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Hegel's Unconscious: Analyzing Matter in the Philosophy of Nature

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A thesis submitted in partial fulfillment of the requirements for the degree in Master of Arts

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HEGEL'S UNCONSCIOUS: ANALYZING MATTER IN THE *PHILOSOPHY OF
NATURE*

(Thesis format: Monograph or Integrated Article)

by

Andrew Kingston

Graduate Program in Theory and Criticism

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts

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London, Ontario, Canada

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Abstract

This thesis analyzes the structural position of matter within the philosophical system of nineteenth century German philosopher Georg Wilhelm Friedrich Hegel. Concentrating on the *Philosophy of Nature*, it reads Hegel's treatment of matter psychoanalytically and semiotically as the unconscious to his anthropological (spiritual) and logical philosophy, which otherwise constitutes the majority of his writings. To do so, this thesis explores a proliferation of figurative language throughout Hegel's text, specifically in his writing on mechanics, light, the elements, and organic life. In this investigation, Hegel's work is considered alongside the work of Julia Kristeva, Georges Bataille, Gaston Bachelard, and Rodolphe Gasché, among others, in order to more fully explore how matter might act as a conceptual repository for what is repressed in the construction of philosophical systems. Implicitly, this thesis also attempts to provide a critique of the ideological appropriation of the philosophical category of reality.

Keywords

Hegel, Nature, Matter, Psychoanalysis, Kristeva, Bataille, Bachelard, Gasché, Unconscious, Deconstruction.

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For Mary M. Kingston
(1948-2013)

From what do you suffer?
From the unreal intact in reality laid waste.

[De quoi souffres-tu?
De l'irréel intact dans le réel dévasté.]

René Char

Introduction

The following is certainly not an exegesis, and perhaps that is the only thing certain about it. Without presuming to explicate any determinate meaning hidden behind the text of Hegel's *Philosophy of Nature*, this study will instead remain on its surface, tracing this meaning's emergence and disappearance. In doing so, its aim will not be to accurately read and theorize the development of Hegel's writing and its content, so much as to read in it a vacuum of meaning, one that is in fact both the cause and the derivative of an excess of signification that confounds and convolves the distinctions upon which Hegel's treatment of nature is predicated. The purpose of this study, however, is not so simply to expose the contradictions in Hegel's writing, of which, as is well known, there are many. On the contrary, it is reasonable to assume that contradictions are what motivate Hegel's thought in the first place. As such, to accuse Hegel of breaking the law of non-contradiction, or to assume that he was unaware of his doing so, is to draw conclusions from his work by importing into it the very premises that he was attempting to call into question. Indeed the following reading of the *Philosophy of Nature* will at times call into question its claims, but in doing so it will not affix to this text any affirmative or negative value; in other words, the aim here will not be to evaluate the correctness or incorrectness of the *Philosophy of Nature*. Rather, remaining at the level of the text itself—and necessarily so, as will be shown—this investigation will attempt to uncover a performativity working backwards in Hegel's text, as it moves forward in its content. This performativity will not as a matter of course contradict the unfolding of nature within Hegel's system, but will rather demonstrate a countermovement within it, like the ebb of the ocean that must follow from the crashing of its waves—and one hardly invalidates the other. As Samuel Beckett once put it: "To swim is true, and to sink is true. One is not more true than the other".¹

¹ Samuel Beckett, quoted in Graver, L. and Federman, R. (Eds.). (1979). *Samuel Beckett: The Critical Heritage*. London, UK: Routledge Press. p. 242.

Inasmuch, then, as this study will attempt to read Hegel against himself, to demonstrate how he in fact says more than he wants to say, one might consider it to be at least in part deconstructive. As well, given the way in which it will later adopt a psychoanalytic terminology, its approach might also be understood as psychoanalytical. Overall this study of the *Philosophy of Nature* might be considered from any number of angles, but perhaps the most fitting description would be to say that it is topological. In other words, it operates on the surface of the text, tracing its different linguistic figurations and exploring the way in which each reflects upon the others—a tropological topology. In this sense, considering the descriptive accuracy of Hegel's writing will be less important here than following the dynamics of the text's relations within itself, as well as its dynamic relations with the texts outside of it: namely, the other volumes of Hegel's *Encyclopedia*. To approach the *Philosophy of Nature* in this way is to concentrate on how it forms an inter- and intra-textual fabric that, apart from the way in which its content develops, has its own significance. In the process, different theorists and theories will be imported into the discussion as they are necessary, to provide conceptual tools for analyzing the text's movements. Among these are Julia Kristeva, Georges Bataille, Gaston Bachelard, and Rodolphe Gasché. While not addressing Hegel directly, each of these thinkers will provide different avenues for pursuing an analysis of his language and of the excesses of his thought.

0.1 Other Approaches to Hegel

Overall, relative to the other areas of Hegel's work, there exists very little scholarship on the *Philosophy of Nature*. Nonetheless, to give some context it will help to briefly recapitulate the positions of some other readers of Hegel in general: there are, for example, the more traditional perspectives such as those of H.S. Harris, John Burbidge (1996), or Alison Stone (2005). These writers each interpret the *Philosophy of Nature* in terms of philosophy, in order to systematically explicate its content, bringing Hegel to bear upon metaphysical or environmental-ethical issues, as the case may be. They accomplish this above all by identifying a certain level of conceptual consistency in Hegel's writing. As such, these approaches, while important in their own right, provide a

foil to this study in their attempts to systematize Hegel's work. This study works under no such pretense. There are then less traditional (but still canonical) approaches to Hegel such as those of Alexandre Kojève (1980) and Jean Hyppolite (1974), each of whom identify a particular moment in Hegel's philosophy and subsequently consider that moment metonymically as a key to understanding the whole of Hegel's system;² for the former it is the "master-slave dialectic", for the latter the "unhappy consciousness" in the *Phenomenology*. These perspectives, however, in concentrating so heavily on one moment of Hegel's writing, develop narrowly in relation to the way in which it unfolds and contradicts itself, often in multiplicitous ways. In fact, the very coexistence of Kojève's and Hyppolite's positions as valid interpretations of Hegel suggests that his system is broader than either of them would have it. Although this is to oversimplify the nuances of these varied approaches to Hegel, it is not entirely unreasonable to contend that what each of them has in common at the very least is that they articulate Hegel's work according to a philosophical paradigm that they either affirm or deny. This is what at base sets them apart from this study.

Among less rigid—which is to say more theoretical—approaches to Hegel's work, Catherine Malabou, for example, reads it more in terms of what it can offer her own explorations of habituation and neural plasticity. In her book *The Future of Hegel* (2004), she traces the way in which human consciousness forms from its position in nature through the sedimentation of habit. Correlatively, Jon Mills, in *The Unconscious Abyss* (1996), approaches Hegel in a similar but also very unique way, demonstrating how Hegel prefigures Freud's notion of the unconscious in his theorization of an "abyss" that underlies the development of consciousness and self-consciousness in the *Philosophy of Mind*. These interpretations of Hegel are each in their own way quite similar in content to this study; however, they differ from it in that neither deal very directly with Hegel's conception of nature, except as it is understood in relation to the development of the

² Neither of these thinkers, however, takes up Hegel's *Philosophy of Nature* in any sustained way, and each is instead concerned with his philosophy as a whole. Nonetheless their approaches to Hegel warrant mention.

human.³ Furthermore, each author begins by presuming Hegel's conceptual architecture, whereas this study will be more concerned with analyzing the language in which it is cast, and showing how Hegel's use of language reflects and inflects its development. That said, these perspectives are valuable, and this text, although it does not consider them further, might well hope to be considered in its own way complementary to them.

Then there is Jacques Derrida, whose deconstructive readings demonstrate the way in which the *Aufhebung* turns against itself. Often this is interpreted as Derrida's dismissal of Hegel, although this take on Hegel's work might also be seen to open it up to fresh interpretations. Derrida rarely addresses the *Philosophy of Nature*, with some exceptions: for example, the column dedicated to Hegel in *Glas* (1986),⁴ in which he reads Hegel's writings on matter and the animal against his anthropological writing. There Derrida rightly contends that in Hegel, matter's essence "is not having an essence" (1986: 23). This claim will be implicit in what follows, and it will be argued that this lack of essence manifests itself throughout the *Philosophy of Nature* in its uses of language. In fact, Derrida at one point briefly gestures toward such an argument in writing of "Hegel's exemplary rhetoric, the exemplarist proceeding of his rhetoric...his rhetoric as the technique of figures and as the form of argumentation" (1986: 29). An examination of this rhetoric in Hegel is precisely what this study will attempt to accomplish. Such a remark thereby places Derrida in the background of this study.

However, perhaps the readers of Hegel who have been most directly influential on this rhetorical exploration of the *Philosophy of Nature* are Arkady Plotnitsky and Jean-Luc

³ Mills at one point does note that the "the abyss is the materiality of Nature" (2002: xiv). In writing this this Mills correctly observes that nature functions like an unconscious for Hegel. However, Mills then moves on in his study to discuss this abyss in terms of the human, as an internalized nothingness in the human consciousness that precedes spirit. As such his argument fails to address materiality or nature in any sustained way. Nonetheless, Mills correctly argues for an unconscious in Hegel in the first place, and in this sense his project is related to this one, which also explores Hegel's unconscious, but in a different way.

⁴ See Derrida, 1986: 23-33, 107-117.

Nancy. Plotnitsky, for example, is also concerned with establishing a sort of topological reading of Hegel's system. Drawing on sources from deconstruction to quantum mechanics, he considers Hegel's thought in terms of allegory (as will be discussed in chapter three) and what Niels Bohr called "complementarity" (1993), as well as other ways in which Hegel's language becomes figurative. Nancy, especially in *The Speculative Remark* (2001), is concerned with establishing a position that engages Hegel's work at the level of what he calls a "speculative grammar". He explores Hegel's writing (especially in his *Logic*) in order to show how it works against its reader's presuppositions of meaning, taking on a performativity that through its contradictions and deferrals of sense forces the reader to speculate at the moment that the text establishes its meaning in the first place. Certainly the following investigation of the *Philosophy of Nature* finds itself very much in debt to both Plotnitsky and Nancy. However, both of these thinkers are more concerned with developing a broader method of reading Hegel or considering Hegel's system as a whole. With that in mind, what perhaps sets the following apart from these perspectives is its specificity. This is to say that this account of Hegel is concerned with a rigorous textual analysis of the *Philosophy of Nature* in terms of its abstract language.

The consequences of this approach, again, are that this study will not evaluate the development of this text strictly in terms of its concepts or of its argument per se—as one might read a work of philosophy. Instead, the text will be considered in terms of tropological and semiotic movements that, as in a work of literature, function to say something more than themselves. As will hopefully become more evident in what follows, Hegel's work acts not only as part of a philosophical system, but also in a sense poetically, in the creative use of a language that can be analyzed as a set of figurative relations expressing something beyond their immediate signification. This does not invalidate such signification, but reinterprets it as site of non-conceptual speculation. In this sense this study aims to provide, rather than merely an explication of conceptual relations, a reading of an implicit poetics in Hegel that upends these very conceptual developments precisely as it constitutes them.

0.2 Toward Hegel's Unconscious Poetics

Hegel's *Philosophy of Nature* is organized into three major sections: "Mechanics", "Physics", and "Organics".⁵ The first section deals with the ideal and mathematical aspects of nature, such as space, time, gravity, and motion. The second section explores different processes of nature, such as the propagation of light, meteorological processes, chemistry, and so on. Lastly, the "Organics" section theorizes the emergence of life, from microorganisms to the human—the point at which for Hegel nature gives way to spirit. In setting up his text in this way, Hegel attempts to outline the relations between the different structural levels of nature, demonstrating a logic that connects nature with the very possibility of its apperception and scientific comprehension; Alison Stone discusses this in terms of a "rationality of nature" (2005: 57-84). Indeed this rationality is in large part what Hegel claims to demonstrate. But, against the apparent simplicity of this claim, what is perhaps most immediately striking about the *Philosophy of Nature* is the utter confusion into which it initially places the reader.

In this text, Hegel's reliance on metaphorical and conceptual juxtapositions often disregards the traditional philosophical injunction for clarity and exactitude of description. In fact, the extent to which his language operates beyond this exactitude at times even seems to approach the fantastical—like the reveries of Surrealism—incorporating the marvelous into an otherwise mundane philosophical treatise on science and nature.⁶ One cannot however reasonably assume that Hegel's intent was to write bad poetry. On the contrary, while the details of Hegel's seemingly strange uses of language will be explored in what follows, what can be immediately noted is that if indeed his language is bizarre, this is not the result of a lack of rigor on his part. Rather, one must assume that Hegel contemplates nature in as seriously a philosophical manner as

⁵ See Appendix.

⁶ In a different context, André Breton once said that "it is Hegel whom we must question about how well-founded or ill-founded Surrealist activity in the arts is" (1969: 259).

possible. This then means that Hegel's oddities must stem from some facet of his conception of nature, or at least the way in which he feels compelled to approach it.

If this is the case, it is possible that in fact the content of Hegel's writings on nature cannot be expressed *except* through the distortion of the language he uses to describe it. Viewed in this way, a question is raised regarding what aspect of nature compels such an elaboration. The hypothesis here is that the source of such a consistency in the use of figurative devices throughout Hegel's text must in fact be the result of its very object of study: matter. In tracing the figurative development of matter throughout the course of the text, and further how each figuration inflects Hegel's treatment of nature overall, the reason for such obscurity in his writing becomes both more and less clear: more clear in that one begins to see Hegel's use of language as implicitly part of his method of understanding nature, and less clear in that this methodical use of language is in the first place the result of an inaccessibility at the core of nature's material constitution. This is to say that Hegel's language parallels his inability to linguistically construe that which is fundamentally non-linguistic, leading his language to turn back on itself as it asymptotically attempts to approximate its own origins.

In positioning the *Philosophy of Nature* as the middle volume of his *Encyclopedia*, Hegel sees the materiality of nature as the estranged (2004: 14), external manifestation of a conceptual structure operant both underneath and above it in the forms of logic and spirit (which he addresses in the *Encyclopedia Logic* (1991) and *Philosophy of Mind* (2007), respectively). For Hegel, nature arises as co-originary with this immaterial logic, as its material inversion. As its inversion, however, the content of this aspect of Hegel's system must necessarily defy the representational economy to which it relates. It is therefore possible to suppose that Hegel's investigation of nature must repress nature's inherent illogicality and unrepresentability in order to address it linguistically and incorporate it into the Hegelian system. In this way it might be conjectured that the role of matter in this system is to represent its unconscious, so to speak: the unachievable lack of closure within the *Encyclopedia* that philosophy must repress in order to constitute itself as such.

Such an observation would be consistent, psychoanalytically speaking, with the surreal language that Hegel employs alongside and within his otherwise philosophical and scientific discussions. In addressing matter, Hegel is forced to linguistically repress and sublimate it within his system. Like the psychoanalytic unconscious, matter then articulates itself through a language that is in this case comprised of a series of almost surrealist tropes that convolute and displace Hegel's discussion of it. The following study will attempt to trace some of the more prominent of these figurations as they develop and reflect themselves throughout the *Philosophy of Nature*.

With this in mind, Chapter one will more firmly establish a link between Hegel's conception of nature and the language with which he describes it. Drawing on his essay "Who Thinks Abstractly?" as well as the first section of the *Philosophy of Nature*, this chapter will argue that for Hegel, any understanding of nature begins with abstraction. If the purpose of the *Philosophy of Nature* is to consider the relations of human knowledge to nature, this chapter shows how this understanding in and through language deprives Hegel of the possibility of establishing a coherent beginning for his investigation. In other words, each of the aspects of nature that Hegel examines in order to comprehend it as such is hypostatized outside of nature in a linguistic, symbolic order. Such a practice, in Hegel's words, makes "Nature, which is an Other than we are, into an Other than she is" (2004: 8). The first chapter then conjectures, given this complication of the way in which nature is comprehended, that it is only in the working-through, so to speak, of its abstractions that Hegel can illustrate nature at all. Hence the language employed in the *Philosophy of Nature* cannot be that of mere description, but must more directly reflect the way in which nature functions as a system of abstractions transitioning into one another. In this sense, the textual movements in the *Philosophy of Nature* are as important as the development of the natural objects that it eventually purports to describe. Matter appears here for the first time, as a relation between mechanical abstractions, but is not yet understood in its traditional philosophical sense.

The second chapter of this study moves on to consider Hegel's ideas about the first,

rudimentary instantiations of matter in light and the elements. For Hegel, light is the first manifestation of matter as more than a merely mechanical relation; it is also the condition of identity in nature. This is to say that light functions as the condition of nature's legibility, as the ontotheological guarantee of the stability or self-sameness of knowledge of nature. In this sense, it is shown how in the text light and language are related in their revelatory capacities—and in this regard light is discussed in terms of a “phenomenological” tendency. It is then shown how the “phenomenological” reading that Hegel attempts to set up in the *Philosophy of Nature* is counteracted by the way in which he describes light implicitly, as the non-identical basis for identity; as such, light is then considered in terms of what Rodolphe Gasché calls “phantasmatology”, which he opposes to phenomenology. To read light as a phantasmatic source of identity is to emphasize it as an unstable and unreliable condition for nature's comprehensibility. This suggests that light, as the objective correlative of Hegel's epistemological access to nature cannot itself be comprehended without remainder. In other words, it resists interpretation except as it is mediated through a symbolic representational economy that reduces it. With Hegel, this chapter then moves on to discuss the “elements” that serve as the basis of this representational economy, which quickly gets out of Hegel's control. In other words, what is important about the elements is their highly metaphorical character. First, Hegel considers the archaic tetrad of air, fire, water, and earth, mixing them together in what he calls the “meteorological process”. These four elements function as metaphorical vehicles for Hegel in evaluating the behaviors of matter, allowing him to consider its different aspects without ever directly considering it as such. Further, these elements are then incorporated into a larger set of metaphorical relations, wherein they are likened even to the processes of the solar system. This leads Hegel to make some otherwise very irrational connections between natural processes, comparing, for example, comets to clouds and vice versa. At this point some very surreal imagery comes into play in Hegel's text, which will be examined in terms of what Bachelard called “material imagination”—a conception of the imagination in which matter plays a role as a conductor of unconscious activity. Without delving too far into Bachelard's own theories, one can extrapolate from them that Hegel's unusual treatment of the elements is a compensation for his inability to come rationally to terms with matter in his abstract

conception of nature. In other words, if Hegel's understanding of the elements is predicated on metaphor, then one might suppose that this is because matter functions here as the unconscious to his conception of nature, which as such must articulate itself metaphorically.

In between the second and third chapters of this study, a significant portion of the *Philosophy of Nature* is omitted: namely the latter half of Hegel's chapter on physics, where he goes on to outline what he calls the "chemical process". This is a process wherein for Hegel matter particularizes itself into the more specific molecular building blocks of organic life, which combine with each other, taking on even more determinate qualities while still maintaining their universality (Hegel calls this combination the chemical object). The chemical process, however, has been omitted here primarily because it ultimately functions as an extension of the meteorological process. Hegel notes that the "chemical elements are the abstractions of the physical Elements, whereas these latter are real in themselves" (2004: 240). Others, such as John Burbidge, consider chemism to be an important stage in the *Philosophy of Nature*, where Hegel's logic is reflected in the natural world. However, for the purposes of a study such as this one that is less concerned with the progress of Hegel's system as a whole, the section on the chemical process provides little more than a paler recapitulation of the meteorological process. It is perhaps for this reason that Hegel returns to the meteorological process—rather than the chemical one—in his discussion of the organism, which is the subject of the third chapter of this study.

