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THE ONTOLOGY OF STRUCTURE:
DELEUZE AND DIFFERENTIAL REALISM

By

Matthew Fee

A Dissertation

Submitted in Partial Fulfillment of the

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ABSTRACT

This dissertation draws on the work of Gilles Deleuze in order to address two major questions: (1) what is “structure,” and (2) what is the nature of its reality? Focusing on Deleuze’s early work in *Difference and Repetition* and *Logic of Sense*, I argue that Deleuze’s theory of structure provides a compelling alternative to *structural ontologism*, the position that structures are best thought of as reducible to individual objects, and *structural platonism*, the view that structures are eternal entities that are outside of space and time. In response to the first position, drawing on Deleuze’s critical account of Aristotle’s metaphysics, I contend that one of the main problems with ontologism is that it is unable to provide an adequate explanation of difference. I provide an explication of Deleuze’s argument that difference is ontologically prior to identity, showing the implications this argument has for developing a realist theory of structure. In response to the second position, I argue that the problem with platonism is that it theorizes structures as transcendent, and that, because of this, platonism is unable to account for the distinctive temporality and spatiality of structure. While Deleuze rejects many aspects of platonism, I provide an account of how Deleuze draws from Plato in order to develop a new theoretical account of structure by inverting the platonist position. Finally, focusing on the concepts that Deleuze develops in his work *Logic of Sense*, I present an account of his ontology of structure as it relates to paradox. I argue that, for Deleuze, rather than thinking of structures as coherent unified wholes, we should understand structures as inherently paradoxical.

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“The most beautiful things in a novel are the things one didn’t know one was thinking about.”
Tan Lin, *7 Controlled Vocabularies and Obituary 2004: The Joy of Cooking* (Lin 2010)

INTRODUCTION

Thematic Focus

In this dissertation, I draw on the philosophy of Gilles Deleuze (1925–1995) to develop the concept of “structure” as a core problem in ontology. Focusing on Deleuze’s account of structure in *Différence et répétition* (1968) and *Logique du Sens* (1969), I argue that Deleuze provides an account of structures as real, but not reducible to individual objects or mental experience. In making this argument, I will also work to provide an alternative to two common approaches towards accounting for the reality of structure: (1) *structural ontologism*, defined as the reduction of structures to the existence of individual objects, and (2) *structural platonism*, the position that structures are transcendent and universal entities outside of space and time. I will argue that, in contrast with both of these positions, Deleuze’s early work presents an ontological theory of structure that is distinctive insofar as it takes difference to have ontological priority over identity.

From a grammatical point of view, “structure” is extremely ambiguous. “Structure” is something that is often attributed to individual physical objects. For instance, we can talk of the “structure” of things like white blood cells, pine trees, or tectonic plates. At the same time, the term can be used in a way that seems more abstract. For instance, we can talk about the structure of economic relations or literary movements. Within the context of philosophy as a discipline, this ambiguity gets even more difficult to manage. At a more methodological level, philosophers often use the term “structure” to refer to concepts, arguments, and differing theoretical

viewpoints. Furthermore, the term “structure” is regularly invoked in describing the subject matter of almost every subdiscipline of philosophy, including ethics, metaphysics, and ontology. The ambiguity of “structure” as a term thus presents difficulties for any project that investigates the concept of structure, not as the structure of something else, but as its own distinct ontological concept.

Despite this ambiguity, however, there is a pressing need to conceptualize the reality of structures. In general terms, I think this need can be characterized through a growing awareness of the inability of classical substance metaphysics—here understood broadly as the group of metaphysical positions that take individual beings (alternatively termed objects, individuals, or substances) to be ontologically fundamental—to provide an adequate solution to core philosophical problems.

More recently, and especially in the past decade, the limitations of classical substance metaphysics have been showing up in a wide range of domains. For example, in the philosophy of science, Steven French argues that “the fundamental ontology of the world is one of structures and that objects, as commonly conceived, are at best derivative, at worst eliminable” (French 2014, v). Similarly, as explained by Elizabeth Barnes, recent work in social ontology argues for realism about social structures, particularly with reference to aspects of social reality that can’t be explained “simply through reference to the individuals” (E. Barnes 2017, 2424) within that structure. In both fields, a realist account of structure provides a novel alternative to the metaphysics of individual objects.

The reality of structure as an alternative to the concept of substance is not an altogether unfamiliar notion in Western philosophy. For example, when Martin Heidegger (1889–1976) claims that Being is not a being, I take it that part of his argument is to illustrate the structural

reality of something which cannot be explained through an ontology of substance. Similarly, Plato's account of Forms seems to indicate a structural reality which cannot be fully explained through an account of individual objects.¹ Without taking a specific position on either Plato or Heidegger at the moment, my point is rather to suggest that many positions in the history of philosophy can be understood as articulating a notion of structure which is not reducible to the category of substance. Following this trajectory, this project aims to interpret Deleuze as both within this tradition of arguing for the reality of structure, while at the same time heavily revising past historical approaches to the problem.

Despite the presence of the concept of "structure" in the history of philosophy, the reality of structure is somewhat controversial in contemporary ontology. Part of the reason for this is that an account of structure does not seem to cleanly map on to the more conventional metaphysical toolbox of concepts including substances, objects, facts, properties, and essences. While "structure" is sometimes used to characterize the relations between these things, it is less often theorized as something with a distinct ontological status.

While my project here is not in philosophy of science or social ontology, my aim is to examine how an ontology of structure provides a promising alternative to substance metaphysics. My goal is not to refute substance metaphysics, but rather to explore how a realist ontology of structure can provide a compelling alternative. I develop the problem of the ontology of structure through an engagement with Deleuze's philosophy, showing how he addresses this problem in *Difference and Repetition* and *Logic of Sense*. By drawing on Deleuze to theorize the ontological existence of structures as prior to and generative of individuals, my hope is that such an account can inform how we conceptualize the reality of structures in other research areas.

¹ I further develop this reading of the "platonist" account of structure in Chapter III.

Textual Focus

In this work, the primary texts that I focus on from Gilles Deleuze are *Différence et répétition* (1968) and *Logique du Sens* (1969). In examining the concept of “structure” in both of these works, I concentrate especially on how Deleuze responds to the philosophical problem of structure as approached through Aristotle and Plato. I provide an account of Deleuze’s critique of their approaches to this problem, while at the same time developing Deleuze’s own account of “structure” that emerges in response to those positions. In *Difference and Repetition*, my textual focus is on chapters 1 and 4. Chapter 1 provides an account of Deleuze’s critique of Aristotle’s concerning the ontological priority of difference. Chapter 4 of *Difference and Repetition* provides Deleuze’s positive account of structure as “problematic Ideas.” In *Logic of Sense*, my focus has been on the earlier sections of the work, focusing especially on the concepts of “structure,” “paradox,” and the “paradoxical element.” I contrast Deleuze’s account of structure with platonist approaches towards structure, working to clarify Deleuze’s critique of Plato as well as to clarify certain theoretical concepts that Deleuze draws from the platonist position.

In addition to these works, and where I have found it helpful, I also draw from smaller sections from a wide range of Deleuze’s other works, including his essays that have been collected in *Desert Islands* (2004), *Proust et les signes* (1964), his letters collected in *Pourparlers* (1990), and part of his later work in *Cinéma II: L’image-temps* (1985). One of the essays that provides a more general guiding framework for the concept of “structure,” as well as for the project as a whole, is Deleuze’s (1972) essay “A quoi reconnaît-on le structuralisme?”, translated as “How Do We Recognize Structuralism?” in *Desert Islands*. While I do not interpret

this essay as one in which Deleuze is aiming to develop his own ontology, I nonetheless find it to be a useful point of reference to clarify and expand on certain concepts and terms that Deleuze draws from in *Difference and Repetition* and *Logic of Sense*.

While the main focus of this work is in explicating certain aspects of Deleuze's concept of structure with respect to scholarship on his work, I also frequently draw on existing literature on this topic on other research areas, including metaphysics, ontology, philosophy of mathematics, as well as the scholarship in Ancient philosophy relevant to Deleuze's reading. The reason for this is that one of the primary aims of the dissertation is to develop the problem of structure not as something isolated within Deleuze scholarship, but as something that has wider-ranging implications for different research areas.

Research Methodology

As this project draws from many different ongoing research areas and methodologies (both within and outside of Deleuze scholarship), one of the difficulties I have confronted in developing the problem of "structure" is how to navigate these different philosophical backgrounds. In navigating this tension, I have taken an approach that is inspired in part by Deleuze's own project.

In his work, Deleuze draws from a wide range of sources in developing his philosophical viewpoints. These sources include not only figures from the history of philosophy, but also literature, cinema, science, geography, art, and mathematics. Moreover, even with respect to his philosophical influences, Deleuze often addresses entirely separate philosophical methods and paradigms. For example, in *Logic of Sense*, Deleuze brings together the logical and literary work

of Lewis Carroll (1832–1898) with the Stoic philosopher Chryssipus. In addition, Deleuze furthermore brings Carroll’s literary subjects like Alice and Humpty Dumpty into conversation with the likes of Bertrand Russell (1872–1970) and Antonin Artaud (1896–1914). In *Difference and Repetition*, often considered one of his more “classical” philosophical works, Deleuze draws from a wide range of sources including Descartes, Kant, Lucretius, Schelling, and the French mathematician Albert Lautman (1908–1944).

Taken together, these different combinations in Deleuze’s work often create a unique aesthetic effect. While this effect is difficult to describe to those that are not familiar with Deleuze’s work already, I think a useful musical analogue here is the practice of “mashup.” In mashup music—a practice that grew in popularity in the 1990s and 2000s with the increasing availability of sampling technology—various songs from differences sources are superimposed together into one, often without clearly defined boundaries between the sampled origins. These different sources are sampled from widely different genres, sonic registers, and historical periods, and their combination resists many of the established boundaries (such as copyright law) within which music is produced. Notably, in contrast to many other genres, the practice of mashup marks a shift away from the notion of artistic production as an individual creation. In the introduction to a (2008) edited collection on the topic, conceptual artist and musician Paul D. Miller describes the practice as follows:

If there’s one thing *Sound Unbound* is about, it’s the remix—it’s a sampling machine where any sound can be you, and all text is only a tenuous claim to the idea of individual creativity. It’s a plagiarist’s club for the famished souls of a geography of now-here. Get my drift? (P. Miller 2008, 5)

My view is that Miller’s account here of “remix” provides a valuable point of reference for

Deleuze's philosophical practice. One of the most obvious examples of this is Deleuze's coauthored works with Félix Guattari, each of which works to resist the notion of philosophical work as emerging from a single author.² Even in his other works, rather than develop an isolated argument, Deleuze is often more interested in mixing, sampling, and producing different philosophical "effects" through the engagement with a wide range of sources. In *Difference and Repetition*, Deleuze suggests a similar point in his description of Nietzsche and Kierkegaard: "They want to put metaphysics in motion, in action" (DR 8). In this alternative approach to metaphysics, the aim—one that I think Deleuze tries to emulate—is not to provide a theoretical representation of something, but rather to produce a sort of "movement" in thought, and in so doing to invent "invent vibrations, rotations, whirlings, gravitations, dances or leaps which directly touch the mind" (DR 8). The goal is not to provide a unified philosophical vision understood as the sole work of an individual, but rather to produce a collaborative "movement" in thought, one that is achieved in part through the combination of disparate philosophical sources.

