser mortals. Increased variety and refinement of foods and methods of food preparation available to the wealthy in later medieval and renaissance Europe may have fostered interest outside the medical profession in ancient medical theories about the relation between food and physical health." In order to follow such dietary requirements, treatises

that compiled lists of ingredients and dispensed instructions on how to use them medicinally became common items for European princes (Siraisi, 1990). Revealing the complexity and intricacy of medieval medicine, these treatises also discussed the air and the atmosphere, movement and rest, sleep and wakefulness, secretions and excretions, states of mind, hygiene and sexual intercourse (ibid). The idea of opposing states of being or ‘natures’ appeared to rule the system, creating a geometrical and rectilinear grid; however, the combination of opposing states with other states required the grid to be open enough to include the multiplicity of changes arising from these combinations. ‘Pork Butcher’ in School of Giovannino de’ Grassi (after Ububehasym Baldach o Ibn Butlan) (14th century) *Theatrum Sanitatis*. Biblioteca Casanatense, Rome, MS 4182, illus.

5 – One of the foods that played a major role in medicine was the mandragora or mandrake root, whose soporific (but also hallucinogenic) effects meant that it was prized as an anaesthetic (Dixon, 2003, pp.188-189). In this scientific illustration from the seventeenth century, the mandragora is deprived of its magical and alchemical dimensions. However, the naturalistic illustration still betrays, in the careful organisation of its leaves, a belief in the earlier interpretations – they frame the white flowers in the shape of an arch and are displayed in such a way that the root can also be perfectly observed. With its gallant head, the root has the shape of a human body with its legs interlaced and is reminiscent of the tradition in which it derives its powers from the ‘death’ of the miniaturised human being it embodies. This is an illustration that stands between the truth-to-nature archetype of Linnaeus, as Daston and Galison observe in *Objectivity* ([2007] 2009), and the singularity of the monstrous thing in which nature reveals itself in a different dimension or layer. ‘Mandragora Faemina’ in Bry, Johannes Theodorus de (1641) *Florilegium Renovatum et Auctum: variorum maximeque rariorum germinum, forum ac plantarum*. Frankfurt: M. Merian, illus.

6 – For the Daoists, the spirits that inhabit the body distilled its juices, transforming matter into the essential vapours that constitute the breath, “the special site of this celestial transmutation being the internal organs, whose number, five, signals their central position” (Levi, 1989, p. 115), but which also correspond to a cosmic element and its movement, to a colour, a space and a cardinal direction. Thus the organs need to be supplied with the cosmic and primordial breath (ibid). It was the value of

breath and its role in the wellbeing not only of the body but also of the cosmos that made these breathing exercises fundamental to Daoist philosophy (ibid). “Baduan jin 八段錦 or Eight Lengths of Brocade Method collected in the Taoist Canon, a thirteenth century Qi Gong technique was illustrated with text ascribed to the immortal Zhongli Quan” (YeYoung Culture Studies, no date).

7 – A metope was a relief panel that ornamented the outside of the Parthenon. This particular metope comes from a set from the south side of the exterior Doric frieze and it depicts the battle between the Lapiths (aided by the Athenian king Theseus) and the Centaurs (Perseus Digital Library, no date). In the metope, as in the battle, the Centaurs, mythical creatures, are shown as inhabiting the same plane as the human beings; both share the same space, the same reality. In ancient Greece, the distance between mythical creatures and humans, in terms of their cosmological status, was substantial because they were believed to exist on different ontological levels; physically, however, they were extremely close. The physical proximity was not only related to the spatial distance separating them – the Centaur is depicted within the reach of the man’s hand – but also to their bodily resemblance. One half of the Centaur is human and there are no anatomical differences in this part of his body with the body of the man. They are both made of flesh – flesh that structures and gives solidity to their shape. According to Kuriyama ([2002] 2006), for classical Greece, a full and compact shape moulded by the flesh was the ‘anatomical answer’ for the desired attributes of solidity, stability, permanence and ultimately immortality. Kalamis (attributed to) (447- 432 BC) *Centaur and Lapith in Combat* [High relief]. Parthenon Gallery, British Museum, London.

8 – As a consequence of the Greek aspiration to possess the solid body of more perfect beings – the body of the hero or the god – their sculptures display extremely well-defined bodies. But at times this desire to convey the solidity that comes with the conflation of the body with supernatural forces is revealed in the exaggerated portrayal of bulging flesh (Kuriyama, [2002] 2006). Despite the immediate suggestion of an extremely well-muscled body, these lumps of flesh, according to Kuriyama ([2002] 2006), do not necessarily portray anatomical muscles; rather, they reveal the desire for perfection – a desire that was still present in Hellenistic sculptures even though anatomical dissection had become common practice. Glykon (3rd century AD) *Farnese Hercules* (also known as

Weary Hercules) [Sculpture]. Museo Archeologico Nazionale, Naples. [Roman copy after a 4th-century BC bronze original by Lysippos].

9 – Associated with the description of bodily perfection is the idea of articulation: a healthy, strong body is one that is well-articulated, with a structure that supports itself and prompts action, like the body of an athlete. The importance of the idea of articulation is also present in language (Kuriyama, [2002] 2006, p. 136). This can be seen firstly in the understanding that the Greeks had of speech itself: the articulation of the voice by means of the tongue (ibid), and secondly (as mentioned above) in the introduction into Greek grammar of a new element, the article, which enabled the transformation of an adjective into a noun (Vernant, 1983, p. 347). In this way, the mouth returns to prominence. It is the mouth that utters articulated speech, but it is also the mouth that names things and hence is able to categorise beings such as the Centaur. ‘An athlete tying a band around his head after a victory in an athletic contest’ (Norris, 2000, p. 127) – *Diadumenos*. Roman copy in marble from around first century BC found in Delos. The original was a bronze statue probably from Polykleitos (or Polyclitus).

10 – “In the ninth image, since the meri or esophagus (which is the same thing) through which food and drink pass from the mouth to the entry of the stomach cannot be demonstrated, because it is covered by the trachea or pipe of the lungs (which is the same thing) as well as by the lungs, and because the meri or esophagus is positioned on top of the spinal cord or vertebrae of the neck and shoulders, right down to the entrance of the stomach (which meri at the entrance to the stomach is called the ‘mouth’ of the stomach), I have made an effort to represent the meri alone in a single image. For it is highly necessary that this member, the meri, be actually demonstrated, because plasters are necessary for this meri and ‘mouth of the stomach,’ and it will be necessary to apply [the plaster] on the back, since the way to the meri is shorter from the back than from the front, given that the chest and lungs are on top of it” (Vigevano [trs. by Wallis], [1345] 2010, p. 245). ‘Esophagus and Digestive Tract’ [Vellum] in Vigevano, Guido of (1345) *Liber notabilium Philippi Septimi, francorum regis, a libris Galieni extractus* (The Book of Notable Matters, dedicated to the French king Philip VII). Musée Condé, France, MS 334/569, f. 9, illus.

11 – “[This chart] deals with poultry. Item no. 110, reading across from left to right, informs us that roosters are dry and hot, that they have these qualities in the second degree, that the best kind to eat are those that crow temperately, that their meat is specially good for patients suffering from colic, that it may cause irritation of the stomach that can be avoided if the birds are tired out before they are slaughtered, that it provides nourishment engendering the humor bile and is recommended for people of frigid complexion, in old age, in winter, and in northern regions” (Siraisi, 1990, p. 123). This is a table that is also a geometrical drawing: is this geometry an embellishment or part of a way of presenting the image, in which the graphic dimension of the text has as much importance as its content? ‘Table of Poultry’ [Velum] in *Codex Fritz Paneth* (a handbook on health based on an eleventh century Arabic version printed in Bologna), Harvey Cushing/John Hay Whitney Medical Library, Yale University Library, New Haven, MS 28, f. 718, illus.

12 – The Griffon (or Griffin), according to Jorge Luis Borges ([1967] 2002, pp. 73-74), is a winged monster, partly eagle, partly lion, which during medieval times possessed a contradictory symbolism – sometimes it was portrayed as the Devil, and at other times as an emblem of Christ at the Resurrection. The Griffon thus exists both as an evil monster and as a figure that stands for the holy process of resurrection, binding together the two opposing realms of heaven and hell. Roman Byzantine mosaics from a peristyle court, possibly from the reign of the Byzantine emperor Justinian I (r. 527-565). *Griffin Devouring a Lizard* [Mosaic]. Great Palace Mosaic Museum, Istanbul.

13 – “Licetus, writing in 1634, and Zahn, in 1696, give the accompanying picture of a monster born at Ravenna in 1511 or 1512. It had a horn on the top of its head, two wings, was without arms, and only one leg like that of a bird of prey. It had an eye in its knee, and was of both sexes. It had the face and body of a man, except in the lower part, which was covered with feathers” (Ashton, 1890, pp. 173-74). Is this a more contemporary version of the Harpies, this time represented as a single presence, with its mythological genealogy replaced by the story of the ‘common’ birth of a freak? Ashton, John (1890) *Curious Creatures in Zoology*. London: John C. Nimmo, p. 174, illus.

14 – “[I]n the Aeneid (Book III), [the harpies] are vultures with a woman’s face, sharp curved claws and filthy underparts, and weak with a hunger they cannot appease. They swoop down from the mountains and plunder tables laid for feasts. They are invulnerable and emit an infectious smell; they gorge all they see, screeching the whole while and fouling everything with excrement” (Borges, [1967] 2002, pp. 77-78). The Harpies, monsters that devour only to excrete, how far are they from the Japanese Gaki (images 60 and 64)? Bulfinch, Thomas (1897) *The Age of Fable: Or the Beauties of Mythology*. Philadelphia: Henry Altemus Company, p. 321, illus.

15 – Saturn, in the darkness, performs an act of ultimate despair, madness, survival or autophagy (eating his own flesh – his children): does this act make him a god, a man or a monster? Blood is briefly present, but not in his mouth, which opens back into the darkness that he inhabits. Is his son’s body going into Saturn’s stomach or into the darkness? And what is his body made of? The paint is clearly visible, moving between the dark tones, creating a disfigured body that does not seem made of flesh but of hard, rigid stone, a moving landscape that sometimes disappears, rarefied, into the darkness. Goya, F. (1819 - 1823) *Saturn Devouring his Children* [Oil on canvas]. Museo del Prado, Madrid.

16 – “‘Internal topography’ (neiijing) of the human body from the front and back view. The frontal view (on the right) shows the positions of the anterior internal organs: the throat (through which jing essence ascends and qi descends), the larynx, the lungs, the heart, the gall bladder, the spleen, the stomach, the huangmen ([the] ‘Vitals Portal’, between the heart and the diaphragm), the pylorus, the small intestine, the large intestine (the ‘nine coils’ of the large and small intestine), the guanmen ([the] ‘Pass Portal’) and the bladder. The back view (on the left) shows the positions of the posterior internal organs: the stomach cavity (possibly an error), the lungs, the spleen, the stomach, the sub-hepatic area, the [left] kidney, the ‘Portal of Life’ (mingmen, anatomically the right kidney), and the ‘Portal of the Po Soul’ (pomen, the anus).” (Wellcome Library, no date a). These drawings merge into a compact structure, which combines a physiological depiction of the internal organs in the human thorax and abdomen with the strange appeal of an everyday floral bouquet or offering of fruit. Li Jiong, ‘Neijing’ (internal topography) [Woodblock] in *Zhengtong daoze* (Daoist canon compiled during the Zhengtong reign period (1436 -1449) of the Ming dynasty). Library of

17 – “Indeed, food and medicine shaded into each other. Avicenna declared, in a passage frequently cited and discussed by Latin medieval writers, that the formal distinction between them was that food was assimilated by the body, whereas medicine assimilated the body to itself. But both food and medicine were complexionate and affected the complexion of the person who ingested them; in practice, not only spices but also various vegetables counted now as one and now as the other. Lettuce, for example, frequently crops up as an ingredient of cold complexion in medicinal recipes” (Siraisi, 1990, p 121). This image shows a cabbage, another ingredient in the aforementioned medical treatises that had a multi-dimensional existence. The text that accompanies this drawing says: “Nature: Warm in the first degree, dry in the second. Optimum: The fresh and fleshy ones. Usefulness: They remove obstructions. Dangers: They are bad for the intestines. Neutralization of the Dangers: With much oil” (Matterer, 2000). “The plants illustrated in the Tacuinum have the same general appearance as those in the Manfredus Herbal and the Historia Plantarum. The similarity between the Historia Plantarum and the Paris and Rome Tacuinum manuscripts is particularly clear for images of the cherry and pine trees, squash, melons, marjoram, and turnips. In all three manuscripts, the plant is shown as a flattened silhouette. Little attention is paid to the correct proportional and spatial relationships among the parts, and leaves are not precisely shaped or naturalistically colored ... larger-than-life pine needles and cones are grafted onto a diminutive tree” (Hoeniger, 2006, p. 67). For example, the use of close-ups, a common procedure in scientific illustrations and diagrams, indicates that the purpose was not to show a pine tree but to present the elements that would enable the recognition of a pine tree, differentiating it from similar trees. The focus is not on rendering ‘real’, observed nature, but to present a table of reference for the recognition of the tree. ‘Cabbage (Caules Onati)’ in (15th century) *Tacuinum of Rouen*. Bibliothèque Municipale, Rouen, MS Leber 1088, illus.

18 – Illustration of neidan (the Daoist inner alchemy): there are points of contact between Daoism and the Timaeus in relation to the understanding of the body – both establish a micro-macro correspondence. However, for Daoism, the body was the universe, it contained the universe in its totality (Levi, 1989, p. 105), whereas for Plato this correspondence was a hierarchy of perfection and

the cosmos existed only in the soul, particularly in its divine part which was placed in the head; the rest of the body existed to support the soul (Cornford, [1937] 1997, p. 281). Thus Daoism had a different understanding of bodily secretions: “the crudest physiological substance assumes a heraldic value because its secretions are integrated into a symbolic system in which they correspond to divine effigies” (Levi, 1989, p. 123).

19 –

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Tarasque Tarascon. (Gordon, 2009).

20 – As Borges states in *The Book of Imaginary Beings*, the Amphisbaena is a two-headed serpent that can bite with both of its heads. It was an ‘impossible’ being, according to seventeenth century polymath Sir Thomas Browne ([1967] 2002, pp. 16-17), who could not believe that such a being could exist as it would contradict the fact that all beings only have a bottom, a top, a front, a back, and a left and right side. The Amphisbaena has, however, been associated with the reptile *doble andadora*. “The Anphivena [sic] is shown with two heads, wings and claws. Amphisbaenae are in fact limbless lizards, wormlike creatures with rounded head and tail, [that] can move in two directions. This animal is pricked [sic] for pouncing” (Arnott, no date). ‘Anphivena’ (detail) in (c. 16th century) *The Aberdeen Bestiary*. Aberdeen University Library, Aberdeen, MS 24, f. 68v, illus.

21 – Is this Satan, hell, or Saturn devouring his child? And what place is it that it inhabits, partially in the darkness of the subsoil, partially in the light of the heavens, the two opposites bridged by heavenly clouds or hellish burning smoke? ‘The Prince of Darkness: Dagol’ [German gouache] in (c. 1775) *Compendium rarissimum totius Artis Magicae sistematissatae per celeberrimos Artis hujus Magistros*. Wellcome Library, London, illus.

22 – A blue bird-like monster, sitting on a potty-chair throne (Dixon, 2003, p. 264), eats a human body while excreting other, previously eaten bodies. However, the bodies seem to go through the process without any harm, escaping digestion, as if the monster had a hollow body. A requirement of hell is that the body has to be preserved, always ready to undergo the fear and pain of being eaten alive and dying once more. In terms of this monster, does being eaten equate to dying, while being excreted equate to being reborn? It appears to be a constant process of transmutation that is aided by the egg-shaped (the egg is an alchemical symbol), bluish excreting organ of the monster. As Dixon (2003, p. 260) highlights, the egg was “considered [a] microcosm of the world, containing all the qualities of life, the four elements perfectly conjoined. A vessel shaped like an egg might, by its resemblance to the common object, aid transmutation of the substances within it.” Bosch, Hieronymus (c. 1480-1505) *The Garden of Earthly Delights* (detail depicting the ‘Prince of Hell’ from the right panel of the triptych, Hell) [Oil on Oak]. Room 56, Museo del Prado, Madrid.

23 – “This image illustrates the mouth of hell for the biblical text, the Apocalypse of John” (Xanthippos, 2013). ‘Torment’ [Xylogravure block-book, hand-coloured] in (c. 1450) *Apocalypsis Johannis. Il libro della fine del mondo. L’apocalisse*. Biblioteca Estense Universitaria, Modena, alfa D.5.22, p. 43, illus.

24 – (12th century) *Dragon devouring a man* [Capital relief]. Church of St. Pierre, Chauvigny.

25 – A dragon is eating a man, beginning with his face, but viewed at a distance it might seem that the man is eating the dragon, firmly holding his neck and swallowing the dragon’s mouth. A mouth inside another mouth, a mouth eating another mouth, leaving a lack, a void, in the absence of the mouth that can eat. The interior of the body no longer has a commanding door that open and closes, defining what comes in and out, and therefore the interior of the body is exposed and is no longer interior. An inside that encloses another inside, an interior space that contains another interior space, but the interior space no longer has an exterior, nothing else exists to make the separation between the exterior and the interior. When the materiality of the flesh disappears, does the hollow body

disappear too, or can it still be eaten? “Goltzius worked with the artist, Cornelius van Haarlem, at the ‘Academy’ of Harlem, who made the painting (now at the National Gallery London) from which this engraving derives. Ripping claws, fangs gouging deep into flesh, scattered heads and shredded bodies provide a graphic portrayal of the fate met by the companions of Cadmus. The opposing forces of the upward thrust of the dying companion’s arm and the downward plunge of the dragon’s neck combine with the contorted male forms to create a sense of emotion in this depiction of an episode from Ovid’s ‘Metamorphosis’ III: 28-63” (The Barber Institute of Fine Arts, no date). Goltzius, Hendrick (1588) *The Companions of Cadmus Devoured by the Dragon* [Engraving]. The Barber Institute of Fine Arts, University of Birmingham, Edgbaston.

26 – “Michelangelo heightened the naturalism of Schongauer’s demons by painting silvery scales onto the spiny, fishlike monster in the upper left. ... The young artist introduced the element of fire, which does not appear in Schongauer’s print. A small fire appears in the crevice of the rocky outcrop, flames shoot from the mouth of the demon with squid-like wings at the lower right, and a wooden club wielded by the spiny, fishlike creature has been transformed into a firebrand” (Kimbell Art Museum, 2015). Michelangelo (?) *Torment of Saint Anthony* (detail) [Oil and tempera on panel]. Kimball Art Museum, Fort Worth.

27 – “In German and Latin. On white, brown and grey-green paper. The title within an ornamental border in wash, with skulls, skeletons and cross-bones. Illustrated with 31 extraordinary water-colour drawings of demons, and three pages of magical and cabbalistic signs and sigils, etc. At the end the figures are in red, and part of the text is written in white on the grey-green paper” (Wellcome Library, no date b). (1775 ?) *Compendium rarissimum totius Artis Magicae sistematissatae per celeberrimos Artis hujus Magistros. Anno 1057. Noli me tangere. Asmodai*, MS 1766, f. 18, Wellcome Library, London.