Chapter three discusses the organism in its three forms: the terrestrial organism, the vegetable organism, and the animal organism. First, the terrestrial organism serves as the ground for the metaphorical economy at work in Hegel's discussion of the meteorological process. Here, the life of the earth is mediated by meteorology—the force of which condenses in it as its basis. Hegel then discusses the plant organism, which acts as a mediator between the universal forces of the meteorological process, and the more

particularized life forms (i.e. the animal). With the plant, subjectivity arises for the first time, but only in a formal sense. Finally, with the animal organism, subjectivity becomes more or less autonomous in its unified form, in which the animal sets itself over and above its constituent parts. The animal in this way internalizes nature—and with it the groundless and unstable behavior of matter that Hegel can only discuss through metaphors. At this point it is shown how in Hegel the animal is constituted by a repression of these very material origins, which begins to separate it from nature. Utilizing Arkady Plotnitsky's notion of an allegorical economy, this chapter will show how the animal stabilizes its perception of the environment by allegorically projecting its own subjectivity onto the matter that it necessarily considers inorganic and external to it. The animal's reality is thereby established by a repression and sublimation of its material situation, upon which it retroactively projects itself. The instability of matter is then shown to win out over the animal's isolationism, first in its excrement, and ultimately in disease and the animal's death. After the animal's death, Hegel ends the *Philosophy of Nature*.

The fourth chapter, which is also the conclusion to this study, briefly summarizes how Hegel depicts matter in a strange, almost hallucinatory use of language that works to sublimate matter's non-essentiality (Derrida, 1986: 23), much like the primary processes relate to the unconscious in Freud. Given that it is only from the position of spirit that Hegel can speculate on nature in the first place, he is necessarily always already describing a nature that it is impossible to describe on its own terms, because any description would subjugate nature to spirit's conceptuality. Resulting from this contradiction, the implicit mobilization of language that is discussed throughout this study defies spirit's conceptual logic, turning Hegel's writing on nature at times into a sort of oneiric text, wherein nature articulates itself through spirit's language but against its reductions.

Admittedly, one would probably not want to subscribe entirely to this impossible conception of nature—least of all Hegel. However, if indeed the *Philosophy of Nature*

enacts such an unconscious textual performativity in its treatment of matter, this does at the very least offer an implicit critique of spirit's symbolic ordering of existence. Viewed in this way, Hegel's text critiques its own reality, moving beyond its contradictions, but not to sublimate them on a higher level of philosophical understanding; rather, from an abstract description of the real, Hegel's text engenders a poetic performance of the surrealism behind spirit.

Chapter 1

It is not beyond the world, but neither is it the world itself: it is the presence of things before the *world* exists, their perseverance after the world has disappeared, the stubbornness of what remains when everything vanishes and the dumbfoundedness of what appears when nothing exists.
Maurice Blanchot (1999: 384)

1 The Double Abstraction

To begin, as one must, it will be relevant to examine an abstract concept. Hegel begins his *Logic* by examining the concept of immediate being, and he likewise begins the *Philosophy of Nature* by taking up the concept of a self-mediating externality. Within the context of the *Encyclopedia* project, these two beginnings are appropriate to his project of tracing the different manifestations of the absolute idea. This investigation will begin, however, with the concept of abstraction itself. It is important to begin this way because the mechanics of abstraction (and, as will be shown, the abstractions of mechanics) are what open up for Hegel the very possibility of a relation between the conceptual structures of his logic and its contingent external state: nature. It is precisely this relation that provides the cipher to the materiality of Hegel's textual work. This is to say that Hegel does not purport to begin with any sort of *concrete* nature, which would automatically relegate his investigation to an unreflectively positive one; instead he is able to adopt a syntax wherein the abstractness of language itself constitutes a negative ground from which he can then move on to illustrate nature in the processes of its self-externalization, instead of as merely *an* externality as such. The externalizations with which Hegel begins are abstract, and therefore begin immanently at the abstract level of his text. The implications of this beginning, then, themselves begin in what it means to be abstract.

1.1 The Mechanics of Abstraction

For Hegel, the word “abstract” operates with a technical meaning that renders it an integral part of his vocabulary. To (over)simplify it, this word signifies a lack—or

perhaps an abundance—of signification covered over, or in Derridean terms, supplemented, by a sign or concept that eliminates the context or relativity of an event, thing, or identity. Of course, this definition then is, by its own logic, abstract. Whereas generally conceived the use of the word *abstract* carries connotations of excessive complexity and vagueness as a result thereof, in actuality, for Hegel the opposite is the case: complexity is given in any concrete situation, and to attempt to subsume reality under merely one of its determinations is to oversimplify it. In this sense, the word *abstract* in Hegel almost always carries with it the sense of the word in its verbal form, insofar as anything that is abstract is something that has been abstracted—which is to say that a generality has been misapplied to identify the particularity of a thing or event, thus bracketing the complex systems and relations that give form to its existence. Abstraction is thus a problem of form. This may be made clearer by looking at Hegel’s essay on the matter: “Who Thinks Abstractly?”.

This very short essay begins with Hegel slyly refusing to define the words *abstract* and *thinking* at all, which he presupposes that everyone in “good society” already knows.⁷ Contrary to what one might have guessed at first, if presupposing a colloquial understanding of the word, Hegel eventually claims that it is the uneducated rather than the educated who think abstractly. He goes on to then give commonplace examples of public views toward murderers, servants, shopkeepers, soldiers, and so on. For instance, the public view of a murderer is as only that: a murderer and nothing more. To assign this person one particular label above all else is precisely the work of abstraction, however warranted it may be in actuality. At once, a finite and incomplete category is imposed upon a much more complex existence, while this very complexity is ignored in favor of the positive label attached to the existence (whatever it is). It would be unthinkable, *inasmuch as the abstraction obtains qua abstraction*, to consider the abstract object in its other capacities, to view it as at one and the same time many other different things,

⁷ He then ironically uses many examples of members of “good society” to illustrate exactly who thinks abstractly: mayors, the masters of servants, military officers, etc.

engaged in varied and varying relations. In Hegel's example, it would be "terrible" within the public sphere for people to say of the murderer that he is a "strong, handsome, interesting man" (2002: 285). In other words, aspects of people and objects become alienated in this type of conceptual abstraction, which is simple to consider in terms of individual subjects and objects, but which becomes much more difficult to think about when considered in terms of the basic materiality of nature and the composition of subjects and objects in general, arising out of a contingent subatomic sea of movement and force. Yet even and especially at this level this abstraction is necessary, so much so that it will have already been performed. Form will have already been abstracted. And it is in the working out, or the working through, of these abstractions that the movement toward concreteness is in fact constituted, instead of in a singular wor(l)d of prescribed identity.

What is even more interesting, however, is the beginning to Hegel's essay. He addresses the reader who would discount his writing because it will "plainly deal with metaphysics" (2002: 284). He notes that "*metaphysics* is a word, no less than *abstract*, and almost *thinking* as well, from which everybody more or less runs away as from a man who has caught the plague. But the intention here is really not so wicked, as if the meaning of 'thinking' and of 'abstract' were to be explained here" (ibid.). Hegel sardonically refuses a mechanics of definition that would end in abstraction, a refusal taken even further by an emphasis on the fact that the essay is already plainly dealing with "words". This is not to say, however, merely that words are abstract. Rather, abstraction occurs through the unreflective identification of these words with real processes, with the processes of "reality"—the word *reality* being an example of abstraction par excellence. By deliberately remaining at the level of the pure ideality of the play of language, without attempted referent, Hegel foregrounds the process of abstraction normally operant within it, and while subsequently plunging into an obscurity on the one hand, he at the same time avoids the more serious abstractive error of positing finite categories as *definitive*.

This, more or less implicitly, is how the *Philosophy of Nature* begins. In the first major section, titled “Mechanics”, Hegel continually emphasizes his subject’s abstractness;⁸ it is this abstractness that grounds the contingency of nature. In other words, nature acts contingently because of the interplay between the necessity of abstraction and the remainder that every abstraction excludes. Rather than immediately delving into the materiality of nature under the aegis of “physics”, as would many of his contemporaries, predecessors, and successors, Hegel first deliberately critiques the notion of physics itself in an almost proto-Bergsonian fashion, by calling into question and in fact mobilizing its diagrammatic and abstractive tendencies. This is the meaning of his statement that “[t]he universal of physics is abstract or only formal; its determination is not immanent in it and it does not pass over into particularity” (2004: 11). His own investigation therefore discusses the scientific knowledge of his time from this critical point of view, without assuming a direct connection between the world and the categories of physics. However, if he is critical of the tendencies of the physical sciences to positively map out reality by universalizing their abstractions, he for all that does not go to the other extreme to posit a Kantian unknown behind reality.⁹ At bottom, whether one views scientific knowledge in a direct correspondence with the world or not, one is usually still operating under a metaphysics of subject and object—and rather than assume this epistemological split (as did Kant and most of the tradition), Hegel attempts in his work to engage the unity of nature’s pre-anthropogenic, pre-phenomenal existence. In fact, it might be said that the construction of this epistemological divide in the first place is the result of unreflectively universalizing the abstract position of the human, which is an abstraction that Hegel refuses to make, or at least that he delays making until he can do so reflectively.¹⁰ By

⁸ For example, see pp. 29, 35, 37, 49, 48, 61, 71 (Hegel, 2004), among others. Some of these references will be discussed further.

⁹ “Of a metaphysics prevalent today which maintains that we cannot know things because they are absolutely shut to us, it might be said that not even the animals are so stupid as these metaphysicians; for they go after things, seize and consume them” (Hegel, 2004: 9). This especially makes sense in the context of Hegel’s third chapter, “Organics”, but here simply shows his antipathy toward such a Kantian attitude.

¹⁰ At the end of the *Philosophy of Nature*, and within the context of the entire *Encyclopedia* project, Hegel does return very strongly to the human perspective, as spirit, separate from nature.

foregrounding the mechanics of abstraction, Hegel realizes that the human perspective is merely one of many, and that it cannot therefore be privileged when beginning a discussion of nature (even if he eventually does privilege it in the movement to *Geist*). In this sense, a sizable part of the *Philosophy of Nature*, insofar as it resists the temptation to *begin* with this perspective, could be said to be a posthuman, or rather prehuman, side to Hegel's work. By speculating on the abstractive nature of even the basic ideas of space and time, the ideal nature of gravity, and so on (as will be discussed below), Hegel's investigation implicitly attempts to inscribe—immanently within the movements of his description itself—the structural levels of prehuman existence, in an attempt to avoid universalizing the specifically human world.

If this immanent critique of scientific positivity (via his foregrounding of abstraction) is to be viewed in any way as related directly to science, it should be seen only as meta-scientific. However, whereas a more traditional meta-scientific philosophy would seek to justify the application of scientific categories—an approach Hegel in fact critiques as a (Fichtean) “philosophy of identity” (2004: 10)—the *Philosophy of Nature* instead attempts to “reconstitute” (ibid.) science's empirical findings, and in doing so to leave them abstract so as to gesture toward the concrete universality from which they are abstracted. In this way Hegel is not beholden to the determinate categories used by science, and being free from them precisely because he no longer needs to deny their abstractive function, he can then utilize such disciplines as physics and natural history to write a relation without first assuming the immutably positive existence of the parts of the relation. In doing this, he attempts to discuss a unity of nature in the face of a perspective that, seen as complete unto itself, reduces the world mechanistically to abstract parts given by the limited perspective of human observation, an activity that then inevitably gives rise to a nearly solipsistic epistemological rift between nature as an external world, and our phenomenal experience of it—and all of this rift's attendant problems. In this sense, then, Hegel's meta-scientific perspective can and does leave science intact, without purporting to correct it or legitimize it. Instead, Hegel complements its discoveries by concentrating on the deformation of the idea of nature rather than simply its formation, and in doing so he attempts to establish a thread of continuity between nature's

discontinuities. Insofar, then, as natural science deals with the specific forms and relations of forms that nature takes, it might be said that Hegel's *Philosophy of Nature* deals with the specific deformations and relations of deformations that nature gives. Moreover, this method of engaging with science—at the level of its abstraction before its content—also shows how all of the myriad non-scientific claims that Hegel makes throughout this text are often complementary to the scientific paradigm without needing to be judged from within it (because again his claims do not purport to fall within this paradigm). At this point, some of Hegel's own words might further clarify this relation:

[T]he cognition which comprehends (*begreifendes Erkennen*) is the middle term in which universality does not remain on *this* side, in *me*, over against the individuality of the objects: on the contrary, while it stands in a negative relation to things and assimilates them to itself, it equally finds individuality in them and does not encroach upon their independence, or interfere with their free self-determination (2004: 12).

Hegel's text therewith might be seen not to make any directly ontological claims about the verisimilitude of objects, or of the existence of the material world, the positive classification and empirical study of which would unproblematically remain the domain of the sciences. Rather, the labor of the negative at work in Hegel's *Philosophy of Nature*, and its often-strange language, operate through the overcomplication of supposedly positive claims, so as eventually to return concretely to the process through which they are abstracted. Doing so renders our particular, phenomenally given experiences of the world both more and less than “real”—the criteria of which, for Hegel, lie on a spectrum of relative abstraction rather than in a simple dichotomy.

1.2 The Abstractions of Mechanics

In the first chapter of the *Philosophy of Nature*, Hegel describes the domain of mechanics as “the determination of asunderness or mutual outsidership, of infinite separatedness, the unity of form being outside it; this unity, as *ideal* is only *in itself* and is consequently a unity which is only *sought*. This is *matter* and its ideal system” (2004: 25). This chapter deals with the “self-externality” of the absolute idea, which is just to say the external

world—the fundamentals of which Hegel not unorthodoxly locates in space and time. Right at the beginning, he immediately states that space and time constitute “self-externality in its complete abstraction” (2004: 28). After the introduction, these are the first words of the book; the world begins with abstraction. Immediately following, Hegel says that he will deal with matter and motion, existing in relation “in that state of abstraction” (ibid.). In this sense, what Hegel takes to be “mechanics” conceptually rends spatiotemporal matter from its unity with the forms that it takes in its concrete, extant state.

As soon as matter is abstracted from its form, and space and time from it, one is then no longer in a position to consider the world from an empirical, or anthropogenic (and therefore anthropocentric) point-of-view. Space, time, and matter, in other words, cannot be accurately discussed while they are abstracted from their complex and concrete unity with the particular forms and events that give them any positive existence in the first place. And yet they still are. The ideal science of mathematics can make calculations of them or theorize them with equations, for example. Being abstract, on the one hand they cannot be called properly real, if by real one understands a concrete, formed substantiality. On the other hand, these abstractions are hardly non-existent. Space and time certainly make themselves at least phenomenally known: for example the decay of time, the specificity of place or the traversal of distance, and so on. And certainly no one will deny that matter is real, not even Hegel. It is, however, important to note that the ontological status of these abstractions is ambiguous, that they exist as abstractions between form and formlessness, only determined by the ideal relations they mediate between more concrete existences, and by the manner in which they mediate them. It will now help to examine a few of these relations in more detail.

Space and time, for example, are of definite interest in this regard. These categories are very complex and have an equally complex history, even more so today than in Hegel’s time. The concern here, however, has less to do with verifying or rejecting Hegel’s account of spatial and temporal reality, as it does with the abstract quality attributed to

them in his account. Their generation from a purely abstract, immediate idea (the one that is discussed in the *Logic*), and the way in which they relate in this mutual generation will begin to give a clue as to how Hegel theorizes the reality of abstraction more broadly speaking. Space, for Hegel, is the universal and radically abstract “asunderness” (2004: 8) of the unity of the idea, which is to say that it is abstracted from everything specific, or “contains no specific difference within itself” (ibid.). As such, it is indifferent. Rather than discussing it in a more Cartesian way, as *extensio*, gridded and plotted with points and lines, Hegel’s space exists only as an indifferent possibility of points and lines, the inscription of which in fact interrupts its unity; space is “a negative punctiformity, and so perfect continuity” (Hegel, 2004: 29). It is exactly space’s radical abstractness that renders it continuous, rather than any ethereal physical property. When further, more specific (even if still abstract) determinations arise “in” space—such as the point, line, and plane—these determinations negate space’s abstract continuity, and give rise to the possibility of time.

Put another way, points, lines, and planes constitute the abstract negations of space’s universality. Each negates, or extends the negation, of the continuous and immediate indifference of space. They are, for Hegel, abstractions from the most abstract externality. In this double abstraction, which turns back upon itself like an uroboros, the unity of space is infected with a negativity that both ruptures its unity and yet arises mediated from it, though still *in abstracto*. “Space is this contradiction, to be infected with negation, but in such wise that this negation falls apart into indifferent subsistence” (Hegel, 2004: 34). This double abstraction is negativity itself externalized, and this is for Hegel the origin of temporality: “Negativity, thus posited for itself, is Time” (ibid.). Yet this negativity arises and reenters the indifferent, external unity of space, like waves superimposed upon waves in a single abstract ocean. On Hegel’s view, then, both space and time express themselves out of the same relation of externality, and are therefore considered as fundamentally intertwined, rather than as two positive entities combined after the fact. Both time and space exist as abstractions from one another, and indeed make themselves felt individually, but in considering their abstract quality Hegel collapses them into one another, to be dissociated only in their modes of expression.

Really, though, whether or not Hegel was scientifically “right” or “wrong” about this relation is, within the context of this discussion, superfluous.¹¹ The important thing to note here is again the abstractness of this relation, which occurs in a twofold movement: first, the relation itself is abstract—indifferent to the material world of objects/subjects, and so on—and second, the mechanics of the relation are driven by the negativity of abstraction as a process of exclusion. In other words, the abstractness of space and time seem to be for Hegel not merely the imposition of a simple abstract concept upon a complex reality (although certainly he is critiquing this tendency), but rather the beginning of the way in which ideal relations are *expressed* in and through the concrete, the way in which one cannot relegate what is empirically “not real” to a status of pure fantasy. Hegel’s theorization of the ambiguous, abstractive modes of existence of space and time renders a new criterion for what it means to exist. What this then does, however, is to reveal an immanent unity between what is thought to be happening at a separate “textual” level and at the mechanical, ideal-mathematical level of reality. The following passage on time will further clarify this relation:

Everything, it is said, *comes to be* and *passes away* in time. If abstraction is made from *everything*, namely from what fills time, and also from what fills space, then what we have left over is empty time and empty space: in other words, these abstractions of externality are posited and represented as if they were for themselves. But it is not *in* time that everything comes to be and passes away, rather time itself is the *becoming*, this coming-to-be and passing away, the *actually existent abstraction, Chronos*, from whom everything is born and by whom its offspring is destroyed (Hegel, 2004: 35).