In this project, I aim to follow a similar strategy. In particular, my goal has not been to provide an all-encompassing metaphysical account of "structure," nor has it been to provide complete account of the concept of structure even in Deleuze's work. In addition, while I often place Deleuze in conversation with disparate philosophical problems, the intent has not been to indicate that Deleuze's work itself provides a full answer to the problem of structure as it emerges in these different areas of study. Furthermore, I am also aware that

² In *A Thousand Plateaus*, for instance, Deleuze and Guattari state this point in the following way: "A book has neither object nor subject; it is made of variously formed matters, and very different dates and speeds. To attribute the book to a subject is to overlook this working of matters, and the exteriority of their relations" (ATP 3).

these different philosophical combinations can produce unlikely results. Just as in the case of mashup music, the combination of Deleuze's work with different thinkers itself produces its own dissonances, resonances, and clashes between different voices. Despite these challenges, my hope is that these clashes, while at times discordant, can nonetheless provide a point of departure for new paths forward, both with respect to ongoing scholarship on Deleuze as well as outside of it.

Scholarly Contributions

This project contributes to both Deleuze scholarship, as well as to contemporary scholarship in metaphysics and ontology (especially concerning philosophical realism and the ontology of structure). While Deleuze's work has received some important recent scholarship in ontology,³ there is not yet any systematic account of his work as it relates to the concept of "structure." In addition, most of the work that focuses on his account of structure tends to interpret that concept solely in relation to French structuralism, which is often viewed as a commitment that Deleuze abandoned in his later work with Guattari.⁴ As this suggests, part of the difficulty in such a project is parsing out the relation between Deleuze's work and his various engagements with "structuralism." This topic has also received attention in some chapters and research articles. But whereas most scholarship tends to focus on Deleuze's encounter with Guattari, my focus will be rather on how Deleuze's early work uses the concept of structure to provide a metaphysical alternative to the structures of representation. In doing so, my goal is not to evaluate Deleuze's

³ See especially Kleinherenbrink (2019) and Bankston (2019).

⁴ See Thornton (2017), who provides an account of Deleuze's later rejection of structuralism after his encounter with Guattari.

relationship to structuralism as a movement, but to examine how Deleuze's work develops a new ontological account of structure.

By focusing on Deleuze's engagement with the problem of structure, I also aim to make a corrective to what I see as a misguided approach in existing scholarship on Deleuze, one taken recently by "object-oriented" interpretations of Deleuze, such as those defended by Arjen Kleinherenbrink (2019) and Levi Bryant (2011). Both Kleinherenbrink and Bryant argue (in my view correctly) that Deleuze is a realist philosopher. Both further argue that Deleuze's position is compatible with ongoing work in object-oriented ontology. While my aim is not to provide a sustained critique of this approach,⁵ I nonetheless present an alternative interpretation of Deleuze's realism. On my view, Deleuze's realism is better understood not as about objects, but structures, where the concept of "structure" is neither equivalent nor reducible to the concept of object.

My project also contributes indirectly to inform conversations about the relationship between Deleuze's early work and his later collaborations with Guattari. Part of the project here is to explain not only how Deleuze formulates the concept of structure in his early work, but what philosophical problems this concept aims to solve. In contributing to that question as it relates to the concept of structure, I aim to open the way up towards a more enriched account of how the philosophical problematic of structure then develops in Deleuze's later work. While this work does not address the question of how Deleuze's concept of structure changes through his later work with Guattari, it does aim to establish the conceptual and problematic groundwork so that this question can be better addressed in future work.

⁵ As an example of a much more critical take towards object-oriented philosophy, see Wolfendale (2014).

While I do not provide a comprehensive account of the impact that Deleuze's account of structure might have on problems surrounding structure in other disciplines, my dissertation nonetheless engages with a wide range of philosophical literature in order to provide points of contact and friction between those areas and ontology. In particular, I hope that the account of structure provided in this work can provide an initial path forward for those in ontology who are looking to develop a realist alternative to substance metaphysics.

Chapter I: Deleuze and The Problem of Structure

Chapter Overview

In this chapter, I develop the problem of philosophical realism about *structure*. The chapter is divided into two main parts. The first part introduces the main questions concerning the nature and reality of structure, arguing for its importance in ontology. In “Structure: An Introduction,” I provide a general introduction to the concept of structure. I explore four varieties of structure, with particular focus on the concept of *ontological structure* and its distinction from other ways of thinking about structure. In the following section, I provide an overview of the *problem of structure*, which concerns the relation between structures and existing individuals. I explicate a specific response to the problem, termed *ontologism*, which suggests that structures are ontologically reducible to objects. In “Structure and Ontology,” I provide an initial account of my approach towards the difference between ontology and metaphysics and Deleuze’s approach to that distinction. Following this account, I explore two more difficulties with the concept of structure: the problem of *mystery* and the *whereness* problem.

The second half of the chapter argues that Deleuze’s work provides key resources for developing a realist ontology of structure that can address the problem of structure. In “Deleuze’s Contribution to the Problem of Structure,” I focus on how Deleuze’s approach to the problem can inform ongoing work in philosophical realism and the ontology of events. In the section “Difficulties with Reading Deleuze,” I explicate some of the obstacles that surround reading Deleuze. I explore two different reading strategies, the *influence* and the *concept* approach. I argue that both strategies are useful but insufficient. In the final section, I present an

account of my own methodology towards reading Deleuze, which I term *problematic conceptual analysis*.

Structure: An Introduction

Examining the concept of structure presents many initial difficulties. The first difficulty is that the concept is extremely ambiguous. We can speak of the “structure” of such diverse things such as supermassive black holes, traffic systems, and 17th-century poetry. Outside philosophy, the term structure is used in reference to various phenomena such as airplane routes, viruses, weather patterns, magnetic fields, and algebraic functions. In philosophy, the term “structure” is regularly involved in explanations of wide range of different areas, such as the structures of consciousness, time, scientific theories, and the world.

A brief conceptual analysis of our different ways of talking about structure can help to illustrate some of these obstacles. To begin with, we often think of structure as relating to “organization” in some way. Sometimes, in these situations, to say that something “has structure” seems to suggest that it is well-ordered or patterned in some way. When a department chair says, for instance, that the new curriculum “lacks structure,” this most likely indicates that it has not been planned out effectively. So, as a first pass, we might think that structure goes hand in hand with organization, and that speaking of the structure of something is just another way of talking about how it is organized.

However, I think there are some good reasons to guard against this association. Many of the structures that we encounter in everyday life are not organized, or at the very least not organized nicely. Moreover, I think the notion of “organization” is too individualized to

adequately capture the concept of structure, since it implies the arrangement of some “parts” that exist within a larger whole. As I will argue later, the mereological notions of “part” and “whole,” while not necessarily inherently misguided, already bring with them too much conceptual baggage from substance metaphysics. Because of this, I do not think that the concept of “organization” is especially effective at explaining the reality of structure.

Taking another approach, we might also think that “structure” cannot be defined at all. In analytic metaphysics, this view has been recently defended by Theodore Sider (2011), who, in *Writing the Book of the World*, argues that structure is a “perfectly fundamental” concept, one that can be “characterized” but not defined.⁶ Sider’s account is illustrative, because it shows just how puzzling the concept of structure can become, especially when contrasted with the examples given earlier.⁷ This raises an important question: is structure something “ordinary”—is it something that pertains to everyday things such as curriculums, tax returns, and airplane routes? Or is structure something more abstract and metaphysical?

Another related question concerns the relationship that structure has with ordinary physical objects, such as chairs and tables. What does it mean to say that a writing desk “has” structure? When we speak of the table’s “structure,” are we saying something about the table itself? Do two tables made at the same factory have the same “structure,” or is that structure specific to each object? If not, then does it mean that “structure” is universal?

In working to sharpen some of these questions, it will be useful to distinguish structures from ordinary physical objects. Objects are individuals. These individuals have properties.

⁶ For Sider, “structure” instead a theoretical “posit,” one that is justified through the unifying role it plays in metaphysics more generally: “Posits are most justified,” he claims, “when they’re unifying. When a single posit can be viewed as underlying multiple phenomena, this counts in favor of the posit” (Sider 2011, 10).

⁷ For a useful overview of the confusions surrounding metaphysical structure, see Finocchiaro (2019).

Consider, for example, a tennis ball. A tennis ball's properties may include things like having a diameter of 6.7 centimeters, a circular shape, and what Peter van Inwagen describes as a "rather distressing greenish yellow" (van Inwagen 2015, 57). Objects and their properties present an entire range of complications on their own. If we have sympathies with Aristotle, we might think that some of the tennis ball's properties are accidental (e.g., greenness). Other properties we might think of as essential: e.g., the properties of being ball-shaped or bouncy. If we have sympathies with Plato, we might think that some of these properties (e.g., greenness) can be "shared" in some way between objects. We may think that beyond each individual physical ball is an ideal form of the tennis ball, and that ideal form is in some way responsible for making each tennis ball what it is. Alternatively, following trope theory, we might think that each property (or, rather, "trope") is specific to each object.

I won't address any of those problems here. What's important for my purposes is that I think structures are very different than ordinary physical objects (and even different from abstract objects). Whereas objects concern *individuals*, structures primarily concern *relations*. This does not necessarily mean that structures are entirely separate from individuals, or that the two concepts themselves have no relation. But it does mean that, with respect to any given structure, the relations between the individual elements in a structure are more important (with respect to what the structure is) than the individuals themselves.

In order to clarify this point, philosopher Stewart Shapiro's (2000) definition of structure is a useful point of reference. According to Shapiro, a structure is "the abstract form of a system, high-lighting the interrelationships among the objects, and ignoring any features of them that do not affect how they relate to other objects in the system" (Shapiro 2000, 74). Shapiro's primary concern is not with a "system" itself, which we might nonetheless think of as an individual that

comprises the objects within it. Rather, his concern is with the “abstract form” of a system. As an example, Shapiro suggests the relations between pieces in a game of chess. In this context, the object of a pawn can be defined through certain properties, such as the inability to move backwards. Whereas “system” includes these objects as well as their relations, the “structure” of chess concerns the form that the relations take themselves.

The nature of this distinction between object and structure is only preliminary and deserves further argument and clarification. However, it is important to emphasize that I don’t think an account of structure is reducible to the individuals *in* the structure. In order to grasp the structure of chess, one needs to understand the complex relations that exist between the individual pieces in a way that exceeds an account of their individual properties. It is not enough to know that a pawn can capture diagonally—you also need to know the relations that obtain between a pawn and the other pieces. Similarly, to use another example, the structure of a symphony is not merely a totality of notes. Each individual note only gains its importance and resonance through its relations to other notes and to the symphony more generally; it is the complex nature of these relations that help to make the symphony’s structure what it is.⁸

Even if we accept this distinction, there is yet another question concerning the reality of structures. Are structures, such as the structure of a chess game or symphony, real? If so, then how? Are these structures “real” in the same way as ordinary objects like tennis balls, or is their reality more similar to that of numbers or mathematical functions? While I will defend here the view that structures are real, the nature of their reality is puzzling, and it’s not immediately clear to me that (even in Deleuze’s account) we yet have all of the concepts needed in order to

⁸ Note that there’s a point about relations that I’m sidestepping here. For those who don’t accept the externality of relations, it might be plausible to think that the relations within a structure are the properties of individuals, and that an account of structure is therefore reducible (or perhaps even superfluous) to an account of the individuals themselves.

adequately understand the reality of structure. Furthermore, as will become clarified further, I do not think that reality of structure is synonymous with “existence,” at the very least in the sense that we generally think of ordinary objects as existing in a defined space and time. Rather, I will aim to show that explaining the reality of structures requires developing new theoretical concepts.