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(The University of Iowa Libraries, 2009). ‘Rerum Naturalium’ in Reisch, Gregor (1504) *Margarita Philosophica* (Pearl of Wisdom). John Martin Rare Book Room, Hardin Library For Health Sciences, The University of Iowa, Iowa, AE3. R4 1504, f. vi, illus.

29 – Bloodletting-zodiac man. “This famous illustration, combining the features of a bloodletting man with those of a zodiac man” (Harrison, 2012). The bowl is assumed to be catching the blood; however, the purpose of the distaff is unknown (Jones, [1984] 1998, p. 95). (1275-1540), in Harley MS 3719 (English manuscript with collection of astronomical, calendrical, medical and philosophical texts), ff. 158-159. British Library, London.

30 – (3rd quarter of 12th century) *Liber medicinae ex animalibus*. British Library, London, Harley MS 1585, f. 72v, illus.

31 – “Aesculapius and Asclepius, supposedly the son and grandson of Apollo, are instructing others in the collection, preparation and dispensation of medicines” (Jones, [1984] 1998, p. 95). ‘Hippocrates (or Galen) is holding up a Jordan to the sun’ in Ardene, John of (2nd quarter of 15th century) *Medical Treatise*. British Library, London, Sloane MS 6, f. 175v, illus.

32 – “Giovannino dei Grassi’s decision to show plants in the midst of landscapes in the Tacuinum paintings, however, meant that he had to depart from the herbal tradition in significant ways. The configuration of the botanical subjects on the pages of the *Historia Plantarum* also produced by

Giovannino's workshop was dependent on the ancient convention of the illustrated herbal: each plant was represented by a single archetypal specimen, extracted from the earth, either with a cut stem or with roots included. In the Tacuinum paintings, by contrast, the individual herbal 'portrait' was repeated many times; the massed plants grow out of the soil to create a garden or field, and gardeners pluck leaves or fruit and fill baskets to overflowing" (Hoeniger, 2006, pp. 67-68). Hoeniger suggests that Giovannino may have been influenced, on the one hand, by the original Arabic work in which the focus is on the best way and time in which to cultivate and harvest a plant rather than on its identification (ibid). On the other hand, the 'genre scenes' accompanying the drawings of plants may have been influenced by the Tractatus de Herbis (ibid). He also displays the possible influence of the literature of courtly love, particularly in his depiction of human activities (ibid, p. 72). How much do these depictions resemble a Bosch painting, such that it could possibly be included within an alchemical, religious tradition? The effects of food on sexual activity or the way it affects social interactions are also represented as, for instance, the hot and moist nature of asparagus, which alongside alleviating constipation also enhances sexual union (ibid). "The effort taken to create scenes of labour in the fields with specific grains surely reflects the economic importance to the Visconti duchy of its agricultural lands. The value of agricultural land was a concern Giangaleazzo, of course, shared with other landowning aristocrats of the day" (ibid, p. 78). "The Tacuinum illustrations portrayed the peaceful, orderly, bountiful world such a ruler would enjoy" (ibid, p. 80). In contrast to the Gaki, the Tacuinum does not portray the environment during the period of its making – a period devastated by hunger, caused not only by bad weather and ruined crops but also by the Black Death and war. 'A pharmacist dispensing syropus acetosus in his shop' in School of Giovannino de' Grassi (after Ububehasym Baldach o Ibn Butlan) (14th century) *Theatrum Sanitatis*. Biblioteca Casanatense, Rome, MS 4182, f. 183, illus.

33 – "Physical description: Lucifer, with three faces, stands centre devouring the wicked. At the base of his abdomen is another face, out of the mouth of which a devil is pulling the body of Simon Magus, whose name is inscribed in reverse. The devil holds two other men in his hands who are each being bitten by a serpent which twist around the devil's arms. The rest of the engraving is split into four rows in which souls are being tormented in various manners" (Victoria and Albert Museum, 2013).

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(Victoria and Albert Museum, 2013). This image summons up an immediate association with images 22 and 42. On the one hand, the cycle of eating and excreting is also present in the blue monster of The Garden of Earthly Delights, as Dixon also shows. On the other, the seated position of Satan, with legs folded and open, supported by the resting hands on the knees, is mirrored in the seated position of the opened body of the man who is being bled to cure him of illness. (c. 1470) *Hell* [Engraving]. Victoria and Albert Museum, Prints & Drawings Study Room, level E, case I, shelf 2, box B.

34 – “Formed of the maws of two hideous, gigantic monsters, it swirls with the chaotic figures of the damned, including kings and a queen wearing only their crowns, and a tonsured monk, as well as young and old, male and female. They are tortured by slimy, hairy demons, while an angel locks the door in the border with a large key, a feature seen in an 11th-century Anglo-Saxon picture of hell. Traditionally called the ‘St Swithun Psalter’ because it contains a prayer to the saint, this psalter’s origins can be placed at Winchester, probably at the Cathedral Priory, which is dedicated to him. It is beautifully illustrated with a series of full-page tinted drawings which probably reflect the tastes and high social status of Hugh of Blois, Bishop of Winchester (1129-1171)” (British Library, no date a). ‘The Last Judgement’ [Vellum] in (1150) *Winchester Psalter*. British Library, London, Cotton MS. Nero C IV, f.39r, illus.

35 – (c.1500-1520) *Satan* [Stained-glass window]. St Mary’s church, Fairford, Gloucestershire.

36 – A hellish mouth or the insides of the body? Hell or a thermal bath – as depicted in image 47? ‘Belial and the Demons’ [Vellum] in Parmenchingen, Antonius Ruttel de (1450) *Proces de Belial de J. de Therano*. Bibliotheque de l'Ecole des Beaux-Arts, Paris.

- 37 – ‘Urine Wheel’ in (16th century) *Anonymi medicina illustrata*. The Royal Library, Copenhagen, NKS 84 b, f. 5v. illus.
- 38 – “The main picture appears to illustrate a cooperative arrangement of a type common in fourteenth and fifteenth-century northern Italy between a physician and an apothecary. On the right is the apothecary’s shop, with an assistant mixing a batch of medicine behind the counter. On the left, the physician holds consultations in or near the apothecary’s premises. The small pictures down the left-hand edge and across the bottom of the page illustrate various forms of medical treatment, including medical baths” (Siraishi, 1990, p. 31). Avicenna (Ibn Sina, 980-1037) (first translated into Hebrew in 1279) *Canon of Medicine in Hebrew*. Biblioteca Universitaria, Bologna, MS. 2197, f. 492, illus.
- 39 – Heyden, Pieter van der (1556) *The Temptation of St. Anthony* (After Pieter Bruegel the Elder) [Engraving]. Metropolitan Museum of Art, New York.
- 40 – “Parents: Thaumais & Electra. Connected to: Odyssey, Iliad, Aeneid, King Phineus, Argonauts, Zetes, Calais, Celaeno. Story: the Hounds of Zeus: Harpies were once sent by Zeus to plague King Phineus of Thrace as punishment for revealing the secrets of the gods. Whenever a plate of food was set before him, the Harpies would swoop down and snatch it away, befouling any scraps left behind. Jason took pity on the emaciated king and killed the Harpies when they returned; in other versions, Calais and Zetes chase the Harpies away. In return for this favor, Phineas revealed to Jason the location of Colchis and how to pass the Symplegades, or The Clashing Rocks, and then they parted. Aeneas encountered harpies on the Strophades as they repeatedly made off with the feast the Trojans were setting. Celaeno cursed them, saying the Trojans will be so hungry they will eat their tables before they reach the end of their journey. The Trojans fled in fear” (Cameron, 2012). Painter, Kleophrades (attributed) (c. 480 BC) *Phineus defending himself from the Harpies* [Attic red-figure hydria-kalpis]. The J. Paul Getty Museum, Getty Villa, Malibu.

- 41 – (c. 480 BC.) *Jason disgorged by the dragon* [Attic red figure kylix]. Gregorian Etruscan Museum, Vatican City, Room XIX.
- 42 – Bloodletting man in (15th century) *Wilhelmi, Walteri de Zirix see descriptio terre sancte*. Broeder Gheraerts *Naturkunde*. Herzog August Library, Wolfenbüttel, MS Augustea, 18.2 Aug. 4, image 00223, illus.
- 43 – A bloodletting chart showing the points for bloodletting. ‘Bloodletting Man’ [Woodcut] in Gersdorff, Hans von (1517) (1st ed.) *Feldtbüch der Wundartzney* (Field-book of the Wound-doctor). Johannes Schott, Strassburg, illustrated by Hans Wechtlin.
- 44 – An Encyclopaedia of the World. ‘Monster’ [Woodcut] in Münster, Sebastian (first published in 1544) *The Cosmographia*.
- 45 – ‘Zodiac Man’ [Pen-drawing] in (1353) *Lectionary, with a calendar, and readings for Sundays and weekdays*. British Library, London, MS Egerton 2188, f. 10, illus.
- 46 – ‘Mandragora’ in (c. 1520) *Arzneipflanzenbuch* (medicinal herb book) published in Augsburg (?). Bavarian State Library, Munich. BSB Cod.icon. 26, f. 59r, illus.
- 47 – Bathing scene illustrating the healing effects of the mineral waters of the springs in Pozzuoli, Southern Italy in Eboli, Pietro da (c.1220) *De Balneis Puteolanis* (The Baths of Pozzuoli). Biblioteca Angelica, Rome. MS 1474, f. 14, illus.

48 – “De Dissectione partium corporis humani, first published by Simon de Colines in 1545. Kerver’s issue includes three striking illustrations of a zodiac man by Mercure Jollat, previously unpublished in the Collines 1545 and 1546 editions and originally rejected by Estienne for being too astrological” (Huard and Gmek, 1965, cited in Christie’s, no date). ‘Zodiacal Man’ in Estienne, Charles (1575) *Les figures et portraicts des parties du corps humain*. Paris: Kerver. University Library Erlangen-Nueremberg, H61/2 TREW.D 176, seite 6, illus.

49 – Heyden, Pieter van der (c. 1561) *The Descent of Christ Into Limbo* (After Pieter Bruegel the Elder) (detail) [Engraving]. Metropolitan Museum of Art, New York.

50 – ‘Schematic representations of female diseases’ in (15th century) *Wellcome Apocalypse* (German and Latin book). Wellcome Library, London, MS 49, illus.

51 – Mandrake root from Surrey, bent into the shape of woman holding a child, acquired by Edward Lovett (1852-1933) an Edwardian collector of charms and magical items. (1870-1916) *Woman Holding a Child* [Carved Mandrake]. The Cuming Museum, London.

52 – Signorelli, Luca (1499-1502) *Resurrection of the Flesh* (detail) [Fresco]. Chapel of San Brizio, Duomo, Orvieto.

53 – The body becomes grounded and is no longer hollow. Instead, it is full, overwhelmingly full. Bursting out of the body, the intestines bridge the earth and the sky to become the clouds that house the astrological signs. Unknown Zodiac Man.

54 – ‘Madragora-Alrun Fraw’ (mandrake woman) [Colored woodcut] in Kaub, Johann Wonnecke von (1485) *Herbarius zu Teutsch* (Hortus Sanitatis) published by P. Schoeffer, Mainz, illus.

55 – Alchemical treatise. ‘Demonstration of Perfection’ in *De Alchimia Opuscula Complura Veterum Philosophorum (Rosarium Philosophorum)*. Illus.

56 In the second century BC in China the body came to be perceived as a cosmogonic system, and the universe, through the elements that constitute it and their interrelations, was reproduced as if existing within the body (Levi, 1989, p. 106). As Levi (1989) shows, each body part is the representative of its elemental counterpart in the universe. For the Daoists, this theory assumed an extreme form: the universe existed in its totality in the body (ibid) – a macro-microcosm theory in which microcosm had exactly the same properties as the macrocosmic version, in distinction to the idea of it being a less perfect version as in Plato’s *Timaeus*, for example. In this system, the processes that lead to the formation and endurance of the universe are the same as those that give the human body life and powers of reproduction. Xiuzhen tu (Diagram of Cultivating Perfection). “diagram (tu) depicting the Daoist body in terms of alchemical and cosmological principles. Versions of this diagram have been found in Guangdong, on Wudang shan (Hubei), on Qingcheng shan (Sichuan), and in Daoist monasteries in Beijing and Shanghai. It contains inscriptions in textual form, symbols of paradises, alchemical symbolism and practice descriptions, lunar phases, names of the twenty-eight constellations, and elements relating to thunder rites (leifa)” (Zabel, no date a).

57 – “At the bottom of the window the dead are raised from their graves by angels blowing trumpets. At Thornhill Church, West Yorkshire, the east window of the Savile chapel depicts The Resurrection of the Dead. The window was installed in 1493 after the chapel had been extended” (Allen, 2009). Burlison and Grylls (1890) *Resurrection of the Dead* [Tracings]. Victoria and Albert Museum Archives, London.

58 – Neijings tu (Diagram of Internal Pathways). “It depicts a human torso from the side, with iconographic elements relating to Daoist subtle physiology. Textual components include passages from the Huangting jing (Scripture on the Yellow Court) and two poems attributed to Lü Dongbin” (Zabel, no date b). Attribute to Liu Chengyin (dated from 1886). Baiyun guan (White Cloud

Monastery), Daoist temple, Beijing.

59 – “The tenth image will be only for the sake of showing the anatomy of the uterus, because many, many physicians are wrong about the situation and condition of the uterus, since they say that it rises up all the way to the diaphragm and presses on the spiritual members, and induces suffocation. This is false, as Galen says in his book *On Affected Parts*, for he says that the uterus does not rise up to the diaphragm, and not even to the stomach, since it has no ligaments above the navel. One should consult the book *On Affected Parts* and one will find plainly laid out Galen’s refutation of those who understand nothing about the movement of the uterus” (trs. by Wallis, 2010, p. 246). In depicting the uterus, the body is shown as hollow (as in image 10), an empty cavity filled with a void. Would showing the other organs distract the viewer/physician from the object of reference? Or would it make the body too realistic, too material, too fleshy, too human and thus deprive it of a soul and consequently those mysteries that will allow it to rise again after death? Have the other organs been removed or are they hidden by the processes made available through the act of drawing, of depiction? ‘Anatomical figure of a Woman’ [Vellum] in Vigevano, Guido of (1345) *Liber notabilium Philippi Septimi, francorum regis, a libris Galieni extractus* (The Book of Notable Matters, dedicated to French king Philip VII). Musée Condé, France, MS 334/569, f 10, illus.

60 – “Through words and pictures, this scroll tells one part of the seven-part story of the *gaki*, or hungry ghosts. The emaciated ghosts, with their skeleton-thin limbs and swollen bellies, are invisible to the human eye. They are in a state of perpetual thirst and lick the drops of spilled water in a temple cemetery. In contrast with the bustling variety of people conglomerated in front of the temple, the misery of the *gaki* is depicted in fluid brushwork and light touches of color” (Kyoto National Museum, no date). (Heian-Kamakura period – 12th century) *Gaki-Zoshi* (Scroll of the Hungry Ghost) [Handscroll]. AK229, Kyoto National Museum, Kyoto.

61 – “In addition to Planetary Man, many printed *Horae* included cuts illustrating the influence of the zodiac over different parts of the body. As seen here, Aries governs the head and face; Gemini, the

shoulders, arms, and hands; Leo, the stomach, heart, and back; Libra, the navel, groin, and buttocks; Sagittarius, the thighs; Aquarius, the legs from the knees to the heels and ankles; Pisces, the feet; Capricorn, the knees; Scorpio, the genitals; Virgo, the belly and entrails; Cancer, the breast, sides, and spleen; and Taurus, the neck and throat. This information, used in conjunction with that provided with charts of Planetary Man, was especially useful in times of disease or injury.

Marcus Reinhard's establishment in Kirchheim was his second press. Earlier he had been a printer in Lyon but had closed shop around 1482. Success seems to have eluded him in Alsace, however. He began around 1489-90, apparently with this *Horae*, but his presses stopped by the mid-1490s" (*Les Enluminures*, no date). 'Zodiacal Man' in (c. 1490) *Horae, nostre domine ad usum Romanum* (Book of Hours) printed by Marcus Reinhard. The Pierpont Morgan Library, New York, 32528.1 [ChL 578], f. π 2r, illus.

62 – 'Planetary influence on the body and four temperaments' (possibly 1486). The Fitzwilliam Museum, Cambridge, 167, f.102r, illus.

63 – "Recto: a multi-figure composition showing the resurrected Christ rising from his tomb, surrounded by several soldiers. Verso: studies of a shoulder" (Royal Collection Trust, 2014). Buonarroti, Michelangelo (1532) *The Resurrection* [Black chalk]. Royal Collection, Windsor Castle, London.

64 – Defector gakis in a street scene. The gaki or 'hungry ghosts' are beings that are ontologically closer to hell; however, they are free to wander the world, always trying to satisfy their infinite hunger (Lafleur, 1989). As Lafleur (1989, p. 274) states, gaki were not simply hungry beings but were actually constituted by hunger, and this is shown in their bodies – they have a thin throat through which no food passes and a huge belly which is never full. (Heian-Kamakura period – 12th century) *Gaki-Zoshi* (Scroll of the Hungry Ghost) [Handscroll]. AK229, Kyoto National Museum, Kyoto.

65 – Lynn, Nicholas of (c. 1424) *Lunar Volvelle* (astronomical calendar). Bodleian Library, Oxford University, MS Ashmole 370, f. 025r, illus.

66 – The dead rise from their graves, including a pope at the centre of the image. Detail of the Last Judgment or Doom in the Southwest corner of the chancel. Resurrection of the Dead (Hayes, 2010, <http://www.sacred-destinations.com/england/chalgrove-church>). Church of St. Mary, Chalgrove. Hayes, Holly (2007) *Resurrection of the Dead* [Photo].

67 – “Doctors often carried around special calendars (or almanacs) containing star charts. This enabled them to check the positions of the stars before making a diagnosis. Many of these almanacs included pictures, which helped explain complicated ideas to patients. ... The diagram was intended to explain how the astrological formations (or star signs) rule over each part of the body. The man's pointing finger serves as a warning against the powerful forces of the stars” (British Library, no date b). An upside down arrow that mirrors the one on the top. A dividing line is created that separates the diagrammatic scheme in two. However, both arrows also point to the outside of the circle, but where is the outside of the circle? Where is the place that the arrows point towards? ‘Zodiac Man’ [Vellum] in Somer, John (1399) *Kalendarium*. British Library, London, MS Sloane 2250, f.12, illus.

Chapter Five

The Story of *The Mouth of the Monster and the Hollow Body* and the Multiple Existences of Space

As observed in Chapters One and Two, although there are many sophisticated discussions about physical and conceptual spaces, none of them clearly conceptualise the way in which these two dimensions constitute the same reality or construct each other. Recognising the difficulty inherent in such a conceptualisation – due to the ambiguity, multiplicity, evasiveness and indeterminacy of space, and the impossibility of fully understanding or conceptualising it – this thesis follows a ‘corral’ strategy in its approach to the ontology of space. Taking as its point of departure the idea (analysed in Chapter Two) that the ontology of space – as *khora* – cannot be approached directly, Chapter Three developed a strategy through establishing an analogy with the notion of the past and the construction of historical narrative. The underlying rationale is the fact that although the past is unclear, encompassing multiple definitions and approaches, and exhibiting an ambiguity similar to that of space, it is subject to the enquiry of historiography. As such, the question that is most salient for the analogy between space and the past is which methodological and epistemological framework best facilitates research into the past’s ontological ambiguity. Chapter Three revealed that there is a spatial dimension to the sort of research methodologies that can be used to approach and work positively with these subjects’ paradoxical nature and instability. Such methodologies forgo the demand for a single, determinate position and accept that a lack of an ‘origin’ – even the presence of discontinuity – is inherent to a non-linear formation. Thus Chapter Three found that space (as *khora*) could be used as a methodological tool to more fully investigate such ambiguous subjects. The following

chapter develops this idea by describing an ontology of space through 1) the displacement of its ambiguity to the figure of the monster and 2) the use of space as a methodological tool (as developed in *The Mouth of the Monster and the Hollow Body*, discussed in Chapter Four) to research it.