Here Hegel makes an important distinction between two types of abstraction, and favors the latter. This “actually existent abstraction” is not discussed as a category at one remove from the real, such as those diagrammed by clocks and mathematics. It is rather a

¹¹ However, it could still be argued that Hegel’s views in this sense are more or less in accord with some contemporary physical views of spacetime.

part of the real: a part that yet expresses itself without necessarily existing in the same ontological capacity as material compositions. Both its essence and substance lie in its expression. It is not a simple metaphor, then, when Hegel names this existent abstraction “Chronos”. This literary, mythopoeic reference functions to illustrate the abstraction as in a sense living. However, Hegel’s reference is far from an attempt to reinstate any Greek mythos; it is rather an attempt to highlight the relation of abstraction and reality, wherein what is real per-forms abstraction’s existence (or, to import a Heideggerian term, its “ek-sistence”). In this way, the invocation of Chronos in the text invests a sort of literary value to Hegel’s discussion of abstract mechanics, not because Hegel is making a cheap and easy turn of phrase, but rather because this Titan’s abstract, unreal reality is actually shared by time. This myth of time can be read, because it is inscribed, in the movement of matter. One could say then that the descriptions of these abstractions in Hegel’s text inaugurate the textual expressiveness of nature, insofar as both are seen through the expression of abstractions. It should be stressed, however, that the mechanics of the abstractions that populate Hegel’s investigation point to the concrete *movement of abstraction itself*, rather than to pre-given abstractions themselves. This, rather than a systematization of natural objects, constitutes the multiplicitous unfolding of the nature described, or perhaps circumscribed, by the shared movement and dissolution of Hegel’s textual abstractions.

In moving from the absolute abstractness of space and time to more particularized aspects of nature, Hegel later considers matter and motion. The relation that he posits between space and time on the one hand and matter and motion on the other is an interesting one in that he derives both of the latter through both of the former. Simply put, for Hegel “Motion is the process, the transition of Time into Space and of Space into Time: Matter, on the other hand, is the relation of Space and Time as a peaceful identity” (2004: 44). Because both matter and motion are derived from a single relation, they are also inextricable from one another, rather than being “introduced [to each other] from the outside” (Hegel, 2004: 42). What differentiates them is their expressiveness, the one more active and the other more passive. Both, therefore, are characterized by their ideal

relations, which is to say their relations to the ideality of space and time. Hegel illustrates this relation in the following example:

A brick does not kill a man just because it is a brick, but brings about such a result only by virtue of the velocity it has acquired; that is to say, the man is killed by space and time. It is *Force*, a category of reflection fixed by the Understanding, which presents itself here as ultimate, and prevents the Understanding from inquiring further into the relationship of its categories. But this at least is adumbrated, that the *effect* of force is something real, appealing to sense, also that *force* and its *expression* have the same content and that the *real expression* of this force is achieved through the relation of its ideal moments, space and time (2004: 42).

This force (which is ultimately the force of gravity), as an ideal relation manifested in the content of an expression, for Hegel constitutes “the *essence* of matter” (ibid.)—a relative, essenceless essence (Derrida, 1986: 23). Hegel here is not claiming that matter is purely ideal; matter, even on his view, is a reality, and in fact is the “first reality” (2004: 44). However, as this study is attempting to show, for Hegel there are always differing levels of reality rather than a simple dichotomy of real and unreal. Certainly matter is a cornerstone criterion of our phenomenal realities, but considered mechanically, matter is just as much an abstraction. In making this more radical claim Hegel takes an interesting and seemingly strange turn, one worth investigating further.

Up to this point in his text, it might seem to some that Hegel is on the way to conceptually deriving the empirical/phenomenal experience of materiality out of his “idea” (i.e. the traditional interpretation of nature within his absolute idealism). However, in theorizing the material body in its relation to motion, force, and gravity, he suddenly turns toward this very experience in order to design his next abstraction. More specifically, he considers the way in which the structural finitude of embodied experience is conditioned by the mechanics of abstraction:

[A]s matter, the body is only the *abstract*, immediate unity of time and space, but their developed and restless unity, motion, is not here posited as a unity *immanent* in it. This is the character given to the body by ordinary (*physikalischen*) mechanics, which postulates as an axiom that a body is set in motion or comes to rest only through an *external cause*, motion or rest constituting only a *state* of the body. What this mechanics has in view is only the selfless bodies of the earth for which such characterizations are, of course, true. But here we have only immediate materiality, which, for that very reason, is only *abstract* and finite. Body *qua* body means this abstraction of body (2004: 48).

Here Hegel discusses the abstract character of the objects of purely empirical considerations of nature. However it is hardly the case that these considerations merely impose abstract categories onto nature (although this remains a problem); in actuality empirical reality is itself constantly abstracting itself from itself, in its determinations and forms. To view reality from this point of view has “the advantage of being familiar to our ordinary reflection and of being drawn from experience” (Hegel, 2004: 49). In fact, as can be seen in the above passage, Hegel will even go so far as to grant the characterizations derived from this point of view a degree of truth (what one can only assume to mean consistency within the parameters of a *physikalischen* mechanics—which is, of course, still a classical Newtonian paradigm). However, for all that Hegel highlights the abstract character of what appears static and most real as a result (of our ability to sensuously and visually—and therefore theoretically—commune with it in a direct fashion). Yet—this point should be emphasized—this abstractness of embodied reality is hardly any less “real” for being abstract.

In the passage quoted above, the sentence following the one that qualifies the truth of empirical observation qualifies this qualification, as Hegel often does: “But here we have only immediate materiality, which, for that very reason, is only *abstract* and finite” (ibid.). One will note here a discrepancy of translation, which will further clarify this

statement.¹² The word in question is translated as “materiality” in the English edition of the text; in the German, however, it is *Körperlichkeit*—physicality—a materiality that is rooted in the body (*Körper*), and as such might be understood as “bodiliness” (if one were to invent a more literal English equivalent). In this more specific sense, then, Hegel is discussing bodies as finite in that they formally abstract themselves from matter and its movement, its motion. This is what Hegel means when, in considering matter qua matter, he says that it “moves spontaneously; [and] it is therefore infinite within its sphere” (2004: 49), this “sphere” being abstracted from matter’s finite embodiments (which are themselves abstractions). Hegel mentions this in passing, ultimately accepting the abstracted character of embodied matter as finite and moving on; however, within the context of this study, this infinite materiality, situated midway between the abstractions of space and time and the *körperliche Abstraktion* of bodies, is decisive. Before returning to this matter, however, it will be important to examine one last abstraction that, incidentally, relates the previous two: the force of gravity.

Hegel deals with gravity as early as 1801, in his dissertation on the orbits of the planets. In this text, he presents a critique of the reification of centrifugal and centripetal forces that changes them from the “mathematical laws of motion” to “the physical appearance of force” (2002: 184). In other words, this reification gives undue ontological status to two aspects of a single force: namely, gravity. These two forces are then assumed to be fundamentally unrelated, except in their mutually external opposition. As a corrective to this tendency, Hegel discusses gravity as a force that expresses itself in multiple ways:

One must say that gravity is one and the same thing which exists in the form of two factors, space and time, or even, so to speak, in the form of space at rest and space engendered by motion in time. All quantitative differences and relations concern those factors, one of which augments while the other diminishes; and no

¹² The full sentence in German is: “Aber dies nur die unmittelbare und eben damit *abstrakte* und enliche *Körperlichkeit*” (Hegel, 1970: 65).

relation or proportion can obtain between the factors, unless it obtains between factors posited within one and the same thing (ibid.).

Even in 1801, Hegel theorizes gravity as a unifying force that mediates the abstractions of space and time, motion and matter. In an almost proto-Einsteinian fashion, Hegel discusses this force as a sort of spacetime, one that is only separated through its relative expressions: in motion and matter. Gravity is thus posited as an organizing principle of matter in bodies. This should not be a particularly surprising thing to say, and yet the way in which Hegel chooses to say it can be read in interesting ways.

Hegel locates the organizing force of gravity—its center—outside of the body (Hegel, 2004: 46 & 51). This is not necessarily to posit gravity as topologically outside of the body, but rather as external to its immediate materiality, to the unincorporated excess of matter that exists structurally prior to the formation of the body at all. As a result, the “location” of gravity could just as much be said to be located external to the outside, and is therefore—insofar as after all of this one wants to retain these abstract spatial terms—inside as well. Furthermore, it is just this externalization in relation to both inside and outside—as the expression of the force given to abstract spatiotemporal relations in motion and matter—that manifests as centripetal and centrifugal forces, or attraction and repulsion. This means that for Hegel, the *center of gravity* is not a spatial location first, but is posited *as* spatial by the matter that it organizes (Hegel, 2004: 54) through these forces that are its expressivity. These forces arise, in Hegel’s view, because gravity itself—as the relation of space and time, matter and motion—remains external to the excess materiality which it organizes, and for this reason matter coalesces around it in a striving, an irresolvable *nisus*¹³ through which it takes form. This center however remains ideal, and in fact must remain so in order to express itself. In this *nisus* toward an ideal center can be seen the desire of matter, and conversely perhaps the matter of desire.¹⁴

¹³ Hegel uses this term, perhaps in reference to Blumenbach’s *nisus formativus*.

¹⁴ Is gravity the *objet petit a* of matter?

Thus gravity, as the force that simultaneously arises from matter and that is the condition for its organization in the first place, becomes the tail of the uroboros, or for that matter its head, closing a feedback loop of simultaneous abstraction wherein nature precludes its own material origin and that subsequently Hegel's text attempts to trace.

1.3 Text and Reality

Hegel's beginning of nature as an intersection between abstractions might hopefully be coming into better view at this point. On the one hand, there are the abstractions made by mechanics: space and time, for example. On the other, there are abstractions made in and through the formation of finite bodies. Each is an abstraction of the other and is related to the other in a mutual abstractness. Space, time, motion, matter, gravity: the relations of and to each of these forces, as outlined by Hegel, are predicated on a multiplicity of abstractions from their otherwise inextricable interrelation. The concrete world of embodiment, however, is just as much an abstraction from the flux of these forces (of time, movement, gravity, etc.), but one that gets hypostatized as a collection of stable, preexistent positive entities. What is most interesting and most obscure between these two aspects of nature's externalization is precisely this *process of* abstraction, and what indeed this process has to say about ideas of concreteness and *a fortiori* those of the idea of reality.

Of course, since the advents of process philosophy or the new physics, this observation might not appear at first to be all that original or compelling. However, there are reasons why the *Philosophy of Nature* merits a rereading in these terms. First of all the value is not scientific. There are ways to consider the world that do not rely on scientific reason—Hegel's Reason, for example, certainly does not. However, to read Hegel's text in this way is hardly to go to the other end and to purport to offer some alternative to science's idea of objectivity. There is no reason for Hegel, operating already outside of (yet including) the bounds of science, to denounce it. Rather, slipping between these extremes, Hegel's text in fact attempts to veritably enter, or help the reader to enter, the very Proteus that is nature, without relying on or wanting to offer any sort of *explanation*

for it. This is also to say that Hegel uses his text as an attempt to address coherently a fundamental incoherence—in the strict sense of the word—which rests behind or before the subject-object split: an incoherence of subject and object because the two have not first been dissociated in order to then cohere. Fidelity to a necessarily incoherent, subjectless position for that reason must alter Hegel's method of inquiry, rendering it significantly different than any purely explanatory investigation. In Hegel's own words:

The theoretical [which is to say observational or scientific] approach begins with the arrest of appetite, is disinterested, lets things exist and go on just as they are; with this attitude to Nature, we have straightway established a duality of object and subject and their separation, something here and something yonder. Our intention, however, is rather to grasp, to comprehend Nature, to make her ours, so that she is not something alien and yonder. Here, then, comes the difficulty: How do we, as subjects, come into contact with objects? If we venture to bridge this gulf and mislead ourselves along that line and so think this Nature, we make Nature, which is an Other than we are, into an Other than she is...we transform things into universals, or make them our own, and yet as natural objects they are supposed to have a free, self-subsistent being (2004: 8).

Rather than attempting to bridge the “gulf” between subject and object set up by an observational, theoretically disinterested approach,¹⁵ Hegel closes his eyes and jumps into it. Certainly, the *Philosophy of Nature* is primarily considered to be an investigation into humanity's relation to nature, but the fashion in which it does so seems ultimately much more unsettling than edifying, more like a fall into a gulf of contingency (*Zufall*) than the construction of a bridge (between, say, logic and spirit). Hegel employs a mechanics of abstraction on two fronts that serves to renounce from either side the stable reality of a subjective or an objective world, to begin only with this mechanics itself. In lieu of a stable reality, then, Hegel immediately and persistently confronts his reader with

¹⁵ This is what some philosophy of science insists on trying to do, superfluously attempting to epistemologically ground scientific practice, presumably to make up for the economic and practical insecurity of the professional philosopher in the face of the utility of science in today's global capitalism.

the reality of abstraction immanently presented in and through the movement of his language: a language which traces an inscrutable matter.

The subsequent discussion of abstraction, through the progression of Hegel's book, becomes more and more tempered. However, the performativity of the abstract mechanics that he sets up in the beginning, and that has been outlined here, continues to function. Nature is theorized through the expressiveness of its abstractions and the abstraction of its expressivity; in this very strict sense one could even call the *Philosophy of Nature* a book of abstract expressionism.¹⁶ In the subsequent investigations of the book (into the elements, light, weather, plants, animals, and so on) Hegel textually traces the process and development of abstraction, utilizing the scientific knowledge of his time. Underlying all of the erratic expressions of abstractions, however, is the obscurity of matter—that “first reality” (Hegel, 2004: 44). Matter is the closest thing to experience, but is also unthinkable—unthinkable not because it is some thing-in-itself, but because it cannot be considered without form, and form necessarily (re)places one in the position of a detached observer. However, by highlighting the process of abstraction itself, and by foregrounding this process at the level of his writing, Hegel's work attempts to circumscribe this problem. In doing so, the text performs its own double articulation. This, on the one hand, as has already been discussed, attempts to almost literarily inscribe access in the text to something like a pure materiality. On the other hand, in the same movement the *Philosophy of Nature* fosters something like a textual expression of the material world in general. This abstract character of matter, as it is conditioned by both forces and forms, does not make material reality any less real, but indeed introduces into it an element of irreality that pervades and is expressed in and through the world. This precedes the conscious and observing subject and imbues the world with an immanent yet in a sense unreal *causa sui* that is not fantasy for being unreal and that, literally rather than figuratively can be talked about in the sense of a text of materiality, or a materiality of

¹⁶ Although clearly their two uses of the term *abstract* are very different, it might not be completely amiss to interpret a Pollock painting as a visual approximation of Hegel's version of matter.

textuality (“of” here taken in the strongest possible genitive sense). This is not to say that one should merely look at reality *as* a text; there is no need for the simile. The text’s integrity, however, is always breaking down.

Chapter 2

Didn't Hegel himself highlight the difficulty of demonstrating reason in nature? Therefore, the necessary dislocation of the eye from its privileged position, the deconstruction of light in its ability to make its own transparency appear, would thus require the traversal of Hegel's philosophy of nature.

Rodolphe Gasché (2012: 286)

2 Light and the Elements, or Phantasm and Reverie

After Hegel's chapter on mechanics, the idiosyncratic and obscure terrain of the second chapter of the *Philosophy of Nature*, entitled "Physics", begins with an investigation of light. This light, however, is not merely taken to be a facet of nature; it is also understood as the universal prerequisite for its intelligibility in the first instance. Light is thus Hegel's entrance into the comprehension of physical world from his beginning in the utter abstraction and the inarticulable madness of the truly concrete.

2.1 Light

The problem to address, then, in this text and beyond it, is that implicitly the light of the *logos*, the sun of Western knowledge, already imposes itself onto light as a sort of *lumen naturalis rationis*, functioning at once as guarantor and executor of its own articulation. To even read Hegel's writing on nature presupposes the light that will have been its condition of comprehension, and as well presupposes that that light must be consistent with what it shows. However, as might be demonstrated through a closer analysis of Hegel's text, neither the phenomena that appear in light nor the possibility of writing them are so quickly given. In fact, light itself prevents the possibility of its own coherent articulation and therefore presents the condition for both the possibility and the impossibility of nature's comprehensibility. This is to say that Hegel's *Philosophy of Nature* can be read along two lines:¹⁷ one might call the first phenomenological—which

¹⁷ Really this is a false dichotomy. It must be read along both of these lines.

would take light as the revelator of phenomena, and which would presuppose a consistency in textual description—and the other non-phenomenological, or what will below be called phantasmalogical—which would not.

2.1.1 Light and Phenomenology

Phenomenology, as at least Heidegger has it, is the study of that which appears (*phainesthai*), and more specifically, that which is made manifest through a “discourse” (*logos/deloun*). On this register, *logos* as discourse is understood “more precisely as ἀποφαίνεσθαι. The λόγος lets something be seen (φαίνεσθαι), namely, what the discourse is about” (Heidegger, 1962: 56). The *logos*, therefore, at least in Heidegger’s view, is the condition of enunciation, or revealing, of an object (as a specified object—“as such”), on the level of *phainesthai*: those things which appear. The condition of this appearance at all, however, is light: “φαίνεσθαι...comes from φαίνω—to bring to the light of day, to put in the light. Φαίνω comes from the stem φα—, like φῶς, the light, that which is bright—in other words, that wherein something can become manifest, visible in itself” (Heidegger, 1962: 51). (This is not to mention the quasi-mystical Heideggerian conception of the clearing, the *Lichtung*—which also takes light as its root—in which beings “reveal” themselves and are revealed.) At least since Heidegger, then, one sees that a fundamental complicity between light and language has been at work in what amounts to one prevalent version of the phenomenological project. This complicity is one that precedes any particular phenomenological inquiry, and insinuates an inherent articulability in that which is presented, in and by the light of language, to the discerning subject’s gaze. Light and its specular metaphors become the transparent medium through which objects also become transparent—present—in and as an identity with themselves, through an implicit linkage between what light supposedly shows and what the equally supposed transparency of discourse can articulate thereby. In other words, all that appears is *a priori* submitted to a set of signifying practices embedded in a subject, or its world, that tries to make sense out of the dark and primitive matter which confronts it. Further, this occurs, or is again supposed to occur, through *both* the literal and figurative medium of light (and *a fortiori* sight) that makes objects comprehensible in the first instance. Light functions in the phenomenological interpretation, then, as the physical transmitter

of phenomena into discursive regimes and vice versa. This implicit association then installs vision and light as the prime movers of the *logos* and its intellect. What can be seen can be understood.