Four Varieties of Structure

In approaching this problem, it will be useful to distinguish at least four different senses of structure. This is not meant to be an exhaustive summary of all the different ways in which structure can be used, philosophically or otherwise. Rather, this section is meant to clarify some of the different theoretical approaches to structure and to distinguish them from my own interest and approaches.

The first sense of structure is *individual structure*. This sense of structure refers to the features of existing individuals and their properties. “Structure” in this sense is another way of talking about the properties that characterize individuals. As examples, consider the following: an old baseball, a city bus, a desert tumbleweed. Each of these individuals will have certain “structural” properties: the baseball has stitches and is spherical, the bus has passengers and four wheels, and the tumbleweed has roots allow it to detach after its death. Since this sense of structure pertains to the individual entities, it is also *ontic*. By “ontic,” I mean here that the “structure” *only* applies to an existing individual.⁹ In metaphysics more generally, there are many

⁹ I draw here in part from Finocchiaro’s (2019) distinction between “ontic” and “non-ontic” structure. Whereas ontic structure indicates the structure of individuals and their properties, non-ontic structure is “not a thing or entity” (2019, 582).

ongoing questions about the nature of objects and how to conceptualize them, such as whether objects are blobs (Armstrong 1989), four-dimensional manifolds (Sider 2003), or something else. Since my aim is to analyze structures as ontologically distinct from individuals and their properties, I will not use structure in this sense of individual structure.

The second sense of structure is *relational structure*. This sense of structure concerns the patterned domains of complex connections between individual entities—e.g., the structure of a symphony, the ecological structures of a desert environment, or the structural routes on a city’s transportation system. While these relational structures contain individual objects, we can distinguish them from certain aspects of these objects in crucial respects. For example, consider the structure of a baseball defense, composed of individual players.¹⁰ If I am assigned to play as catcher, it will be relevant to the success of this defense that I have good reflexes. But it will not be relevant whether I can play the piano or enjoy long walks on the beach, even if these might be important parts of my individual identity more generally.¹¹ In a preliminary sense, there thus seems to be something about these relational structures that, considered together, is not equivalent to the individuals that are involved in them. For example, to say that one takes “the bus” to the city is not the same as to say that one takes “this particular bus” to the city. This is because, from my perspective of using the transportation system, I am not quite as concerned with the individual bus as an object. My focus is rather on the role that the individual bus accomplishes in taking me to my destination.

¹⁰ I credit this example to Stewart Shapiro (2000).

¹¹ Stewart Shapiro (2000) makes this point in the following way: “We distinguish the office of vice president, for example, from the person who happens to hold that office in a particular year, and we distinguish the white king’s bishop from the piece of marble that happens to play that role on a given chess board. In a different game, the very same piece of marble might play another role, such as that of white queen’s bishop or, conceivably, black king’s rook” (Shapiro 2000, 77). While Shapiro develops this argument for structuralism in the philosophy of mathematics, he also suggests extensions beyond this context.

This is not to say that account of these structures should not include any certain considerations of objects or properties whatsoever—it's important to me, for instance, that the bus has wheels, and that the driver doesn't fall asleep. At the same time, there are many properties of the bus and driver that *don't* concern the bus's structural role in getting me to my destination. For instance, it's not especially relevant to me that this particular bus was assigned to a different route last week, or that the driver is also a musician. Properties that define the individual in relation to the structure are not equivalent to those that make up the individuals.¹²

The third type of structure is *ontological structure*. This sense indicates structure not as pertaining to an object or collections of objects, but rather indicates the structural "Being" of beings. Ontological structures are structures not of any entity or group of entities. Rather, ontological structures relate more closely to existence. In this respect, examples of philosophical accounts of ontological structure arguably include Heidegger's analysis of "structures of being" (Heidegger 1962, 60), Deleuze's account of the structure of being as "difference," and Markus Gabriel's ontology of "field-structures" (Gabriel 2015, 13). My aim is not to suggest that these different philosophical accounts of structure are equivalent, but rather to indicate that they are different in key respects from the first two senses of structure. As I will argue that this sense of structure pertains to the existence of ontic entities without itself being an entity, questions concerning the nature and reality of ontological structure will constitute an important part of my analysis.

Finally, the fourth sense of structure is *metaphysical structure*. Metaphysical structure pertains to the world in general. An account of metaphysical structure is an explanation of what

¹² Those who favor an ontology of individuals might object here that such relational structures are just themselves individuals. For instance, we might think that the baseball defense or traffic system is itself an object, and hence and individual. A similar approach is taken by Graham Harman (2011) and (2017).

the world is like at a fundamental level. This is the sense of “structure” used most often in contemporary metaphysics. For example, Sider (2011) describes structure as “figuring out the right categories for describing the world” (2011, 1).¹³ Similarly, according to Jonathan Schaffer, metaphysics more generally is an inquiry into “the structure of the world” (Schaffer 2009, 379).¹⁴ Like ontological structure, this concept of metaphysical structure is *non-ontic*—in other words, claims about metaphysical structure are not necessarily reducible to claims about existing individuals.¹⁵ Since my primary aim here is not a metaphysical investigation into the overall “world” at large, I will not use structure in this sense.

Although I have distinguished four ways of talking about structure, note that my aim at the moment is only to clarify some of the different ways of using the concept. This is not an argument for the reality of each sense in which structure is used.¹⁶ In what follows, my focus will primarily be on the second and third senses of structure—*relational* structures as the complex relations that are irreducible to individuals, and *ontological* structures as concerning structures of existence. Ontological structures can be distinguished from individual and relational structures in three major ways. First, accounts of ontological structure aim to provide an analysis of a

¹³ On Sider’s (2011) account, explaining structure requires investigation into which categories carve the world at the joints—that is, which concepts can adequately capture the fundamental structure of the world.

¹⁴ Schaffer (2009) interprets structure through the concept of grounding. He emphasizes the priority of questions around grounding in metaphysics more generally, an approach that he connects to Aristotle and distinguishes from Quine and Carnap.

¹⁵ This is because, arguably, assertions about metaphysical structure can be true independently from the existence of ontic entities (Finocchiaro 2019, 585).

¹⁶ For instance, Markus Gabriel (2015) rejects the notion of metaphysical structure, since he argues against the existence of the world as the totality of entities. In addition, Graham Harman (2017) would likely argue that relational structures are themselves objects, and therefore that the existence of relational structures can be conceptualized through an account of individual structure.

structural reality in a way that does not require invoking additional “ontic” entities.¹⁷ So, like metaphysical structure, but unlike individual structure, ontological structure is non-ontic.

Second, an account of ontological structure aims to explain the underlying conditions through which ontic entities exist. Unlike proponents of “metaphysical structure,” ontological structure is somewhat less concerned with providing an account of the “world” at large. Third, whereas accounts of the first two kinds of structure often involve more empirical considerations, my view is that ontological structures cannot be explained through reference to the empirical sciences.¹⁸

The Problem of Structure

This provides a framework to explicate what I take to be the problem of structure. The problem of structure concerns the question of how or whether to formulate an account of structure and its relation to (existing) individuals. Put roughly, there are two major approaches to this problem. The first approach is to argue that the reality of structure is reducible to individuals and the ontological concepts and tools we use to describe them—at best, structure is no more than a derived “effect” of the more important role that existing individuals play in ontology. In contrast to this initial approach, the second approach argues that structures have a reality that is not reducible to individuals. The second approach faces a number of challenges, most notably that

¹⁷ On Gabriel’s ‘fields of sense’ ontology, fields of sense are theorized as structures within which objects are situated. But these fields are not themselves objects. Rather, the concept of “fields of sense” indicates a structural reality that grounds the relations within which objects exist. Notably, Gabriel also takes fields of sense to individuate objects: “The sense individuates the objects and accounts for the specific truths about them” (Gabriel 2015, 224).

¹⁸ Note that there is an open question of whether accounts of “metaphysical structure” should be answered through reference to the empirical sciences. For example, approaches in ontic-structural-realism, such as French (2014) and Ladyman and Ross (2009), take a more empirical approach and develop their accounts of structure within the philosophy of science. By contrast, metaphysical approaches towards structure such as Sider (2011) take a much less naturalistic approach.

the “reality” of ontological structure is controversial, and often seems mysterious. Because ontic structures are more familiar within our everyday language, we often reinterpret philosophical claims about ontological structure in ontic terms. What is structure, in other words, is not the structure of some *thing*?

In working to answer this question, it will be useful to formulate a contrasting approach, according to which the only real type of structure is individual structure. Consider the position Sider (2011) terms *ontologism*, according to which the world is nothing more than a collection of entities.¹⁹

One of the key aspects of *ontologism* as a view is that it does not grant a distinction between “reality” and “existence.” According to this position, to be “real” is nothing more than to exist, and to exist is to be real.²⁰ Ontologism has two variants, methodological and metaphysical (Sider 2011, 94-95). *Methodological ontologism* is the view that ontology should proceed through an account of entities and their properties. To say that something is “real,” following the methodological version, is as a matter of practice to indicate that there is some thing that exists. As explained by Sider, this position argues that “it’s somehow conceptually confused to think of a fundamental metaphysics as being given by anything other than a list of entities” (Sider 2011, 94).²¹ In contrast to the methodological position, *metaphysical ontologism* takes a stronger approach. It asserts that there is nothing more to the world than existing things and their underlying features. According to this view, it is misguided to think of the world as

¹⁹ Sider’s (2011) account of non-ontic structure is also a reference point for Markus Gabriel’s “fields of sense” ontology. See Gabriel (2015, 154).

²⁰ Note that I’m not addressing a wide range of somewhat related issues concerning existence and time, e.g., whether only things in the present exist.

²¹ See Finochiarro (2019) for a useful overview of the primary objections towards non-ontic structure through the methodological version of ontologism.

more than just a group of entities. Notably, this approach can be characterized in part through Heidegger's account of "metaphysics" as characterized through an inquiry into beings *as* beings.²² But in contrast to the methodological view, which claims this is something that characterizes metaphysical inquiry, metaphysical ontologism takes this as a fundamental metaphysical claim about the world. It is the view that, insofar as some structural feature of the world is "real," that feature must therefore exist as an entity or characteristic of an entity.²³

Like Sider and Heidegger (and, as I will argue, Deleuze), I think that ontologism is misguided. Importantly, as we will see for Deleuze, "reality" and the "real" is not synonymous with "existence" (or what Deleuze often refers to as "actual existence").²⁴ Reality is more than a list of individual things and what they are like. Moreover, I will claim that Deleuze provides a compelling argument against ontologism.

However, in making this argument, it is also important to note that metaphysical ontologism can be formulated in an extremely wide way. In arguing that the world is nothing more than "entities" and "things," proponents of metaphysical ontologism often include not just physical objects, but also abstract and fictional objects.²⁵ For example, according to Harman's (2017) ontology, the world is nothing but objects. However, these objects include not only physical entities like trees, but also include abstract objects like the number 6, as well as fictional

²² Note that the exclusive focus on the ontic as opposed to the ontological is only one of the features of what Heidegger terms metaphysics. For a useful overview of the other features, see Bahoh (2019b, 61).