This chapter therefore approaches the ontology of space by means of an analogy with another subject that is ontologically ambiguous: it conducts an analysis of the ontology of monsters. A speculative exploration of monsters offers a different viewpoint from which to analyse the problematic of the ontology of space, as monsters allow us to conceive of a multitude of situations in which the physical, material, abstract, conceptual, imaginative, affective, experiential and aesthetic interact. A multiplicity of existences (or ways in which the physical and the conceptual inform each other in the form of the monster) emerges from the construction of speculative frameworks. This sort of framework does not constrain space to a single viewpoint or vision, but instead allows us to approach its ontology from the perspective of the multiple possibilities of existence and confrontation that are different expressions of a possible single entity.

Two Ontological Narratives

Through a continuation of the study of *The Mouth of the Monster and the Hollow Body*, this chapter presents a combination of two (out of all the possible) overall narratives that emerge through the interactions discussed in Chapter Four. These two narratives enable the thesis to encompass a thought experiment in which the ontology of space can be

discussed and explored. Both narratives are driven by the relationship that exists between understandings of monsters and the changing and historically contingent understandings of the human body, particularly those revealed through medicine. Although the discussion is mainly situated in ancient Greece and medieval Europe, it should not be understood solely in the context of a specific period or region as the sources are used to trigger a discussion, not to limit it. As such, materials from other contexts, such as Daoism in China during the second century BC, ancient Chinese medicine and Japanese ghost stories, are also used to inform the discussion. Such a non-linear approach to the study of historical sources and the past is supported by the historiographical discussion held in Chapter Three, which was primarily informed by the spatial implications of research methodologies. This chapter therefore is not an historical study of the monster as such; rather, it uses monsters to bring an artistic approach (by means of a spatial methodology) to the discussion of the ontology of space. Consequently, *The Mouth of the Monster and the Hollow Body* is used as a speculative and experimental study that admits inputs from visual, material and textual sources from different disciplinary frameworks and times, as well as the performative practice of the notions of the diagram and the encyclopaedia presented over the last few chapters, as seen particularly through an artistic lens.

The first narrative is driven by the apparently innocent question: where does the monster exist? This question is explored through the interrelations between the physical sites that monsters inhabit, the bodies of monsters and views of the human body that are driven in particular by the physiological processes in which the mouth participates. That is, how do monsters become present in this world and in what ways do they interfere in human lives? A panoply of places emerges from this interrelation, some of them in the realm of the physical human body, others associated with those places or dimensions in

which human beings have often located their own transformational processes. This interrelation gives rise to the notion that there is a spatial ambivalence between the place where monsters exist and the physiological knowledge of the human body; there is a slow displacement of the monster from the outside world to inside the body according to changes in the knowledge (mapping) of both the world and the anatomy of the human body. This is particularly evident in changes in how the bodies of monsters have been imagined, observed and depicted, and how this has been influenced by understandings of the human body. The shifts in what an object is considered to be help produce changes in what it is.

The question of ‘where’ points to a way of investigating the ontology of the monster through discussing the place(s) of its existence. The question is therefore twofold: through questioning *where* monsters exist, it also asks *how* monsters come to exist, as these two questions are not separable in the context of *The Mouth of the Monster and the Hollow Body*. This twofold question will be used to reveal how space is always implicated – that is, is active – in the conception of any ontology as something that is deeply related with the enaction and construction of identities, categories, structures and order. Given the discussions in the first part of this thesis, the question of where a monster exists cannot be understood as one regarding site, place or landscape; instead, asking ‘where’ means questioning the friction and tension between the physical, ‘real’ and material and the abstract, conceptual, immaterial and metaphysical dimensions which necessarily rise to the surface if both dimensions are seen as co-constructing each other. Consequently, it is not possible to dissociate the ‘where’ from the ‘how’, as space is implicated in the formation of entities. In addition, if ‘where’ is also seen as ‘how’, then the ontology of the monster is multiply informed through the expression of the various frictions and tensions of the two dimensions.

The second narrative supports the first and is driven specifically through a study of the role of the mouth within the human body. As the mouth partakes in multiple systems in the body, such as digestion and the production of sound, it is a mediator between human beings and monsters. In relation to digestion, the mouth is the place through which food enters and exits, a passage between worlds and dimensions that has been transposed into the realm of the monster in order to understand the reasons behind the monster's existence in terms of its interrelation with human beings. Within this interrelation – and confrontation – the mouth emerges once again as playing a fundamental role in the emission of sounds. On the one hand, there is the scream of fear; on the other, speech and rationalisation. Thus the mouth is the place where articulation (speech) both happens and does not happen (the scream), giving origin to different understandings of and confrontations with the monster, and playing a central role in finding a compromise with fear, with the unknown. This can be a fear derived from an absence of forms; that is, the fear of a lack of separation, divisions, limits or order. Thus monsters enact *khora*, the 'bastard' order that is neither and both the sensible and the intelligible (at the same time and never). The monster is the place where the unknown is displaced to, although it is never fully realised and controlled, being infinite and unreachable. The monster, as *khora*, as space, cannot be fully accounted for through the multiple understandings and perspectives that have emerged or co-existed over time. It is something that is multiple, ambiguous and evasive, a place of and for transformation, mutation and metamorphosis.

In an experimental and speculative context, monsters are not simply metaphors for something 'other'. The use of monsters in *The Mouth of the Monster and the Hollow Body*, and in this chapter, differs from other approaches in which monsters are perceived as an imaginary referent for a certain reality, as a metaphor for animality, the monstrous,

evil or the 'other', one that is often read as holding political and/or social implications. This analysis does not approach the monster in the same way as Scott does when he says:

[It is] one of the most significant creations [which] serv[es] to reflect and critique human existence. Whether it has its etymological roots in a demonstration of something (*monstrere*) or a warning (*monere*), the monster as a metaphor continues to be a powerful expression of the imagination and the rational. (Scott, 2007, p.1)

This would be to limit the monster to something that is purely a human creation, metaphorically speaking, possessing no physical existence in itself. Contrary to this perspective, an exploration of the ontology of monsters in the context of *The Mouth of the Monster and the Hollow Body* depends on the position that monsters are entities that might have existed. The analogical approach is deepened (relative to the discussion in Chapter Three) by releasing it from its ties with the contingency of reality. This chapter resorts, therefore, to a suspension of disbelief that would otherwise constrain the monster (and its ontology) and relegate it to the position of an entity with a doubtful physical and material existence. Such a step begets questions on the boundaries and limits of materiality, physicality, visibility, reality, abstraction and imagination; that is, on how things with multiple levels, degrees or modes of existence are materialised and dematerialised.

The importance of researching an ontology of monsters through a suspension of disbelief is that, by releasing the ties of reality, an array of perspectives or other possible realities are unleashed, revealing a multiplicity of existences. These multiple existences can then be seen as a model for the re-framing of the ontology of space, in which space is not an entity with a single, ambiguous and evasive existence, but a combination of multiple existences informed by different combinations (and transformations) of the

physical, material and experiential realm with the abstract, conceptual and imaginary one. A plural identity thus emerges from a single ontology. Therefore, if *The Mouth of the Monster and the Hollow Body* is understood as a model for space, it shows how space can be multiply unfolded in terms of its own ontology. This thesis argues that the same strategy that was applied to the ontology of monsters in *The Mouth of the Monster and the Hollow Body* can be applied to space, providing a framework and method for the exploration of its ontology.

Accepting that monsters might have existed implies the construction of a series of hypotheses that would account for their possible existence. This chapter builds these hypotheses not only around the accounts (from stories of encounters to biographies), images and sculptures of monsters, but also from traces within human beings themselves, the results of encounters with monsters, which are reflected either in the belief in their existence or, at the least, in the suspension of disbelief. As such, it starts from the idea that traces of monsters can be found in the processes of transformation and metamorphosis that occur in the interaction, friction and tension between the different physical, material, abstract, conceptual, immaterial, metaphysical, imaginative, affective and experiential aspects of everyday life – that is, the frictions, tensions and interactions that occur between multiple dimensions of existence. To pursue an understanding of the existence of monsters, therefore, a multiple set of possibilities demands consideration:

1. The monster is something external to the human body and exists in the same realm. Thus there is the possibility of physical contact between monsters (who are encountered as fearful beings) and humans.
2. The monster is an entity that exists outside the human body but not in the same reality as the human being. Although there is a possibility of contact between them, one or the other must cross between these two distinct realms.

3. The monster is something internal to the human body; it is part of it and consequently there is no distinction between the two, they are always in contact. The monster is one dimension of the body.
4. The monster is something internal to the human body; it exists as part of an imaginative process and is expressed through sensory experiences, narrative constructions, artistic materialisations, and cultural and everyday practices.
5. The monster is both outside and inside the body, and it moves between the two positions, either possessing the body or existing outside it. In this case, it can assume multiple stages and degrees of physicality.
6. The monster is the human in altered form, due to death or disease.
7. The monster is a physical phenomenon.

The remainder of this chapter will present the story that results from the merging of the two narratives discussed above, as it emerges in *The Mouth of the Monster and the Hollow Body*. This story is composed of short meditations, which take the literary form of multiple allegories, guided by different types of monster-existence and understandings of the human body. These mediations, however, also constitute *The Mouth of the Monster and the Hollow Body*, and as such, they should not be separated from the visual diagram and the encyclopaedia; rather, they should be approached in combination with the other sides of *The Mouth of the Monster and the Hollow Body*, as an integral part of it – as discussed in Chapter Four.

The Story of *The Mouth of the Monster and the Hollow Body*

The mouth, the scream and speech

The mouth in physiology is one of the five (in females, six) external orifices of the body. However, the question is: where does the exterior opening finish and become part of the interior? Is the mouth a limited cavity or an infinite open space crossing the interior of the body? A point of entrance, a point of beginning or a 'limen' is "a threshold below which a stimulus is not perceived or is not distinguished from another" (*Oxford English Dictionary*, 2005, p. 1016). George Bataille describes it thus:

The mouth is the beginning or, if one prefers, the prow of animals; in the most characteristic cases, it is the most living part, in other words, the most terrifying for neighbouring animals. But man does not have a simple architecture like beasts, and it is not even possible to say where he begins. (Bataille, [1970] 1985, p. 59)

The mouth is a version of the möbius strip or the Klein bottle, which in a continuous movement travels between inside and outside, between multiple dimensions. In describing the mouth in this way, Bataille alerts us to the movement that human beings make – as do other animals – with the mouth placed at the highest point of the body in order to release those sounds that are most profoundly animalistic:

... as if explosive impulses were to spurt directly out of the body through the mouth, in the form of screams. This fact highlights both the importance of the superior or anterior extremity of the body, the orifice of profound physical impulses; one sees at the same time that a man can liberate these impulses in at least two different ways, in

the brain or in the mouth. (Bataille, [1970] 1985, pp. 59-60)

The mouth is, for Bataille, an expression of both animal physiology and psychology. In *The Mouth of the Monster and the Hollow Body*, however, the two routes that impulses travel are not the mouth and the brain, but the brain and the gut, which are both expressed through the mouth. The first, the impulses of the brain, are expressed in speech, and the second, those of the gut, in the scream.

This dual aspect of the sound produced through the mouth is also associated with both the mythological and the logical. The scream is the mythological side due to its lack of rational, logical articulation – an eschatological fear that begins in the gut and is expressed in a chaotic sound. Speech, in contrast, is the logical (articulated, causally linked and integrated) emanation of the brain. However, this particular association might not have always existed in this form. As Bruce Lincoln (1999) shows, in ancient Greece the mythological and the logical have not always been associated with the irrational and the rational, respectively. In tracing the history of myth, Lincoln (1999) finds²⁰ that until the Sophists, in the fifth century BC, *mythos* was a kind of discourse that portrayed the truth, as opposed to the gradual association of myths with stories, falsehoods and lies. When the word *mythos* came into being in ancient Greece it was associated with and used to describe a trustworthy story that accounted for the actions of the gods. The truth either existed in the actions of the gods themselves, which stood for moral and ethical values, or in the words of the poets as they expressed what they had been told by the gods. These two positions shared the idea that the gods never lie because they stand for

²⁰ Lincoln (1999) uses textual analysis of works that range from early accounts, such as the *Iliad* and the *Odyssey* in the eighth century BC, to the philosophical works of Plato in the fifth century BC.

truth. Thus, on the one hand, *logos* stood for persuasion and seduction, independent of any truth value, and as such was associated with the speech of woman, conveying ideas of seduction, weakness, flaws, impermanence, transience and instability. *Mythos*, on the other hand, was associated with man, conveying ideas of solidity, strength, constancy, permanence, immutability and absoluteness. According to Lincoln (1999), *logos* was the pragmatic tool of human beings while *mythos* was the truth, echoing the commandments of the gods.

Such an understanding, according to Lincoln (1999), was possible up until the moment at which the system of writing superseded the oral system and prose became a tool of communication on the same level as poetry. Writing opened up the possibility for an argumentative structure (*logos*) that did not need to rely on memory, and hence another way of understanding truth slowly surfaced. In contrast, *mythos* was part of a system that was based on and derived from the spoken word, in which the poetic construction and its form supported the process of remembering (*ibid*). The existence of an absolute truth that is set by the gods negated the necessity for debate, as the words of the gods were indisputable and unchanging, and all that was necessary was a system that enabled their retrieval (*ibid*). However, in the process of the change from an oral to a written system, poetry – and consequently *mythos* – became a synonym for mischievous stories that were not to be trusted, told by a person who played with the emotions of the audience in order to control their beliefs, as opposed to the idea of poetry as the stories told by the gods through the poet, who was thought to be a medium controlled by the gods. In the latter incarnation, the poet was highly prized. As the tool through which the words of the gods were materialised, the poet possessed no control or authority over his own spoken words. The diametrical shift between the standing of the *mythos* and the *logos*, however, was complete by Plato's time. The *logos* had become the tool that

philosophers would use to convey their knowledge and argue for their positions on and understandings of the truth. According to Lincoln (1999), the reasoning behind the rise of the *logos* over *mythos* was the fact that in order to debate and uncover truth with any sense of authority, the philosopher could not appear to base it on the manipulation of the emotions and senses of others.

Mouth, excreta, names and order

In medieval Japan, a certain type of ghost, the *Gaki*, symbolised a way of understanding the relationship between the body and the underworld. The *Gaki* had very thin throats and huge bellies, which meant they were constantly hungry because they could not eat; in fact, they were “constituted by hunger, not merely conditioned by it” (Lafleur, 1989, p. 274). They were constantly looking for whatever they could consume and, as such, represented the transformation or disappearance of excreta (Lafleur, 1989). In a wider context, they explained the disappearance of matter from the world. The *Gaki* were seen as beings that exist in-between the human world and the underworld; more precisely, they carried their own hell of punishment in the world (*ibid*). They were not completely material, although they were not without substance as they possessed a certain physicality, which enabled them to eat. This relationship with what they ate, transformed or made disappear was present in their names. They were called:

[O]nes with bodies like cauldrons, those with needle-thin throats, vomit-eaters, excrement-eaters, nothing-eaters, eaters of vapour in the air, eaters of the Buddhist dharma, water-drinkers, hopeful and ambitious ones, saliva-eaters, wig-eaters, blood-

drinkers, meat-eaters, consumers of incense smoke, disease-dabblers, defecation-watchers, ones that live under the ground, possessors of miraculous powers, intensely burning ones, ones fascinated with colours, inhabitants of the beach, ones with walking canes, infant-eaters, semen-eaters, demonic ones, fire-eaters, those on filthy streets, wind-eaters, burning-coal consumers, poison-eaters, inhabitants of open fields, those living among tombs (and eating ashes), those that live in trees, ones that stay at crossroads, and those that kill themselves. (Lafleur, 1989, pp. 283-286)

Two ideas emerge from these ghosts: 1) the relationship with eating and the transformation of excreta through an understanding of the mouth and 2) the strange classification system of Borges' *The Analytical Language of John Wilkins*, which Foucault uses as a point of departure for his work, *The Order of Things* ([1966] 2002).

Was this relationship with excreta and eating also present in European Christianity in the Middle Ages? The first interaction between the *Gaki* and medieval European monsters is found in the classification system of names. As opposed to ancient Greece, where monsters had a name and a genealogy – as Ginevra Bompiani shows in *The Chimera Herself* (1989) – that illustrated the very specific role they played within the mythological system, in medieval times most monsters seem to have come into existence without names: they were simply called 'demons'. However, these nameless monsters also reveal the importance of the mouth. The mouth, as seen in the depictions of demons, was one of their most important features – they were frequently depicted eating, not excreta but human beings. In the context of hell, in which demons were the perpetrators of punishment, the mouth was the vehicle of permanent, endless suffering. Demons, dragons, evil spirits and other monstrous figures were driven by the mouth that regurgitates, destroys, kills, expels fire and spreads poisonous substances – for example, the *Amphisbaena*, two-headed serpent-like creatures who were said to be doubly dangerous as both their heads exuded poison (Borges, [1967] 2002, pp. 16-17). But demons were also portrayed as eating themselves, as with the Greek monster *Uroboros*,

who became an alchemical symbol in the Middle Ages (*ibid*, p. 150). What, then, is the relationship between the human body and demons in the context of the Western world?

The body, demons and resurrection

If we look at medieval European medicine we find that the idea of possession, particularly before the witchcraft panic of the 16th and seventeenth centuries, did not play a substantial role in the explanation of illnesses (Siraisi, 1999, p. 149). The body was thought to be affected by entities, but they did not possess it. Therefore, in distinction to Chinese Daoism, there was a separation between the understanding of cosmology and the understanding of the body in terms of the interaction between these two systems and the divine. However, if the physical body was not greatly affected by demons while on earth, it was a different case in the afterlife.

Resurrection was a matter of intense debate in the early Church, with the convergence of two different ways of understanding the body: Hellenistic thought and the Judaic tradition (Tazi, 1989, p. 523). Resurrection was a difficult concept at the beginning of Christianity because it implied an understanding of the body, of the flesh, which presented problems for the Church's explanatory model of the afterlife (*ibid*). The idea of resurrection came from the Judaic tradition, which did not have a clear separation between the body and the soul. However, as Tazi (1989) shows, the idea of such a separation had been a matter of deep reflection in ancient Greece. For instance, in the *Timaeus*, the mortal soul inhabits the belly (the soul of irrational appetites) and the

chest (the soul of higher emotions), while the immortal soul inhabits the head (the soul of rational thought). However, all these were but expressions of the perfect soul that guides the cosmos. As such, despite inhabiting a material body, the soul was something immaterial.