The notion that light would be *unreflectively* caught up in philosophical discourse, however, is far from a new one. For instance, in 1957 Hans Blumenberg critiqued this sort of metaphorical entanglement in his essay “Light as a Metaphor for Truth”. What Blumenberg importantly points out is that “light acquires a history” (1993: 40)—a history that he traces from the pre-Socratic philosophers through the allegory of the cave, to scholastic philosophy and Francis Bacon: the point at which light, which had previously existed as immanent to the world, became interiorized in and synonymous with the subject’s logical scrutiny, as the arbiter of revelation. “The inner light of the mind [*Geist*] is descended from transcendent light...Light no longer shines into the world in order to wake it into Being; instead, it gets lost in an alien and enemy sphere; it must be liberated and led back to its origin. The paideutic history of *man* [sic], who comes out of the dark into the light, has been transformed into a history of *light*, which loses itself to the dark and returns to itself” (ibid.). This odyssey of light operates in phenomenology as an implicit imbrication of phenomenality with a logic to be studied. If this is the case, and if, as Tilottama Rajan has argued (2002), there is a genealogy shared by deconstruction and phenomenology, this implies the necessity of a deconstruction *of* phenomenology.¹⁸

In what was initially a doctoral dissertation on Georges Bataille, Rodolphe Gasché (2012) begins such a project through a juxtaposition of phenomenology with what he terms “phantasmatology”, which he develops through a sustained exploration of Bataille’s remarks about the phantasm, and Freud’s remarks about the fantasy. Both the fantasy and

¹⁸ This is different than a dismissal of phenomenology. Certainly aspects of all the major phenomenologists (Husserl, Merleau-Ponty, Sartre, and even Heidegger himself) can be read against this interpretation of a phenomenological appropriation of light. However, it can be argued that this appropriation remains implicit in the more or less canonical interpretation of the phenomenological project—and hence the necessity for its deconstruction.

the phantasm share an etymological root—*phantasia/phantasma*—that arises, like *phainesthai*, from light. Phantasmatology will remain here only a theme to be explored, and necessarily so, because for Gasché, the phantasm of phantasmatology is originless. It is delirious, and produces delirious (*dé-lire*) readings (Gasché, 2012: 11-13). He writes of the phantasm (first in relation to the Freudian question of the phylogenesis or ontogenesis of the primal fantasy) that it is “the hybrid derivative in the general meaning of an offspring that constantly deviates from the stem and makes every genetic genealogy impossible” (2012: 135). The phantasm flashes up for a moment, only to dissolve; it articulates itself only to disarticulate the possibility of remaining present for a future articulability. “The phantasm lasts only for this single moment, which is at the same time also the moment of consternation: the phantasm dissipates itself and delivers itself over to death. The phantasm is this intermediate area that opens up in the gap, in the blind spot of Hegelianism, as an impossibility to be philosophically thought. A veritable *logocide* takes place” (Gasché, 2012: 210-211). The chance of reading Hegel through this blind spot of Hegelianism is precisely what a phantasmatological reading can offer.

In his essay on Hegel’s semiology, Derrida discusses Hegel’s theory of light as a visual precursor to a phonocentric bias in his writings more broadly.

[L]ight is posited as a first manifestation, even if a still abstract and empty manifestation, the undifferentiated identity of the first qualified matter. It is by means of light, the neutral and abstract element of appearing, the pure milieu of phenomenality in general, that nature first relates itself to itself (1985: 91).

Derrida then goes on to claim that sight is, in its relation to light, an ideal sense, but that hearing is so to an even further degree because visually perceived objects “persist beyond the perception of their sensory, exterior, stubborn existence” (1985: 92), whereas hearing passively receives and assimilates signs of which there is not a properly material remainder.¹⁹ Such would be one of Derrida’s main projects, not just in this essay: to

¹⁹ Blumenberg (1957) makes a similar point.

proffer this remainder—as *écriture*—against hearing’s presumption of a direct relation to signification, to the signified. From here, Derrida moves on without really returning to the question of light and vision, having shown its lesser evil when compared with sound. However, if there is something at work in light and vision that thwarts the enlightened world, it will be productive to address this chiaroscuro, to find and explore the shaded borderland in which it becomes possible for *phainesthai* to become *phantasma*. If, in other words, light is “the pure milieu of phenomenality in general” (Derrida, 1985: 91), it must also be the locus of a dissociation from the *logos* of phenomenology.

2.1.2 Fiat Lux

In the *Philosophy of Nature*, light is the first instantiation of what Hegel calls “qualified” matter, which is to say matter that possesses some modicum of form, albeit in a rudimentary, as yet indeterminate state. As has already been discussed, previous to his discussion of light Hegel is interested in matter in its absolute abstraction, as a completely formless category of “mechanics”, separate from any embodied manifestation of it in the world that would be bounded off from its continuity. One recalls his statement that matter is “infinite within its [own] sphere” (Hegel, 1970: 49), which is the case only insofar as one considers matter separate from its finite, embodied manifestations. In this sense, matter is abstracted from its traditional hylomorphism, universalized, and considered continuous with itself. Light for Hegel is (structurally and synchronically) the first stage of matter’s differentiation from this absolute abstraction. However, although differentiated in some sense, it remains universal, and therefore undetermined (*unbedingt*), i.e. disembodied. He calls it a “material ideality” (Hegel, 1970: 91). Further, because Hegel’s text theorizes light’s universality, it goes on to uphold various claims about the nature of light that run counter to the contemporary scientific understanding of it, going so far as to discount early theories of light that posited it as particles and waves (Hegel, 1970: 92).²⁰ However, reading the *Philosophy of Nature* purely for its scientific import is not advised.

²⁰ However, it should be noted that even in contemporary science, it is uncertain as yet whether light is composed of particles or waves, each of these categories being used as needed, as consciously applied

Scientificity aside, then, the value of Hegel's theory lies in its conceptualization of light as the indeterminate basis of material determinations, and as the condition for their visual sensation and subsequent cognition. Indeed Hegel pulls no punches here, construing light as the very materialization of the principle of identity. "Matter in its first qualified state is *pure identity-with-self*, unity of *reflection-into-self*...This existent, universal *self* of matter is *Light*" (Hegel, 1970: 87). One sees how light for Hegel is not a merely inert physical entity, but already is tied up with forms of subjectivity (and therefore phenomenological apprehension). Light is likened to the self (Hegel, 1970: 88, 93), as its precondition and in fact its prefiguration: "This is the pure reflection-into-self which, in the higher form of spirit, is the Ego" (Hegel, 1970: 88). Hegel even goes so far as to say that light is "simply Thought itself, present in a natural mode" (1970: 93). There can be no doubt then that this theorization of light is of an onto-epistemological nature, which is to say that Hegel is not considering light as such, as an *object* of study (i.e. its physical properties)—as illustrated by his heavy-handed dismissal of the Newtonian theory of light—but rather as the material condition for knowledge, which is also to say as the continuity that exists between and prior to the subject and object of knowledge, and that somehow ensures their communion: "Light brings us into the universal interrelation; everything exists for us in theoretical, unresistant fashion because it is in light" (Hegel, 1970: 88).

Here light is given a very clear function: to provide the clarity and transparency of identity. It illuminates the objects of the world to come to light "as such", which is to say phenomenologically. It acts as a great unifier—a sea in which otherwise disparate entities are submerged—functioning as an ethereal, weightless (Hegel, 1970: 91) continuum of

external schemata, to understand the different behaviors of light. For this reason, as farfetched as it seems, Hegel's extravagant theorization of light as a universality might in fact contain a kernel of scientific relevance today (this is not to say that it does).

matter and the knowledge of matter. Simultaneously the remainder of differentiated matter (in particularized substances), and the precondition of its apperception, light opens up a clearing for ontology (as Heidegger would later note). It is the condition by which things become what they are and remain so. Light thus conceived is plenitude; it typifies the fallacious principle of “consumption without loss” (Blumenberg, 1993: 31), according to which identity may remain throughout the alteration of that of which it is an identity.²¹ Furthermore, in its capacity as the element of identity, light functions for Hegel (as well as implicitly for physics more generally) as the ultimate archivist of memory. In reference to the propagation of light, specifically in reference to starlight that takes years to reach earth, Hegel writes “we can see in it a Past which has become Present in an ideal fashion as in memory” (1970: 92). Here one can perhaps see the more contemporary idea of light cones in a very elementary form. Regardless, the implications of this phenomenon²² Hegel considers to be “eerie” (1970: 94), stating that one should think them without “involving oneself” (ibid.) in them. Put simply, light is the materiality of *Erinnerung*, and perhaps here even Hegel realizes implicitly the dangers of an infinite archive. If light spans time, then on the one hand it provides the perfect continuity, which envelopes existence in a blanket of comprehensibility, but on the other hand (as will be shown) it fragments this continuity with a non-identity, interrupting in identity as a *mise-en-abyme*.

As this disembodied yet existent avatar of identity, light appears at first as the materiality of what Julia Kristeva with Jacques Lacan calls the symbolic. To move from nature to text, light as Hegel understands it also becomes the condition of the legibility of his writing on nature in the first instance, in precisely the same way that it is the condition of the legibility of the nature that his text describes. Light gives entities their consistency,

²¹ Because Hegel relies on this principle, he invokes the fairly absurd thesis of “General Alix”, who believed that the planets surrounding the sun produced hydrogen for it to burn (1970: 91), which Hegel interprets as a process by which the planets “posit their plurality ideally in their centre, and epitomize themselves in this unity of their existence” (ibid.). In this way, the sun is literally understood as the principle of identity at the heart of the solar system.

²² The main implication seems to be that events—disastrous or even mundane—might occur without the possibility of knowing (i.e. seeing) them.

having arrested the dark play of signifiers that might otherwise at any moment dissemble and disassemble (transcendental) signification generally. In this light of the symbolic, which presides over the text, the *Philosophy of Nature* becomes the Book of Nature; it *appears* to freeze the natural world in a blinding transparency, through which words and things coincide in an absolutely ordained harmony, thereby laying nature bare to the discernment of its reader.

For Kristeva, the symbolic is characterized by two main attributes (Kristeva, 1984: 22-23). First, it is characterized by coherent structures that give rise to a system of categories (semantic, logical, intercommunicational). These linguistic categories are synchronically structured but also diachronically modified in history. Although they are influenced by history, and however historical and ideological they may be, these structures at any given time may be analyzed in terms of a static, stratified structure that articulates a more or less definite meaning for each linguistic category (as an example Kristeva discusses Chomsky's generative grammar), which subsequently determines how meaning can be generated semantically. Second, the symbolic relies on the deixis of "the subject of enunciation, which always proves to be the phenomenological subject" (Kristeva, 1984: 23). This is to say that the phenomenological subject—in this case the reader of Hegel—understands the text as an appearance (*phainesthai*) predicated upon a prior revelation of potential meaning: that given by a certain grammar, which in this case is made to correspond to nature through a principle of identity that Hegel locates in light. The light assures—or seems to assure—that the statements in the *Philosophy of Nature* are consistent with what is described in the text, because light provides the means by which what is seen remains consistent for a conceptual articulation. One can therefore see in Hegel's discussion of light the construction of a phenomenological fiat that subtends a symbolic system to which the natural world would correspond, already given, all ready to be grasped.

2.1.3 Light and Reflection

Nonetheless, against the presuppositions of this surface reading of Hegel, there flows a countercurrent, turning his light against itself. Perhaps expectedly, this current and

countercurrent of light create a whirlpool in the text. For Hegel, light constitutes the material manifestation of motion—the displacement of matter’s identity—as it returns to itself in order to constitute a self-identical matter (Hegel, 1970: 87), the consequences of which have already been discussed. This is to say that for Hegel, the identity of light is not at first this self-identity, but is such only as the *return* to a unity of matter and motion. Furthermore, this unity for Hegel appears not to be a static, peaceful one. Rather, light is constituted by a *perpetual* return of motion to matter and matter to motion:

Matter which has revealed itself as this *unresting whirlpool* of self-relating motion, and as the return to a being which is in and for itself, and this being-within-self which is there in contrast to outer existence: such matter is Light. It is the self-contained totality of matter, only as pure *force*, an intensive life which holds itself within itself, the celestial sphere which has withdrawn into itself, whose *whirling* is precisely this direct opposition of the directions of the self-relating motion, in whose flux and reflux every distinction is extinguished (ibid.; my emphases).

What one notices here is an ambiguity along the lines of what Kristeva outlines in her appropriations of Plato’s *chora*, and to a lesser extent Husserl’s *hyle*, both of which she unsurprisingly aligns with Hegel’s idea of *force* (Kristeva, 1984: 32). In the above quotation, Hegel’s understanding of light is predicated on the notion of force, which, as Kristeva notes, “supersedes itself as Force; conversely, its realization as Force is a loss of reality” (1984: 115). In other words, force, and therefore light (as “pure force” (Hegel, 1970: 87))—the material guarantor of identity and phenomenological certainty—does not and cannot itself possess a stable identity. Rather, light exists as a flickering, a departure and return in what Hegel calls an “absolute velocity” (ibid.): presumably the speed of light. This implicit instability requires Hegel to renounce the possibility of grounding the light that is the basis for the appearance of *phainesthai* in the first place, and therefore the basis of comprehending this appearance according to any discourse, or *logos*—which is to say phenomenologically. Hegel must take the position that light is “devoid of any determination within itself. Its determinateness is indeterminateness” (1970: 88); “In

thinking of light, one must renounce all conceptions of composition and the like” (Hegel, 1970: 93). In this way, he ends up with an aporia in which light cannot remain what it is.

Of course, any painter or optometrist will along with Hegel note that the apprehension of light requires a fundamental relation with what it is not. Pure light would function the same as pure darkness (Hegel, 1970: 89). It is therefore only in the interplay of these two extremes (which are effectively hyperbole) that light becomes effective: “light has a limit, a defect or lack; and it is only through this its limit that it manifests itself...it is in the limit that reality first begins” (ibid.). The limit to light is more determinate matter, the “heavy matter”(Hegel, 1970: 95) that it cannot permeate. As a result, light is reflected by its surface, and it is from this interplay that both light and what is illuminated derive significance. It is this reflection, and reflection in general, that makes the phenomenological project simultaneously possible and impossible in relation to vision. Light becomes caught in a perpetual reflection that removes it from any direct representational economy: the surface of an object “shines, but is not originally self-luminous, its shining is derived; [however] since the surface at each point behaves like the sun it is a being-for-another, hence outside itself and so in the other. That is the chief characteristic of reflection” (Hegel, 1970: 97). Reflection, on this account, is therefore not that of a single light that gives the condition of a single, self-same reflection of the world. Although for Hegel light does originate with the sun, or today with the fluorescent tube, and can by and large be trusted in everyday activity, it is nonetheless perpetually multiplied and fragmented by its objects of reflection. Light cuts across itself, splits itself in its reflectivity, dislocating itself in a displacement and deferral of origin. In other words, it is not that first light exists and then its reflection; rather, it is only in and as reflection, cutting across more reflections, that light comes to exist at all. Noting this ceaseless mirroring of light and its sources, Hegel gives the following analogy:

Any attempt to explain this mechanically results only in the wildest confusion. If we call the two mirrors *A* and *B*, and ask what is visible in *A*, the answer is *B*: but *B* is *A*'s visibility in *B*, so what is visible in *A* is *A* as visible in *B*. Now what is visible in *B*? *A* itself, and *A* as visible in *B*. What more is visible in *A*? *B* and that

which is visible in *B*; i.e. *A* itself and *A* as visible in *B*, and so on. Thus we have the continual repetition of the same thing, but so that each repeated image exists separately (1970: 98).

This amusing analogy shows that light and vision do not merely require an external opposition (i.e. darkness); rather, light is also caught up in a sort of general economy where in its very constitution it is already interpenetrated by its own impossibility of serving as a *direct* source of illumination. Expanded and repeated ad infinitum in the very process of its shining, light reflects itself *en abyme*, monadically folding into itself and plying its objects of reflection along with it, so that any determinate understanding of one or the other is severed by their very relativity—which is not a relation of one identity to another, but rather the broken play of mirrors, which only show light back to itself as something different (its reflection via objects of reflection). This means that the *phainesthai*, appearing “as such” in light, is fragmented rather than illuminated, because light is always already engaged in an effectively originless reflectivity given by the very objects it is supposed to show. Thereby this “as such” can only appear to disappear, to move outside of itself into an economy of images (or signifiers) that functions as a suspension of communicability, cut across by other objects expended in light, which does not remain itself but which becomes the purveyor of these infinitely reflected positions, this “whirlpool” of non-identity. In light, *phainesthai* “is” *phantasma*. It is only upon a subsequent analytic separation of the object’s image from light, in vision (which implies a subject) that the phantasm takes on meaning and becomes a phenomenon, given by the *logos* and its regime of signification: in Kristeva’s terms, the *symbolic*. This symbolic emergence of the phenomenon from its ectoplasmic suspension, however, remains only temporarily, eventually returning as *phantasma* to the prolonged mirroring from which it came. At the basis of the appearance of phenomena (and therefore phenomenology), then, is no longer light *per se*—identical with itself and the condition of identity—but a lightlessness, which is nonetheless light, though a light that cannot shine because it is already reflected.

2.1.4 Phantasmatological Reading and the Semiotic

Along these asymmetrical lines, Gasché writes that “the structure of the phantasm is that of a chain of connected yet sharply distinguished, constantly multiplying images that groundlessly mirror one another” (2012: 157). Inasmuch as this groundless mirroring disrupts the rigidification of discourse (*logos*) and that which appears in and through it (*phainesthai*), it becomes possible, and in fact necessary, to turn this phantasmatological light onto language. Gasché in fact already thematizes this turn in his work on phantasmatology, concentrating on the way in which the phantasm haunts a movement that establishes “objective” language through its separation from what Bataille calls “mythology”. Specifically, Gasché examines this *re-venant* of the repressed in terms of the signifier and the image, which he makes synonymous with one other (2012: 141). In other words—this probably does not bear repeating—language and linguistics are fundamentally connected with the project of phenomenology, each mutually constituted from a fundamental rejection of indeterminacy. This is further echoed by Kristeva in her work on psychoanalysis and semiology: “the aim of linguistic metalanguage is a normativeness and/or a grammaticality given in its phenomenological purity as a synthesis of nuclei of meaning or of signification” (Kristeva, 1984: 37).

Kristeva critiques, with her notion of the semiotic, the very derivation of the symbolic order, moving beyond emphasis on the difference and play within that order. If, then, the light of phantasmatology displaces the phenomenologico-linguistic ordering of appearance, this splitting of light also reflects the split in language between its constitution as a system of representation and as a drive: in other words, the desire in language to articulate the inarticulable. According to Kristeva, the semiotic “is articulated by flow and marks: facilitation, energy transfers, the cutting up of the corporeal and social continuum as well as that of signifying material, the establishment of a distinctiveness and its ordering in a pulsating *chora*, in a rhythmic but nonexpressive totality” (1984: 40). By stressing the semiotic, Kristeva emphasizes that language itself is “only one stage of the signifying process” (*ibid.*). If this is the case, light’s phantasmatological aspect gestures toward this excess in the signifying process from

which language rends itself to establish its seeming univocity, like objectivity separates itself from mythology for Bataille and Gasché.²³ This aspect of light breaches the semiotic as that which reveals, or reflects, the restricting and external imposition of the symbolic order, while at the same time providing the condition for access to it.

If, then, light is the condition of identity, and therefore the symbolic ordering of phenomenology, it is also the seat of phantasms, of non-identity and the semiotic, structurally pre-linguistic morass of rhythm and force²⁴ that unsettles any attempt at articulating that which appears (*phainesthai*) according to a discourse (*logos*). In other words: inscribed in the very condition of any phenomenological reading, of Hegel or otherwise, light functions duplicitously as both the condition of apprehension, and the medium by which apprehension is obscured in a seemingly infinite mirroring that leaves appearance lost in an expanse of partial images and ephemera. As the very condition of phenomena to appear, or to be revealed at all, “as such”, light—and at this point one should sense a relation between light as a *specular* force and light as a *speculative*²⁵ one—reflects and is reflected only as an image of what can never be shown: continuity without consistency, the disruptive specter that interrupts representation. Light is not the Platonic sun, the pure Being that gives identity and takes it away, but the phantasmatic dream from which we each wrench our phenomenal reality, and that ceaselessly

²³ For Bataille and Gasché, mythology is not properly understood as mythology until this schism.

²⁴ One might consider this phrase in terms of waves and photons, though even waves and photons possess a symbolic identity that the semiotic *chora* flouts in its nonexpressiveness. The point, however, is not to hypostatize the semiotic, but rather to show that expressivity arises from its nonexpressivity, rather than the reverse.