²³ Although Sider's (2011) analysis occurs within the framework of analytic metaphysics, my view is that his account of metaphysical ontologism also pertains to a recent shift towards objects in Continental philosophy.

²⁴ See DR 47 and DR 280.

²⁵ Such accounts may not even use the word "object." See, for example, Kleinherenbrink (2019)'s speculative realist account of Deleuze's ontology according to which "everything is a machine" (Kleinherenbrink 2019, 2).

individuals like Sherlock Holmes. According to Harman, insofar as something exists and is not reducible to its components, it is an object—even “events” are objects.²⁶

While my purpose is not to directly evaluate his position, Harman’s “wide” formulation of objects is useful in order to illustrate three points. First, if metaphysical ontologism is true, then it follows that the notion of “ontological structure” is fundamentally misguided. If *everything* is an object—trees, hurricanes, numbers, unicorns, lightning strikes, and so on—then, by definition, all structure must be ontic, since such structure will pertain to the nature of those entities. Second, although I will argue that metaphysical ontologism is misguided, I also think it is important to note that objections against ontologism should not overtly rely on assumptions about what objects are (e.g., through claiming that objects are physical or material). Since, as Harman demonstrates, ontologism can be formulated in an extremely wide way, a better line of approach is to target the underlying framework of ontologism. Drawing on Deleuze, I will claim that this underlying framework relies on the assumed priority of identity over difference. As I will argue in Chapter II, the guiding assumption of ontologism is that objects exist in such a way that the world consists of pre-established identities. Because of this, difference is conceptualized as a relation that occurs between already-individuated entities. By contrast, if identity is not ontologically fundamental in relation to difference, then ontology needs to do more than provide us with a list of individual entities and the features that define them.

If this Deleuzian objection follows, then I think it provides a good reason for rejecting both metaphysical ontologism as well as methodological ontologism. If difference is ontologically prior to identity, then a metaphysical account of identities is necessarily

²⁶ On the conceptualization of events as objects, see Harman (2017, 52-54). On Harman’s account, an object is defined as “anything that cannot be entirely reduced either to the components of which it is made or to the effects that it has on other things” (Harman 2017, 43).

insufficient. If this is the case, then ontology should not be methodologically limited by the methodological concepts that characterize individuals and their properties. We need new concepts, ones that are better able to overcome the limitations in metaphysical accounts that prioritize identity.

As a final point, an account of non-ontic structure should also work to explain why an account of ontic entities is insufficient for ontology. This requires not only developing a robust account of ontological structure that is not reducible to the ontic framework of existing entities and properties, but also an analysis of why such an approach is unable to account for the existence of such entities. In Chapter II, I will argue that Deleuze provides conceptual and critical resources to provide us with such an account. Specifically, I will explore how Deleuze presents a crucial challenge not only to metaphysical ontologism, but also to the underlying methodological framework that ontologism takes as its guiding assumption. This guiding assumption is not the postulation of any specific type of entity as fundamental (such as material objects, events, or otherwise), but is rather the assumption that individual identities are fundamental and the proper basis from which to conduct ontological inquiry. If this assumption is misguided, then it does not matter how wide or narrow ontologism takes the concept of “entity” to be, because it will start out on the mistaken assumption that ontology begins with an account of already-existing individuals.

Structure and Ontology

Developing an account of ontological structure has four important consequences for ontology more generally. As defending and articulating these claims is my major task in this dissertation, I

will only state them in a concise form here. (1) An account of ontological structure shows why ontology should not merely be a listing of entities and their properties, no matter how long or varied the list. An account of ontological structure thus indicates that it is not enough to say “what” things exist. Rather, following Deleuze, I will argue that ontology should also explain the ontological conditions through which individual entities are formed. (2) An account of ontological structure informs how we conceptualize the seemingly stable identity of ordinary objects. As I will argue, Deleuze’s realist account of ontological structure does not merely aim to supplement an already existing world with fully formed identities, but rather aims to give an account of the underlying conditions through which identities are produced, generated, and destroyed. Such an account will require substantial revisions to our “common sense” views of the world. Moreover, it will directly contest any claims to taking the identities of objects as fundamental or as existing in a way that is not intimately connected to structure. (3) An account of ontological structure informs the problem of the relation between reality and actual existence. Drawing on Deleuze, such an account demonstrates that reality is not grounded in the concrete existence of “actualized” entities. Rather, on his account, structures are “real” but not actual. (4) An account of the reality of ontological structure can inform our account of the reality of structures in other domains, such as social structures. On Deleuze’s account, such structures are no less “real” than structures in other domains, and there is no single domain of structure that is ontologically prior to the others.

Ontology and Metaphysics

As this project develops an account of Deleuze's ontology of structure, I will also briefly indicate how I understand the terms *ontology* and *metaphysics*. A useful reference point here is Markus Gabriel's (2015) *Fields of Sense*. Gabriel defines ontology as "the systematic investigation into the meaning of 'existence', or rather the investigation of existence itself aided by insight into the meaning of 'existence'" (2015, 5). He distinguishes ontology from metaphysics, where metaphysics is defined as "a combination of both (a) an account of reality versus appearance, and (b) a theory of totality" (6). Insofar as metaphysics aims for totality, Gabriel argues that metaphysical theories tend to posit "a unified overall reality, the world, which is at least unified by the fact that everything that exists co-exists in that domain" (6). In contrast to metaphysics, Gabriel's ontological account critiques the concept of the "world," arguing that there is no such total domain in which everything exists.

Insofar as I do not aim to explore the concept of "structure" as it relates to the world in general, my project here develops an ontological rather than a metaphysical account of structure. My concern is with the reality of *structures* in a large number of different domains, not with one overall structure that encompasses everything. As will become apparent, this is not to say that all structures are equally fundamental, or that there cannot be grounding relations between structures. But it is to say that I do not assume that there is any *one* fundamental structure that is the foundation for everything else.²⁷

In what follows, I will develop an account of structure through an analysis of Deleuze's early work in his (1968) *Différence et répétition* and (1969) *Logique du sens*. In these works,

²⁷ On this point, I draw on Deleuze's account of structure in the essay "How Do We Recognize Structuralism?". In this work, Deleuze writes: "From a structuralist perspective, it is no doubt unsatisfactory to resurrect the problem of whether there is a structure that determines all the others in the final instance" (DI 188). Deleuze develops this point as a critique of Levi-Strauss, who he suggests thinks of ethnographic structures as more important than other structures. "This is why," Deleuze claims, "despite several of Levi-Strauss's hasty pages, no privilege can be claimed for ethnographic social structures" (DI 188). In addition, Deleuze also here implies a critique of a certain form of Marxism, as the economic "base" no longer takes priority over structures in other domains.

Deleuze develops a systematic ontology of structure wherein structure is prior to and generative of the identities of existing objects. In drawing on Deleuze to develop an ontology of structure, it will also be important to briefly clarify some aspects of the concept of ontology.²⁸ Ontology is often understood as the inquiry into what exists.²⁹ For instance, assuming any entity X (whether chairs, tables, numbers, properties, facts, possible worlds, and so on), ontology aims to determine whether X exists.

Although Deleuze is concerned with reality, in contrast with this standard approach, his concern is not primarily with what he terms “actual existence” (DR 280). This is for at least two reasons. The first reason is that one of Deleuze’s main concerns is not determining what exists and what does not exist, but rather examining the underlying conditions through which existing things are created, sustained, and destroyed. Deleuze’s approach is still nonetheless crucial to the problem of ontology, since it concerns the question of existence. However, in contrast to the standard definition of ontology, Deleuze’s approach is more focused on *how* things exist rather than *what* exists. The second reason is that, broadly speaking, Deleuze is interested in ontological relations of grounding. So rather than addressing that question of what exists and what does not exist, Deleuze is interested in describing how the existence of individual entities is grounded. Put roughly, this is the question of how the existence of certain less fundamental entities can be explained through reference to the underlying structural realities that constitute

²⁸ There are opposing views in the scholarship on whether Deleuze’s work can be itself be understood as ontology. For instance, Zourabichvili (2012) claims that “there is no ‘ontology’ of Deleuze” (Zourabichvili 2012, 36). However, I agree with Kleinherenbrink’s (2019) claim that “Deleuze merely opposes a certain *kind* of ontology: one that claims to discern something *fixed* from which all of reality derives” (Kleinherenbrink 2019: 28). This connects closely to Gabriel’s (2015) rejection of metaphysics understood as a theory of totality, that is, an all-encompassing domain within which everything is situated.

²⁹ See, for example, Quine (1948).

them.³⁰ Developing the specifics of this claim is a major task of this dissertation. What is important to emphasize for the moment, however, is that in both of these ways, Deleuze's investigation is broader than the question of which entities exist, at least insofar as existence is understood in terms of existential quantification or ontological commitments to ontic entities.³¹ In this sense, Deleuze's sense of ontology is closer to Gabriel, who claims that "ontology is not the attempt to answer the question what there is or the question what kinds of things there are" (Gabriel 2015, 75). Like Gabriel, Deleuze is not primarily interested in the question of determining *what* exists, and his ontology will include an analysis of reality in a way that is more than an account of existing entities.³² This point will inform what I take to be Deleuze's main contributions to the problem of philosophical realism. My aim here is to indicate the broader applicability that the problem concerning the "reality" of structure has towards debates in philosophical realism more generally.

Two More Concerns about Structure: Mystery and Placement

Before discussing how Deleuze's ontology of structure can contribute to these problems, I will also raise two preliminary concerns about the concept of ontological structure. On my account, ontological structures are non-ontic; they are thus not ontic entities themselves, nor reducible to individual entities.

³⁰ This concern with grounding is a feature that Deleuze shares with recent positions in analytic metaphysics, such as Schaffer (2009). As explained by Schaffer, concerns about metaphysical grounding can be broadly contrasted with the Quinean view about ontology as the inquiry into *what* exists. In opposition to this standard approach, Schaffer (2009) argues that "contemporary existence debates are *trivial*" (2009, 257).

³¹ See Quine (1948). Like Gabriel (2015), Deleuze would not endorse Quine's account of ontological commitment.

³² For example, in his account of structure of "problematic Ideas," Deleuze claims that "the elements of a multiplicity...are not even actually existent" (DR 183/237).

This presents two major problems. The first problem is that such an account seems mysterious. “What can structures be,” the question goes, “if not the structure of some *thing*?” Following this objection, proponents of non-ontic structure often can seem as if they are talking about a seemingly alien realm of existence, one which is mysteriously deeper than or “beyond” the world of everyday objects. In developing an account of structure, one runs the risk of running afoul of Aristotle’s objection: uttering “empty words” and speaking “poetic metaphors” (Aristotle 2016, I 9 991b20-22). Call this the objection from ontological mystery. According to the objection, insofar as non-ontic structure seems to be inherently mysterious, we are better off trying to avoid including it in our ontology.³³

An additional problem with structures is that their temporal and spatial locations are unclear. Call this the *whereness question*. The whereness question concerns the question of where to find or locate ontological structures in a universe of material objects.³⁴ Insofar as I argue that structure is not equivalent to physical objects and thus cannot be identified with the spatiotemporal status of objects, this is a difficult question to answer. If approaching the topic from a metaphysical standpoint, we might think of structure as pertaining to *everything*, that is, the world at large. Structure would thus in some way seem to pertain to fundamental reality, or, in Sider’s terms, “what the world is like, at the most fundamental level” (Sider 2011, 1). However, if we are skeptical of this approach, we might want to think of structure as merely a subjective result of human thought. Following this approach, we might think that structure is not

³³ Note that this problem also applies to metaphysical structure. See Finocharrío (2019) on this point. As examples of objections concerning the intelligibility of non-ontic structure, see Hirsch (2013), Contessa (2013), and Goldwater (2014).