According to Tazi (1989), the Greek notion of the soul made it difficult for Christianity to explain how we can exist after we are dead. As his enquiry illustrates, heaven was a place to which we ascended after death, but it was difficult to justify the existence and importance of a physical body in a system in which both heaven and hell were seen as immaterial places, places for the soul. At the beginning of Christianity, Tazi (1998) reveals, there were two different explanations. On one hand, the body was the mortal part of the human being, perishing with death and disappearing after it, and thus the soul would ascend to heaven and the body, the flesh, played no role at all in the system that led to resurrection (*ibid*). On the other hand, there was a perspective in which the body played a very important role in protecting human beings from the desires of the soul. All sin came from the soul's desires, and the body was not only its container but also the means through which the human being could fight these desires (*ibid*). This second perspective was associated with another notion, that of identity: the soul required an identity and the construction of that identity was dependent on the existence of a body (*ibid*). Consequently, the body began to play a more important role as it was recognised that it was the body that would actually go to heaven or hell; however, it did this as a rarefied body, a body that was not just form or flesh but the container of the soul and the identity (*ibid*). Looking at the images of hell (and related beliefs), it is possible to verify the importance of the flesh at this time through the punishments inflicted on fallen Christians in this netherworld.

The body, food, excreta, medicine and systems of correspondence

Medicine also reveals a particular relationship between the body and the mouth, and also excreta. The mouth is one of the places through which medicine is imbibed. Although in medieval times there were many different forms of healing, one of the most important practices was the ingestion of healing substances. However, there was also an important relationship with what the body ejects – both prognosis and diagnosis were carried out by inspecting faeces, urine and blood. As Siraisi (1990) shows, illnesses were believed to be a matter of imbalances within the body resulting from external causes:

[M]edical theory asserted that the human body exists in either health, sickness, or a neutral state between the two. Deviations from health were classified into congenital malformations (in medieval Latin, *mala* composition of the body), complexional imbalance (*mala complexio*), and trauma (*solutio continuitatis*, or break in the body's continuity). This classification placed almost all internal illness in the domain of complexional imbalance. Relatively little attention was paid to the first of these three categories, and when surgery emerged from medicine as a separate occupation and discipline in the West during the twelfth and thirteenth centuries, the management of trauma became the characteristic task of the surgeon. Hence, the care offered by medical practitioners other than surgeons consisted primarily in the management of the body in health (that is, the maintenance of a good temperament) and the treatment of internal and some external illnesses attributed to complexional imbalance. (Siraisi, 1990, p. 120)

Another important thing to notice about medieval medicine is that it emerged out of the convergence of three different sets of theories: those of Greek antiquity (through the teachings of Hippocrates and Galen), those of the Islamic world, which permeated Christian philosophy, and those of pagan practices (Siraisi, 1990). Medieval medicine inherited the theory of bodily imbalances from classical Greece, where the main concern was helping the patient regain lost bodily harmony. The Greek idea of the bodily humours persisted, creating a system in which cosmology and medicine were fused

(*ibid*). Consequently, medicine became less about knowing the body than about comprehending its part in a larger system, and within this system food possessed multiple significances (*ibid*). As Siraisi shows, a vegetable such as a lettuce was not only food but also medicine, and its impact on the body would differ according to the reason for its ingestion. As Siraisi states:

Indeed, food and medicine shaded into each other. Avicenna declared, in a passage frequently cited and discussed by Latin medical writers, that the formal distinction between them was that food was assimilated by the body, whereas medicine assimilated the body to itself. But both food and medicine were complexionate and affected the complexion of the person who ingested them. (Siraisi, 1990, p. 121)

Thus the digestive system can be seen to play different roles and have different sorts of presence and meaning both within the body and in the cosmological system.

A particularly important food in this system was the mandrake as it played just such a double role as food and medicine, revealing that medicine was the combination of a wide system of practices. In medicine, mandrake was used as an anaesthetic because of its soporific properties, although it possessed hallucinogenic ones as well (Dixon, 2003, p. 188). In addition to this aspect, the mandrake's peculiar shape meant it was used in magical practices as a talisman (*ibid*, p. 185); the root's human shape gave it anthropomorphic properties (as Borges ([1967] 2002, p. 96) points out in *The Book of Imaginary Beings*). The body of the root was seen as a human body, yet one that was not fully human due to the flower that sprouted from its head. This view of the mandrake was so embedded in medical practice that dogs were used to dig the root out because, when it was pulled from the earth, the mandrake was supposed to release a scream that was capable of killing anyone involved in the act (Siraisi, 1990, p. 152). Mandrake was therefore an anthropomorphised monster due to its form and its influence on the human

body. This perspective allows us to observe the interactions between multiple dimensions or types of existence, in which the monster can be both food/medicine and physical experience.

Turning to the end-process of the digestive system, the excreta, and its importance in medieval Europe for prognosis and diagnosis, Siraisi (1990, p. 124) notes that “when it took place, observation consisted primarily of taking visual note of the patient’s external appearance, listening to the patient’s own narrative of the illness, and inspecting and smelling his or her excreta”. Examination of excreta was an important element in diagnosing the patients’ problems or bodily imbalances as it was thought to contain the ‘bad humours’ that were provoking the disease and which the body was attempting to eliminate (*ibid*). Consequently, forcing the sick body to expel excreta – through phlebotomy (blood-letting) or inducing vomiting or diarrhoea (purging) – was a way of improving its balance. The category of excreta included not only urine and faeces but also blood. When examining excreta the doctor knew he should be particularly aware of its colour, odour and consistency, and particularly in blood-letting, in the viscosity, hotness or coldness, greasiness, taste, foaminess and coagulation velocity of the blood (*ibid*). Urine was also of such importance that all physicians carried ‘urine wheels’. These were colour charts which depicted all the possible tonalities of urine, relating its colour to different diseases, thus enabling the physician to compare and contrast the colour of the patient’s urine with the colours on the chart in order to make a judgment about the illness and the cure.

Nonetheless, at every moment other dimensions of experience were brought to bear – for instance, “in describing the rhythms of the pulse, the terminology of musical proportion and metrical verse was also applied”, and so the mouth, the word and *Gaki*-like names mark their presence. As Siraisi observes,

... a set of standard adjectives was used to describe individual instances of pulse that supposedly combined specific variations in all ten categories; these terms include a number of comparisons with the motion of animals – for example, pulses were said to be antlike, goatlike, or wormlike (Siraisi, 1990, p. 125).

In this way, systems of interactions were put in place that brought together the multiple dimensions.

Apart from examining the patient, the main means of identifying a disease continued to be according to the textual tradition, and this guided the interpretation of the examination (Siraisi, 1990). The fact that there was not always an examination or even any contact with the patient at all reveals that the textual tradition was not simply used for guidance but comprised the very centre of medical practice. The textual tradition existed over and above observation – it was a system in which the apparent intricacy of the world revealed itself through diseases, which were then inscribed in *tabula* (or tables). As a consequence, new diseases and even new medicines and treatments were inscribed in the tables, expanding them without changing their core structure, the system of correspondences. Diseases were categorised according to their description in terms of the four humours, but as Siraisi (1990, p. 130) says, “another kind of classification of disease that was followed in many practically oriented manuals, presumably because it was useful, [emphasised] the concept that different diseases were peculiar to different parts of the body by adopting a head-to-toe arrangement”.

The cosmological body and divinities in the body

In Chinese Daoist philosophy, in the second century BC, the body was seen as part of an overarching cosmological system of interactions driven by a replicating logic, in which “cosmogogenesis merged with embryogenesis” (Levi, 1989, p. 106). In this system there was a complete transposition of a cosmological understanding to the body, in which each body part was the representative of its divine counterpart. However, this was not a not just a macro-micro relation, in which the macro cosmos is present in the micro cosmos of the body through a process of degeneration, as it was, for instance, in the *Timaeus*. In the Daoist system there was a complete transposition of the macro to the micro because there was no difference between the two dimensions – “the body is thoroughly divine” (*ibid*, p. 109). The cosmos existed within the body and existed through different entities, all of which were divine – although some were also pernicious: for example, the ‘three cadavers’ (*ibid*, p. 111). The relationship between the body, the divine and everyday practices was well established; the presence of these elements in the body reflected the ancestor worship that structured the whole of Chinese society, which consisted of making bloody offerings to the divinities, who were believed to be the spirits of the departed (*ibid*, p. 114). However, alongside the ‘three cadavers’, the body was also the vessel of delicate spirits and it was possible through breath (a divine metamorphosis of bodily fluids) to care for the divine within the body (*ibid*, p. 115). The understanding of how the fluids existed within the body in relation to the divine was translated into a set of practices in which breathing exercises played a crucial role, not only for the maintenance of the body but also in establishing a connection with the divine (Levi, 1989).

The body, its depiction, pictorial planes and tables

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Figure i – *Las Meninas* (1656) by Velázquez

Foucault describes in *The Order of Things* ([1966] 2002) how Velázquez' *Las Meninas* (1656) can be understood in the different interactions and on the different planes revealed in the painting itself (figure e). The two elemental planes are that of the painting itself (the object) and the plane of representation. However, Foucault alerts us to the fact that other planes unfold within the picture:

For in it there occurs an exact superimposition of the model's gaze as it is being painted, of the spectator's as he contemplates the painting, and of the painter's as he is composing his picture (not the one represented, but the one in front of us which we are discussing). There three 'observing' functions come together in a point exterior to the picture: that is, an ideal point in relation to what is represented, but a perfectly real one too, since it is also the starting-point that makes the representation possible. (Foucault, [1966] 2002, p. 16)

This interaction between planes is also present in Courbet's *A Burial at Ornans* (1849-50), painted two hundred years later. As this painting is almost life-size, it particularly engages with the plane of the viewer because perspective is distorted when the viewer faces the painting: the plane of the viewer becomes perpendicular to the plane of the painting, giving them the sensation that they are the one who is being buried (figure f). Due to this distortion, the parallel planes of the viewer and the painting become two perpendicular planes, which act to bring the viewer into the image. Two perpendicular planes also exist in medieval anatomical depictions, particularly in Guido of Vigevano's *The Book of Notable Matters*. In these depictions, the body is both suspended in the air, with the feet hanging loose, almost as if ascending to heaven, and laid out on a horizontal plane, the plane of the surgical table or the sickbed, as it waits to be treated, examined or observed.

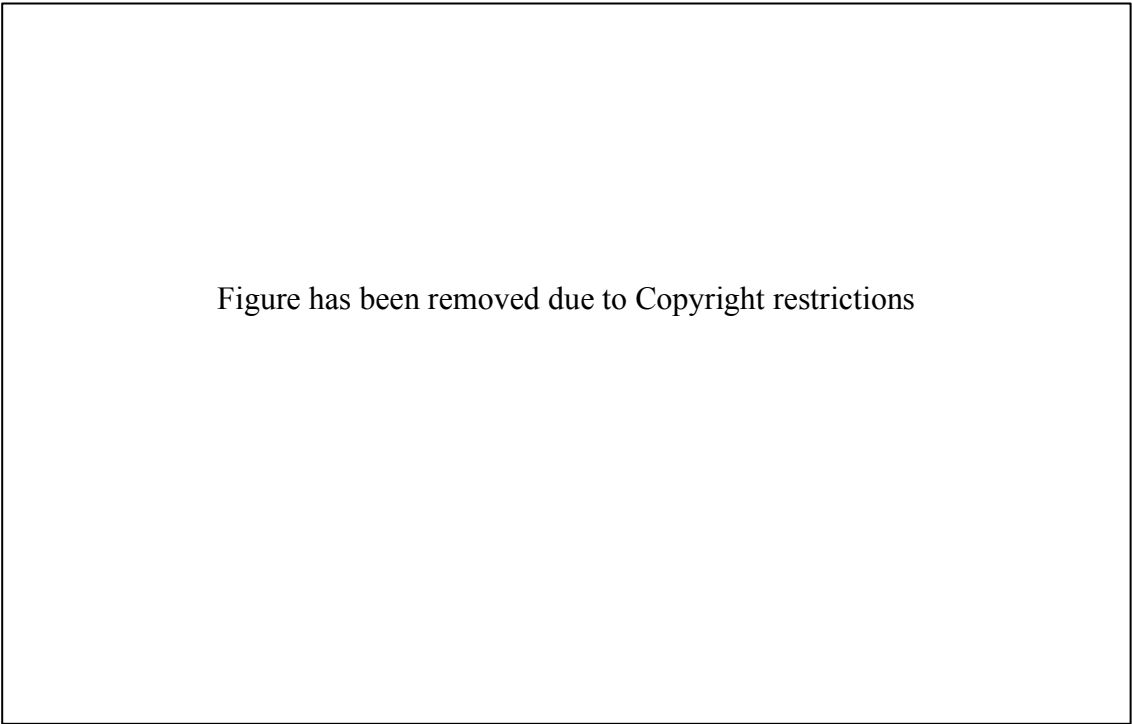


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Figure j – *A Burial at Ornans* (1849-50) by Courbet

The hollow bodies of demons and humans

The premonition of the divine within this medieval depiction is also observable in the way the interior of the body is revealed. This is a hollow body, in which the inside of the body is a void surrounded by a thin layer of flesh and skin. This can also be seen in the depictions of the Resurrection in early Christianity, which exemplified the idea of the rarefied body as the soul's container, a form within which the soul exists. In these depictions, the body is a bottomless container of all the internal invisible processes. Similarly, the image of the medical body reveals how a notion of a complex system emerges. The body is porous, with substances entering and exiting it, and crossing different dimensions within it – it is simply the form of these activities and dimensions, the place where all these transformations happen. This hollowness can also be seen in monsters: their bodies are depicted as hollow, with the cavity of the mouth (that becomes the cavity of the whole body, a large container) acting as the gateway between dimensions.

The hybrid body of named monsters

As mentioned above, in ancient Greek times monsters would possess names, families, genealogies (Bompiani, 1989). For instance, the Griffon, a hybrid of eagle and lion, carried this duality into the Middle Ages, becoming symbolically divided between two opposing perspectives (Borges, [1967] 2002, p. 74). On the one hand, the Griffon drew

the chariot which symbolised the Church, but on the other, it was also a symbol of the devil (*ibid*). In distinction to the demons of hell, monsters with names had bodies that were markedly material as they existed most frequently as animal hybrids, giving them an identity that was permanently sealed when, after death, they were sent into the heavens as constellations (Bompiani, 1989, p. 369). An exception was the Chimera, whose tripartite form deprived it of a single identity, meaning that it became more of a verbal than a visual element, thus informing the idea of it as “the creature of language, the metaphor of metaphor” (*ibid*, p. 377).

The importance of the hybrid monster in ancient Greece is revealed by Joahnes Fritsche in *The Riddle of the Sphinx: Aristotle, Penelope, and Empedocles* (2005) when he asks:

But so far humans have indeed assumed the existence of goat-stags and gods. Are humans systematically hallucinating animals? Are they subject to a blind mechanism of imagination that encloses them in a horizon of notions and ideas that have little or nothing in common with reality? Or, are their sense organs such that they always give false or imaginary idea of reality? In which way does it matter whether the ideas humans have about reality are false or not? (Fritsche, 2005, p. 2)

The Platonic and Aristotelian answer to this is:

Our inborn or empirically acquired ideas of things are not false. It is only our capacity, and need, of combining different ideas in sentences that can bring about falsehood and non-being. There are no goat-stags. However, there are goats and stags, and the monstrosity of the goat-stag results from combining the features of different things in one and the same thing. (Fritsche, 2005, p. 2)

In the Harpies, for example, the multiplicity inherent to being a monster was not only expressed in their bodies – a combination of the female body with that of a bird – but also in their repetition, as the Harpies were a plural monster (Bompiani, 1989, p. 367), a

multiplicity. As monsters that also played an important role within the system of body-mouth-food-digestive-system-excreta, the Greek myth of the Harpies tells that they were sent by the gods to contaminate and devour the dishes of a banquet prepared for a Thracian king, who had insulted them (Borges, [1967] 2002, p. 78).

The articulated body

The medieval hollow body and the inhabited body of Daoism present understandings of the body distinct from those of ancient Greece. The Greek body was an articulated, ordered body. In *The Expressiveness of the Body* ([2002] 2006), Kuriyama argues that an understanding of the musculature was only able to develop through the medical traditions that emerged from Greek knowledge. Consequently, for Kuriyama, the question is: what enabled the ancient Greeks to visualise the muscles? In order to see the muscles, there must be an initial wish to see them, and this was manifested in the desire to perform dissections and observe anatomy. However, there is more to anatomy than a simple curiosity about the interior of the body; what defines anatomy is not just the opening up of the body to look into its interior – this was already common practice with animals in the context of divination. The existence of a desire to specifically observe the human body was a necessary precondition. As such, Kuriyama ([2002] 2006) argues that prior to knowledge of the musculature, and the anatomical knowledge and dissection of the Hellenistic period, there existed in classical Greek society a desire for or attraction towards certain features that only later came to be embodied in the muscles.

This attraction revolved around ideas of order and articulation. The idea of articulation also encompasses the idea of a clear separation and division between things: it is only when something is clearly distinguished that it can become articulated with something else, otherwise without separation and distinction there are not two elements but only one, a single element which is indistinct as it takes multiple but similar forms. The idea of the musculature was therefore closely related to the construction of the idea of identity in ancient Greek culture (Kuriyama, [2002] 2006). Muscles, or the indeterminacy between muscle and flesh, reflected the cosmos as imbued in the body: the lumps seen beneath the skin depicted the strength that came from divine impregnation. But with changing notions of nature and an increase in the perception of individuality, muscles gradually became the vehicle of human agency, the evidence of self-command and will (*ibid*).

It must not be forgotten that order in ancient Greece equalled beauty and goodness, as Brague reminds us in *The Wisdom of the World* (2004); it was an idea that mirrored their understanding of the cosmos. The quest for a good order is epitomised in the *Timaeus*, where Plato describes the workings of the cosmos in correlation to the human body. In tracing the connection of order with the human body, the idea of articulation (discussed by Kuriyama) emerges as fundamental. It was widely used in describing the bodies of heroes, which were more perfect than common human forms. More importantly, beyond the strength and power – fundamental to a hero – that the muscles enabled, the notion of the body was taking shape in the form of the hero (Kuriyama, [2002] 2006). This form portrayed action and readiness for action; all the parts of the body, in their fullest meaning and function, were fitted together so as to work perfectly (*ibid*). The body of a hero needed to be more than the body of a mortal because the hero was closer to the gods; it needed to be more perfect, in better order,

with all its parts performing at their peak. As such, the “*arthroi* ... were not joints in the modern anatomical sense – at least, not just joints – but the divisions and differentiations that gave the body distinct form” (*ibid*, p.135).

Such multiple uses suggest that articulation represented order, and the destruction of this order led to death. In contrast, an unarticulated body – soft, fluid, unstructured – was observed as being close to death; it was therefore a defeated body with a shifting shape, a body in transformation. In addition, indeterminacy was also seen as the mark of the immature. Viviparous animals, Aristotle observes, produce offspring that from the start look similar to themselves, whereas lower animals produce something that is not yet articulated (*adiarthroton*), like eggs or larvae (*ibid*, p. 135). As Kuriyama summarises:

Before [they] became fascinated with special structures named muscles, the Greeks celebrated bodies that had a particular look – a special clarity of form, distinct “jointedness,” which they identified with the vital as opposed to the dying, the mature as opposed to the ... unformed, individuals as opposed to people who all resemble each other, the strong and brave as opposed to the weak and cowardly, Europeans as opposed to Asians, the male as opposed to the female. (Kuriyama, [2002] 2006, p. 143)

The body, the mouth, digestion, speech, scream and the monster

The importance of the idea of articulation is also present in language. This importance can be seen firstly through the ancient Greek concept of speech itself, the articulation of the voice by the tongue (Kuriyama, [2002] 2006, p. 136), and secondly through the introduction of the grammatical article into the Greek lexicon (Vernant, 1983, p. 347).