²⁵ Gasché writes: “The mirroring aspect of the *specter*...fixates the idea of a discontinuous dispersion of images, which is also amplified by the fact that the individual images mutually mirror each other in an infinite regression like a hall of mirrors. Thus, the meanings that need to be brought into play are *specter*, *spéculaire*, perhaps even *spectaculaire* (inasmuch as the image is also presentation, representation, and staging), *spéculatif* (which like all others derives from *specio*), and finally also *specus* (Latin for cave, grotto, tunnel, *pit*)” (2012: 156).

announces our separation from it. This specter therefore generates speculation,²⁶ but one in which the specular is not already given.

The function of light at the debut of the concretization of matter in Hegel's text is a very specific one: his discussion of light sets the conditions by which matter becomes readable at all. If one interprets this light as the condition of the identity of natural phenomena, then indeed one will be locked into a reading of the *Philosophy of Nature* in which Hegel unconvincingly attempts to bring matter into accord with a non-existent logical dialectic. However, if one reads this same matter according to the spectral contradictions that already haunt Hegel's text, the light that must illuminate the rest of it becomes much more forceful. In this register, the phantasmatological light implicitly discussed at the beginning of the physics chapter, never apparent on the surface, continuously irrupts in the symbolic economy that Hegel earnestly tries to set up throughout the rest of the book, as the echo of matter's abstraction. Even prior to any discussion of the more particularized manifestations of matter, the theorization of light in the *Philosophy of Nature* already demonstrates in language the aberration from which neither language nor light nor nature can or should escape. If Hegel's use of abstraction in his first chapter places language and nature on the same level—rather than treating the former as a purely detached descriptor—Hegel's discussion of light at the outset of the second chapter prevents the direct correspondence of his own language with the matter he is nonetheless attempting to describe. Matter then becomes the silent signifier of what he cannot place within a traditional philosophical economy of language, a fact that becomes even more pronounced in the section on the “meteorological process”, which immediately follows his writing on light.

²⁶ Jean-Luc Nancy's commentary (2001) on Hegel's idea of the speculative seems especially appropriate in this case.

2.2 Meteorology

In the section on the meteorological process, Hegel constructs the first images of matter under this phantasmatological light. On the surface, this section discusses the processes of the elements that ultimately constitute the basis for the appearance of life. However, it quickly becomes apparent that Hegel's discussion of the elements relies on a use of language in which they function as signifiers of the behavioral characteristics of Hegel's conception of nature, rather than of the substances that compose it.²⁷ In this section, Hegel invokes the doctrine of the four elements, treating them metaphorically as the different expressions of a distortive matter that he cannot theorize on his own terms, and that he must therefore circumscribe in a gestural, metaphorical economy. In other words, these images of the elements belie a phantasmatic instability in the matter that Hegel brings to light.

2.2.1 The Four Elements

The elements in Hegel's section on meteorology remain universal, and as such disembodied (though this is not to say that they are immaterial—only that they are not yet embodied). However, because these elements exist also as particularized expressions of matter, while they participate in its disembodied universality, the aspects of nature that Hegel deals with here exist always in excess, transitioning and giving way to one another in cycles and processes. Hegel explores this movement in his examination of air, fire, water, and earth.

But why does Hegel invoke the archaic notion of the four elements in the first place? Considering the doctrine of the four elements to be scientifically legitimate was an anachronism even in Hegel's time. His choice to discuss nature in these terms, however, is not based on a pre-scientific naïveté, but predicated on a much more deliberate critique

²⁷ Afterward, in discussing the “chemical process”, Hegel does discuss the formation of the basic substances that compose life. However, these “chemical objects” are also abstractions of the meteorological elements (Hegel, 2004:240), which for Hegel only exist in an obscure relation with a matter that he refuses to define.

of the chemistry of his time, especially its redefinition of the elements atomistically.²⁸ Hegel makes this critique explicitly, justifying his recuperation of the doctrine of the four elements in the following passage, which is worth quoting at some length:

From the standpoint of chemistry, we are, it is held, required to understand by an ‘element’ a general constituent of bodies which are all supposed to consist of a definite number of these elements. Men start by assuming that all bodies are composite, and the concern of thought is to reduce the infinite variety of qualified and individualized corporealities to a few simple incomposite and therefore general qualities. Based on this supposition, the conception of the four Elements which has been general since the time of Empedocles, is nowadays rejected as a childish belief because, forsooth, the Elements are composite. No physicist or chemist, in fact no educated person, is any longer permitted to mention the four Elements anywhere (Hegel, 2004: 106). [But]...The chemical standpoint is by no means the only one; it is only a peculiar sphere which has no right at all to extend itself to other spheres as if it were their essential principle. We are here dealing only with the becoming of individuality and at first, only with that of the universal individual, the Earth: the Elements are the differentiated matters which constitute the moments of this becoming of the universal individual. We must not therefore confuse the standpoint of chemistry with that of the still wholly universal individuality (Hegel, 2004: 107).

In other words, Hegel is not just ignorantly approaching the elements from the position of an outdated chemistry or alchemy—because he is not approaching them scientifically to begin with.

While he does on one level understand the elements to be substantial in their own right (e.g. water as the substance of lakes, oceans, and so on), Hegel considers each of them

²⁸ For example, around this time, figures such as Henry Cavendish and James Watt were debating the chemical structure of water.

first only as the modalities of a universal matter which considered in isolation from its different, individualized expressions remains a universal abstraction, as was discussed in the previous chapter. Put another way, Hegel treats the elements in terms of their behavior rather than their composition: at times they even take on almost subject-like qualities, becoming sorts of natural *dramatis personae*. At other times, they seem to defy their own identities, becoming the vehicles for the displacement of their own meaning within Hegel's text.

The four elements are related in the following way: from light, Hegel derives air, which gives way to fire, which becomes water. Finally, he takes the passive ground for the relation of the previous three elements to be earth. Although not through a chronological process, one element does seem to arise from a change in another's structure. To illustrate: air is the negative universality (Hegel, 2004: 108) of light. Like light, air is universal; however whereas light is weightless, air has a more substantial, heavier (ibid.) universality—heavy to the point that it “pervades everything” (ibid.). It exists as a purity, “but not an inert purity; for what evaporates into air is not preserved therein but is reduced to a simple universality” (Hegel, 2004: 109). Effectively, air acts as an erosive purity, through which—in friction with the matter with which it comes into contact—it breaks matter down, as a “harmless-seeming but insidious and consuming power over what is individual and organic” (Hegel, 2004: 108). Air acts in a way as an agent of aging and decay. However, instead of merely breaking down bodies into smaller components such as atoms, Hegel contends that we should view this erosion even more strongly, as a negation of the shape of the matter that it erodes, in which it transforms this matter completely into air.²⁹

The next element that Hegel discusses is fire. For Hegel, fire is a momentarily concentrated version of air. He cites the way in which a piston gives off a spark as

²⁹ He says that “we must not be so tender towards matter” (Hegel, 2004: 109).

evidence of this concentration (Hegel, 2004: 110). Fire is the result of the “consumptive power” that is inherent in Hegel’s conception of air. To put it in his own terms: whereas air is consumptive “in itself”, fire is a consumptive “being-for-self”. It is in fire that the negative universality of air is kindled into a form that exhibits its negativity as “[an] existent being-for-self, negativity as such” (Hegel, 2004: 110). However, as a material expression of this pure negativity, fire consumes itself in consuming its object: as a pure negativity, it is self-negating. In line with his discussion of time in the “Mechanics” chapter, Hegel calls fire a “materialized time or selfhood” (ibid.).³⁰ In this way fire is linked to air and to time, as the expression of their intensification.

Opposed to fire’s pure activity—a double negative, a self-negating negativity—water is neutral. It is “the opposition returned into itself” (Hegel, 2004: 111). Hegel likens water to air, in that for him, both exist as fluidities. But whereas air is an expansive, elastic fluidity, water is non-elastic, and “more earthy” (Hegel, 2004: 112). It is, as he says, horizontal (ibid.). Water has no center of gravity, and for this reason, the place that Hegel assigns to water here is one of neutrality, which offsets the negativity of fire.

In his discussion of meteorology, Hegel has little to say of the element of earth,³¹ save that it “holds together the different moments [the other three elements] in individual unity, it is the power which kindles them into a process which it also sustains” (Hegel, 2004: 113). In other words, earth acts as a foundation upon and with which the other three elements interact. It is this interaction that Hegel ultimately identifies as the meteorological process: “The individual identity which binds together the different Elements, as well as their difference from one another and from their unity, is a dialectic which constitutes the physical life of the Earth, the *meteorological process*” (ibid.). In the

³⁰ It is probably almost redundant to say here that it might in this sense be possible to speak of a poetics of fire (such as Bachelard’s).

³¹ However, earth is taken up more in the first subsection of the section on “Organics”, when Hegel discusses geological processes.

meteorological process, matter exists between and as the elements, constantly exceeding its individual abstract forms. As Alison Stone phrases it, “the elements are not stable objects but shadowy media which shade indeterminately into one another” (2005: 129). “The main difficulty in grasping the meteorological process comes from confusing physical Elements with individual bodies” (Hegel, 2004: 114). In order to further theorize the relation of the elements in this conception of meteorology, then, it might be helpful to consider Georges Bataille’s notion of general economy.

2.2.2 General Economy, Metaphor, and Meteorology

The idea of a general economy³² might be described as follows: it is an economy that, rather than concentrating on saving wealth or energy for production, concentrates on the loss associated with the construction of systems. A general economy is predicated on an excess that, by definition, cannot be productively incorporated in a system that restricts its applicability to specific ends. Such an economy therefore concentrates on expenditure rather than production and accumulation. According to Bataille:

The human mind reduces operations, in science as in life, to an entity based on typical *particular* systems (organisms or enterprises). Economic activity, considered as a whole, is conceived in terms of particular operations with limited ends. The mind generalizes by composing the aggregate of these operations...It does not take into consideration a play of energy that no particular end limits: the play of *living matter in general*, involved in the movement of the light of which it is the result. On the surface of the globe, for *living matter in general*, energy is always in excess; the question is always posed in terms of extravagance (Bataille, 1989: 22-23).

From this, it is possible to see in Hegel’s text the presentation of a general economy occurring between natural forms. Consistently one sees an abundance of “*living matter in general*”, not to mention “the movement of the light of which it is a result”. It proliferates

³² Bataille opposes general economy to “restricted economy”, which attempts to divert energy into a means of production. Restricted economy is, in other words, more or less the traditional notion of economy.

and splinters into multiplicities of forms as the result of the inability of any finite form to restrict it. Manifestations of this exuberant matter operate throughout Hegel's text in oppositional and transitional processes that might be said to constitute a general economy of this definition, in that each gives way to another, disallowing the fixity of the identity of matter. The development of each element entails its dissolution and envelopment in others, at the point of a formal rupture in which natural shapes—which the scientific mind takes to perdure in a stable identity, even through transformations—open up to a non-identical profusion of matter: “the explosive character of this world” (Bataille, 1989: 40). This reveals simultaneously the excessive character of matter itself, in its universality unburdened with the stagnancy of form, as well as the specific *force of form as a metaphor for performativity*. In this general economy, the elements are no longer exclusively restricted to the generic identities of objects. In other words, rather than existing as scientific objects for Hegel to enumerate, the elements of his meteorology are identifiable “as such” only insofar as they exude, to certain degrees, particular behaviors of matter, thereby participating in an economy of analogy wherein the identities of matter and material processes are exchangeable with each other as insufficient signifiers that ground one another in a self-referential system of metaphors. This general behavior of a sovereign materiality leaves the identity of each element as merely a temporary reference that leads to another. To now give some of the more extreme examples: it is in this sense, moving beyond the elements themselves, that Hegel discusses lightning as “aerial fire” (2004: 121), the moon as a “waterless crystal” (2004: 101), volcanoes as “thunderstorms with earthquakes” (ibid.), thunderstorms as volcanoes in the clouds (ibid.), and clouds as “rudimentary comets” (Hegel, 2004: 120). In his time, it was debatable as to whether or not comets possessed a solid center, and so Hegel seems to literally believe that comets were composed of fluid; however, to take this relation—of comets to clouds—which is of a metaphoric character, as merely an immature scientific perspective again misses the point. These analogies proliferate not merely as comparisons between two objects or occurrences, nor as supposedly scientifically validated truths. Rather, these analogies should be taken in a strong sense, as a transposition of logics (*ana-logos*), where the rationality that for Hegel supposedly underlies and allows for the comprehension of nature breaks down precisely in order to point toward its opposite, in an almost oneiric

relativity between volcanoes and thunderstorms, or clouds and comets. With this in mind it might be contended that this text—in how its language circles around a nature it already knows to be inarticulable—works through an unconscious that complicates Hegel’s usual tendency toward systematization; perhaps matter is Hegel’s unconscious. One might then read the positive content of Hegel’s writing on nature as an attempt to cathect the impossible experience of materiality through language, and to show how this linguistic-material sublimation is always already at play.

2.2.3 Matter and the Unconscious According to Bachelard

Hegel would likely resist approaching his own work in this way, so in order to foreground this tendency toward an unconscious in his work it will be helpful to briefly draw on the work of Gaston Bachelard, to obliquely gesture toward the textual aspects in the *Philosophy of Nature* that belie what Hegel cannot articulate and yet still must. This begins, in Bachelardian terms, with reverie. Reverie (*reverie*), for Bachelard, is different from a dream (*rêve*), although they are fundamentally related. Whereas a dream could be said to be a phenomenologically real irreality, a reverie finds an irreality at the basis of the real: it, like the phantasm, functions to distort the real, and in doing so to subvert the command of any reality principle. Bachelard writes:

The demands of our *reality function* require that we adapt to reality, that we constitute ourselves as a reality and that we manufacture works which are realities. But doesn’t reverie, by its very essence, liberate us from the reality function? From the moment it is considered in all its simplicity, it is perfectly evident that reverie bears witness to a normal, useful *irreality function* (1969: 13).

The irreality espoused in Bachelard’s reverie is a function of the imagination, which for him is not a technical term; it might be said that for Bachelard, the imagination is only the faculty that disrupts the organization of reality, which might in this sense be read as the converse to Kant’s imagination, or as a modification of it.³³ The important distinction

³³ In many ways, Kant’s imagination is more interesting, because of its dual function, where in the first critique it acts as a faculty for the construction of the unity of apperception, and in the third critique it acts

that Bachelard makes, however, is between two types of imagination: formal and material. More accurately, he understands the more or less traditional notion of the imagination to be formal, and dismisses it in favor of a “material imagination” that he deals with at length in his later work.

The distinction between the formal and the material imagination takes its impetus from Aristotle’s theory of the four causes. In this regard, Bachelard writes: “besides the images of form, so often evoked by psychologists of the imagination, there are—as I will show—images of matter, images that stem *directly from matter*...When forms, mere perishable forms and vain images—perpetual change of surfaces—are put aside, these images of matter are dreamt substantially and intimately” (Bachelard, 1982: 1). The formal imagination in this sense only gives rise to play within the conceptual frameworks of determinate judgments (i.e. Hume’s imagination). As opposed to this formal imagination, the material imagination operates out of an experience of matter itself, of matter given through the breakdown of form, in reverie. As Bachelard succinctly puts it, “*matter is the unconscious of form*” (1982: 50). Like the Freudian dream-work, one might then also conceive of a sort of Bachelardian reverie-work, operating in one’s relation to matter. This relation—of reverie, matter, and the unconscious—for Bachelard is especially evoked in poetry, which is to say that if matter is indeed analogous to the unconscious, it articulates itself through images evoked in a certain use of language.

In this case, the reverie of matter in Hegel’s text announces itself, like in some poetry, through the breakdown of its positive content, which allows matter to exceed the text’s semiotic restrictions. First, against the necessity for a concrete beginning, matter is considered as an abstraction. Second, its very prerequisite of comprehensibility—light—

as a supplement for an incommensurable discontinuity between the faculties that it synthesizes in the first. However, Bachelard’s imagination will be more useful here, in its relation to matter.

is obscured before it can be appropriated as the condition for any direct representation. Finally, when matter as it is conventionally understood finally does appear in the text—as the unstable elements of the meteorological process—it does so ambiguously and phantasmatically, engaging itself in a metaphorical economy wherein its forms are only ever temporary names for aspects of its performativity, wherein each aspect of matter serves as the reference point of another, leaving only the repetition in different terms of the same abstract *abgrund* with which matter began.

From here, Hegel never really moves past the implicit positioning of matter as a distortion at the heart of nature. However, this is not to say that Hegel considers matter to be entirely inaccessible. Rather, in the text following the chapter on physics he describes the different manifestations of this matter, as organisms, exploring the ways in which each particularizes itself as a different relative stabilization of matter's distortions of identity. In each organic form, Hegel attempts to make his material unconscious speak its unspeakable surplus, which otherwise is ever at conflict with itself. The following chapter will explore the ways in which these organisms retain this conflict.

Chapter 3

Nature—matter—and the unconscious are bound to emerge against history and consciousness; but both—or, indeed, all four concepts—demand a different theoretical economy.

Arkady Plotnitsky (1993: 194)

3 The Organism: Reality as Allegory

Hegel's chapter on "Organics" is divided into three parts, which cover what he understands as the terrestrial, vegetable, and animal organisms, respectively. Rather than consider organic nature to be directly synonymous with life, Hegel makes the organism, as an organization of natural forces, the definitional precondition for life. This allows him, by stretching its definition, to first consider the earth as an organism, since it is organized into a relation of its constituent processes. This organism, however, is rife with the same breakages of determinacy as was the meteorological process, for which it is the ground. As will be shown, Hegel's treatment of the earth as an organism repeats and extends the metaphorical economy that began earlier in the text with the elements. In this way, he continues to elliptically discuss the ambiguity of matter in its disembodied, unformed state. For the first time, however, in this section a determinate life begins to emerge from the otherwise universal solar and terrestrial processes that constitute the life of the earth.

Following his discussion of the terrestrial organism, Hegel moves on to the vegetable organism. The plant occupies a liminal space between the universality of nature and the particularized subject, and for this reason Hegel treats it in between the earth and the animals. In the plant, the subjectivity of the organism is immanently identified with its individual parts, so that the plant constantly produces a multiplicity of itself rather than establishing a single, self-contained organic unity. Harking back to his discussion of the four elements, Hegel again extends their uses as metaphors and likens the plant kingdom to water, as a neutrality (2004: 277). Finally, the animal kingdom, or the "Fire-Kingdom"

(*ibid.*) supersedes that of the plant. Here, at the end of the *Philosophy of Nature*, for the first time emerges a unified organism set entirely above the processual breakdown of the continuity of matter in its universality. With it develops the notion of subjectivity properly so called, and thereby the very notion of a reality to be known and scrutinized. In other words, with the animal's separation from nature, matter as it has been understood is displaced in the ideal relations between more or less sentient beings and *their own* environments. However, the force of matter's nameless and constant transition always threatens to burst through the bounds of animal embodiment. If, then, at first the movement of matter is repressed and temporarily sublimated, so to speak, through the development of animal sentience, it eventually reappears in the abject signifiers of what reclaims the rupture produced by the development of the animal, which it wants to disavow, but cannot: namely excrement, disease, and death.