³⁴ As a useful overview of placement problems more generally, see Ludwig (2015, chap. 1).

part of the world at large but is rather a result of our interpretations. This would suggest that, for lack of a better term, the “place” of structure is within our mind.

Both the wide and the narrow approaches to the placement question run into difficult problems. The first approach renders structure as characterizing fundamental features of the world. In contrast with the wide approach, the narrow approach conceptualizes structure as subjective, that is, as a distinctive feature of human experience that would not exist without us. But this severely limits the scope of such an account. Although there may be subjective structures of experience that are distinctive to human existence (such as, for instance, those studied in phenomenology), my view is that, following Deleuze, conceptualizing every structure as subjective is too limiting.

In contrast to both of these approaches, I will argue that addressing the placement question with respect to ontological structure requires providing an account of both the temporality and spatiality of structures.³⁵ In this respect, one of Deleuze’s main contributions to the placement question is to articulate a concept of structure which is narrow enough to do productive philosophical work, while at the same time not being merely subjective. In short, Deleuze addresses the placement problem through claiming that structures have a distinctive temporality and spatiality which is distinct from extensive time and space. Rather, the temporality of structures is connected to its generative capacities, and the spatiality of structures is reconceptualized through a series of topological relations. On his account, structures thus have

³⁵ In his account of structures as Ideas, Deleuze addresses this question through claiming that “the genesis takes place in time not between one actual term, however small, and another actual term, but between the virtual and its actualization—in other words, it goes from the structure to its incarnation, from the conditions of a problem to the cases of solution, from the differential elements and their ideal connections to actual terms and diverse real relations which constitute at each moment the actuality of time” (DR 184/237).

their own form of temporality and spatiality which is distinct from both the existence of objects as well as mental experience.

In addressing these problems, in the chapters that follow I will draw on Deleuze to develop a positive concept of *differential* structure. Differential structure is non-substantial. It does not indicate a substance or ontic entity, nor does it merely indicate a property of some group of objects. Furthermore, differential structure is also plural and variable. As I will argue, there is not any one differential structure that encompasses the fundamental structure of the world, and there can be (and are) multiple differential structures in play at once.

Deleuze's Contribution to the Problem of Structure

One of Deleuze's major contributions to the problem of "structure" is through his reconfiguration of philosophical realism. Realism is conventionally understood as the view that certain things exist independently of our mental experience of them. In deciding whether such entities are "real," two criteria are commonly invoked: (1) existence, and (2) mind-independence.³⁶ According to this terminology, if something exists and its existence is independent of our mental experience of it, then it is real. Following this approach, the subset of things that are real is less than the subset of things that exist, because certain things exist which are mind-dependent and therefore not "real" according to the prevailing terminology.

Call this view *traditional realism*. When approached through the framework of traditional realism, an account of the reality of the structures faces three major problems. First, it is not clear in what respect "structures" exist. For example, does the structure of a symphony exist in some

³⁶ On the realist criteria of existence and mind-independence, see Miller (2019).

way that is separable from each of its performances? Or does the structure of chess exist in a way that is separable from the totality of chess games that have been played? If the answer to these questions is yes, then explaining the nature of this existence presents a number of challenges. For instance, as indicated earlier, if it is accepted that the structure of chess exists in a way that is separable from individual chess games, then it is also not clear *when* or *where* this structure exists. Since these questions concerning the temporality and spatiality of structure are difficult to answer, proponents of structure are often viewed as needing to posit an additional realm within which structure exists.³⁷

Second, the existence of social structures also presents a difficulty for traditional realism. Are social structures “mind-dependent” or “mind-independent”? At the very least, they do not seem to be mind-dependent on any one individual. But at the same time, it’s not clear exactly whether they could be said to exist without any “minds” at all. So, on the criterion of mind-independence, it is not at all clear in what sense all structures (particularly social structures) can be said to pass the second test for realism. As one of the hopes of providing an ontology of structure is that such an account could inform our understanding social structures, it seems as if the traditional approach towards realism is not especially useful here.

Third, it is not immediately clear how *ontological* structures fit into the traditional realist framework. This is because realism is often concerned with the reality of individual entities or groups of entities, such as chairs, numbers, and trees. Recall that on our earlier definition, ontological structures are defined as structures of existence that are not reducible to an account

³⁷ See Goldwater (2014) for a version of this objection against Sider’s (2011) account of metaphysical structure. Note that this problem concerning structure overlaps with how to characterize the reality of abstract objects. However, my focus is not on abstract objects, but on structures. For example, the rules defining chess constitute an abstract structure, whereas a chess “pawn” is an abstract object. Typical examples of abstract objects include the natural numbers. However, whether numbers are objects is also sometimes disputed; for example, Benacerraf (1965) argues that numbers are not objects.

of individual entities and their properties. If this is the case, then it also seems unclear how to characterize the reality of such structures—deciding the reality of structures is not merely the same as deciding whether, for instance, numbers really do exist in a way that separate from our mental experience. Even if an account of ontological structure passes the test of existence and mind-independence, the existence of ontological structure should not be understood as postulating additional entities, since by definition an ontological structure is not itself an existing ontic entity.³⁸

Structure and the Ontology of Event

While it is not fully explored in this dissertation, the second problem that an ontology of structure contributes to is the ontological status of events. In recent years, the problem of the ontological status of events has received increasing attention, both within the context of Deleuze scholarship and outside of it.³⁹ The concept of “event” plays a major role in Deleuze’s work, where he argues that events are real, but not reducible to accidents or mere changes within a substance.

³⁸ Accounts of metaphysical structure try to avoid this problem by arguing that structure pertains to the world at large. On such an account of the fundamental structure of the world, developing an account of structure means developing a total worldview. See, for example Sider (2011, 292-296).

³⁹ For work on events outside of Deleuze scholarship over roughly the last decade, see Bahoh (2019b), Zizek (2014), Badiou (2013), Raffoul (2020), Smith (2015), Coombs (2015), and Romano (2009). In the context of recent scholarship that addresses Deleuze’s ontology directly, see Bowden (2011), Bennett (2017), Zourabichivili (2012), and Faber et. al (2020).

As indicated by James Bahoh, events “have most often been assigned a secondary or derivative status with respect to substances or subjects” (Bahoh 2019b, i).⁴⁰ For example, Jonathan Bennett defines an event as “the instantiation, at a time, of the property by a substance” (Bennett 1988, 88).⁴¹ By contrast, several 20th-century philosophers like Heidegger, Deleuze, and Badiou, have argued that events have a distinctive ontological status. In addition to these positions, the view that events are not reducible to objects or substances has also been argued for by Anglo-American philosophers such as Donald Davidson (2001), Nicholas Rescher (2000), and Max Cresswell (1986). One way to make a distinction between object and event is to say that whereas objects “exist,” events “occur” or “happen” (Casati and Varzi 2020).⁴² Objects are individual persisting entities, such as thunderstorms or lakes. Events, by contrast, are occurrences—the flash of a lightning bolt, or the freezing of a lake’s surface in winter.⁴³

Insofar as I aim to develop an ontology of structure that is not reducible to objects or substances, events are important because they provide a crucial alternative theoretical framework than substance metaphysics. However, events and structures are often thought about in ways that

⁴⁰ Bahoh (2019b) distinguishes between three different kinds of events: (1) ordinary, (2) historical, and (3) ontological. At the first level are ordinary occurrences, such as the drop of water landing on a windshield. At the second level are non-ordinary events of sudden transformation, such as the eruption of a volcano, or the stock market crash of 2008. In contrast with the first two, the final category concerns the ontology of events in relation to being. At this level, the question of event does not concern any one occurrence, but rather concerns the ontological structure of being. For instance, Deleuze claims that “Being is the event in which all events communicate with one another” (LS 180/211).

⁴¹ Cf. Kim (1976). As indicated by Bennett, Kim’s approach roughly corresponds with Aristotle’s account of change (Bennett 1988, 88; Aristotle 2014 *Phys.* 227b21ff).

⁴² See also Hacker (1982). While I will not directly defend this distinction until chapter IV, not all philosophers accept a fundamental ontological distinction between objects and events. See, for example, Harman (2017: 52-54) and Sider (2002, 211-212). On Harman’s view, the concept of object is a more generally category that also includes events. On Sider’s view, objects are four-dimensional manifolds, and so the distinction between events and objects is one of scale rather than category.

⁴³ The temporality of events presents its own problems which will be addressed in chapter IV. For the moment, it is important to note that Deleuze does not view events as occurring at moments within an already-established spatiotemporal manifold (such as one provided by the empirical sciences).

are opposed to each other. We oppose, for instance, the “event” of the French Revolution to the social and legal structures that preceded it. At a more everyday level, we distinguish the structure of a train schedule from the disruptive event of a delay due to unforeseen circumstances. Events are typically placed on the side of disruption and change, whereas structures are thought to indicate rigidity and stasis.

The distinction between event and structure forms a number of oppositions between the two terms. For instance, whereas structures are thought to be regular and calculable, events are irregular and unpredictable.⁴⁴ And whereas structures are complex multiplicities involving relations between many different variables, events are said to be singular. This opposition between the two terms forms a common objection against the classical structuralism of Lévi-Strauss and Ferdinand de Saussure. According to this objection, the structuralist project is unable to account for the dynamic reality of events and change. For instance, Foucault explicitly connects the concept of event to his own anti-structuralist position: “Structuralism formed the most systematic effort to evacuate the concept of the event...in that sense, I don’t see who could be more of an anti-structuralist than myself” (Foucault 1980, 114).⁴⁵ As explained by Craig Lundy, the tension between structure and dynamism is one of the central problems that led to the eventual rejection of the structuralist program as insufficiently “dynamic” (Lundy 2013, 88).⁴⁶

What is important to emphasize here is that the opposition between event and structure presents philosophical problems for both concepts. For those that prioritize the fundamental

⁴⁴ For example, Derrida argues that the event is “always singular, unique, exceptional, irreplaceable, unforeseeable, and incalculable” (Derrida 2005, 135). See also Smith (2015).

⁴⁵ Deleuze and Guattari make the similar objection against classical structuralist thought in their analysis of vampires, arguing that “structuralism clearly does not account for these becomings” (ATP 237).

⁴⁶ As indicated by Lundy (2013), these rejections themselves often relied on misleading characterizations and simplifications of structuralism.

nature of events, there remains the problem of how to account for the quasi-stability of regulated systems in a way that captures the reality of structure. A version of this objection can be found in later sections of the *Cratylus*, where Socrates raises an objection towards the ontology of Heraclitean flux which Cratylus espouses. Endorsing the view that everything is in flux, Socrates argues, requires us to accept that “all things are afflicted with colds and drip over everything” (*Cratylus*, 440). The world of flux is contrasted with the eternal world of forms that transcend our phenomenal world of becoming. According to this objection, not everything is unstable. Put in slightly different terms than Plato’s, the problem is thus that events seem unable to account for the relative stability, predictability, and order of our experience.⁴⁷

By contrast, for those that prioritize the ontological reality of structure, one of the key problems is how to conceptualize structures in a way that can account for the reality of events. There remains a key ontological question concerning the metaphysical relations of structure to event, without (1) collapsing one into the other or (2) maintaining an intractable dualism between them. Notably, in developing such an account, I do not think it is enough to say merely that one concept is more important than the other—e.g., that events are more fundamental than structures, or that existing structures are prior to events.⁴⁸ Rather, approaching this problem requires demonstrating how structures are related to events; that is, how the ontological priority of events over substances provides an explanation for the seemingly stable existence of structural systems like governments, economies, and languages. In this respect, rather than thinking of events as opposed to structure, Deleuze’s approach aims to think of them as more closely related.