The article, as discussed by Jean Pierre Vernant in *Myth and Thought Among the Greeks* (1983), enabled the transformation of adjectives into substantives, and what might seem at first to be a small intervention in fact had the impact of transforming the ways in which thought could be structured. Speech, as Kuriyama ([2002] 2006, p. 136) illustrates, was seen as what made humans human; it was the way in which reason could be expressed.

However, the connection of speech with articulation extends beyond the operative and physical device of the tongue, as speech was the main tool for argument before the establishment of writing, as shown earlier, and it had to be articulated in such a way as to facilitate memorisation – it needed cadence and rhythm, or the articulation of words according to a sound structure (*ibid*, p. 136). In distinction to digestion and pulsation, which according to the ancient Greeks were examples of movements or processes that human beings could not control, the activities of walking and speaking were examples of controlled movements, and it is the muscles that allow human beings to control these actions (*ibid*, p. 144). As Kuriyama ([2002] 2006, p. 144) suggests: “Muscles allows us to choose what we do, and when, and how; and this choice marks the divide between voluntary actions and involuntary processes. Muscles, in short, identify us as genuine agents”. Speaking is thus a voluntary act, but an act that is only available to those who can control their muscles. Consequently, those who cannot speak cannot control themselves and do not possess autonomy and agency; they are not individuals but part of a horde controlled by some other entity (*ibid*, p. 146). As Kuriyama ([2002] 2006, p. 146) says, “the bulging swells that knot the limbs and torsos of mythical beasts and heroes may signal courage, or strength, or passion and all virtues of heroes, not as personal qualities rooted in an inner self, but as marks of divine favor [*sic*], manifesting the influx of godly powers”. Monsters that ‘eat’ (or

devour) are therefore revealing the fact that they are guided by external forces, they do not control themselves, and the actions they take are guided by uncontrollable bodily processes such as digestion.

Thus once again this investigation returns to the mouth, to the beginning of the body and the story (emulating the *Timaeus*), to the scream and speech. The mouth, as seen throughout the story taken from the narratives of *The Mouth of the Monster and the Hollow Body*, plays multiple roles in the relationship between human beings, monsters and the affective dimension of their interaction. On the one hand, there is speech, the articulated sound, which expresses the making of order. On the other, there is the scream or inarticulate sound. However, both constitute the same cyclical way of becoming connected with the monster, while both human beings and monsters share their own fears and impossibilities. The actions of screaming or speaking gives the monster a physical, emotional, material existence; a materiality which had previously come into the body through eating is activated at the moment of confrontation with the monster either in the gut and the lungs or in the head and the lungs. The monster can therefore be seen as a place where the paradox of multiple, coeval existences occurs. As such, it reveals a series of strategies through which this paradox is managed, allowing for comfort and alleviation through the relinquishing of agency, thus ensuring human beings the possibility of life. This paradox is space itself, but it is also one that space shelters in the form of the monster.

Conclusion

This thesis has shown how space, as an entity, has given rise to a multiplicity of definitions and understandings. As Chapter One noted, because the concept lacks a clear referent – space is sometimes presented as physical and at other times as abstract and metaphysical – the definitions often appear contradictory, as if describing distinctly different things. There seems to have been little consensus on the idea of space over the course of Western civilisation – no one definition has persisted across time and place, not even contingently or provisionally. Instead, this research points to the possibility of the continued coexistence of multiple distinct understandings. Its findings have led to the conclusion that space is an ambiguous and indeterminate concept that cannot be fully understood or apprehended, and that attempts to do so have neglected this essential characteristic.

Taking this position as its point of departure, the thesis has investigated why it is impossible to pin down a specific referent for space. Two concurrent hypotheses emerged: 1) space is an entity that is unreachable, ungraspable and unknowable despite the fact that it can possibly be sensed, and 2) space is a multiplicity that is heterogeneous, discontinuous and multidimensional. As such, ambiguity and indeterminacy are the inherent characteristics of space itself and not by-products of a lack of precision in academic discourse when attempting to define the concept; *space is always partial, always unknowable in its entirety and thus is crucially a non-representable entity*. It is not possible to limit the dimensions of space to a single definition – its very name refers to this lack of limitation. However, although it possesses a name in everyday speech, it is not actually possible to speak of what space *is* (that is, to name it); we must rather speak of *how* space can be. This thesis therefore

suggests that what informs the multiplicity and unreachability of space is the idea that it reflects (and drives) the tensions, frictions, exchanges, transformations and combinations that result from a co-constructive process between different realms: the physical, material, abstract, conceptual, immaterial, metaphysical, imaginative, affective and experiential which inform (historical) everyday life. Space performs the boundaries and limits between these realms. It combines multiple realms through the very process of constituting them as entities, informing the practices and materialities that are emergent in the performance, because this is an enacted process, in which space intervenes through experience and affect, allowing for the conceptualisation and formation of identities and classifications, and the activities of ordering and structuring. Space is also the third, or beyond the third, the ‘other’ in the triad that includes subject and object; it is the entity that can never be constituted (or fully materialised) because it escapes the epistemologies of both the sensible and the intelligible and is thus the vehicle for a ‘bastard’ type of reasoning and order. However, because space is unknowable, as Chapter Two argues, it cannot be represented or fully addressed through language or other representational means, and this fact lies behind the difficulties of expressing the idea of space and constructing its ontology.

The viability of the hypotheses this thesis suggests (in order to alleviate the tensions, oppositions and paradoxes inherent in conventional understandings of space) rests on avoiding a representational position and adopting instead an enacted ontology that does not separate humanity and the world but sees them as co-constructed, enabling space to emerge as an entity that addresses and is informed by multiple realms and dimensions. However, this model of the world, as seen in the discussion of Ingold’s (2011) work in Chapter One, requires the integration of processes of discontinuity, disruptions and breaks, not only because these are part of how we experience the world

and therefore inform our understandings and actions as part of the world, but also because they allow the conceptualisation of a multidimensionality that although interactive is constituted by separate layers or facets and although unified is not without disruption. Furthermore, it does not dismiss the potential of abstraction in constructing structures that compare, contrast and observe similarities and differences, connections and relationships. This new conception of space therefore requires an epistemology that is non-representational, enabling us to entertain the possibility of space as a multiple entity that necessarily escapes all attempts to constrain it within a single viewpoint; it thus remains ‘unknowable’. As a result, this conceptual framework perceives space as an eternal conundrum – a paradoxical and unknowable entity – in which all understandings and approaches are possible and related, simply presenting different facets of the same thing, which nonetheless remains unidentifiable as a single entity.

Space can therefore be seen as constituted by all its multiple conceptualisations (historical and contemporary), as they continually add further dimensions: some fade away at times, although they never entirely disappear, while at other times they draw closer to each other. All these conceptualisations *are* space as they are each a facet comprising its multiplicity. Space is, therefore, the container and the content, death and life, the structural and the relational, the process and the disruption – it is the multiple spheres of a ‘Russian doll’. However, these spheres do not necessarily exist inside each other consecutively: some of them might share the same place while others might be far apart, some are contained within others while others do not touch or only intersect at some places; they exist as a *mise-en-abyme*.

Space is therefore beyond multiplicity, multidimensionality; it cannot be defined by the concepts that have been used to define it as infinite and finite, absolute and relative, homogeneous and heterogeneous, limited and unlimited, dead and alive, static

and changing. This is because it partakes in the very definition of these concepts. It is a place of beginnings where all conceptualisations are drawn together through its potential for transformation, but it is a place of beginnings without origins, as space itself has no precise and definitive beginning. Space is not an entity with a single, albeit ambiguous and evasive, existence but a combination of multiple coexisting existences informed by different combinations (and transformations) of the physical, material and experiential realm with the abstract, conceptual and imaginary one; it is an entity with a multiplicity of existences informing its ambiguous and evasive nature – a plural identity that emerges from a single ontology, as discussed in Chapter Five. This nonetheless suggests the impossibility of materialising space as a meaningful whole: space can only be encountered in research through a ‘corralling’ process. However, it cannot be fully actualised by means of a research methodology, only suggested by way of its facets. Space, nonetheless, due to its multiple dimensions and facets, enables processes of research that are epistemologically driven by experience, affect, non-representationality and non-linearity, without a specified origin.

Precisely because the multiple understandings of space seem to be informed by the processes of transformation and metamorphosis that occur in the interaction, friction and tension between the physical, material, abstract, conceptual, immaterial, metaphysical, imaginative, affective and experiential that inform everyday life, and because aesthetics could be regarded as a by-product of such tensions, this thesis has argued that the path to approaching the ontology of space lies through an artistic framework. Aesthetics might alleviate the tensions provoked by the ambiguity of space and facilitate access to its ontology through a sensuous, experiential and imaginative form of understanding. It is also possible, using artistic practices as a means of exploration, to present the detoured workings of space as a methodological device, as

revealed in the discussion of *The Mouth of the Monster and the Hollow Body* in Chapters Four and Five. As such, this thesis provides a set of moves that it considers an important way of considering an ontology of space with a productive methodological purchase. This enhances and supports research practices by enabling a discourse that, because it starts from an aesthetic perspective, does not become constrained within an intelligible-sensible dichotomy but instead takes advantage of the multiplicity and multidimensionality of space.

One of the findings that is important in this context is that although space can never be fully apprehended or represented, it nevertheless informs a set of practices, frameworks and even materialities. As such, the connection between structures and space is fundamental to the belief that space has a methodological purchase. In turn, a spatial structural method (that is, space as a methodological device) can be used to explore the ontology of an entity by revealing the connections and disconnections, similarities and differences, tensions and multi-level dimensions of its constitution in multiple realms.

This thesis has used the notion of structure to establish the viability of space as a methodological device, not only in so far as its association with a type of spatial conceptualisation is concerned, but also as an active element existing in the realm of spatiality. Its potential was investigated in the first part of the thesis, in which structures emerged as constituents of enacted orders, as being the facet of space that, being relational, plays with the infinite set of experiences of order that space allows. As such, structures are a key element in the thesis as they provide an avenue by which to reach the perception that space has a practical, productive side. Chapter Four then illustrated in a visual diagram how structures are multiply integrated: the diagram was informed by the concurrent coexistence of multiple structures, each of them presenting different

approaches to space in an integrated, interactive and non-hierarchical way – a single unity constituted by the non-unified but interactive, infinite dimensions of space. The diagram thus enacted the paradoxical and impossible nature of space.

The diagram can therefore be understood as an enacted, non-representational, material outcome of the processes of experiencing and perceiving order through interactions between multiple realms. More simply put, a diagram combines the practice of drawing with structures from the point of view that the two dimensions are co-constitutive and part of the whole process that enacts space. As such, diagrams not only embody and enact space, but they are also expressions of space as a methodological device. Space has methodological purchase when informed by its (open and accepting) conceptualisation as comprising a multiplicity of dimensions and facets that nonetheless constitute a single entity. However, exploring and constructing space as a methodological device, and putting it into practice, is a process that is shared in a dialogical fashion with the beholder; or more accurately, with the world itself. An analysis of *The Mouth of the Monster and the Hollow Body* also revealed that space, in its methodological productivity, could be fundamental to approaching and researching concepts (such as space) that are ontologically ambiguous, unrepresentable, unreachable and unknowable in their totality. This insight has created a perspective on space in which space constitutes itself; it is a *mise-en-abyme*. That is, it is a *mise-en-abyme* – created through a ‘bastard’ kind of order – that constructs itself as a device through the multiple perspectives and understandings of space itself. Space is then an infinite creation of infinities, successively falling into each other.

Nevertheless, for the conceptualisation of space to be meaningful in the context of research methodologies, it is necessary to emphasise that space is both multiple and multidimensional. The idea of multiple realities corresponding to an infinite number of

subjectivities, however, is still insufficient for an understanding of the multidimensionality of space. Even with the idea of the multiple realities of multiple subjectivities, the multiplicity is still reduced, necessarily complying with the notion of a single ‘outer’ reality from which these multiple subjectivities emerge. As such, it does not 1) speak about the existence of a multiplicity of perspectives in the same subject, particularly when these might be contradictory; 2) account for the notion of ‘outer’ multiple worlds or realities; or 3) conceive of the interaction and co-construction of all these dimensions.

Thus, as a productive methodological device, space is a *mise-en-abyme* that constructs itself as a device through multiple perspectives and understandings, which are possible due to the fact that although interacting with and informing each other, the facets of space exist in different dimensions. The *mise-en-abyme* is possible because although it is constantly self-reflective, it is never so in relation to the same aspect or through the same perspective. This is a *mise-en-abyme* methodology that does not hide but, rather, explores ontology through the perspective that we can never say that *it is*, that is *known*, but instead that it must rest in ambiguity. We can only show, not explain.

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Appendix A

Disclosing Space: Order And Mediation From Hand-Drawn Scientific Illustration To Geometry

DISCLOSING SPACE: ORDER AND MEDIATION FROM HAND-DRAWN SCIENTIFIC ILLUSTRATION TO GEOMETRY

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In this paper hand-drawn scientific illustration will be presented as a mediator between humans and ideals of the physical world, which are needed to be made attainable thereby enforcing a materialisation. In order to deconstruct this mediation an analytical framework will be created through the exploration of two antithetical order systems and their interaction with subjective and objective human dimensions. The use of this framework reveals how the mediation operates on different levels of the construction and understanding of hand-drawn scientific illustrations; as scientific drawing is an embodied action guided by conventions for its construction and analysis. Consequently, it becomes a case study for understanding the human felt experience on the construction of scientific theories that deal with order and systematization. Observed through this perspective, hand-drawn scientific illustration propels an analogous function to geometry in mathematical conceptualizations, as these are both apparently disruptive forms of mediation. This correlation prize open issues concerning space, particularly regarding its role as the conceptual foundation of geometries. The mathematical correlation will unfold from an isotropic/anisotropic discussion inside Newtonian mechanics. The outcome of this reading will reveal the interactions between the human connection with the physical world and conceptualizations of space, as despite the inherent immateriality of this relationship, concrete and tangible signifiers, such as verbal and mathematical languages, have long characterized our understanding of space. Consequently it is expected that observing geometries as a mathematical materialized mediator of the human/space interaction, this relationship begin to be unveiled.

In the preface of *The Order of Things* (1990), Michel Foucault discusses different layers of order operating systems and how the workings of culture, built upon an interplay between these, can liberate order itself. During this process the interstices between the operating systems are revealed, which open up the possibility of other kinds of order.

Thus, between the already ‘encoded’ eye and reflexive knowledge there is a middle region which liberates order itself: it is here that it appears, according to the culture and the age in question, continuous and graduated or discontinuous and piecemeal, linked to space or constituted anew at each instant by the driving force of time, related to a series of variables or defined by separate systems of coherences, composed of resemblances which are either successive or corresponding, organized around increasing differences, etc. This middle region, then, in so far as it makes manifest the modes of being of order, can be posited as the most fundamental of all: anterior to words, perceptions, and gestures, which are then taken to be more or less exact, more or less happy, expressions of it (which is why this experience of order in its pure primary state always plays a critical role); more solid, more archaic, less dubious, always more ‘true’ than the theories that attempt to give those expressions explicit form,

exhaustive application, or philosophical foundation. Thus, in every culture, between the use of what one might call the ordering codes and reflections upon order itself, there is the pure experience of order and of its modes of being. (Foucault 1990, p.xxii)

At one extreme of the layers of order there is a type, “the encoded eye” that unfolds from the perceptual confrontation with the qualities of things. This confrontation encourages us to analyse things by grouping or separating, creating matches and seeing sequences of causes and consequences, as if the distinguishing codes were innate to things and we were driven by the qualities themselves to order what they have produced. However, Foucault points out that this classification is subject to the underlying human drives; that order only emerges when almost imperceptible subjective criteria are used, making the work of order almost a primary and instinctive necessity. In contrast there is another ordering at work; the generation and implementation of analytic structures, which are born from conscious thought and action, the “reflexive knowledge”. These analytic structures, or grids, also play another part when they make visible the organising system that constitutes order, thus enabling discourses about universal laws. This second type of order forms the work of Philosophy and Science and in it is recognised the existence of measuring standards, which become themselves a studied and regulated subject matter. These two extremes of order enaction will be used in this paper to guide a reflection on hand-drawn scientific illustration as an instance in which both ordering systems are apparent. The paper will show how in certain scientific illustration the order of the “encoded eye” and the one of “reflexive knowledge” operate by means of subjective and objective interplay and what impact this has on knowledge.

The issue of scientific illustration discussed in this paper is intentionally limited to hand-drawn examples. Although these two types of ordering systems are evident elsewhere, for example in scientific photography, drawing has been chosen since it is more immediately embodied and there are established conventions and techniques for their construction and analysis. As a consequence it is discernable the presence of the two types of ordering systems in hand-drawn scientific illustration due to the simultaneity and interplay of subjective and objective facets, both in the representational method —drawing— and in the purpose of the illustration. At one level it is possible to see in these drawings the interaction with the qualities of things inducing an unconstrained immanent order —an order that is brought up by a kind of primal confrontation with things and which is conveyed in the drawing action. However, this action is disciplined by a pre-determined and objective structure that creates rules on how to draw scientifically — for example an almost inviolable rule is that the light source should be at 45° angle to the object and orientated from left to right²¹.

The illustrator should ask the scientist what conventions apply to the subject at hand. Among the questions to be asked are: what views are needed (lateral, dorsal, ventral, three-quarter, sagittal, cross section, exploded)? In what positions should the specimen be drawn? For taxonomical illustrations, for example, animal often are drawn facing left. Should dotted or dashed lines be used to indicate internal structures? Obtain a sample drawing for that specific discipline. Maintaining consistent conventions permits the work of several illustrators to be easily compared and ensures that an illustration will be ‘read’ properly. (Hodges 2003, p.35)

²¹ By setting such a rule it is avoided that convexities and concavities are mistakenly read, reducing flaws and subjective interpretations of the drawing. As Dominic Lopes accounts in *Drawing in the Social Sciences: Lithic Illustration*, this rule becomes evidently important in lithic illustration.

These rules exist in part to release the mechanisms of drawing while guiding and keeping under control the representational act —so to contain it within its contextual framework, the scientific knowledge— as a reminder that what is intended is an order within the scientific sphere. By reminding the illustrator of the purpose of the drawing it is not mistakenly thought that the aim is to create a simulacrum²² or a hyper-real representation²³. Being a ‘hand-drawn’ scientific illustration it shares some characteristics with other types of visual representations, especially those said to be realistic, or those that create an illusion. The aim is not to portray a simulacrum of an object that, although physically absent, would exist in the illusion of seeing and experiencing it in the virtual space of the representation²⁴. It is neither the aim to create a sign that indicates the existence of something somewhere else for which it stands. Nonetheless, there is a virtual representation in hand-drawn scientific illustration, as there always is, as long as there is a visual representation of something. Consequently, and although hand-drawn scientific illustration can be observed just for its visual qualities, its realism and illusionary dimension are accessory properties which only surface due to the techniques used to depict the object. These techniques of rigour and precision thus become rules on how to draw scientifically, as they not only enable a rigorous and structured formalisation —enforcing the scientific order, but also become representatives that state scientific objectivity. Therefore, by using these drawing techniques it is possible to balance the subjective and the objective in the action of drawing.