3.1 The Terrestrial Organism

The earth constitutes the basis for the movement of the meteorological and chemical processes, as well as plant and animal life. Hegel understands it to be the consolidation of the relations that make up the solar system, which for him are only implicitly organic (2004: 275). As such, Hegel considers the earth in terms of its “solar, lunar, and cometary life” (2004: 278), extending a metaphorical relation from the section on meteorology (2004: 120):

The free, independent members of the universal process, sun, comet, and moon, are now, in their truth, the Elements: Air as atmosphere, Water as the sea, but Fire as a terrestrial Element contained in the fructified, dissolved (*aufgelöst*) earth and separated off as a fructifying sun. The life of the earth is the process of atmosphere and sea in which it generates these Elements, each of which is an independent life for itself while all of them constitute only this process (2004: 294-295).

Through the meteorological process and its relation to “the sidereal connection outside it” (2004: 293)—a relation that Hegel makes by analogy—the earth is “fructified into vitality” (2004: 294). The sidereal and distant relations that obtain in the solar system are

condensed into the meteorological processes, of which the earth is the ground, and from which the chemical processes that produce individual life are derived. The force behind the life of the earth is in this way found outside of it. It is because of the self-externality of the identity of the terrestrial organism that Hegel notes: “the earth, it is true, is totality; but because it is only implicitly (*an sich*) the process of these bodies, the process falls outside of its product which is perpetually renewed...The earth, thus presupposed by life as its own basis, is *posited as not posited*; for the positing is concealed by the immediacy” (2004: 278; my emphasis). As the basis of the production of life, the earth serves as the immediate vehicle for the functioning of the metaphorical meteorological economy that Hegel sets up to mediate and channel the abstract forces of matter toward the more individuated forms of (plant and animal) life. The life of the earth, or the condition of earth as the presupposition and ground of life, is then itself groundless due to the deferral, or displacement, of its own force in favor of the condensation of forces external to it, which are themselves only meaningful in a self-referential, circular system of metaphors (for example from the atmosphere to air to fire to the sun, etc.). Indeed Hegel at one point likens the earth to one who is asleep and dreaming (2004: 282). In his depiction of it midway between the processes of meteorology and the movement of the heavens, the earth more closely resembles a dreamscape than a planet, though one that nonetheless possesses a degree of reality. One might then say that Hegel’s description functions as that of a reverie, a distortion of the reality not yet set up by organic life and human knowledge.

It is from this immediate terrestrial reverie of solar, meteorological, and chemical processes—each at once bound up with the others, while each progressively condenses into more particularized forms of life—that the earth becomes “fertile”, negating its own indeterminate universality and creating the conditions for the emergence of more and more determinate organisms.

In other words, because the terrestrial organism is only implicitly (*an sich*) vitality, the truly living organism is an other than the terrestrial organism itself. But since this is in itself the negativity of itself, is the sublating of its immediacy,

it posits the inwardness of itself but as a being which is the other of it: that is, the earth is fertile—fertile simply as the ground and basis (*Boden*) of the individual vitality upon it. But the earth is vitality only in an indeterminate mode; true, this vitality erupts at all points, but only feebly (Hegel, 2004: 294).

The earth is fertile in that it is animated, but not yet animate, and so the forces that are at work in its immediacy begin to mediate one another—for a relatively unclear reason³⁴—conserving the differences (Hegel, 2004: 294) that arise through these mediations. These differences produced by the earth’s fertility are “feeble” and “indeterminate”, which is to say that they are not yet fully individualized, not yet entirely separate from the universality of matter from which they arose. This is also the case in Hegel’s theorization of the chemical process, and for this reason he goes on to identify the earth as the “absolutely universal chemical process” (2004: 294).

Here Hegel discusses how life establishes itself in its rudimentary forms in the ocean—which with recourse to more of his original metaphors he identifies with “the cometary Element” (2004: 298)—and on land—which is “the solid crystal of the lunar Element” (ibid.). In his exploration of the development of life on land and in the oceans, Hegel understands it as a universal vitality, which does not yet manifest itself in a determinate organism and rather exists as a “punctiform” (2004: 294, 298) organization of the universality of nature, as microorganisms that do not fully differentiate themselves from their environment. Further, Hegel understands these indeterminate organisms to originate *generatio aequivoca* (2004: 294, 302). In his terms, to originate *generatio aequivoca*, to be mutually generated—as opposed to *ex ovo*: from an egg or in other words sexually reproduced—is characteristic of these organisms, emerging through the division of a prior organism or cell (presumably in meiosis and mitosis), rather than through the

³⁴ Hegel does not seem to address the question of how life begins, and rather takes it as a given that it does, and must. One should remember that Hegel here already presupposes nature’s existence, and does not purport to deduce its temporal origin (in fact as a result he often scorns theories of evolution); rather, his concern is only to show as much as possible its relation to itself and the forces that condition its comprehensibility.

production of an entirely new organism in the joining of two others. This is to say that this form of life arises in a sense from the material of its surroundings: Hegel notes that “[w]herever earth, air, and moisture are present, there we find plant life. Wherever something weathers away, at once a vegetable form, mould, or mildew makes its appearance...This vegetation, as not yet shaped by individuality, consists of inorganic-organic forms like lichens and fungi which one does not rightly know how to classify” (2004: 298). For Hegel, these simple cellular organisms are punctiform expressions of a universal vitality because they are derived from the universality of matter (as it is expressed in the terrestrial organism and its processes) while also maintaining a semblance of individuality. For this reason they are difficult to classify, and yet however taxonomically ambiguous they are for Hegel, because they generate themselves through division they become the first instantiations of a fundamental split in nature, which determines its subsequent organizations: this is the split between what will come to be identified as the organic and the non-organic—which in fact cannot exist prior to a division of matter from its own processes.

At first, in keeping with the ambiguity that the text has exhibited thus far, this division is made in such a way that the organic and the inorganic are at first only abstractions and reflections of each other, and therefore not entirely independent:

[I]n its actuality, as it is in its own self, the universality is the sunderance (*Auseinandertreten*) of organic Nature and its non-organic nature: the former being the form of individuality and the latter the form of universality. Both are abstractions; the substance is the same in both forms (*Arten*) into which it has differentiated itself (Hegel, 2004: 301).

Because this universal vitality particularizes itself *generatio aequivoca*, it retains its relation to its own universality; both its organic and inorganic aspects are linked as reciprocal abstractions from the same substance. It is only through a constant resistance to a regression back into the purely universal that life maintains itself as more than a mere modality of the animating forces at play in the “terrestrial organism”.

This life which is a reflectedness-into-self is now established as an independent existence passing through its own cyclic process, and it has its own existence which remains opposed to that other reality and holds fast to its negative nature, denies its origin, and displays its own becoming (Hegel, 2004: 302).

In other words, life begins with a denial, or at least a repression, of its own divisive origins. This division is also where Hegel locates the origins of subjectivity. However, this aspect of life is as yet only a formal beginning to subjectivity, because the forces that animate it are not yet self-determining—i.e. it is not yet entirely set over and above the inorganic materiality from which it develops. Immanently connected with its materiality, but having also separated itself from the processes of matter, here subjectivity begins in a still nascent state. This constitutive split from which the subject emerges does not take on its fullest shape in Hegel until the animal organism, but even in its earliest form it alters the economy of matter, making it more discontinuous than continuous, more transgressive than transformative. Whereas in the terrestrial organism, and in all the structural stages prior, matter was characterized by its position within a system of metaphors wherein each of its different aspects helped to determine the next, here with the development of plant and animal life the notion of the subject complicates this relationship by introducing the division between non-organic and organic nature; before this distinction was meaningless. No longer then do different aspects of matter merely metaphorically refer to one another; this oneiric economy of images, illuminated by an unstable light, comes to an end at the terrestrial organism, which begins a process wherein matter's ambiguity divides itself. From the onset of organic nature in Hegel's text, material relationships will then develop metonymically and ultimately allegorically, hierarchizing the position of matter in relation to the development of subjectivity and its futile yet perpetual repression of its own origins.

3.2 The Vegetable Organism

The plant functions for Hegel as the intermediary organism between the more universal life forms like lichens and fungi and the fully individualized forms of animal life. In the plant, the organism takes on a formal structure, a skeleton, through which it particularizes

itself and begins to retain its identity. However, the plant's subjectivity is not yet entirely distinct from its process of particularizing itself. In Hegel's words:

The *subjectivity* in virtue of which organic being exists as a *singular*, unfolds itself into an *objective* organism in the shape of a body articulated into parts which are *separate and distinct*. In the plant, which is only the *first, immediate* stage of subjective vitality, the objective organism and its subjectivity are still immediately identical. Consequently the process whereby the plant differentiates itself into distinct parts and sustains itself, is one in which it comes forth from itself and falls apart into a number of individuals, the whole plant being rather the basis (*Boden*) for these individuals than a subjective unity of members; the part—bud, branch, and so on, is also the whole plant (2004: 303).³⁵

In Hegel's conception of the vegetable organism, because subjectivity has not fully differentiated itself from its object, the parts of the plant each contain within it the whole of its proto-subjectivity. This is to say that Hegel considers the beginnings of subjectivity in plant life through a sort of metonymical framework, whereby any part of the plant represents the whole, and in fact represents a whole that cannot actually be whole, because each of its parts, in their metonymic relations, are already in themselves wholes. Consequently, for Hegel the plant grows through a metamorphosis, multiplying and falling apart, losing and changing its members until the plant itself falls apart in its quest for unity. Even though subjectivity begins in the plant, this subjectivity is equally present in every one of its parts, each of which is individuated in regard to the next, and not subordinated to an organic unity. As a result, the plant's unity is still located outside of itself: namely, in light. This places the plant in a unique position in relation to the material processes that surround it. As a subjective entity it retains its distinctness from the universal, and yet it strives back toward the universal again in order to find its organic

³⁵ Also, see Hegel, 2004: 320.

unity.³⁶ The plant for Hegel is in this way itself a materialized metonymy of desire, in that its parts each fall apart and are replaced in search of a unity that they cannot attain. It is, in other words, a manifestation of matter's attempt to overcome the disparity incurred in it after the split between its organic and inorganic aspects. And in fact, inasmuch as the plant's life seeks to return to a simpler state, paradoxically through its proliferation, the plant might even be considered as the embodiment of the death drive in Hegel's nature.

Before it can return to such a state, however, the life of the plant must begin. The first stage of its life is the seed, which Hegel, with Goethe, understands to contain already the entirety of the plant's identity. It does not grow out of the seed by developing into a unified organism, but rather the plant grows through a constant metamorphosis of the seed, which "is already in itself the whole plant, the whole tree, etc., in miniature. The parts are already fully formed, receive only an enlargement, a formal repetition, a hardening, and so on" (Hegel, 2004: 323). This occurs through a process that Goethe calls *anastomosis*, a concept that Hegel borrows in his theorization of plant life.

Goethe's term is taken from the Greek language (ἀναστόμωσις) and roughly translates to "an opening that communicates". Elaine Miller, in some of her writing on Goethe, translates it more literally as "the process of the opening of mouths" (2002: 65). This process guides the plant's development and occurs throughout all the stages of its life, from seed to fruit. It is characterized by a rhythm of contraction and expansion that opens, or unfolds the plant out of the seed, or more precisely out of the cotyledon contained within a seed. Once germinated, the plant absorbs nutrients and stores them. Eventually it expends them in sprouting the beginnings of leaves. Stems form from another condensation of nutrients, and again new shoots grow. Leaves form through the spreading out and rejoining of the veins that transport the plant's nutrients, so that the leaf's surface becomes woven from them through a progressive narrowing of capillaries.

³⁶ This is why, for Hegel, the plant strives toward light. Hegel even goes so far as to call this subjective unity of light and the plant a "light-plant [*Lichtpflanze*]" (Hegel, 2004: 336).

The calyx then forms from a condensation of leaves at the end of the stem. As the plant's development occurs, the nutrients in the sap are filtered, becoming finer and finer in the more developed organs. At the point where the calyx forms, the nutrients in the sap become so rarefied that they produce the colorful and delicate corolla. Finally, the sexual organs form as a condensation of petals germinated by these distilled nutrients. In this schematic, fractal-like unfolding of the plant from its most basic germ, each part of the plant metonymically relates to the next as a repetition of the whole individuality of the plant, each of which is in itself an entirely new plant *in potentia* (Hegel, 2004: 313).

The plant, then, as merely the repetition of the seed, never progresses beyond its incomplete subjectivity, which is immediate in the germ of the plant that separates itself from the universal life of the earth. However, for Hegel this separation is a partial one and therefore necessitates that the plant still be dependent upon a direct relation to these forces:

This hiding of the seed in the earth is therefore a mystical, magical act which signifies that in it there are secret forces which are still slumbering, that, in truth, the seed is something quite other than what it is as it lies there...the seed is the power which conjures the earth to serve it with *its* power (Hegel, 2004: 323).

The growth of the plant out of the earth requires some magical explanation for Hegel. These secret, magical forces—i.e. the forces of the terrestrial organism—imbue the plant with energy, and the plant correlatively attempts to incorporate these forces into itself.³⁷ If it could do so entirely, it would be able to interiorize them and develop a subjectivity separate from its immediate existence. However, for Hegel this proves impossible and so the plant's growth consists in its perpetual falling apart as it unfolds toward the universal—in the shedding of leaves, flowers, seeds, etc.—short of culminating in any sort of subject position.

³⁷ Hegel notes that the plant grows from the seed in two directions: upward to light—the universality of identity in nature—and downward to the earth—the ground of the universal meteorological process (2004: 324).

Ultimately, in its Goethian striving, the plant does constitute its own identity vis-à-vis the elements that give it the force to grow. However, for Hegel, this only happens for a moment in the life of the plant: the point at which it flowers and bears fruit. In the process of flowering it consolidates its metamorphoses, so to speak, and unifies to produce seeds, the germs of new plants. It then ultimately passes away as whole rather than as a plurality of individuals. Hegel quotes Franz Joseph Schelver to paraphrase this process that, in keeping with the plant's strange relation to nature, occurs without the slightest explanation rooted in reality:

[W]hen the flower opens, the mystery is everywhere unfolded to its fullest extent; growth and germination are suspended, and the colouring and scent of the flower are then often developed in every part (Hegel, 2004: 350).

The flower unifies the plant as the culmination of its web of metonymical relations. Each points up to the flower, in which the plant for the first time blossoms forth as a whole. In more properly Hegelian language, the flowering of the plant displays “the return into itself of the individuality [of the plant], and shows that the parts—which in the first instance are individuals—belong also to the mediation, and are transient moments in it, and consequently that the immediate singularity and externality of plant life are sublated” (ibid.). This sublation of the plant, however, is also its death. Hegel considers the flower to be an opening of the plant as a whole onto the universal forces of nature; “since the stage of flower-life is only a relationship to an other, whereas life consists in being self-related in its self-distinguishing, this contact within the flower, whereby it becomes for itself, is its death. This contact is a positing of the individual, of the singular, as identical with the universal” (Hegel, 2004: 351). Thus the plant returns to the continuity of matter from which it came at the moment that it determines itself as a unified organism.

One can see then that what the ambivalent position of the plant represents in Hegel's nature is a sort of embodiment of the death drive. Under a compulsion to repeat itself in its metamorphoses, the plant's teleology drives it to reunite with its origins in

universality, much like the Freudian subject that also strives to return to homeostatic calm. The plant distinguishes itself as an organism, but because the relation of its subjectivity to its objectivity is an immediate one, it cannot break free of the universal forces that condition it, and so it eventually falls back into them. Its life in this way is a perpetual dying, while its death is the apotheosis of its life. As a system of metonymies—in which each part of the plant is a repeated gesture toward an always incomplete whole—the plant falls apart, and in the flowering of its death it returns to an indeterminate movement of matter having become in a sense the metonymy of all of nature, non-identically repeating and metamorphosing itself *ad infinitum*.

3.3 The Animal Organism

The plant remains connected with matter's indeterminate movement that thus far has been implicitly treated by Hegel in terms of abstraction, phantasm, metaphor, and metonymy. Its blossoming outward from and ultimate pulsating return to this universality, as the manifestation of a proto-death-drive, represent what in nature cannot be contained or broken away from: a matter that simultaneously constitutes the basis for individual life as well as the certainty of its eventual dis-individuation, i.e. death, or metamorphosis. In opposition to the plant, which exists in this way in a perhaps more honest relation with nature, the animal is constituted precisely by its determinate break with this ambiguous materiality.

The form of the animal, in other words, is brought about through a radicalization of the way in which microorganisms first break from the processes of the terrestrial organism *generatio aequivoca*. However, whereas these organisms as well as the more complex vegetable organism retain their direct dependence on the processes of nature, the animal makes itself into an absolute of sorts, by interiorizing the universality that previously existed outside of it, creating an interior world unto itself. This is perhaps the most important and telling move that Hegel makes in the *Philosophy of Nature*, in that here, for the first time, Hegel introduces the split between matter and mind (*Geist*). Here the subjectivity of the animal appropriates nature's universality, developing a soul that is set over and above its constituent parts, unifying them in it as a supposedly self-sustaining

organism. Here, in other words, for the first time, the bare materiality of the animal's individual constituent parts is separated from an interiorized universality that is the expression of the unification of these parts. Thus, Hegel theorizes the animal as the beginning of spirit. This beginning of spirit, however, is contemporaneously the beginning of matter understood *as such*. The interiorization of universality into/as the subjectivity of the animal at this point is retroactively projected back onto the rest of the text as the very condition of its comprehensibility. The implicit phenomenological fiat underlying the text,³⁸ otherwise flouted at every turn by an ambiguity that supervenes upon every attempt to establish determinate relations of form in matter, finally arises with the animal to pronounce identity upon it.

Moreover, this constitutive split from which the animal arises, as the stabilization of identity in the animal's (especially the human's) subjectivity, arbitrates a division between what counts as a stable reality and what counts as an irreality. Hegel writes:

This idealism which recognizes the Idea throughout the whole of Nature is at the same time realism, for the Notion of the organism is the Idea as reality, even though in other respects the individuals correspond only to one moment of the Notion. What philosophy recognizes in the real, the sensuous world, is simply the Notion (2004: 358-359).

The condition of reality—or what becomes philosophically admissible as reality—is determined by the animal's split from and retrospection upon an indeterminate, unconditioned existence, which as such is inadmissible to philosophy, and is therefore anachronically reflected in the previous text of the *Philosophy of Nature* as the multiple series of contradictory abstractions and analogies that have been discussed thus far. The legitimating concept of reality, then, is foremost a product of a subject located outside of its materiality; and this determination equally constructs a materiality separate from the subject that judges it. However, this dislocation is only the illusory product of the

³⁸ See Chapter 2, Section 1, Subsection 2.

animal's subject position. In this way, split from the same substance, the subject and its material situation are allegories of one another rather than opposites, mutually establishing one another in what will be discussed below in terms of Arkady Plotnitsky's conception of an allegorical economy. For this reason, for the remainder of this chapter the term *matter* will signify the allegorical counterpoint of mind, whereas *matter* will signify the ambiguous materiality that precedes and permeates the individualization of the animal organism, and that it must repress in order to maintain its autonomy. In other words, the very *notion* of a material reality is constituted by the repression of and ultimately the animal organism's disavowal of its direct relation to nature and its processes. This separation, however, does not last, and *matter* ultimately challenges this repression, becoming abject in relation to the organism.