⁴⁷ Note that I use this reference to Plato only as a suggestive example rather than a close interpretation of this text or account of the theory of forms. For a recent interpretation of Platonic forms as structures, see Frede (2020). Deleuze’s reading of Plato will be addressed more explicitly in chapter II.

⁴⁸ On this point, Foucault claims that conceptualizing the event is “not a matter of locating everything on one level, that of the event, but of realizing that there are actually a whole order of levels of different types of events differing in amplitude, chronological breadth, and capacity to produce effects” (Foucault 1980, 114).

Deleuze continuously emphasizes the importance of structures not as static entities, but as generated through and from events. Without events, structures would be entirely stationary; there would be no way to explain their genesis or dissolution. In contrast to the above opposition, Deleuze argues that the opposition between structure and event is misguided. In *Difference and Repetition*, Deleuze claims that “there is no more opposition between event and structure or sense and structure than there is between structure and genesis” (DR 191/247). In *Logic of Sense*, he similarly writes that “it is imprecise to oppose structure and event: the structure includes a register of ideal events, that is, an entire history internal to it” (LS 50/66).

While the full implications of Deleuze’s ontology of structure for the ontology of events is not worked out fully in this project, I nonetheless aim to set up the initial framework towards thinking of structures as fundamentally connected to events. In Chapter III, I will focus on how Deleuze’s inversion of Plato aims to accomplish this through reconceptualizing structures as inherently spatial and temporal.

Difficulties with Reading Deleuze

In working towards this broader aim, my main source will be Deleuze’s philosophical accounts of structure in *The Logic of Sense* and *Difference and Repetition*. However, before explicating the details of Deleuze’s account, it will be useful to provide an explanation of the methodology that guides my approach towards these texts.

Reading Deleuze is difficult. In clarifying this difficulty, we can consider a parallel example from literature. In an article on Gertrude Stein, literary scholar Craig Dworkin writes

that “there is still no collective sense, on opening one of her books, of how to go about it word by word (Dworkin 2002, 59). For Dworkin, the difficulty is not only because of Stein’s textual complexity. Rather, it is because Stein’s work challenges our usual interpretive practices when approaching a literary work—readers of Stein who “are preoccupied with conventional characters and plot—like the police detectives in Poe’s *Purloined Letter*—are looking in the wrong place and missing the real action” (2002, 59). In other words, the major challenge of reading Stein is that she complicates our understanding of how to read, and she thus requires us instead to think about interpretation in a new way.

I think this example can be usefully applied to Deleuze. Despite the increase in Deleuze scholarship over the last two decades, and despite the productive readings of many different works, there is still no collective viewpoint, on opening one of his books, of how to go about his work word by word. Similar to Stein, this is not only due to complexity in reading his work, but due to the way in which Deleuze often challenges our standard approaches to philosophical interpretation. There are at least two different aspects to this problem. First, there are widely divergent interpretations of the “content” of his work, and of how to interpret certain philosophical claims within it. These competing views are often recognized existing secondary scholarship. However, what is less often addressed is the problem of *how* to read Deleuze’s work—that is, the process by which one goes about reading and using his work to do philosophy. This is not to suggest that there should be only one way of reading Deleuze, or that his work cannot be used towards different ends. But it is to indicate that we can gain something through being more explicit both about the problems in reading his work, as well as the different ways in which these problems can be addressed.

Deleuze's philosophy aims to develop a new philosophical "image" of thought, one which he argues is no longer subject to the shortcomings that characterize much of the history of philosophy. However, insofar as part of his project aims in part to decentralize the ontological role of the subject, this also has consequences for how to read and interpret philosophical texts. My aim here is to indicate one way towards addressing this problem by developing an alternative approach towards reading Deleuze. In doing so, I first will address some of the problems that pertain to reading Deleuze's work, as well as some of the strategies that are often taken to these problems. I will suggest that these approaches, while often informative, are not sufficient to grasp his philosophical work. I will then briefly describe my alternative approach, termed *problematic conceptual analysis*, which builds on the centrality of problems in his ontology.

Aside from grasping the structure of his argument, two of the major challenges in reading Deleuze are (1) explicating the specific terminology he uses in making these arguments, as well as (2) clarifying the wide range of voices and textual sources he draws on. The second problem is especially difficult given that it is not always immediately clear what exact role these different voices play in relation to his argument. As suggested by Henry Somers-Hall, these problems and others are part of why (in contrast to many other philosophers) "there are as yet so few attempts to provide a consistent general reading of Deleuze's whole *opus*" (Somers-Hall 2012b, 2). While I do not aim to provide such a general reading of Deleuze's whole work in this dissertation, I do want to provide a methodological framework that situates my own approach. In doing so, I will also outline two broad ways of reading Deleuze which I distinguish from my own: the *influence* approach and the *concept-focused* approach. My aim is not to suggest that these two ways of reading Deleuze are always misguided, but rather that in isolation they are both insufficient for grasping certain core aspects of his work.

In making this argument, I will also add a cautionary point about the role and limitations of any single methodology for reading Deleuze's work. In describing my own methodology, I do not mean this to be a rigid set of principles that are meant to stipulate how one must read Deleuze. This is because a regulative set of principles for reading Deleuze would likely run counter to the textual aspirations of his work, as well as to his claim that there are different ways of productively reading texts.⁴⁹ Despite these cautions, clarifying methodology is useful insofar as it can emphasize the specific way in which one wants to read a text, as well how this methodology contributes one's wider aims.⁵⁰ If reading Deleuze requires a reconfiguration of how we read philosophical texts, then an account of my methodology can help to clarify this reconfiguration. Without being clearer about how one reads Deleuze, there is more of a risk that certain standard interpretive practices—such as, for example, clarifying a philosopher's claims through a chronological account of their work's development from past to future—are taken for granted rather than reevaluated within the context of Deleuze's philosophical contributions to the problem of interpretation.

Reading Deleuze: The Influence Approach

⁴⁹ On this point, see Deleuze's account of two different forms of reading in *Negotiations*, interpretative and intensive. Interpretive reading corresponds roughly with the philosophical practice of reading texts systematically, determining their arguments and reconstructing them in a systematic fashion so that they can be better understood. In the case of intensive reading, however, Deleuze argues that "there's nothing to explain, nothing to understand, nothing to interpret. It's like plugging into an electric circuit" (N 8). In *A Thousand Plateaus*, Deleuze and Guattari also contrast their own approach with interpretation: "We will never ask what a book means, as signified or signifier; we will not look for anything to understand in it" (ATP 4).

⁵⁰ While Deleuze indicates certain reservations against philosophical interpretation, this does not mean that he necessarily rejects all approaches to method. For example, Duffy (2016) argues that Deleuze uses Martial Gueroult's structural-genetic method in his work on Spinoza.

Given the wide ranges of figures referenced in Deleuze's work, one approach towards reading him is to examine the wide range of various influences on his writing. The range of influences (philosophical and non-philosophical) in his work is enormous, as has been recently seen through the recent essay collections published as *Deleuze's Philosophical Lineage*.⁵¹ These volumes and other scholarship has contributed towards a better understanding and grasp of vast number of references within Deleuze's work both to the history of philosophy and outside of it. Since Deleuze's own references to other philosophers are often difficult to follow, the influence approach works to clarify his accounts and readings of these different philosophers. Approaching Deleuze's work through his philosophical influences has advantages and disadvantages. The main advantage of this approach is that it often makes explicit certain aspects of his views that are often not clearly explicated in Deleuze's own work, but merely referenced briefly or implied. As Deleuze's philosophy is closely connected to the history of philosophy, an account of these historical connections can help to situate his philosophical work within this context.

At the same time, however, an analysis of the figures referenced in Deleuze's work also suggests a problem concerning the best interpretive criteria through which to understand the relation between his work and the figures Deleuze draws on in making his arguments. This raises the problem of influence. As indicated by Foucault, the concept of "influence" is notoriously evasive.⁵² An account of an "influence" can often work to suggest a sort of continuity of viewpoints across different philosophical figures, while leaving the exact nature of this continuity unexplained. This problem applies especially to Deleuze. An account of a certain

⁵¹ See Jones and Roffe (2009) and Jones and Roffe (2019).

⁵² On Foucault's account, an analysis of influence is "too magical a kind to be very amenable to analysis," and functions to "refer to an apparently causal process (but with neither rigorous delimitation nor theoretical definition) the phenomena of resemblance or repetition; which links, at distance and through time—as if through the mediation of a medium of propagation—such defined unities as individuals, oeuvres, notions, or theories" (Foucault 2002, 23–24).

influence on his work can be useful in helping to frame Deleuze's positions within a specific historical context. There are two main difficulties with influence that run counter to his work. The first is that Deleuze's frames his own process of reading the history of philosophy not in terms of influence, but in terms of *becoming*—whereas influence designates a unidirectional line of causation from one entity to another, becoming is a bidirectional process through which both entities are transformed. The second downside with this approach is that an account of *how* Deleuze is influenced by another philosopher does not on its own always make explicit the reasons *why* this influence is important—that is, how Deleuze's use of a particular concept or figure allows him to address a specific philosophical problem.

Reading Deleuze: The Concept Approach

A second approach towards reading Deleuze is to focus on providing an interpretation of specific concepts in his work. The *concept approach* focuses on the explication and development of these concepts, working to clarify them through reference to either the history of philosophy or with reference to their use in other disciplinary contexts (e.g., the term *rhizome* in the context of biology). This approach is well exemplified by the two recent Deleuze “dictionaries,” which provide a resource providing accounts of many concepts in Deleuze's work.⁵³ Aside from its use in clarifying difficult aspects of his work, the main advantage of this approach is that it seems to cohere well with Deleuze and Guattari's formulation of philosophy as “the art of forming, inventing, and fabricating concepts” (WP 2). An analysis of a philosopher's work, following this

⁵³ See Parr (2010) and Young et al. (2013).

approach, proceeds through an analysis of the individual concepts that they produce, as well as the relations between these concepts.

While the concept approach can be incredibly useful given that vast amount of complex terminology in Deleuze's work, in my view it is also insufficient. This is because philosophers do not invent concepts out of nowhere, or merely to be creative. Rather, concepts are invented in order to address specific problems. Taken on their own, concepts are relatively empty. Without an account of what problem concepts aim to resolve, and in particular how novel concepts provide an alternative to problems that develop within prior concepts, an account of a philosopher's concept is merely free-floating. This means that while it is true that a good reading of a philosopher requires an account of their concepts, such an analysis of concepts can also be left lacking if it does not also address the question of *why* a philosopher poses concepts in the first place. Without such an analysis, it can easily remain unclear what work such concepts are supposed to accomplish. The problem with the concept-focused approach is thus that although it correctly views (on Deleuze's view) concepts as invented, it does not on its own address the relation between concepts and the problems that concepts aim to address.