The rules act as norms and placeholders bridging the empirical order and the theoretical order, the scientific analytic structure. Therefore, above all the rules, runs the scientific discourse determining the co-ordinates of the analytic structure, or grid. This shows which are the congregating factors of the different taxonomical categories and presents a scale that specifies the differences and similarities through which the object should be differentiated. The scientific grid operates not only as a primary criterion to guide what should be depicted in the drawing, but also, by insisting on the taxonomical purpose, ensures that it is a recognisable, even ‘familiar’, ordering of the world that is being drawn. Consequently, a scientific drawing is never an innocent representation since it is guided by a prior analysis of what is being represented, which is not only supported but also restricted by the examining grid that insists on what is essential to the category. Therefore, it is not a representation of specific properties of the individual that is intended and that is being structured —although one starts from the individual— but the qualities of a category, for instance a species. Therefore, what is represented in hand-drawn scientific illustration is an archetype, the perfect exemplar, and through it the organising and communicating system of a particular kind of scientific knowledge into which the object of study is inserted. For this reason, more than an archetype, it represents an ideal, in order to create a taxonomy the individual needs to be abstracted so that the qualities of the category can be idealized and the analytic structure given form. Consequently, what one can observe in a hand-drawn scientific illustration is a virtual image of an ideal, which therefore reveals in each moment the existing scientific paradigm. In conclusion, despite being a drawing, hand-drawn scientific illustration is a scientific tool and this needs to be visible in the representation so that it becomes observable that it is a discourse on scientific knowledge that is being constructed; although one that is based upon two antithetical order systems. Such a diametric construction is more easily recognizable when hand-drawn scientific illustration is observed throughout history.

In order to unravel the work of these two order levels in hand-drawn scientific illustration it is helpful to

²² ‘A simulacrum is a ‘simulated object’. It is an object that has many of the same visible attributes as its original, yet it does not share its essence’. (Ettlinger 2008, p. 35)

²³ Throughout the paper, and after the Or Ettlinger, by hyper-real representation will be understood as a representation of things that may or may not be physical but that exist as signs referring to other entities. Therefore they may have an existence in the virtual space of the representation or in the physical world.

²⁴ In *The Architecture of Virtual Space* (2008), Ettlinger advances a theory of pictorial images according to which pictorial representations are the creation of a virtual space where a non-physical reality takes place.

look into what objectivity meant throughout the history of hand-drawn scientific illustration. Observing objectivity as a scientific paradigm that has not been a constant, but an emerging and growing concern throughout time within the scientific framework, when looking into hand-drawn scientific illustration history this pursuit is revealed. The process for the foundation of modern scientific illustration, comprising most of the rules we still use nowadays, was a slow one. Around the fourteenth century changes start to happen which are encompassed in the representation of things: the images start have realistic concerns. However, with exceptional rare cases there is no intention to portray any kind of scientific knowledge in the representation of things. Images existed to show other dimensions, mainly religious and mythological ones, either then the actual thing or the knowledge of the thing. When the knowledge of something was communicated it was most frequently used diagrams and not scientific illustrations. Therefore, in most cases, the need for an actual confrontation with the thing being represented did not exist. By the sixteenth century representations achieve a degree of realism that doubts exist as to whether they were attained via direct observation of the portrayed thing or not. Such changes indicate a growing concern with the representation and communication of a rational and scientific knowledge of the object instead of a religious and mythological one. Nonetheless, until the eighteenth century it was common practice to represent something based on other drawings instead of an analyses driven through direct visual contact; copies were considered an acceptable way to share the knowledge but also to learn drawing techniques. It was also accepted that the illustrator could “perfect” the drawing so that it better conveyed the taxonomy. Only recently is there a demand that drawings are based on live exemplars and supported by extended levels of information. Additionally, and also only recently, the drawing activity has to follow the previously mentioned rules in order to depict things so that representations match the objectivity standards of contemporary science. This synthesized overview gives us a framework through which we can observe what was supposed to be depicted and the way to do it throughout history. Consequently, when analysing hand-drawn scientific illustrations it is possible to perceive the changes in the scientific paradigms and in what objectivity meant. Therefore more than a history of representations, even of the different codes on how to draw scientifically, it gives us a panorama of those changes. As a result, it is possible to observe that scientific representations —and thus the scientific discourse for which the representations stand for— is not only informed by objective premises but also built upon a subjective human dimension that is present in the act of drawing along with the paradigms themselves that guide the structuring of the scientific grid. The significance of scientific illustration lies in the essential confluence and visibility of these two different layers of order construction informed by subjective and objective dimensions. Therefore, hand-drawn scientific illustration acts as an important mediator between these dimensions.

On this basis, examining hand-drawn scientific illustration as a mediator can unveil the workings of subjectivity and objectivity. On a first analysis three sub-categories of interaction fall under the scope of the mediation determined by the three key stakeholders in scientific illustration: the illustrator, the scientist and the observer:

i) *Illustrator and object*: at the moment of the representation construction, when the illustration is being drawn and both ordering spheres are in action. In this sub-category the mediation occurs when the illustrator confronts the thing being represented through the depicting rules used in cooperation with the scientific grid. The mediation is done through direct confrontation with the object and the intention is to organise the information in the form of a drawing.

ii) *Scientist and knowledge of the object*: when, after the taxonomy is created, scientists use the illustration to return to the structure, or the laws governing the structural decisions of the taxonomy. The mediation in this sub-category is based on all the elements present in the illustration that allow the scientist to read the knowledge in conformity with the grid. This is the reason why frequently in the representation there are additional schemes, drawings or textual information. In this way the representation becomes a tool in the

knowledge sphere whose content often needs to be guided, pointed, taught so that it can be understood. Additionally, the mediation in this sub-category is not one in respect to the object but to the knowledge of the object. As previously observed, hand-drawn scientific illustration does not primarily concern itself with simulacra or hyper-reality. Being either of these would be antagonistic because what is being mediated both in i) and ii) does not lie outside the illustration analytic structure — either when making it or reading it— in the virtual space of the image, nor outside the purposes that justify its very own existence.

iii) *Observer and drawing*: when the illustration is apprehended without any governing rules or scientific gird, and therefore the object can only be grasped outside the laws that determined its representation in the scientific context. This sub-category however can be further subdivided into: a) when the observer is unaware that what is presented is a scientific illustration; b) when the observer is aware that what is presented is a scientific illustration and therefore knows that there is another order present beyond an aesthetic representation. In a) it is possible to consider the simulacrum and the hyper-real, but then the representation ceases to be a scientific illustration and rests just as a representation. In b) as it was observed in ii) it might be necessary that there is an external intervention so that the scientific information is communicated. Nonetheless either in a) and b) the mediation is performed through the image and it is mostly based on empirical knowledge.

All three sub-categories derive from the above understanding of hand-drawn scientific illustration, which acknowledges it as a tool intended to support a taxonomy that is informed by diverse interactions between the two order levels and their interplay with subjective and objective dimensions. In this account hand-drawn scientific illustration is not reducible to the representation and its constituent elements, instead it should be regarded as an analytical system that is present during the entire process of the representation construction in which what is being portrayed is a system of knowledge. Nonetheless in all the sub-categories there is not only a scientific but also a felt experience of the thing conveyed by the mediation, although with different weights. This is the reason why we are able to use these three sub-categories (and two sub-divisions) to examine hand-drawn scientific illustrations as a medium that reveals some of the processes of subjective and objective interactions. This suggests that there is something quite specific at work in hand-drawn scientific illustration that enables it to congregate and make visible these different dimensions and orders in just one thing.

The mediation achieved by scientific illustration is only possible as the process used to build and communicate the information—drawing— makes distinctively visible what is being mediated (two disparate orders and their configuration with subjective and objective dimensions). However, this transparency is a peculiar one as it causes disquiet in the viewer by bringing together in different moments what is thought to be antithetical: the subjective and the objective. The trigger is in fact just the recognition that what is being observed is a drawing and of what a drawing is: a subjective action that mainly concerns the relation established between one person and the thing being drawn, thereby transferred into an action, the gestures that make the strokes. It is thereafter possible to say that the specificity of hand-drawn scientific illustration derives from the inherent qualities of scientific drawing. This is a particular drawing process informed by two main dimensions: the act of viewing and the codes on how to draw scientifically. Which is then the interrelation between these elements? If we observe drawing as a particular way of analysing something through a sensorial connection—which is guided by the senses (mainly the vision) and transformed into gestures— it hence becomes an embodied analytical viewing where two levels of interpretation occur. The first one comes from the act of viewing which is in itself a way of understanding something. However, there is a goal guiding the viewing when this act is placed in a drawing context. Inside this context, the goal is the conversion of what was perceived by viewing into a materialised thing, strokes on a paper. It is during the materialization that the second level

of analysis takes place; when the strokes become a composition by their organisation and ordering. Consequently, the act of drawing rests in a delicate interaction between the viewing and the gesture as these two actions work simultaneously in a process that is partially conscious and partially immanent but deeply subjective. Therefore, how can a drawing be a tool for the sciences even nowadays? It is when this question is apprehended that the tension between subjective and objective becomes visible as we are aware that the illustration is intended to be a scientific product, and therefore must convey scientific expectations.

Scientific analyses are generally regarded as guided by purposes other than portraying a subjective human connection with something, a detached knowledge of the thing is expected. Additionally, it is also intended that the information gathered and communicated is structured in a way so that it can be understood by those with the means to read it and thus replicable. The objective is that the knowledge formulated can be widespread, used and reinforced by others. Consequently, hand-drawn scientific illustration needs to be placed within the scientific context in order to gain validity. Such is the reason why in order to give it a scientific framework there are necessary specific drawing rules and methods. Thus the specificity, importance and validity of hand-drawn scientific illustration is achieved through the combination of different kinds of analyses which are informed by a multi-dimensional connection between subject and object. This particularity in hand-drawn scientific illustration of grabbing a multi-dimensional connection, which becomes visible in the drawing itself, enables all the three subjects (illustrator, scientist and observer) to be in contact with a representation of a knowledge — whether the understood knowledge is subjective, objective or both. Therefore, in a hand-drawn scientific illustration the subjective and objective dimensions become present in the drawing through the materialization of the multi-dimensional connection performed by the three sub-categories. Until this moment the role of hand-drawn scientific illustration as a mediator between subjectivity and objectivity was examined through the analysis of the three sub-categories (and two sub-divisions). However, if the sub-categories are in fact different reflections of a connection between subject and object, then the interaction between *illustrator*, *scientist* and *observer* with *object*, *knowledge of the object* and *drawing* can be redefined into one major category: the viewer/viewed category. At this stage it will be sufficient to flag the complexity and nuances of the viewer/viewed interaction as being more extensive than a physiological and perceptible deed in a particular representational practice²⁵. Consequently, when regarding scientific illustration as a mediator, viewing is not only vital for making the representation in the hand-drawn context, but also for reading the illustration in its multiple dimensions and orders. Nonetheless, the relation between viewer and viewed does it not insist on the necessity of something to be seen? If so, it primarily exists the necessity for a connection between subject and object, which subsequently requires a materialised mediator so that the aim of the connection can be achieved. Is it then possible to communicate and be connected with an abstract idea without a materialisation? Or to portray a scientific ideal without a representation, as is the case of hand-drawn scientific illustration? Is it not the materialisation, whether verbal, mathematical or visual, the only way we have to communicate ideals? In hand-drawn scientific illustration it is visible, through the materialized mediator, the tension between an intellectualised ideal of the world and our need to understand and act on it; a multi-dimensional connection between Man and the physical world. Accordingly, if there is the necessity to materialise this connection, such a translation becomes the physical mediator to which we have direct access, so as to get in contact with abstract ideas and ideals. Therefore the tangibility of hand-drawn scientific illustration becomes vital in the mediation process, as

²⁵ This broader perspective of the viewer/viewed relation and the apparently seamless fusion of orders will be discussed in future paper/thesis particularly in relation to the reception of relics using the work of Christof L. Diedrichs. In the paper *Desire for Viewing: 'A deluge of images' in the Middle Ages* (2005), Diedrichs analyzes how formal developments in relic holders are guided by different modalities of seeing, giving an expression and authority to this action that prompts a reflection on the relation between what is seen and desired to be seen. Consequently reporting that beyond a reflected, conscious and controlled experience of something, there is also a connection between subject and object that overrides comprehension. Viewing can afterwards be understood as an action with different degrees and manifestations of both an analytical and reflexive dimension and a felt, sensorial even emotional one. In this broad perspective viewing can be seen as an inborn modality of connection, construction and ordering of the physical world, which is informed by subjective and objective dimensions.

by feeding the viewing construction —both when making and reading the illustration— not only enables the combined work of the two order levels but also reveals them. Derived from this conclusion it is now possible to make an overall picture on how does hand-drawn scientific illustration function as a mediator. Additionally, which is the importance of such a mediation as the aim for analysing hand-drawn scientific illustration is to derive an analogy with geometry, so that the conceptualizations, role and importance of space inside mathematics can be understood.

As a taxonomical tool hand-drawn scientific illustration is used to construct a discourse on order and making order, which is informed by a multi-dimensional connection between subject and object, or Man and the physical world. In turn, this connection has its origins in the confluence of two distinct order systems and their interplay with subjective and objective dimensions. However, the multi-dimensional connection impacts not only on the construction of the scientific grid itself —that reflects our discourses on order and making order— but also on the materialisation of that construction. Consequently, hand-drawn scientific illustration can be presented as the materialization of intellectualised ideals of order in the world, as in order to be constructed and reflected upon these need to be formalized. Consequently, hand-drawn scientific illustration is a necessary materialized mediator between Man and abstract ideals of the physical world and it's ordering, as in order for Man to be use these ideals it is necessary to make them attainable and manageable. Nonetheless, by performing this mediation, hand-drawn scientific illustration makes transparent the human action on scientific constructions thus becoming disruptive. Moving into another representational model, the mathematical language, and its relation with space, is it still possible to find similar disturbances? Is there something in mathematics that plays a similar role to the one performed by hand-drawn scientific illustration? Is there something in the foundation of what is considered to be a rigorous method of abstraction and logical reasoning that reveals the dual order system and its interplay with subjective and objective human dimensions? Where do ideals fit in mathematics and how are these materialized? In a paper entitled *The Causal Efficacy of Space* (1964), the circumstances that make spatial anisotropy a sustainable conceptualisation are analysed by Dudley Shapere. The analysis is informed by observing how different conceptions of space influence a set of related concepts thereafter creating a network of congruent and context specific word meanings. Nonetheless, such a network is only possible when some breaches are created between theoretical conceptualizations and the ordinary usage of the word space. Thus, a friction between the two order systems is generated, revealing the context in which some scientific positions were assumed, like Newton's refusal of anisotropy²⁶. Proceeding from the work of Shapere it will be built an analogy between geometry and hand-drawn scientific illustration as in this paper are set significant indications about the relation between Man, space and mathematical constructions.

In the *Causal efficacy of Space*, Newton's mechanics is used as a case study to illustrate how language interacts with abstract thinking in conceptualizations of space and how these conceptualizations impact on mathematical constructions. In order to study the physical behaviour of entities, Newton had to encompass measurements of size, shape and relative positions in his theory and in turn an analytic structure is needed

²⁶ The relevance of this question is better understood when reading what Shapere himself stated about the distinction between isotropy and anisotropy. 'Modern relativity theory and cosmology raise the question of whether physical space (or any region thereof) is 'isotropic' or 'anisotropic' —that is, as various authors put it, of whether space is 'the same in all directions,' of whether it has a 'unique direction' or 'orientation,' or of 'the equivalence of different spatial directions.' To common sense, however, such locutions are only confusing: for what can it mean to raise the possibility that space itself, independently of its material content (though perhaps because of its material content), has any direction? This confusion is increased by the fact the terms 'isotropic' and 'anisotropic' are here borrowed from a language used to talk about media: thus Van Nostrand's Scientific Encyclopedia defines these terms only with reference to media, declaring an isotropic medium to be one 'whose properties are the same, in whatever direction they are measured.' We can understand this usage —water is an isotropic medium, a crystal is not. But common sense, at least, does not consider space to be a medium, but rather to be a container of media, and thinks of media or bodies in space as possibly manifesting different properties in different directions, but never of space itself as possibly doing so.' (Shapere 1964, p.111)

which accounts for space. In mathematics those analytic structures are geometries, thus opting for a certain geometry alternatively to others has implications on what is primarily considered as space and thereafter an entity, behaviour and their characteristics. Consequently, Newtonian mechanics is dependent of an entire structural web of concepts and concept meanings that guide the geometry. In Newton's case the developed geometry did not comprise space as anisotropic. Therefore, which analytic structure and concept-meanings did Newton use, which prevented him to think of space as anisotropic? Newton's space is considered to be absolute and uniform in the sense that has no qualities able of any kind of interaction. In it there is no agency; space is 'indifferent' to the phenomena which take place in it' (Shapere 1964, pp.111-121), thus uniformity is a property of entities themselves and not from being uniformly activated by space—which is the Riemannian space. Consequently and moreover, Newton's space can neither be isotropic nor anisotropic as it has no properties at all, it is just a container. Inhibiting Newton from attributing any kind of qualities to space is the fact that his conception of space was coincident with a certain usage in verbal language of this word. A usage that is grounded in a felt experience thereafter feeding, as a primary conception, other levels of abstraction. Newton's conceptualization of space coincides with one of the common language meanings of such word, it is therefore possible to observe the interactions between verbal language and mathematics, opening up the path to observe the dual construction of the two types of order and their interplay with subjective and objective dimensions. Consequently and additionally, the role of space and geometries in our connection with the physical world through mathematics becomes clearer.

Newton's conceptualization of space, which informs his geometry, not only is grounded as it is also considered the most representative of one of the only three types of physical conceptions of space that, according to Keimpe Algra²⁷, exist from antiquity up until Einstein's time, since all these three types of physical space have their roots in ordinary language.