3.3.1 The Structure of the Animal Body

The animal is characterized, as has already been noted, by a unified body. For Hegel, in the enclosure of its body, the organism separates itself from the universal processes of nature, while at the same time interiorizing them within itself. First, he contends that “[i]n the animal, light has found itself, for the animal arrests its relationship to an other; it is the self which is for the self” (2004: 351). Further, this interiorization is not merely of light:

In the solar system we have the sun and other members which have an independent existence, and are related to each other...Now if the animal organism, too, is a sun, then in it the stars are related to each other according to their physical nature, and are taken back into the sun, which holds them within itself in one individuality (Hegel, 2004: 352).

In the solar system, the sun, as the principle of light and therefore the principle of identity, is the central unifying component that holds it together as a system. Similarly, in the above passage Hegel makes the subjectivity of the animal analogous to the sun, as the ideal center that acts as the representation of the organism's identity. In fact, Hegel in this way theorizes the organism as “the microcosm, the centre of Nature which has achieved an existence for itself in which the whole of inorganic Nature is recapitulated and

idealized” (2004: 356). The animal is therefore not merely a part of nature, but an interiorization of the whole of nature’s relations. For this reason, Hegel then proceeds, in describing the structure of the animal body, to import again many if not all of the metaphors that had been operant in the previous sections of the text, which he used to circumscribe the unstable fluxion of pre-individualized ~~matter~~. For instance, Hegel describes muscular movement in terms of a “fire-process” (2004: 366), compares the pulmonary system with “the Element of air” (ibid.), and certain movements of the blood with the “atmospheric process and the volcanic process” (ibid.). Further, he classifies the lung as “the animal leaf” (ibid.), the liver as the embodiment of “the lunar process” (ibid.), and then reclassifies certain of the movements of blood in terms of a “cometary, lunar, and terrestrial course” (2004: 371). As well, Hegel categorizes the senses as interiorizations of the universal elements and mechanical relations (2004: 382): smell and taste are identified with water, touch with gravity, etc.³⁹ Hegel organizes these metaphorical importations of nature in the animal by adopting a pre-existent threefold structure of the animal organism—of sensibility, irritability, and reproduction—initially developed and theorized by Albrecht von Haller and Karl-Friedrich Kiemeyer (Stewart, 2000: 191).⁴⁰ Nonetheless, that Hegel would import the same metaphorical economy that obtains prior to the emergence of subjectivity suggests that the internal matter of the organism retains the same instability that is expressed in the processes of ~~matter~~ that antecede the organism’s internal life.

Even though nature is internalized in this way, the animal still maintains a distinct boundary between its own subjectivity and the matter outside of it: “the rest of Nature is

³⁹ Less surprisingly, Hegel allies the senses of sight and hearing with light and sound, which he also treats earlier in the text, outside of their relations to the senses.

⁴⁰ Sensibility, very simply put, is the organism’s ability to sense itself, to exist as a bundle of self-feeling. Hegel aligns this aspect of the organism with the nervous system (2004: 364). Irritability is the organism’s ability to sense and interact with the world outside of it. Hegel aligns irritability with the muscular system (2004: 366). Reproduction comprises the organism’s ability to maintain—i.e. reproduce—itsself in the face of an externality that continuously wears it down. On the level of the organism, reproduction manifests itself in the digestive system (Hegel, 2004: 371).

therefore here present for the first time as outward” (Hegel, 2004: 356). In other words, the animal creates a microcosmic version of nature, which it at the same time determines as an other, relating to it as something foreign to the animal body. In this way, the organism represses its own direct relation to the universal instability of *matter*, in order to determine itself in a dichotomous relation where it thereafter reestablishes matter as an inert exteriority over and against which it stands, mediated through its subjectivity. As will be discussed in what follows, it then relates to matter allegorically, and eventually imposes a symbolic order upon it through what Hegel calls the “constructive instinct”.

3.3.2 Reified Allegories

Of course, the animal’s relation to *matter* does not cease to exist merely because it is repressed. Rather, the animal’s relation to it becomes in a very specific sense allegorical in and through this repression. Conversely, this allegorical subjectivity then intuits its external circumstances as identical with itself, thereby projecting the allegory of its own repression onto its external world and stabilizing it as an inert and foreign matter that confronts it. This mutual constitution of matter and mind through their division functions as a variation on what Arkady Plotnitsky identifies as an “allegorical economy” (Plotnitsky, 2004: 197) in Hegel. Plotnitsky considers allegory to be the cornerstone, or in Paul de Man’s phrasing, the “faulty cornerstone”, of Hegel’s work in general, and some of his remarks can be applied still more specifically to the *Philosophy of Nature*. He writes that “we deal at least with a triple allegorization” (Plotnitsky, 2004: 129), which can here be considered in terms of the relation of matter and subjectivity as they first organize themselves around the animal organism:

The first allegory is defined by a certain visualizable geometry or topology that allegorizes nonvisualizable objects or concepts. These—this is the second allegory—in turn allegorize (and sometimes participate in) the conceptual “topology” (the use of this term is already an allegory) of certain philosophical concepts here considered. This last topology, however, further allegorized yet something else; and one needs to consider the concept or, in turn, allegory of allegory itself in order to ask it what that may be. In view of the epistemology that

ensues, it may be rigorously impossible to answer this question. (Plotnitsky, 2004: 129).

To recast this triplicity in terms of the animal, first the relation of its subjectivity to its body becomes an allegory for the nature that it represses and recapitulates on its own terms. Bataille calls the product of a repression such as this a will to be everything (1988: 88, 185). Second, this relation is then projected back onto nature, so that the animal's externality becomes an allegorical reflection of its self. This is to say that the animal imposes its own perceived stability or identity onto the external matter that confronts it. Third, then, the system constituted by (1) the animal organism as the allegory for the repression of its own origins and (2) its external world as an allegorical reflection of the product of this repression, is itself an allegory for this economy of allegories—or, in other words, an allegory of the allegorical (which is also to say figurative, or even fictional) character of these relations. In other words, these double crossings of the animal and its world reveal and represent the etiological groundlessness of each. The systematic stabilization of each through the exclusion of the other points to what in nature is expressed previously as a universal process of convoluted abstractions transitioning into one another (e.g. space and time, gravity, light, the meteorological process, or even the geological and vegetable organisms, etc.). In terms of Hegel's text, because this universal ~~matter~~ cannot be named beyond these abstractions, it cannot be read as a "reality" except through this recuperative allegorization economized at the level of the animal organism.⁴¹ Prior to this stage of nature, Hegel only expresses a "material reality" through a system of metaphors and metonymies that do nothing to stabilize it as such, and through which a figurative and dreamlike state of transition emerges rather than a self-identical physical world. This system of allegories found in the animal organism is then a reason to consider the state of ~~matter~~ throughout Hegel's text, prior to its *realization* through the animal organism's projection, as a state of irreality, of "materiality without matter" (as Plotnitsky and Derrida characterize matter in the work of de Man). However, in this case it is not

⁴¹ This is not to say that one might not consider allegory at work at other levels of the *Philosophy of Nature* as well—though these allegorical structures would necessarily be different from that of the animal organism.

that this “materiality without matter” is inherently “without matter”, or inherently unreal, but rather that matter as such does not possess a reality without dividing itself into organisms that retroactively constitute it “as such”. More specifically, this is to say that the category of reality holds no importance until organic life splits itself off from the whole of nature. Prior to this division, one can only project the animal’s understanding of matter back onto its own origins as something other than itself, as the irreality that is repressed in its constitution *as* matter in the face of the subject. It is only the inherent (and necessary) desire to possess a stable reality that makes this projection hard to accept; reality as such is an animal bias resultant from the failure to understand its own allegorical situation. This observation is what Hegel ultimately theorizes, accidentally and by way of his linguistic figurations, throughout the *Philosophy of Nature*.

The next step that Hegel takes with the animal organism is to explore how it copes with the necessity of creating its own reality.

3.3.3 The Thetic Animal

Hegel calls the way in which the animal subject relates to its world the “practical relationship” (2004: 384). This begins with the subject’s fissuring, in which it splits itself from nature. This creates a “feeling of externality as *negation* of the subject, which is at the same time positive self-relation and the certainty thereof in face of this its negation: in other words, the feeling of *lack* and the *urge* to get rid of it” (Hegel, 2004: 384-5). This feeling of lack for Hegel lies at the core of the subject and catalyzes a drive within it, a need for it to externalize itself and recognize itself in its world. For Hegel, it is only through the overcoming of this lack that the animal organism becomes a full-fledged subject (2004: 385). To do so, it alters its environment, marking it and making it its own in what Hegel calls the “constructive instinct” (2004: 406). Some examples of this that Hegel gives include birds’ nests, the lairs of burrowing animals, and spiders’ webs.⁴²

⁴² This process also includes less material processes that nonetheless manifest themselves in the world; the prime example of which Hegel gives of this is birdsong. In Hegel’s understanding of it, birdsong achieves a “blithe self-enjoyment” that even approximates art and therefore spirit (Hegel, 2004: 409).

Each of these constructions, while leaving the external world intact, reorganizes it and assimilates it into the organism's identity; for this reason Hegel considers the constructive instinct to be a combination of perception⁴³ and digestion (ibid.). In this way the organism externalizes itself in the world, creating fixed points of reference in which to recognize and reconcile the disparity between itself and its surroundings. Thus the animal enters into a symbolic order of sorts—one that gets increasingly more complex in proportion to the animal. It sees itself reflected in the world symbolically and thereby derives its identity from something other than itself, with which it nonetheless identifies.

Kristeva understands a similar process semiologically in terms of a “thetic phase”, effected, as in Hegel, by a constitutive rupture between the subject and its exteriority, which the subject then attempts to bridge by establishing, or announcing, a symbolic identity between itself and that which confronts it:

All enunciation, whether of a word or of a sentence, is thetic. It requires an identification; in other words, the subject must separate from and through his image, from and through his objects. This image and objects must first be posited in a space that becomes symbolic because it connects the two separated positions, recording them or redistributing them in an open combinatorial system (Kristeva, 1984: 43).

As in Hegel, the formation of Kristeva's thetic phase is the result of a lack. In this case, it is from the lack encountered in castration anxiety, which separates the subject from the mother and in doing so substitutes its dependence on the mother for a dependence on the stability of a symbolic order. This transition, in Kristeva's terms “transfers semiotic motility onto the symbolic order” (1984: 47), which is to say that the subject's drives are displaced and mixed into the symbolic order, upon which it must thenceforth rely to rediscover its lost wholeness—and of course it never can. The subject is through this symbolic derivation put “in process/on trial [*en procès*]”, which is to say that it comes to

⁴³ Hegel calls the animal's perception the “theoretical process” (2004: 381).

exist *between* its own internal lack and the exteriority through which it externalizes itself, as an ever-changing product of the system that it sets up between itself and its constructions.

Kristeva considers this process in terms of language (broadly construed), though it can easily be applied to Hegel's notion of the constructive instinct. In assimilating and reconstructing its environment to reflect itself, the animal creates a symbolic order similar to the one into which Kristeva's *sujet en procès* casts itself. Hegel calls this symbolic order that the animal establishes, and that simultaneously establishes the animal, the "genus process". Through the genus process, the animal's self-externalization posits its subjectivity as something existing beyond its particular material embodiment, but which does not regress to the more chaotic stage of the ~~matter~~ of its origins. This is to say that the genus process constitutes a stable order that determines animal identity beyond each of its individual manifestations (i.e. the genus). As such a process of stabilization, it is the prefiguration of spirit, which does not achieve its full expression except in the genus process of the human.

However, if the genus process leads to a material-symbolic stabilization of the identity of the animal, this is not only because the animal is so simply able to externalize itself, but also because it is driven to do so by a drive that originates with the necessary repression of the animal's own origins in an unstable nature. Kristeva writes that "the Freudian theory of the unconscious and its Lacanian development show, precisely, that thetic signification...constitutes the subject without being reduced to his process precisely because it is the threshold of language" (1984: 44-45). This means that a reduction here "of the subject to the transcendental ego" (ibid.) is impossible, because the thetic stage of the animal is driven as much by a lack outside of the subject as within: a lack of origins, of stability, of reality. In other words, the thetic animal is not reducible to a one-way projection toward spirit; this projection is always also undermined by the fact that the animal cannot fully distinguish itself from its environment in the first place, and that its

self-assertion is therefore a double movement that establishes both the animal's identity outside of itself, while simultaneously reflectively establishing the identity of the animal inside of itself, as the condition for its externalization in the first place. Each movement validates the other in a mirroring of origin. Its self-assertion, therefore, in order to be effective in positing a real order between the organism and its external world, must repress the initial indistinction between the two. It is this sublimation (and perhaps sublation) that retroactively constitutes the organism as an ego, while relegating its origins to an unconscious materiality.

3.3.4 Abjection

Nonetheless, in spite of the seeming stability of the animal's world, the first sign that this reality will not hold manifests itself in the animal's excrement. Hegel at one point even compares the process of excretion to the constructive instinct, noting that each is a "self-externalization" (2004: 406) of the organism. Thus excrement functions in a sense as a part of the thetic stage of the organism's constitution, or rather, as its counterpoint. For Hegel, the organism's waste is its error. "Excrement has, therefore, no other significance than this, that the organism recognizing its error, gets rid of its entanglement with outside things" (2004: 405). These "outside things"—food as well as gastric fluid, which Hegel considers to be foreign to the animal—cause it to be "disgusted with itself" (*ibid.*), and so the animal expels them. Here one can see that excretion for Hegel works as the vehicle through which he evacuates the fact that the animal is already not itself, but a function of a repressive, self-grounding allegorical economy by which it in its very structure attempts to escape the material processes to which it has always been irrevocably tied. In the face of a subjectivity and genus that Hegel wants to further and further purify of material conditions, excrement causes shame and disgust—it is abject. For Kristeva, abjection is not a product of uncleanness, particular physical anomalies, or characteristics associated with an object; rather, abjection is brought about by "what disturbs identity, system, order. What does not respect borders, positions, rules. The in-between, the ambiguous, the composite" (1982: 4). It is neither subject nor object, but what defies the distinction between the two, and risks the border through which they have been so painstakingly separated, by structure or evolution. The abject is then unbearable to the subject not

because it is an other to it, but rather because the abject other threatens to collapse the subject's self-differentiation through which it distinguishes itself from this other in the first place.

If, then, the animal in its very constitution represses its relation to ~~matter~~, it must double its efforts and might even attempt to disavow this relation altogether when it arises within its own structure—though the abject cannot be adequately repressed or disavowed. The initially repressed ~~matter~~ forces its way out, unable to be ignored, even while the organism must maintain this repression of its own materiality, as the condition of its perceived separation from the external world. In this way, excrement is the beginning of a threat to the very constitution of the organism. However, the disgust that Hegel and the animal feel at their abject waste is not merely a reaction to a return of the repressed:

The 'unconscious' contents remain here *excluded* but in strange fashion: not radically enough to allow for a secure differentiation between subject and object, and yet clearly enough for a defensive *position* to be established—one that implies a refusal but also a sublimating elaboration. As if the fundamental opposition were between I and Other or, in more archaic fashion, between Inside and Outside. As if such an opposition subsumed the one between Conscious and Unconscious (Kristeva, 1982: 7).

The abject is in this way constituted by a fundamental contradiction between the necessity to repress and the inability to repress, in which the distinctions between inside and outside, conscious and unconscious are threatened: “[t]hese body fluids, this defilement, this shit are what life withstands, hardly and with difficulty, on the part of death. There, I am at the border of my condition as a living being. My body extricates itself, as being alive, from that border. Such wastes drop so that I might live” (Kristeva, 1982: 3).

The next stage in the abjection of the organism, for Hegel, is disease. In life the animal organism attempts to materially approximate its genus in the act of procreation and love

(Hegel, 2004: 412-414), and in doing so to continue itself in its progeny; however it ultimately finds the genus out of reach for itself, and therefore begins to deteriorate. In other words, unable to maintain itself in a state of harmony with its genus, the animal succumbs to its universality: it begins to fall back to the materiality from which it is initially divided, and this for Hegel is the onset of disease. He thus says that the cause of disease “lies partly in the organism itself” (Hegel, 2004: 429), defining it as “a *disproportion between irritation and the capacity of the organism to respond*” (ibid.). Irritation, or in other words the stimuli affecting the organism, here outweighs the organism’s subjectivity, which can no longer organize itself as a universality in the face of its particularities. In this sense, an organ that previously worked in harmony with the organism will unbalance the entire system. Hegel then considers fever and similar bodily responses—because they affect the entirety of the body—to be its attempts at replacing all of the organs back into a unifying rhythm or harmony. If these responses and medicine⁴⁴ both fail, the inorganic aspect of the organism begins to win out against it, eventually draining its vitality, and sapping it of what initially separated it from non-living matter: namely, its unity. This then brings about the death of the animal.

In death, abjection wins out entirely over the organism’s repression; unconscious matter overtakes the organism, and the distinction between conscious and unconscious is once again annulled. This ultimate abjection, however, is not for Hegel the result of a purely external influence, but is in fact the culmination of the organism; it is inborn in the very condition of the life of the animal. Further, because the animal is initially constituted from an abstraction, a splitting off from the universality of nature, its death is an equally abstract process for it. The abstractions of nature thereby come full circle.

This universality which makes the animal, as a singular, a *finite* existence, reveals itself in it as the abstract power which terminates the internal process active

⁴⁴ Medicine for Hegel functions effectively like fever, in that through the introduction of a foreign body into the organism, Hegel believes that medicine rallies the body’s organs to respond to it as a unity, thereby bringing the body back into harmony with itself.

within the animal, a process which is itself abstract (§ 356).⁴⁵ The disparity between its finitude and universality is its *original disease* and the inborn *germ of death*, and the removal of this disparity is itself the accomplishment of this destiny (Hegel, 2004: 441).

For Hegel, in this passage, life is a disease and death its cure. Each organism rends itself from the universality of nature, and asserts itself in its will to be everything (à la Bataille) above nature, as the organ does to the organism in Hegel's understanding of disease. The genus process collects what it externalizes, creating a universality on a level other than nature, and the organism which sets itself above its own conditions then returns to its initial state, to "the repose of the dead; and this repose of death overcomes the inadequacy of disease, this inadequacy being therefore the primary cause of death" (Hegel, 2004: 442).