Problematic Conceptual Analysis

In contrast with these two approaches, my own methodology—problematic conceptual analysis—takes problems to be central in approaching Deleuze's work. Deleuze develops a specific account of the problem that is crucial to both *Difference and Reptition* and *Logic of Sense*, one that has received increased scholarship in recent years.⁵⁴ However, despite the way in

⁵⁴ Recent scholarship on Deleuze's ontology of problems includes Voss (2013, chapter 3), Wasser (2017), Bahoh (2019a), and Bianco (2018).

which this scholarship has contributed to a better understanding of the importance of the concept of problem in his ontology, I do not yet think the full implications of this concept have been grasped with respect to question of how to interpret Deleuze's work.

Deleuze takes problems to be central not only to philosophy, but to the activity of thinking. In *Difference and Repetition*, Deleuze argues that it is not merely enough to identify problems as important:

Everyone 'recognizes' after a fashion that problems are the most important thing. Yet it is not enough to recognize this in fact, as though problems were only provisional and contingent movements destined to disappear in the formation of knowledge, which owed their importance only to the negative empirical conditions imposed upon the knowing subject. (DR 159/206)

This passage is important, because it shows that for Deleuze the importance of problems is not merely a result of empirical limitations in our subjectivity. Problems are not merely obstacles to be overcome in the pursuit of knowledge. Rather, problems have their own distinct ontological status: "problems must be considered not as 'givens' (data) but as ideal 'objectivities' possessing their own sufficiency and implying acts of constitution and investment in their respective symbolic fields" (DR 159/206).⁵⁵ Problems are real—they are not, in other words, merely the result of our subjective curiosity. Nor are they the result of our natural affinity for the truth or good will.⁵⁶

Problems are also central to how Deleuze reads other philosophers. As explained by Craig Lundy (2013), Deleuze's own reading of other philosophers is guided not so much through

⁵⁵ See Wasser (2017) for a useful overview of some of the core features of Deleuze's notion of problems.

⁵⁶ In contrast with this approach which presupposes our affinity with the truth, Deleuze prefers the alternative example of Proust's jealous lover—the jealous lover is not motivated by a will for truth in general, but for truth with regards to a concrete situation. Deleuze writes: "Proust does not believe that man, nor even a supposedly pure mind, has by nature a desire for truth, a will-to-truth. We search for truth only when we are determined to do so in terms of a concrete situation, when we undergo a kind of violence that impels us to such a search" (PS 11).

explicating their exact positions as much as it is through uncovering the underlying problems that structure their work more generally: “Deleuze attempts to elicit what he believes are the critical problems articulated by the oeuvre of each thinker, problems that may not always be explicitly apparent in the text, but traverse them throughout and provide the source of their vitality” (Lundy 2013, 84). Deleuze’s reading of other philosophers is thus not so much guided merely through restating their concepts or theories. Rather, his aim is to uncover the main problems that these concepts and theories work to address. If it is true that Deleuze’s readings of other philosophers are guided primarily through the investigation of problems, then it suggests a similar approach can be taken to Deleuze’s own work. We should aim not to merely explicate his work through an analysis of concepts, but to articulate and examine the underlying problems that his work confronts.

Deleuze’s ontological account of problems and their relation to solutions will be addressed in more detail in Chapter III. For the moment, I will emphasize three aspects of problems that guide my methodology: (1) problems do not disappear with their solutions,⁵⁷ (2) problems result from questions as imperatives,⁵⁸ and (3) problems are measured not by truth or falsity, but through their powers of generation (DR 190-1/246-7). To say that problems do not disappear with their solutions means that problems are more than the various attempts to solve them—one can trace the philosophical continuity of problems across different works, even as those problems are solved in different ways. At the same time, the imperative status of these questions indicates that problems are not merely eternal or unchanging, but rather caught up within a broader process of dialectical movement. This is partly why Deleuze prioritizes

⁵⁷ DR 168/219.

⁵⁸ DR 188/243.

questions that do not take the form ‘What is X?’—but rather prefers alternative forms such as ‘Who?’. These alternative questions indicate the non-eternal and eventual status of questioning. Finally, the importance of concepts should be understood not merely through whether they are true or false, but through how they work to clarify and transform the original problems they address.⁵⁹

In order to clarify the importance of these points for reading Deleuze, I will briefly recount the overall structure of Deleuze’s account of problems. In *Difference and Repetition*, Deleuze argues that problems are structured through four different aspects: (1) “ontological questions” as imperatives, (2) dialectical problems, (3) problematic fields of solvability, and (4) solutions given within these fields (DR 200/258-9). Deleuze credits Heidegger for having recognized the priority of questions and problems. However, in contrast to Heidegger’s account of the question of being, Deleuze argues that it is not enough “to repeat a single question which would remain intact at the end” (DR 200/259).⁶⁰ Deleuze does not view problems as static entities, but as developing dynamically through a dialectical process whereby problems are transformed through their solutions.⁶¹

While not merely eternal, problems are also broader than the particular philosophers who confront them. As argued recently by Patrice Maniglier (2021), on Deleuze’s account problems

⁵⁹ Although Deleuze does not tend to think of problems as existing at the level of the “true” or “false,” he does productively develop the notion of a false problem (cf. DR 158).

⁶⁰ Deleuze argues that for Heidegger the “ontological difference corresponds to questioning. It is the being of questions, which become problems, marking out the determinant fields of existence” (DR 65/90).

⁶¹ In this broader framework, Deleuze distinguishes two different senses of “solutions”: the first refers to the domain of solvability (e.g., the domain of mathematics wherein mathematical solutions occur), whereas the second indicates the “different orders of problem within the dialectic itself” (DR 179/232). At this second register, problems are thus solutions to prior problems insofar as they are posed in a new way within this dialectical structure. Deleuze develops his account of the dialectic with reference to the French mathematician Albert Lautman. On the influence and how Lautman was influenced by Heidegger’s account of problems, see Bahoh (2019a).

do not exist internally within an already-established domains of inquiry, such as mathematics or philosophy. At the same time, problems are not merely in the external world. Rather, Maniglier claims that problems occur in the boundaries between disciplinary fields. Solutions are carried out within specific fields of solvability, but problems remain external to them:

The problem cannot be formulated in a third medium, by some ‘common sense’ – to use Deleuze’s term; its identity and its nature can only be perceived by the very way the disciplines can be articulated with one another in their divergence. To have a problem is to have two – or at least to be caught in two dynamics of structuration. Problems, therefore, are intrinsically equivocal objects, which are always two-pronged. This is why Deleuze can say that Kurosawa and Dostoyevsky, or Godard and Thom, have ‘similar problems’, even though these problems exist nowhere other than in the films that Kurosawa made and the mathematical objects that Thom created. (Maniglier 2021, 40–41)

This divergent aspect of problems is important to emphasize because it indicates how problems exceed their articulation within a specific established domain of inquiry. As noted by Maniglier, in Deleuze’s early work this occurs through the way in which problems cannot be confined to one faculty of thought.⁶² In Deleuze’s later work, however, problems are not developed within the context of his theory of the faculties, but rather exceed the problems set out within any one discipline. Deleuze claims, for instance, that there are “similar problems, which, at different moments, in different circumstances, and under different conditions, send shock waves through various fields: painting, music, philosophy, literature, and cinema” (RM 289). This informs a philosophical reading of Deleuze’s account of problems insofar as it suggests that philosophy does not have a set of pre-established problems (e.g., the problem of truth, mind, or being) that

⁶² On this point, Deleuze claims that “Ideas occur throughout the faculties and concern them all” (DR 193/251).

remain unchanging throughout their development. Not only are problems constantly developing dynamically, but these problems exceed their articulation within the discipline of philosophy.⁶³

Deleuze's complex dialectical account of problems and solutions informs the question of how to read his work in three major ways. First, it means that an account of Deleuze's philosophical concepts alone is insufficient for grasping his arguments. In *Qu'est-ce que la philosophie?*, Deleuze and Guattari emphasize that problems are crucial to the formation of concepts: "Even in philosophy, concepts are only created as a function of problems which are thought to be badly understood or badly posed" (WP 17). If this is the case, then it means that an account of philosophical concepts also requires an account of the problems that those concepts address.

Second, the priority of problems means that the primary purpose of identifying influence on Deleuze's work is not to argue for a causal chain of historical continuity, nor is it to trace a philosophical lineage. Rather, identifying these influences is important insofar as it clarifies how a philosophical problem is transformed through an encounter with another philosophical figure.⁶⁴ What is important is thus not so much the encounter between one philosopher and another, but how this encounter opens up new paths towards approaching a philosophical problem.

Third, the priority of philosophical problems also informs how we examine the overall trajectory of Deleuze's work. If concepts are in some sense secondary to problems, then it is not enough to identify a unified set of ideas across Deleuze's general works or merely to state that

⁶³ As emphasized by Dan Smith, the process of concept creation is "not necessarily an exclusive concern of philosophy" (Smith 2012, 179).

⁶⁴ On this relation between concepts and problems, Bianco emphasizes that on Deleuze's account "all philosophers pose new problems by changing the conceptual conditions according to which philosophers posed theirs" (Bianco 2018, 24).

his various works are incompatible. Rather, we should aim to account for how the status of certain philosophical problems is transformed throughout the development of new concepts.

Importantly, engaging with the trajectory of problems rather than concepts allows for points both of continuity and discontinuity. In this way, identifying the dialectical relation between problems and concepts allows for a more expansive account of continuity than would be available if we are only tracing the continuity of concepts across different texts. Insofar as problems and concepts exist in relations through which they are both transformed through their development, it also allows us to trace the emergence of concepts in later works in relation to problems posed in the earlier works, even if the concepts used to approach these problems are not necessarily continuous with the former.

This provides a general framework through which to briefly explain my own method. Following this account of problems, my own method of *problematic conceptual analysis* first starts with the identification of a question. This question then becomes developed within a problematic field of inquiry. Within this field of inquiry, new concepts are proposed as solutions to the problem. These solutions then transform the problem, thus allowing for the problem to be posed in a new way. This method thus requires three main steps to be completed, namely the following: (1) an account of the *problem* that Deleuze aims to address, (2) the *concepts* that Deleuze develops to solve this problem in a new way, and (3) how the original problem is transformed through these solutions. Note that each of these steps will need to consider the distinctive aspects of Deleuze's understanding of problems, as well as his specific account of concepts. Providing an account of a problem needs to explicate the questions that orient the problem, as well as how that problem is developed within a field of solvability. Similarly, in

providing an account of the concepts used to address those problems, one also needs to keep in mind that for Deleuze concepts are not merely referential.⁶⁵

Chapter Conclusion

In this chapter, I argued that the ontological status of structure deserves further consideration. I explained how philosophical problems concerning the reality of structure could inform ongoing questions, specifically in relation to philosophical realism and ongoing work in the ontology of events. Furthermore, I provided an initial indication of how Deleuze's philosophy can contribute to these problems. Finally, I explained the methodological approach that guides my reading of Deleuze. Rather than examining Deleuze's work solely in terms of his influences, I aimed to follow his work as far as he develops his concepts in response to problems.

In this dissertation, the main problem I address with respect to Deleuze is the following: how do we conceptualize the reality of structure without presupposing identity? Or, in other words, how can we theorize structures not merely as coordinating established identities, but as grounded in difference? Deleuze develops several novel concepts to address this problem, most notably the concepts of *virtuality* and *actuality*, as well as *singularity*, *multiplicity*, and *series*. In addition, Deleuze will also present important revisions of classical philosophical concepts, such as difference, identity, sense, and event. An account of these revisions thus needs to demonstrate not only how Deleuze changes these concepts, but how these changes in turn transform the philosophical problem as originally posed.