Newton's concept of absolute space is no doubt the most famous representative of the (c) kind of space, his concomitant notion of *relative* space rather belonging to the (b) kind. Also this concept of absolute space might be regarded as an extension of one of the senses in which the word space is used in common parlance. We use 'space' in this sense e.g. when we say that a body moves 'through' space, and the concomitant notion of absolute place when we say that body (A) 'occupies' the place formerly held by body (B). (Algra 1995, p.18)

Both Shapere and Algra support the idea that conceptualisations of space have profound connections with ordinary language up until Einstein's time and that it was a departure from this conceptualization model that enabled Einstein to be groundbreaking. Nonetheless, Einstein himself made misinterpretations of Newton's concept. This was possible since Newtonian's geometry is set on a structural web of concepts

²⁷ In Concepts of Space in Greek Thought, Keimpe Algra enquires on how physical space was thought, questioned and understood throughout ancient Greek physical theories. In order to proceed with his study, Algra distinguishes three main categories in which concepts of physical space until the 20th century can be divided. This derive from the functions that a concept of space may fulfil in physical theories which foundations are in everyday experience and therefore are rooted in the ordinary usages of the word space in language. According to Algra,

"Space may figure as:

- (a) a kind of prime stuff or 'reservoir of physical possibilities', or
- (b) a framework of (relative) locations, or
- (c) a container, the 'fixed stage where things Play out their comedy', a space in which things are and through which they can move, to paraphrase Epicurus." (Algra 1995, p.15-16)

with a specific logical cohesion. In case such structure is not interpreted within its own logical system, which signifies using the exact same word meaning for the set of concepts, interpretation errors may occur. Yet, a misinterpretation of Newton's space based on an incorrect word reading is only a reflection of a more profound problem, thus it does not fully explain Einstein's misreading. Such confusion firstly derive from the multiplicity and fluctuations of the meanings of the word 'space' in verbal language, which create a divergence and resistance in the understanding of other conceptualizations involving this word. Secondly and deeper in the analysis of the misinterpretation, the multiplicity of meanings has its origins in various subjective felt experiences, which entails some contradictory experiences. These diverse experiences, in turn, inform the different conceptualizations of space that are transferred into ordinary verbal language. Therefore, ordinary verbal language becomes a reflection of the constructions of the first type of order. Finally, when scientific usages are interconnected with verbal language—as in Newton's case—the two orders come together and therefore the word turns into something that needs to be understood and read in its precise context. If up until Einstein the relationship between ordinary usages and scientific ones was much more intimate, the fact that it took place in a departure from the common usage since the beginning of the twentieth century, made this concept even more unclear. These circumstances contributed to a deeper and disturbing proliferation of meanings, making space an even more difficult and demanding concept to communicate, use and comprehend. New conceptualisations seem counterintuitive and contradictory in regard to what is felt as being physical space. Therefore, these new conceptualizations make space for an even more unsettling concept. However, the uneasiness with the concept of space does not primarily emerge from the described developments; they are a result of the concept itself and its characteristics that generate an absence of a sole and converging meaning. Space is in itself indefinable as it is unattainable to observation and analysis; consequently the lack of consensus concerning this word is a manifestation of something deeper, as the problematic is the very own essence of space and our understanding of this essence. Consequently intellectualizations of space can be observed as a multi-dimensional connection with the physical world, which are articulated through verbal and mathematical languages and interconnections of both.

Considering the diverse intellectualizations of space is it then possible to observe geometries as materialized mediators guiding the attainability of space intellectualizations in mathematics? As previously observed, Newton adopted a geometry in conformity with a certain conception of space. This conception of space was informed by a particular subjective experience of the physical world and for that reason it was impossible for him to conceive space as anisotropic. Consequently, Newton's space bounded him to a specific analytic structure, or geometry, but for what are geometries used? Geometries are used to guide and make scientific (mathematical) readings of the relations between physical entities. Thereafter, by matching these readings with the theories that would explain them, it is possible to account for the validity of those same theories. However, because geometries are informed by conceptualizations of space it not possible to account for the essence of space itself; the outcomes of geometries are pragmatic and usable measurements that inform descriptions of the physical world and it's ordering. By using geometries is then possible to construct, validate and convey our scientific theories. Therefore, a geometry it is not only an analytic grid which is built upon space conceptualizations, but also the tool that makes those conceptualizations applicable so that a scientific order may be achieved. However, prior to the geometry, a necessary ontology of space that releases us from the constraints of our inability to analyse and define space—so to transform it into a mathematical concept (a geometry)—is required. This is a necessary construction although a very unsettling and disturbing one as it is based on a structure built on something that we cannot account for physically but to which we have attributed physical properties. Consequently, geometries can be put forward as materializations of an abstract ideal of order in the physical world—space—as these are adopted, constructed and used in conformity with an ontological conception of space. What then becomes visible in the different geometries is the human presence—through it's multi-dimensional connection with the physical world—in mathematical constructions. This visibility occur as space conceptualizations—in mathematics—are informed by abstract intellectualizations and idealizations of order in the physical world which convey scientific purposes, or the “reflexive knowledge” order, and an immanent desire of order informed by felt experiences of the physical world,

which convey the “encode eye” order. Therefore, as hand-drawn scientific illustration, geometry is also the materialisation that operates, makes visible and attainable a mediation. Consequently, geometry is on a first level a materialized mediator, within mathematics, between two order systems and their interplay with subjective and objective dimensions; and on a second level between Man and space conceptualizations — ideals and understanding of a connection with the physical world that concern its structuralisation and order.²⁸

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²⁸ Going back to the first page of this article to re-read the quote of *The Order of Things*, it becomes apparent that a further step needs to be taken in order to overcome the two order types and go deeper in the understanding of space. The two orders dualism concerning space is more evident in the abstract/physical space dichotomy, which is reflected in the disturbing multiplicity of space conceptions that exist within mathematics but also in verbal language. How is it then possible to overcome this dichotomy? This question will be addressed in future research by taking in consideration contemporary mathematics. Since Einstein times there are conceptions that do not seem to derive from a felt experience of the world. How are these possible and what is the role and importance of space in this theories? Is it then possible to conceive space outside the two orders dualism?

Appendix B

Earth-Sky Cosmologies: A Reflection on Cosmology Through Human Practices (Part 1)

**Earth-Sky Cosmologies:
A Reflection on Cosmology
Through Human Practices (Part 1)**

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Earth-Sky Cosmologies:

A Reflection on Cosmology Through Human Practices

(Part 1)

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Abstract

Presently cosmology is regarded as a discipline that is mainly concerned with the understanding of the cosmos in the heavens as an external readable structure that can reveal the origin of the Universe. In this context Man is positioned as an external observer detached from the studied phenomena. Such understanding of cosmology has a history that traces back to the origin of the word cosmos within the ancient Greek civilisation, as informed by a Man-world dichotomy and the symbolic placing of the unknown world in the sky. However, cosmology, as the word cosmos implies, is about the conceptualisation of the world, moreover, about the reflection and expression of the interrelation between world and Man and not about a detached *cosmogenetic* understanding of the universe through the heavens. Overcoming the restricting contemporary accounts of cosmology, the philosopher Rémi Brague presented an argument in the work *The Wisdom of the World* that rethinks cosmology within a framework where the human is fundamentally and inevitably implicated. Departing from Brague's work, in this paper it will be argued that re-thinking cosmology requires a shift in focus to conceive of practices, such as drawing, as human worldly experiences bringing to the surface the role of the human as more than an observer of the world. This shift will be supported by a close examination of two hitherto separate discussions: cosmology as an emerging discipline during the Enlightenment and the role of drawing within the epistemological model of 18th century natural history.

As the philosopher and philologist Rémi Brague (2003, pp. 2-6) reminds us, a triad exists within a contemporary understanding of the cosmos: cosmography, cosmogony and cosmology. From these three words the first two have a deep heritage within Western thought, the usage of which can be traced back to the ancient Greek civilisation (Brague, 2003). Brague defined the first, cosmography, as “the drawing or description (*graphein*) of the world as it appears at a given moment” and the second, cosmogony, as “the story of the emergence of things or, perhaps, the story of cosmogenesis... [; the explanation of] how things come to form (*gignesthai*) the world as we know it, in the structure in which we find it today” (2003, p. 3). Cosmology, however is a much more recent term, the origin of which dates from the mid seventeenth century (Brague, 2003), yet as a working concept that underlies a discipline, the first records date from the 18th century in the context of German philosophy, particularly in the work of Christian Wolff.²

As the discipline of cosmology was created during the 18th century, its conceptualisation

consequently bares the ideas and agenda of the time, or of what was called the Enlightenment, the Age of Reason. Supporting the emergence of the Age of Reason was mechanical philosophy³, but also empiricism, as

“[t]he enthusiasm for reason in the Enlightenment is not for the faculty of reason as an independent source of knowledge (at least not primarily), which is actually put on the defensive in the period, but rather for the human cognitive faculties generally; the Age of Reason contrasts with an age of religious faith, not with an age of sense experience” (Bristow, 2011, p. 5).

Therefore, the logical and mathematical grounding of mechanical philosophy could also be sustained in combination with an empirical framework. Despite the fact that mechanical philosophy was not at odds with empiricism, at the time, not all philosophers would agree with such an epistemological combination and a multitude of positions emerged. One of the philosophers that despite being a rationalist, was not opposed to empiricism was Christian Wolff. Moreover, Wolff aimed to “include empirical knowledge as the foundation for philosophical knowledge and establish a definitive place for empirical knowledge within his system of Human Science” (Hettche, 2008, p. 15). Another characteristic of the Enlightenment was a general tendency to release knowledge from metaphysics, which is correlated with the rising prominence of both mechanical philosophy and the emergent empirical methods (Bristow, 2011). Nonetheless, a rational and empirical philosophical position was not in opposition with religion and metaphysics in general and consequently, not all philosophers were anti-metaphysics, as was the case with Wolff (Bristow, 2011; Hettche, 2008). Therefore, in trying to understand what cosmology, as a discipline, was at its origins, it becomes necessary to unpack what were the epistemological foundations that could have given origin to the discipline during this period. In doing so, and given the wider outlined perspective of Enlightenment, this paper will use and delineate the foundational principles of truth-to-nature⁴, the epistemological model underlying natural history, as an exemplary case of a framework in which rationalism, empiricism and metaphysics were correlated in a same epistemological framework –the same correlation in which Christian Wolff has been positioned.

Up until and for a period during the seventeenth century, nature was examined pursuing a scheme that had the accidental, the variable and unpredictable as underlying principles within the epistemological framework (Foucault, 1970; Hankins, 2007). A scheme guided by superstition and supernaturalism within religion (Bristow, 2011) unleashing a mythological facet, inside which the ontology of nature existed and that, as the science historians Lorraine Daston and Peter Galison (2007) reveal, can be found in the imagery and curiosity with the monstrous and the aberrant. However, a move was made towards principles such as the typical, the ordinary, the average and characteristic - ultimately the archetypal principles that become ingrained by the mid 18th century (Daston and Galison, 2007; Foucault, 1970). Underlying this process was a shift to a belief in a “natural theology that characteristically praised the regularities of God’s laws as more worthy of admiration than the exceptional marvel or miracle” (Daston and Galison, 2007, p. 68). Within this approach to theology, which started to emerge in the seventeenth century, it was thought that

through reason and without calling on the Bible it was possible to find the divine truth that lay in nature; God's creation (Hankins, 2007). Consequently, Man and Nature became close to each other, since the latter stopped being regarded as something unknowable and within an unreachable domain. Such theological transformation came to have deep implications in 18th century philosophy and science.

The principles of natural theology within 18th century philosophy and science were carried by the belief that the work of God was structured and organised according to rules and principles. As the historians Rienk Vermij (2008) and Thomas Hankins (2007) point out, this was an argument based on a supreme intelligent and designing agent that created and ordered the natural world, which stands in opposition to the idea of a world set in place by irrational and unknowable forces. Thus uncovering the work of God could be achieved through an enquiry of the physical world, or Nature, within which the order of all Nature's elements could be displayed. As such, 18th century Man believed that it was possible to perceive the order within the world directly by observation of Nature and abstract reasoning⁵, breaking away from the mythological, and establishing a universal science of order; the taxonomical programme. Thus, this programme had to entail an epistemological shift so that signs can become "tools of analysis, marks of identity and difference, principles whereby things can be reduced to order, keys for a taxonomy" (Foucault, 1970, p. 64); therefore enabling Man to 'see' nature's inner workings, its structure and order, in the end: God's laws. Such framework, according to Foucault (1970), came into existence by the end of the Renaissance and faded at the beginning of the 19th century. From inside this framework a new empirical field came to existence: natural history.

The taxonomy of the natural world as the project of natural history became epitomised in the work of Linnaeus and the making of Atlases⁶. Within the work of natural historians, the taxonomical project entailed a search for the transversal organising principles that could constitute the grid within which elements existed and had their own specific places. According to Foucault, in order to achieve such a grid it was first necessary to detach elements from their linguistic signification; however, such was only possible after the seventeenth century as before "signs were then part of things themselves, whereas in the seventeenth century they become modes of representation" (Foucault, 1970, p. 141). This change in the modes of signification by means of modes of representation, opened a gap between elements and language, a gap within which natural history found its place by resorting to the practice of drawing in order to bridge the understanding of elements (Foucault, 1970, p. 141). As a result through the "fundamental articulation of the visible, the first confrontation of language and things can now be established in a manner that excludes all uncertainty" (Foucault, 1970, p. 146), regarding what the elements are, their place in the grid - thus in the world - and in God's intentions. The practice of drawing within natural history ultimately enabled the construction of the taxonomical grid in which potentially everything could have a place through its representation as a sign.

Natural history through the practice of drawing made possible a new interpretation and naming system that was accessible to all knowledgeable people given the empirical

transparency of this construction. The practice of drawing and the process within which drawings were created⁷ in natural history was a process that had embedded in itself the observation of individual elements and the abstraction of their formal characteristics so that the specificity of the individual could stand for a same group of elements and therefore be quantified and translated into the generalisation and universality of the topographical grid. Drawing was consequently an empirical enquiry that released the morphological aspects of elements from the linguistic signification, enabling order through archetypal disclosure. Thus, within natural history, drawing became the means through which not only knowledge could be discovered and assembled, by the materialisation of signs, but also one in which knowledge could be constructed as a reflective process of 'see- ing'. In this dual function - assemblage and construction of knowledge - drawing became an empirical, but also recursive practice as the very own process of usage and construction of the taxonomical grid would be employed to refine, improve and enlarge the grid on a continuous process (Daston and Galison, 2007; Foucault, 1970). The overall process of constructing and using the taxonomical grid through drawing was therefore a recursive method of empirical ordering and abstract reasoning that was used to inform a new epistemological model; the truth-to-nature model.

Nonetheless, within a truth-to-nature model, a third function was also expected from the practice of drawing. As Daston and Galison explain, two types of drawing are expected to be seen within Atlases: the 'ideal' type and the 'characteristic' - or archetypal. In the framework of 18th century scientific drawings, "the 'ideal' image purports to render not merely the typical but the perfect, while the 'characteristic' image locates the typical in an individual" (Daston and Galison, 2007, p. 70). As such, drawings were expected to be perfected by selecting what to represent and how to portray⁸ it in order to achieve what was thought would be a beautiful⁹ and perfect form. This means that not only the 'perfect' was thought to be beautiful but also, and above all, that it did not exist as a 'pure' form in nature, however Man, through drawing, could reach an understanding of the ideal forms of the elements that structured nature. This belief brings to the surface a re-emergence of Platonic theories in support of natural theology (Daston and Galison, 2007, p. 58). Yet, differently from Platonic theories, and in the context of natural history, 18th century Man considered that through the recursive and empirical practice of drawing it was possible to 'foresee' what was not yet there, or the divine process that the natural world was undergoing to become perfect¹⁰. Consequently, the taxonomical program within natural history aspired not only to reveal an omnipresent order ruling within nature through the archetypal, but also to 'foresee' the ideal forms within God's intentions.

As it is perceivable, for the practice of drawing to have such a programmatic role, one in which there is no separation between the act of drawing and the understanding of the world, it is highly dependent upon an active and cognisant 'seer' (composed by the eyes of an expert, the scientist, guiding the hand of the illustrator) that determinately seeks to construct the taxonomical grid. The presence of the 'seer' in the 18th century framework is fully recognised and embraced within the overall scientific and philosophical programme (Daston and Galison, 2007), as only through his activity does it become possible to fully unleash the epistemological programme of natural history. As a result,

drawing within natural history can be presented as a recursive and empirical practice that enables an enquiry into all existing elements by an active ‘seer’ that was present in the process, not only as a rational being which would use reason to abstract principles, but also as a subjective and affective being that engaged and connected with the world. Drawing was therefore also an immersive process in which there was no separation between Man and nature, or the world, enabling Man to make visible the underlying laws, not so much behind the individual elements in front of him, but the overall divine order and laws that guided the natural world. Man was therefore active in the making of knowledge; however, he was not active in the making of the structure and consequently in the making of the world, which were imposed on him by God. Consequently, Man was separated from nature but only in as much as Man was an observer of the world and consequently could make visible and ‘foresee’ the laws and intentions of God. Nonetheless, Man was still part of the ontological grid, part of the world, which he observed.

The preceding analysis of 18th century Enlightenment through the perspective of natural history, hence brought forward four features that enable the contextualisation of the emergence of cosmology within a wider framework than the one derived by uniquely observing a mechanistic perspective. The first of these features is the role of natural theology in the creation of a truth-to-nature epistemological model. This was prompted by the belief that there was an order to the world that was governed by God’s laws and intentions, which could be perceived through observations of the natural world and abstract reasoning. This belief led to the second feature, the taxonomical programme: the construction of an ontological grid within which potentially everything had a place by escaping the previous paradigm of linguistic signification. Such a programme relied on a process of interrogating the world that was based on a method and system for ‘seeing’ the world through modes of representation. This process was the practice of drawing, the third feature. In this context, drawing comes as a recursive, empirical and immersive practice that by unleashing the archetypal and ideal within elements enables the assemblage and construction of knowledge. Such an epistemological approach evidences the space that was opened for the presence of the human as an active agent in the making of knowledge, bringing forward the fourth feature, the active ‘seer’.

Observing the foundational principles of the truth-to-nature epistemological model reveals the way in which rationalism, empiricism and metaphysics were connected within a single perspective, which, as outlined previously in this paper, was coincident with the philosophical perspective of Christian Wolff, one of the first to take cosmology as a working concept that lies at the basis of a field of knowledge. As such, surveying the potential presence of the four features of truth-to-nature within Wolff’s understanding of cosmology puts forward the possibility to comprehend 18th century cosmology as beyond a solely rational and mechanistic discipline. According to Wolff, philosophy was divided into three main branches: ontology, metaphysics and physics, in which the three branches were directly related to a top-down hierarchy, in which ontology was the grounding for metaphysics (from which cosmology was a branch), which in turn was the grounding for physics (Hettche, 2008). As such,

“[j]ust as cosmology and psychology (together) provide the basis for advancing an a posteriori proof for God’s existence, it is the result of theology’s a priori proof whereby the inquiry into the causes of contingent reality is justified” (Hettche, 2008, p. 24).

Consequently, one can discern in Wolff the presence of the essential ideas of natural theology guiding the cosmological enquiry, in which a metaphysical existence would justify the observed reality, finding the empirical support within the methods of physics to explain the mechanistic¹¹ laws of God’s design (Hettche, 2008). Within Wolff’s cosmology, the understanding of God’s design as mechanistic is deeply related with the fact that for him the subject matter of cosmology was the “world-whole” (Hettche, 2008, p. 16), in which the “world is a collection of mutable things that are next to each other, follow upon one another, and entirely connected with each other” (Wolff cited in Hettche, p. 18). Therefore, in combination with natural theology and the usage of empirical methods, structuring the knowledge gathered was a mechanical and rational reasoning. If drawing, as in natural history, is regarded as an empirical tool then it is possible to suggest that cosmology as a discipline merged cosmogony and cosmography. As a result, cosmology would combine the need to understand the world through its functioning and organisation, its divine laws - or cosmogony - with empirical methods of enquiry, such as a process of analysis that is conveyed through the practice of *graphein* - or cosmography. Observing cosmology through a perspective that combines an enquiry of the world with a construction of knowledge that is lead and derived from a bodily practice driven by a ‘seer’ (drawing as the practice previously described), not only opens cosmology as a construction in which the human is present on a multi-level dimension, but also frames cosmology differently from the contemporary approaches.