Death then is the relinquishment by the organism of itself. Its reality—the allegorical structure of the way in which it interprets its world—breaks down and the dichotomies that constitute it no longer persist; the split between consciousness and the unconscious, reality and irreality, mind and matter dissolve. The organism returns to a level of immanence with the ~~matter~~ that it represses—the materiality without matter, the matter without mind, the unconscious without consciousness, the irreality that persists without juxtaposition with reality. Bataille theorizes this irruptive, paradoxical materiality in his essay "Base Materialism and Gnosticism". One of his aims in this essay is to conceive of a "materialism without ontology" (Bataille, 1985: 49), a matter that "refuses to allow itself to be reduced to the great ontological machines" (Bataille, 1985: 51)—machines that would otherwise prefigure an understanding of it in terms of the dichotomy of more or less dogmatic materialisms or idealisms. The development of the animal in Hegel's chapter on organic life implicitly outlines the way in which such a base matter becomes

⁴⁵ One recalls that embodiment itself is an abstraction (see Chapter 1, Section 1). In section 356 of the *Philosophy of Nature*, Hegel writes: "Structure, as alive, is essentially process, and it is, as such, *abstract process*" (Hegel, 2004: 377).

repressed by the animal's division from nature—as a “matter” that is subsequently only articulated in the abjection of the organism. The animal then recuperates the category of matter as the projection of its own subjectivity. However, through the animal's death matter no longer exists in a duality between it and mind, and as a result of this dissolved relation with mind it also loses its ontological status. For this reason, it is no longer of real interest to Hegel, as a philosopher, who then ends the *Philosophy of Nature*. However, with the animal's death, inasmuch as it shows the animal's situation to be staked on a failed sublimation, it becomes possible to anachronically read this base matter throughout the earlier text of the *Philosophy of Nature* as the cipher to the unconscious behind Hegel's many ruminations.⁴⁶

⁴⁶ It is also possible to read this relation with regard to the *Philosophy of Nature's* position within Hegel's *Encyclopedia* as a whole. This is to say that although Hegel considers the “reality” of spirit in the third volume of the *Encyclopedia*, implicitly within its second volume he already reveals this reality to be allegorically constructed from a repression and subsequent sublimation of a materiality that cannot be interpolated within the precise ontological categories that philosophy requires. If this is the case, matter as it is theorized in its development and repression, its expansion and contraction within the *Philosophy of Nature*, can be seen to enact an unconscious to his system, which perhaps—psychoanalytically speaking—he ultimately disavows (*Verleugnung*) or even forecloses upon (*Verwerfung*) in order to make any subsequent proclamations about the nature of spirit and its reality. One might then ask, bearing in mind the clinical consequences of repudiation, if Hegel's theorization of matter forces his subsequent claims about spirit into a state of neurosis or possibly even psychosis.

Chapter 4

The goal of Nature is to destroy itself and to break through its husk of immediate, sensuous existence, to consume itself like the phoenix in order to come forth from this externality rejuvenated as spirit.

GWF Hegel (2004: 444)

Furthermore, a materialist reading of Hegel allows us to think this negativity as the trans-subjective, trans-ideal, and trans-symbolic movement found in the *separation of matter*, one of the preconditions of symbolicity, which generates the symbol as if through a leap—but never merges with it or with its opposite logical homologue.

Julia Kristeva (1984: 117)

4 Hegel's Unconscious

Having now traversed some of the more interesting parts of the *Philosophy of Nature*, a few final recapitulatory remarks might serve to articulate more precisely and concisely how matter functions unconsciously in relation to the structure of Hegel's *Encyclopedia*.

From his *Logic*, as a system of conceptual relations that precede the *Philosophy of Nature*, Hegel derives the beginnings of nature as this logic's inversion. In other words, nature for Hegel is a self-externalization proceeding from the immateriality of what he calls the *idea*. Space and the mechanical relations of time, gravity, and so on, are the first results of this externalization. However, in the first chapter of this study it was demonstrated that Hegel considers these aspects of nature as abstractions from nature's concrete situation, which can only be presupposed. Considered in terms of the Hegelian understanding of abstraction, nature's most elementary mechanical structures like space and time are abstract extrapolations from nature's particularities, while correspondingly nature's material particularities (bodies and states of matter) are themselves abstractions

from these abstract states.⁴⁷ Therefore, Hegel's beginning shows that no aspect of nature can be considered as an originary concrete state from which to begin. If Hegel cannot begin to theorize except through abstractions, then an appropriate object of study when approaching a philosophical category as broad as "nature" is impossible. For this reason, it was argued that it is in the textual movements of the *Philosophy of Nature* that Hegel works through these abstractions so as to approximate nature in its concreteness. The text, in other words, became more important than a mere apparatus for describing nature; its very constitution as a system of abstractions makes its figurative and linguistic aspects immanently related to nature's inscription of itself. In this sense, if nature is always already a system of abstractions, then the way in which Hegel's text figures such a system necessarily must reflect its own configuration: the movement of nature's development in Hegel's system can be inferred from the movements of the text.

The second chapter of this study then explored in Hegel's writing the way in which matter develops in its "universal"—which is to say its unembodied, or underdetermined—states, the first of which is light. Light was considered to be both a force of nature, as well as the very condition for its comprehensibility as a system of abstractions in Hegel's text. In other words, light for Hegel was shown to be the aspect of nature that guarantees the stability of identity. This identity, however, through a close reading was shown to be itself unstable and equally as groundless as the beginnings of nature. Similar to the way in which nature's mechanical aspects were shown to be products of a double abstraction (of the particular from the general and of the general from the particular), Hegel's discussion of light was considered in terms of its perpetual reflectivity, a phantasmatic reflectivity that skews its reliability as a source of identity. In this sense, not only does Hegel consider nature through a system of abstractions, but also, until light can be somehow stabilized, his theorization of nature is of a system of non-

⁴⁷ In Schellingian and Spinozan terms, *natura natura* are an abstraction from *natura naturans*, while *natura naturans* is an abstraction from *natura naturata*. Neither provide a foundation for an adequate beginning. Schelling has similar difficulties with beginnings (and much scholarship remains to be written on how each of these thinkers respectively handled such difficulties).

self-identical abstractions. This leaves not only nature in a rather obscure position, but also and necessarily Hegel's writing of it.

After investigating the consequences of Hegel's reflections on light, his discussion of the "meteorological process" showed that the elements that it illuminates (both physically and metaphysically), the very building blocks of nature's myriad forms, relate to one another in a metaphorical economy, as the figurations of the different expressions of matter—which at this point in the text Hegel still does not define except tautologically as a systematic relation of nature's different abstractions. In this way, for example, fire is considered as the expression of matter's negativity, water the expression of matter's neutrality, and so on. Further, since these aspects of nature are only considered metaphorically as the relative manifestations of an errant, undefined materiality, their identity as such is not stable; it was therefore shown how Hegel goes on to develop even more complex metaphorical relations in a general economy that he initially sets up with the elements. For example, Hegel posits relations between clouds and comets, thunderstorms and volcanoes, and so on. From this the possibility arose that the way in which Hegel sets up this system of nature's abstractions could be considered in terms of the unconscious. In other words, because the language that Hegel uses is so intimately tied to his conception of the structures of nature, it is conceivable that the very text of the *Philosophy of Nature* works as an expression or sublimation of an inarticulable aspect of nature's (non-)origin, which results in this proliferation of figurative language. Matter as Hegel treats it in this text would function much like the unconscious does in psychoanalysis, expressing itself in a process of a condensation and displacement cast in metaphor.

Working from this hypothesis, the third chapter investigated the ways in which Hegel's text carries this ambiguity forward and attempts to sublimate it more fully through the development of the organism. At first, the terrestrial organism repeats Hegel's metaphorical economy of the meteorological process and the solar system, becoming the ground upon which these forces mediate one another. Hegel considers the interaction

between the forces of nature that condition the development of life to be in fact themselves a sort of proto-life: a life of the earth. From the life of the earth, he discusses the way in which microorganisms split themselves off from the earth's activity, constituting the first real rift between the organic and the inorganic. This act of splitting was shown to be a fundamental factor in the constitution of the organism. The vegetable organism was then shown to be the last form of nature directly tied to Hegel's reverie-like economy of matter. In the plant, organic subjectivity strives to break free of the universal processes of matter, but ultimately cannot because the subjective and objective, or organic and inorganic aspects of the plant remain immediately related to one another. Thus the plant cannot unify itself and is constituted by a constant multiplication and dissolution; in this way, the plant represents, in a perpetually multiplying form, the death drive inherent in organic life. Finally, with the animal, organic life is able to separate itself completely from nature. However, in doing so for Hegel it represses the materiality of its origins. His discussion of the animal was in this sense considered as a theorization of the way in which the instability of matter—as it is considered up to this point in the text—is sublimated, in that the animal represses and then recuperates its material situation by projecting its own subjectivity onto the externality that it encounters.

In this regard, Hegel's remarks on the animal organism can be seen to trace the way in which the very notion of an objective reality is constituted. Hegel shows that the animal organism constitutes an objective reality through a definitive split between its subjectivity and its material situation, which it then only re-cognizes in relation to its subjectivity. This was shown to occur through an "allegorical economy" whereby the animal and its world become mutually determining allegorical grounds for one another. The animal then builds its own world, through what Hegel calls the "genus process"—a precursor to his conception of spirit. However, the constitutive rupture between the animal and its external world that allows for the genus process in the first place necessarily represses the activity of matter considered by Hegel up to that point. Implicitly within the text, matter is thus conceptually dichotomized and hierarchized between an unstable, non-identical conception of matter that is repressed by the animal ("~~matter~~"), and a matter that the animal views in contradistinction to itself as an objective reality, upon which it works to

externalize itself and make itself real. The former conception of matter in this way reflects back onto the rest of the text of the *Philosophy of Nature* as an irreal or at least pre-real conception of what matter is to the animal. Thus it was shown that the position of matter in the majority of the second volume of Hegel's *Encyclopedia* is that of a sort of material fantasy, an irreal reality that threatens the stability and self-identity of the animal's organic world. As such, the latter must repress the former in the constitution of subjectivity, the ego, on the way to spirit.

If all of this is the case, then, at the level of its presentation in the text, the treatment of matter in Hegel's *Philosophy of Nature* might be considered in terms of a variation on what Tilottama Rajan calls the "textual abject". Rajan defines the textual abject as "a form in which the speaker submerges in some trauma or affect from which he will not separate by constructing an objective correlative for it in what Lacan calls the 'symbolic' order" (1993: 62). In its immediate presentation, matter plays precisely this role, as the traumatic non-identity that Hegel must nonetheless explicate, at least in order to reach his desired identity.

Complementarily, in its relation to the rest of the system, matter can also be seen to constitute the unconscious of Hegel's work—a body of work that mostly lies external to matter, beginning with the animal organism and continuing in the *Philosophy of Mind* and the *Phenomenology*. In other words, in order for spirit to pronounce itself as true, intelligible, and self-identical, it must repress its material origins—and is in fact comprised of such a repression—as is shown in the *Philosophy of Nature*. However, because it is *already* from the position of spirit that Hegel and his reader are retroactively exploring nature, the repressed, unconscious origin of this anthropocentric position can only be articulated in an erratic, reverie-like, almost surrealist language that sublimates it so as to maintain some coherence and not undermine Hegel's position in explicating his own beginning—which is nonetheless impossible to begin with. The strange material beginnings of *Geist* are spirited away, and yet in creating an *Encyclopedia*, Hegel must return to them. Although he attempts to keep open the fissure upon which his very ability

to philosophize is grounded, and so theorize it purely on his own terms, the matter that lies on its other side contaminates the language that Hegel uses, irrupting in his encyclopedic investigation as a series of tropes (metaphors, metonymies, allegories) that prevents its circles from closing. Matter thus becomes an index for the non-knowledge upon which the Hegelian system is based, the black hole of spirit consuming the sleep of reason's dreams.

Bibliography

- Bachelard, Gaston. (1969). *The Poetics of Reverie: Childhood, Language, and the Cosmos*. Daniel Russell (Trans.). Boston, MA: Beacon Press.
- (1982). *Water and Dreams: An Essay on the Imagination of Matter*. Edith R. Farrell (Trans.). Dallas, TX: The Dallas Institute of Humanities and Culture.
- Bataille, Georges. (1985). *Visions of Excess: Selected Writings, 1927-1939*. Allan Stoekl (Trans.). Minneapolis, MN: University of Minnesota Press.
- (1988). *Inner Experience*. Leslie Anne Boldt (Trans.). Albany, NY: SUNY Press.
- (1989). *The Accursed Share, Volume I*. Robert Hurley (Trans.). Brooklyn, NY: Zone Books.
- (1990). "Hegel, Death and Sacrifice", in *Yale French Studies*, 78, pp. 9-28.
- Blumenberg, Hans. (1993). "Light as a Metaphor for Truth: At the Preliminary Stage of Philosophical Concept Formation", in *Modernity and the Hegemony of Vision*. David Michael Levin (Ed.). Berkeley, CA: University of California Press.
- Blanchot, Maurice. (1999). *The Station Hill Blanchot Reader: Fiction and Literary Essays*. Lydia Davis et al. (Trans.). Barrytown, NY: Station Hill Press.
- Breton, André. (1969). *Manifestoes of Surrealism*. Richard Seaver and Helen R. Lane (Trans.). Ann Arbor, MI: The University of Michigan Press.
- Burbidge, John. (1996). *Real Process: How Logic and Chemistry Combine in Hegel's Philosophy of Nature*. Toronto, ON: University of Toronto Press.
- (2007). *Hegel's Systematic Contingency*. New York, NY: Palgrave Macmillan.
- Char, René. (1992). *Selected Poems*. Mary Ann Caws and Tina Jolas (Eds.). New York, NY: New Directions Books.

- Derrida, Jacques. (1978). *Writing and Difference*. Alan Bass (Trans.). Chicago, IL: The University of Chicago Press.
- (1985). *Margins of Philosophy*. Alan Bass (Trans.). Chicago, IL: University of Chicago Press.
- (1986). *Glas*. John P. Leavey Jr. and Richard Rand (Trans.). Lincoln, NE: University of Nebraska Press.
- Hegel, G.W.F. (1970). *Werke (9): Enzyklopädie der philosophischen Wissenschaften im Grundrisse*. Frankfurt am Main, Germany: Suhrkamp.
- (1991). *The Encyclopedia Logic*. Theodore F. Geraets, W.A. Suchting, and H.S. Harris (Trans.). Indianapolis, IN: Hackett.
- (2002). *Miscellaneous Writings of G.W.F. Hegel*. Jon Stewart (Ed.). Evanston, IL: Northwestern University Press.
- (2004). *Philosophy of Nature*. A.V. Miller (Trans.). New York, NY: Oxford University Press.
- (2007). *Philosophy of Mind*. A.V. Miller (Trans.). Oxford, UK: Oxford University Press.
- Hyppolite, Jean. (1974). *Genesis and Structure of Hegel's Phenomenology of Spirit*. Samuel Cherniak and John Heckman (Trans.). Evanston, IL: Northwestern University Press.
- Heidegger, Martin. (1962). *Being and Time*. John Macquarrie and Edward Robinson (Trans.). New York, NY: Harper Collins Publishers.
- Gasché, Rodolphe. (2012). *Georges Bataille: Phenomenology and Phantasmatology*. Roland Végso" (Trans.). Stanford, CA: Stanford University Press.

- Kojève, Alexandre. (1980). *Introduction to the Reading of Hegel: Lectures on the Phenomenology of Spirit*. James H. Nichols (Trans.). Ithaca, NY: Cornell University Press.
- Kristeva, Julia. (1982). *Powers of Horror: An Essay on Abjection*. Leon S. Roudiez (Trans.). New York, NY: Columbia University Press.
- (1984). *Revolution in Poetic Language*. Margaret Walker (Trans.). New York, NY: Columbia University Press.
- Malabou, Katherine. (2004). *The Future of Hegel: Plasticity, Temporality and Dialectic*. Lisabeth During (Trans.). New York, NY: Routledge Press.
- Miller, Elaine P. (2002). *The Vegetative Soul: From Philosophy of Nature to Subjectivity in the Feminine*. Albany, NY: SUNY Press.
- Mills, Jon. (2002). *The Unconscious Abyss: Hegel's Anticipation of Psychoanalysis*. Albany, NY: SUNY Press.
- Nancy, Jean-Luc. (2001). *The Speculative Remark (One of Hegel's Bons Mots)*. Céline Surprenant (Trans.). Stanford, California: Stanford University Press.
- Plotnitsky, Arkady. (1993). *In the Shadow of Hegel: Complementarity, History, and the Unconscious*. Gainesville, FL: University Press of Florida.
- (2004). Curvatures: Hegel and the Baroque. In Rajan, Tilottama, Plotnitsky, Arkady and Gasché, Rodolphe (Eds.). In *Idealism Without Absolutes: Philosophy and Romantic Culture* (pp. 113-134). Albany, NY: SUNY Press.
- Rajan, Tilottama. (1993). "Coleridge, Wordsworth, and the Textual Object", in *Wordsworth Circle*, 24(2), pp. 61-68.
- (2002). *Deconstruction and the Reminders of Phenomenology*. Stanford, CA: Stanford University Press.

Stewart, Jon. (2000). *The Unity of Hegel's Phenomenology of Spirit*. Evanston, IL: Northwestern University Press.

Stone, Alison. (2005). *Petrified Intelligence: Nature in Hegel's Philosophy*. Albany, NY: SUNY Press.

Appendix: Contents of Hegel's *Philosophy of Nature*⁴⁸

INTRODUCTION TO THE PHILOSOPHY OF NATURE

- A. Ways of considering Nature.
- B. The Notion of Nature.
- C. Division.

SECTION ONE. MECHANICS

- A. SPACE AND TIME
 - 1. Space.
 - 2. Time.
 - 3. Place and Motion.
- B. MATTER AND MOTION. FINITE MECHANICS.
 - 1. Inert matter.
 - 2. Thrust.
 - 3. Falling.
- C. ABSOLUTE MECHANICS
 - 1. Universal gravitation.
 - 2. Kepler's Laws.
 - 3. Transition to Physics.

SECTION TWO. PHYSICS.

PHYSICS OF THE UNIVERSAL INDIVIDUALITY.

- A. The free physical Bodies.
 - 1. The Sun, Light and its Reflection.
 - 2. The Bodies of Opposition (Moon and Comet)
 - 3. The Planet as the Body of Individuality.
- B. The Elements
 - 1. Air.
 - 2. The elements of Opposition (Fire and Water).
 - 3. The individual Element—Earth.
- C. Meteorology—Process of the Elements.

PHYSICS OF THE PARTICULAR INDIVIDUALITY

- A. Specific Gravity.
- B. Cohesion (Adhesion, Coherence, and Elasticity).
- C. Sound.
- D. Heat.

⁴⁸ Hegel, 2004: xxix-xxxi

PHYSICS OF THE TOTAL INDIVIDUALITY.

- A. Shape (Shapelessness, Magnetism, Crystallography).
- B. Particularization of the individual Body.
 - 1. Relationship to Light (Transparency, Refraction of Light, Theory of Colour).
 - 2. Properties of the Opposition (Smell as particularized Airiness, Taste as particularized Water).
 - 3. The Totality in the Particular Individuality—Electricity.
- C. The Chemical Process.
 - 1. Combination
 - a. Galvanism
 - b. The Process of Fire (Combustion).
 - c. The Process of Water (Neutralization, Formation of Salts).
 - d. The Process in its Totality (Chemical Affinity).
 - 2. Dissociation

SECTION THREE. ORGANICS.

THE TERRESTRIAL ORGANISM.

- A. History of the Earth.
- B. Structure of the Earth—Geology.
- C. Life of the Earth (The Atmosphere, the Oceans, Land).

THE PLANT NATURE.

- A. The Process of Formation
- B. The Process of Assimilation.
- C. The Process of Reproduction (Genus-Process).

THE ANIMAL ORGANISM.

- A. Shape (Structure).
 - 1. Functions of the Organism.
 - 2. The systems of Shape (Nervous, Muscular, Circulatory, Digestive).
 - 3. Total Structure.
 - 4. The Structural Process.
- B. Assimilation
 - 1. The Theoretical Process (Sense Organs).
 - 2. The Practical Relationship (Instinctive and Reflex).
 - 3. The Constructive Instinct.
- C. The Process of the Genus.
 - 1. The Sex-Relation.
 - 2. Genus and Species.
 - 3. The Genus and the Individual.
 - a. The Disease of the Individual.
 - b. Therapy.
 - c. The Self-induced Destruction of the Individual.

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