As a discipline, cosmology underwent a process of transformation in which both Wolff’s perspective of cosmology as well as the proposed multi-level presence of the human (emergent through the role of drawing within natural history) would not generally persist. As a consequence, cosmology came to be understood as the “science that accounts for the origin, development and laws that make the universe as a whole, but particularly the astronomical study of the beginning of the physical universe” (Hetherington, 1993, p. 116, cited in Campion, 2010, p. 2). Despite the fact that cosmology is still understood as a joint enterprise - ranging from theology to the arts - to understand what is and makes the Universe (Harrison, 2001, p. 15), cosmology mainly became focused on the scientific dimension. As such, nowadays cosmology as a practice became a science that attempts at an all-encompassing study of the physical¹² (Harrison, 2001, p. 15; Balashov, 2002, p. 107) and material (McWilliams, 1928, p. vi; Narlikar, 1992, p. 362) nature of the Universe, a discussion that is framed by the sky. However, this understanding of cosmology raises a problem as it constrains cosmology to just one dimension, that of cosmogony through the lenses of science. The problem of taking cosmogony for cosmology, however, is not only present in the way that cosmology is practiced today, but also in the way that, as a concept, is applied retrospectively when looking into theological and mythological frameworks¹³. Such state of affairs prompts this paper to revisit the notion of cosmology, questioning what then is fundamental for the conceptualisation and discipline of cosmology nowadays.

In the work *The Wisdom of the World*, the philologist and philosopher Rémi Brague puts forward the argument that cosmology is primarily a discourse about the relation between Man and world and that it is because “the moral status of nature is disrupted in modernity” (Flynn, 2008, p. 219) that cosmology is no longer a reflection of an ontological order. This realisation sets Brague to discuss the necessity of the re-emergence of a moral foundation in thinking about cosmology and in order to support this pursuit Brague exposes the necessary relation between cosmos and world within cosmology. In the definitions of cosmography, cosmogony and cosmology that Brague puts forward, the word that emerges accounting and leading the definition is not cosmos, but world, as its synonym. By, relenting on the use of the word cosmos, Brague is not only making visible what, given an apparent obviousness could be too quickly dismissed, the straight connection between cosmos and world, but is also opening up the way to dismantle the idea of cosmology as attached to the heavens. Consequently, despite the determinacy of a moral quest, supported by Brague’s Catholicism, the argument potentiates a meta-discussion liberating cosmology to be re-thought beyond the restricting vision of a scientific project dominated by astronomy. Fundamental for Brague’s argument and underlying is move is the idea that “if the world is to arise as a thematic concept, then Man must arise as the subject for whom the world exists” (Flynn, 2008, p. 218). It is within this framework that Brague defines cosmology as that “as is implied by the word logos, is not that of a simple discourse, but a reflection on the nature of the world that as a world must be expressed” (Brague, 2003, p. 4) and therefore the existence of a human subject is a necessary condition for the conceptualisation of the world. As a consequence, cosmology comes to be a discourse of an ontological but also anthropological order (Brague, 2003, p. 5), however, in order to fully understand Brague’s concept of cosmology and its implications, it becomes necessary to look at the history of the emergence of the word cosmos.

For Brague, the primary foundations of cosmology, as well as its limits, lie within the origin of the word ‘cosmos’ in the ancient Greek civilisation. As a result, a distinction and separation is made between the moment where a word to mean the world – cosmos - came into being and the previous conditions set by pre-Greek civilisations, where the process of imagination and construction of such a concept had started. Brague shows evidence that leads to the conclusion that early civilisations, as the Mesopotamian and Egyptian, did not have a word such as world in order to designate the entirety of all things that constitutes a world. Previous to the Greek civilisation, on a first stage, there existed enumeration - the listing of elements that made the whole - after the utterance of the whole - the usage of words that meant entirety and wholeness, expressing therefore the idea of a totality (Brague, 2003; Rochberg, 2007). According to Brague, this meant that these civilisations had not yet grasped things in themselves in order to create a structure that makes of all things a unity. Phenomena were observed, understood, explained and integrated in an overall system without, however, Man looking to understand them as a unity from a single perspective; what Emma Brunner-Traut designated as ‘aspective’ (Brunner- Traut cited in Brague, 2003, p. 13). Consequently, a word that in itself expresses all things as a unity and that grows to be more than the sum of its parts, the word world, could not exist. It is therefore possible to conclude from Brague’s work that the word world came into being out of a necessity to designate the possible and different models for the structures and orders in which the entirety of all things could be organised and observed as one. However, because in pre-Greek civilisations Man existed in communion with the world, such an independent

structure could not be conceptualised and named. Consequently, without a word for world there could not exist an explicit and intentional reflection upon it. As such, following Brague's argument, it is not feasible to discuss cosmology prior to the existence of the word cosmos, which in the Western world only came into being with the ancient Greek civilisation.

The word chosen by the Greeks to express the unity of the whole, cosmos, is one that reflects the idea that the entirety of things needs a structure in which to be organised, as the word designates order¹⁴. From the idea of an ordered whole, the cosmos, to become synonym of world, Brague argues that two fundamental ideas that came to light during Socrates' time had to take place. The first was Nature becoming unknowable and consequently unreachable. The second was the separation of Man from the natural world; or the entirety of all things that constituted the whole. These two ideas occurred when Socrates observed that only Man, in its ethical dimension, could be known and discussed and that therefore the domain of physics and nature were truly unknowable, because they were not subject to the moral laws of Man. It is important to note, as Brague does, that the Socratic understanding broke away from the dominant paradigm as "[t]he Greeks believed that the world and its human subjects were primarily connected through the existence of laws that governed them all, and that those laws were of a moral nature" (Brague, 2003, p. 29). Such transformation in belief created a chiasm that separated the laws of Man from those of the physical world, or ethics from physics and Nature.

With the chiasm opened by Socrates, the first outcome was a symbolic deferment of the world, cosmos, to the sky. The physically distant sky came to symbolise the unreachable and consequently, the unknowable (Brague, 2003). Nature became unknowable, what once had been the reachable and close domain of the earthly and everyday phenomena, became merged with the unreachable domain of the heavens. Nature and heavens, earth and sky, or the whole, were now part of the same domain. The second outcome was Man becoming an independent entity from the whole, the world, or cosmos. A construction that followed, which may seem a necessary contradiction: that in order to have a word - the cosmos - that denominates the whole - the world - a part of the whole has to be taken from it - Man (Brague, 2003). According to Brague, this construction is however fundamental as in order to think of the whole as a unity it is first necessary to see the entirety of that unity from the outside, more precisely that the whole becomes an object that is seen and conceived as separate from the thinking subject. Therefore it is possible to conclude that the very own emergence of the word cosmos, as the ordered world, goes hand in hand with the creation of the dichotomies inner and outer, Man and world.

Socrates therefore prompted the fundamental step of Man seeing himself independent from the whole, observing it as a separate entity, and opened up the possibility for the cosmos to mean the world, a world that however existed symbolically in the heavens. Nonetheless, the reflection of the cosmos as world, and therefore cosmology, only occurred with Plato, more precisely with the work *Timaeus* that Brague sees as being the first Western cosmological work written down. In order to do so, Plato had to bridge the chiasm opened by Socrates and to establish a relation between Man and the world - the cosmos - reconciling Man with

the ordered structure of the whole (Brague, 2003), while still keeping humans on a separate domain. Plato bridged this chiasm by enabling moral ideas to be integrated in the structure of the order that makes the whole, by placing good as the principle that ruled both the physical and the human dimensions (Brague, 2003) and establishing a macro-micro correspondence between them. Good stopped being a feature of the moral laws of Man and became the moral nature of the divine laws to which both nature and Man were subjected. As the ancient philosophy scholar Francis M. Cornford (1937) expresses regarding the *Timaeus*:

“Looking deeper, we see that the chief purpose of the cosmological introduction is to link the morality externalized in the ideal society to the whole organization of the world... Now Plato intends to base his conception of human life, both for the individual and for society, on the inexpugnably foundation of the order of the universe. The parallel of macrocosm and microcosm runs through the whole discourse. True morality is not a product of human evolution, still less the arbitrary enactment of human wills. It is an order and harmony of the soul; and the soul itself is a counterpart, in miniature, of the soul of the world, which has an everlasting order and harmony of its own, instituted by reason¹⁵” (Cornford, 1937, p. 6).

As a result, with Plato, cosmology thus can be understood as the conceptualisation of a frame- work within which Man and nature existed as resultant of a higher divine moral programme. A programme that had its most perfect expression in the sky, as this was the domain of the unattainable divine knowledge, which, following a top down structure emerged on every single stage of the structure as a less perfect version of the previous structural stage. Within the shift to the structure of the world as moral, thinking about the world became inseparable from thinking what the human being is as well as his position in the structured order that constituted the cosmos, or the world. Consequently, Brague departs from Plato’s *Timaeus* to support the necessity of a moral foundation in thinking the world, as Man and world are necessarily bound by morality. Such necessity associated with the analysis of the emergence of the word cosmos in ancient Greece, takes Rémi Brague to defend that cosmology is a human reflection and articulation, not so much about the heavens as it is about the world and our relation with it, from the perspective of an observer that is subject to the same divine moral laws as the world. Therefore cosmology becomes an *onto-anthropological* enterprise however molded by morality.

Given Brague’s understanding of cosmology it becomes possible to overcome the problem of a restricting vision of cosmology within a contemporary context. If the cosmos at a certain moment in time signified an unattainable realm where divine laws decree and for which the sky was the best representative, when it comes to thinking about the cosmos as world from a *onto-anthropological* perspective there is no distance between sky and the tangible nature, or the everyday world which humans inhabit, which has been symbolised by the earth. Therefore what seemed to be distant, antagonistic and irreconcilable realms (the laws of the heavens and the everyday life on earth) becomes united releasing cosmology from the contemporary approaches. In this paper, however, it is argued that three

disputable premises underpin Brague's cosmo- logical definition. The first is a necessary moral cause binding Man and the world within the cosmological structure. This premise lessens Brague's argument by restricting the human, the world and their interrelations to a moral feature, which moreover, only fully exists in its relation with the divine. Furthermore, it also assumes an existing separation between Man and world within a cosmological conceptualisation. Consequently, the first premise is supported by the second: that it is not possible to conceptualise the structural order of things without the human being seeing himself as existing on a separate realm. Thus, that Man exists as an autonomous entity that observes the world from the outside, raising a dichotomic epistemology. The third premise emerges from the belief that the conceptualisation of an idea is dependent not only on a separate thinking entity, but also on language. Therefore, a reflection upon the world relies on the existence of a word to express it. As a result, a conundrum is created within Brague's work: that the conceptualisation of cosmology within an *onto-anthropological* perspective is something that begins with ancient Greek civilisation but also curiously ends with Enlightenment, the time that created the discipline of cosmology, and the disbelief in a moral world.

In order to re-think cosmology outside Brague's limited framework and within which an *onto- anthropological* conceptualisation can still exist, a different conceptualisation of the anthropological dimension within cosmology is required; one that does not rely on the three premises previously outlined. As this paper shows, the key to surpass the problems raised by Brague may lie in the 18th century framework of natural history. As outlined through the account of natural history, an underlying programme that relied on drawing as a recursive, empirical and immersive activity in which was embedded a human conceptualising presence, supported the 18th century episte- mological framework. This presence was acknowledged and accepted, moreover, incremental to the construction of that very same epistemological framework, as within the practice there was no separation between Man and nature, or the world, pointing towards the possibility of knowledge not having to be expressed in words in order to be thought. Consequently, although a conceptual separation of Man from nature in order for the word world to appear might have been important, it does not imply that Man exists as separate from the world, nor that the exist- ence of the word world is necessary for a conceptualisation of the world, the human and their interrelation. If Man and world are seen as an interconnected and integrated system, then an *onto-anthropological* conceptualisation is also embedded within practices and all modes of expression.

Cosmology can therefore be redefined as a discourse about the *onto-anthropological* reflections and expressions of the multiple and contingent relations between Man and world, in which practices are recognised as modes of embedded conceptualisation and expression; escaping the requirement of an outside observer (in addition, a moral foundation) and a word to conceptualise and express cosmology. As a result, it becomes possible to attempt a framework of analysis of cultures prior to ancient Greece and post-Enlightenment in which the reflection on the world does not come through the form of a written text, but can be found within a everyday practice or system of practices. An example of a practice deeply rooted within a pre-Greek society - the Mesopotamian – that not only embodies in itself an understanding of the world, the human and their

interrelation, but also sits outside an astrology/astronomy context, is hepatoscopy, or divination through liver readings. Through the analysis of this practice it is possible to unleash this society's cosmological model from an *onto-anthropological* perspective, dismantling part of Brague's conundrum: the idea that before Greek civilisation there was no conceptualisation of the world as a structured whole in which is recognised and reflected Man's position and role. Such analysis of the Mesopotamian practice of hepatoscopy will inform the second part of this paper.

Endnotes

¹ The present paper undertakes a reflection on Cosmology informed by disciplines such as History, Cosmology, Art, Assyriology, Anatomy and Philosophy. The analysis is driven by a transdisciplinary approach to research, within a PhD context of which the title is: Enquiry on the Essence of Space: Khôra, Kinaesthetic and the Sublime.

² Christian Wolff's *Cosmologia Generalis* published in 1730 was, according to Brague, the first out of a series of German publications to present works dedicated to cosmology and its reflection.

³ Mechanical Philosophy is a term coined by Robert Boyle (Westfall, 2000, p. 412) that indicates the belief that the natural world was arranged by combinations of inert particles of matter, featuring only size and shape, that moved according to mechanical laws and therefore natural phenomena could be explained in terms of such mechanical laws (Westfall, 2000; Hankins, 2007, p. 13)

⁴ Truth-to-nature as defined by Daston and Galison is a "code of epistemic virtue" (2007, p. 18) that precedes Objectivity as the main epistemological force driving natural philosophy. Characterising it is a "metaphysical dimension, an aspiration to reveal a reality accessible only with difficulty... the true genera of plants and organisms" (p. 58). In order to achieve such a goal the naturalists would combine empirical methods with abstract reasoning and would actively intervene in revealing the truth of nature without, however, being commanded by it.

⁵ In the context of the naturalists, abstract reasoning implied the acts of selecting, comparing, judging and generalising (Daston and Galison, 2007).

⁶ Within this context atlases are conceived as visual records of the present states of affairs

of knowledge and in which is “identify[ed] a discipline’s most significant objects of inquiry” (Daston and Galison, 2007, p. 17).

⁷ In order for drawing to come to have such a programmatic role within natural history, it was necessary to develop both a system of analysis and a method of analysis (Foucault, 1970) so that the questioning of the object of research and construction of the grid could happen. The first - the system - was the unleashing of the guiding principles of a formal grid with determined sites against which individuals could be ‘seen’, ‘read’ and placed in. The system of analysis therefore demanded a reflection on what constituted the construction of a grid, or on what constituted an order based on an a-temporal differentiation (Foucault, 1970). The second - the method - was a process according to the grid’s principles of ‘seeing’ and ‘reading’ each individual being/element in order to place them in their specific site, thus informing the grid. The method of analysis relied on algebraic operations to organise elements according to their differences and consequently on what constituted identity (Foucault, 1970), not however of the individual, himself, but of the overarching characteristics of a same group of individuals.

⁸ For instance, in a typical period drawing, the usage of colour as an accidental trait was discouraged; it should even be avoided. What was supposed to be portrayed was the form, quantity, proportion and position of elements. (Daston and Galison, 2007, p. 59; Foucault, 1970, pp. 145-146).

⁹ The idea of a perfect form was, at the time, related with the idea of a beautiful form, as both ‘perfectness’ and ‘beautiful’ were features of the true. As a consequence a true drawing was one where not only the accidental had been eliminated, but also one where a form had been made beautiful through the perfectness and perfect through beauty (Daston and Galison, 2007).

¹⁰ According to Foucault this cannot be seen as the evolutionism of later 19th century and in fact two types of ‘evolutionism’ existed. The first, as mentioned, believes that all the species evolve on a continuum towards the perfection of God, being that all species have their own perfect form, although possibly will never achieve it. The second says that species have moved through time from one place in the taxonomical grid to another; explaining, for instance, that birds have wings as for one moment in time, when the earth was covered by water, they had had fins (1970, pp. 165-166). As such, the underlying idea is that there is a “general table of variables that defines all the possible forms of the living world” (Foucault, 1970, p. 167).

11 Given the fact that “mechanical philosophy was [seen as] a program of explanation, not a program of investigation” (Hettche, 2008, p. 411).

12 According to Balashov, the usage of contemporary physics to explain the beginnings of the Universe by cosmology did not happen “until the 1970s, when ... physics began to assume a truly historical dimension [by observing physical laws as dynamic]. The idea that the temporal career of the universe may include not only the history of matter but also the history of its basic properties, which figure in the laws, is largely a product of this interplay between particle theory and cosmology in their joint effort to probe the physics of the very early universe” (2002, p. 110).

13 In a contemporary context, cosmology is used indistinctly from cosmogony, even when looking back into mythological accounts of the conceptualisation of the world. For instance, within the Mesopotamian culture, what is offered is a description of the mythological stories in which such conceptualisation may have happened (Brague, 2003). Yet, one example in which an analysis and elucidation of those stories happen in relation to questions such as: What is the world within Mesopotamian culture? Or, in the context of a Mesopotamian culture, what is the place of human kind in relation to the whole? Going beyond a cosmogony is the contribution of the Assyriologist Francesca Rochberg (2007), *Mesopotamian Cosmology in A Companion to the Ancient Near East*. In this study, the usage of mythological stories to attempt to answer such questions is justified by the fundamental role of the gods in their creational and transformational actions, signifying that it was not possible to think of the world as an independent structure from the gods. However, if, as supported by Rochberg, in the Mesopotamian culture gods were not specific places or beings but metamorphic entities, and therefore should not be strictly associated with an understanding and interpretation of the heavens, then there is no reason to restrict such an analysis to a search within a combination of Mesopotamian mythology with Mesopotamian astronomy/astrology sources.

14 The order put forward through the word cosmos is one that beyond recognising the existence of the whole as an ordered entity denotes the quality of such order, as the term refers in particular to the beauty that emerges from the perfectly ordered (Brague, 2003, p. 19).

15 However this reason, and as Cornford denotes, “[W]e shall find that if Plato’s language is to keep any substantial meaning, we must not ascribe to him either the belief in an omnipotent creator or the notion of natural law as a closed system of causes and effects. His Necessity is irregular and disorderly, and not inexorably determined, but open to the

persuasion of Reason; and Reason has need to persuade her, not having unlimited power to compel” (1997, p. 36).

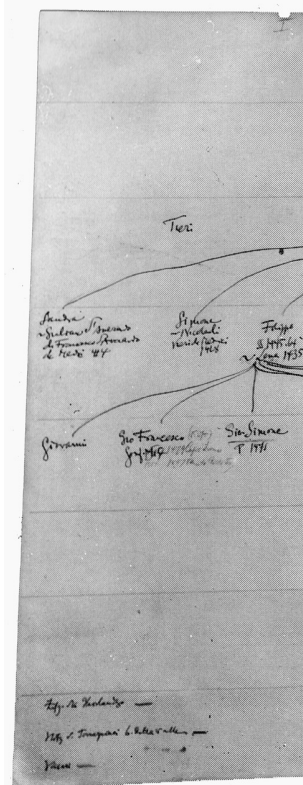
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Appendix C

Diagram Drawings of Thesis Structure and Chapter Flow and Interaction