⁶⁵ On the core aspects of Deleuze and Guattari's notion of the concept, see Mader (2012, 9–32).

I had marveled at the immense difference between the animals at the zoo and the gulls, pigeons, sparrows, and starlings that were only visitors there. There is even a dominant finch.
-Lyn Hejinian, *My Life* (Hejinian 2003)

Chapter II: The Priority of Difference

Chapter Overview

This chapter works to introduce the core philosophical background that informs Deleuze's account of structure. In the opening section, I overview some of the existing literature concerning Deleuze's relationship to structuralism. Drawing on my methodology introduced at the end of Chapter I, I provide an initial account of the relation between "structuralism" and the philosophical problem of structure. The following parts of the chapter introduce Deleuze's critical approach towards structure, focusing on his account of representation. In "Deleuze's Critique of Representation," I provide an account of Deleuze's critique of representation. In the following section, I argue that Deleuze's argument against representation in *Difference and Repetition* relies on his positive account of intensive difference. Finally, I conclude with an account of how Deleuze's account of difference as ontologically prior to identity provides a path towards conceptualizing the reality of structures.

Deleuze's "Structuralism" and the Problem of Structure

In Chapter One, I argued that Deleuze’s work could be approached through what I termed “problematic conceptual analysis.” The core methodology of this approach was to focus on Deleuze’s work as an attempt to resolve a problem. On this approach, one of the key features of problems is that they are not “exhausted” by their solutions. In this work, I explore how Deleuze’s work maintains a consistent engagement with the problem of how to conceptualize the reality of structures. At the same time, I also want to clarify certain aspects of this reading. Since the main concept guiding this inquiry is “structure,” and because Deleuze is a French philosopher working in an academic context deeply informed by structuralism, this might imply that I am proposing a “structuralist” reading of Deleuze.

Is Deleuze a structuralist? Recently, a view somewhat along these lines has been suggested by French philosopher Patrice Maniglier (2021). According to Maniglier, “Deleuze’s entire work” can be read “as an attempt to provide a philosophical elaboration of what might be called a structuralism of the diverging articulation of structures, which comes with the interpretation of problems as moments of structuring processes” (Maniglier 2021, 15). Although my aim here is not to provide a general interpretation of Deleuze’s entire work, I find this to be a compelling line of thought and one that is worth pursuing. However, as will be explained, such an approach requires explicating Deleuze’s account of structure, one which is not identical with the various approaches to structure in 20th-century structuralism.

In the context of Deleuze scholarship, Deleuze’s account of “structure” in his early work is often considered in relation to the French structuralism of thinkers such as Jacques Lacan and Ferdinand de Saussure. This is contrast with Deleuze’s later coauthored work with Felix Guattari, which is frequently understood as a rejection of structuralism.⁶⁶ Since the concept of

⁶⁶ As a useful example of this line of analysis, see Thornton (2017).

structure is considered to be something Deleuze later abandoned, it has often received less attention in Deleuze scholarship.⁶⁷

In addition, Deleuze's own interviews and comments at times seem to further support the interpretation that he rejected the concept structure. In a 1980 letter to Arnaud Villani, Deleuze writes: "I attach very little importance to the text of structuralism and very little importance on the entire part of *The Logic of Sense*, which is still in the clutches of psychoanalysis (the empty compartment, and a much too structural conception of 'series')" (LOT 79). Similarly, in *Dialogues*, the concept of assemblage is explicitly contrasted with the concept of structure: "Structures are linked to conditions of homogeneity, but assemblages are not" (D 52).⁶⁸ These passages and others support a more general understanding of Deleuze as someone that abandoned structure as a concept.

However, I think these passages can present a somewhat misleading interpretation of Deleuze's work. Specifically, I think they rely on two methodological errors: (1) the appeal to biographical development, according to which an author's later views are understood as inherently better or more sophisticated than their earlier views (or, more generally, the interpretation of later intellectual developments as necessarily better or more sophisticated than earlier movements); and (2) the interpretation of Deleuze's work through the continuation of concepts, rather than in relation to the underlying problematic within which those concepts are deployed. Addressing these concerns requires less attention to biographical development and

⁶⁷ As indicated by Jacques Lecercle, one of the reasons that *Logic of Sense* has received relatively little scholarship in comparison to the co-authored works with Guattari is that has been considered both "too structuralist" and "too psychoanalytic" (Lecercle 2002, 99–100). However, since this analysis, there has been increasing scholarship on *Logic of Sense*. For instance, see in particular Bowden (2011) and Bennett (2017).

⁶⁸ Note that as *Dialogues* does not have a singular author, this quote can't be attributed directly to either Deleuze or Claire Parnet.

more attention to the underlying philosophical problems that Deleuze initially uses the concept of structure to address.

Deleuze's break with structuralism is typically thought to have occurred through his encounter with Félix Guattari in 1968 (Thornton 2017), most notably through the publication of *Anti-Oedipus* in 1972. In contrast to this position, my sense is that although the timing of this break may be biographically accurate, from a philosophical point of view it seems both too late and too early. It is too late because even in Deleuze's early work, his aim is not primarily to explicate structuralist thought, but rather goes beyond it in crucial respects. As emphasized by Lundy (2013), even in the essay "What is Structuralism?", Deleuze's main aim is not merely to summarize structuralist thought, but rather to "extract a novel and creative force" (Lundy 2013, 86). Just as Deleuze's reading of Nietzsche is not merely an explication of Nietzsche's philosophy, Deleuze's reading of structuralist figures should not be understood merely as an explanation of structuralism. In addition, and as I will argue in Chapter III, many of the crucial figures Deleuze draws on to develop an ontology of structure—such as the mathematician Albert Lautman—are not generally thought of as forerunners to "structuralism" in the ordinary sense of the term. This means that even if Deleuze work is "structuralist," it is structuralism in a very different way than the standard sense of the term.

At the same time, I think the timing of Deleuze's "break" with structuralism in 1968 is also too late. This is because Deleuze's later work maintains a commitment to the problem of explaining the ontological reality of structure, even as Deleuze develops this ontology in new ways and through new concepts. While it can be accepted that Deleuze rejects a certain version of structure as theorized in certain versions of structuralism, he nonetheless aims to develop new approaches to the problem of structure in both his early and later work. In providing an account

of this problematic in his early work, my aim is to theorize this account so that its development in later work can be made more explicit. As suggested by Walter Broekman (1974), structuralists themselves often avoided explicitly developing definitions of structure outside of particular domains, and even in classical structuralism “there is no consensus about what structure actually is” (Broekman 1974, 7). If Broekman’s point is correct, then, even if Deleuze’s later work is understood to be “rejecting” classical structuralism, it is not yet altogether clear what theoretical account of “structure” Deleuze’s later work is rejecting.

Following an approach focused on problems rather than influence, my sense is that the question should no longer be whether Deleuze’s early work is more or less structuralist than his later work, but rather how Deleuze’s early and later work provides different solutions to the problem of structure as it develops. In this respect, it is true that many of the key concepts related to structuralism, such as “structure” and the “paradoxical element,” are replaced with different concepts in Deleuze’s later work. However, this does not mean that Deleuze is not addressing one of the core problems in classical structuralist thought, namely, the problem of how to explain the reality of structures and their relation to individuals.

What this indicates is that analyzing the relationship between Deleuze’s various works at level of problems rather than merely the continuation of concepts allows us to provide an account of how he develops new concepts in response to the original problematic of structuralism, while at the same time transforming those problems in new ways. At the same time, such an approach allows us to analyze the problem of structure as not limited to the structuralist movement. Put succinctly, the problem of structure is much broader than the

problem of structuralism.⁶⁹ Insofar as problems extend across different disciplines and theoretical concerns, an investigation into the problem of structure allows an account of how Deleuze conceptualizes the problem of structure through figures not explicitly connected to the history of structuralism.

As I will argue in the next section, following this broader problem in Deleuze's work requires going back further historically and philosophically than the 20th-century. It requires an analysis of what Deleuze terms "representation," a philosophical history that begins with Plato and Aristotle. I will explore how representation presents one of the major ways in conceiving the reality of structure. In order to understand the innovative aspects of Deleuze's ontology of structure, it will thus be necessary to understand how this ontology provides an alternative to the framework of representation.

Deleuze's Critique of Representation

In order to explain Deleuze's ontology of structure, it will be necessary to introduce the critical apparatus of Deleuze's thought. In doing so, I will focus on two of Deleuze's major claims: first, that the philosophical model of representation is inadequate for ontology, and second, that difference is prior to identity. In explicating Deleuze's argument for these claims, I will claim that the primary reason for rejecting representation is its theoretical inability to account for the ontological reality of difference. After explicating this argument, I will briefly indicate how these critical points inform the problem of how to think about structure.

⁶⁹ As indicated by Broekman, "the concept of structure lies at the root of important developments in the scientific and philosophical thinking of our century, roots that roots that go far too deep for structuralism to be facilely presented as being 'today's thing'" (Broekman 1974, 102). Broekman argues that "structuralism is not a new philosophy, nor is it a philosophical movement comparable to existentialism or phenomenology" (102).

Deleuze analyzes the philosophical framework of representation at both historical and theoretical levels. In “Plato and the Simulacrum,” Deleuze identifies three major moments in the history of representation: (1) the Platonist distinction between “model” and “copy,” (2) Aristotle’s “method of division,” and (3) the uptake and modification of Aristotle’s metaphysics “under the influence of Christianity” (LS 259). Since my aim is to explicate the core features of his critique, my focus here will be on his reading of Aristotle. As indicated by Daniela Voss, “Deleuze’s critique of the logic of representation applies to Aristotle much more than to Plato” (Voss 2013, 38). This is because although Platonism initially founds “the domain of representation” (38), it is not until Aristotle that the philosophical framework of representation becomes more fully developed with new conceptual and theoretical resources. In *Difference and Repetition*, Deleuze terms the Aristotelian approach “organic” or finite representation, which he distinguishes from the “orgiastic” or infinite representational accounts of Leibniz and Hegel.

At a theoretical level, Deleuze defines representation through four features: (1) “identity in the form of the *undetermined concept*,” (2) “analogy, in the relation between ultimate *determinable* concepts,” (3) “opposition, in the relation between *determinations* within concepts,” and (4) “resemblance, in the *determined* object of the concept itself” (DR 29/44-45). Deleuze views these four aspects of representation as continuing throughout the historical trajectory of representation, although in different ways throughout this history.

These four features of representation can be clarified through reference to Aristotle. Deleuze reads Aristotle through reference to Porphyry’s *Isagoge*, a standard text in the Medieval era for the introduction of Aristotle’s work. In his explanation of *genus* and *differentia*, Porphyry indicates that the primary question that concerns *genus* is “What is it?”. This question crucially distinguishes *genus* from other sorts of considerations, such as properties, differences, and

common accidents: “Differences and common accidents are not predicated of them in answer to ‘What is it?’ but rather to ‘What sort of so-and-so is it?’” (Porphyry 2003, 4). On Porphyry’s account, individuals are explained through their differentia and genus, such that individuals are classified within larger species groups in increasingly more general levels. For example, Socrates as an individual is simultaneously rational, human, animal, body, and substance.⁷⁰ As explained by Henry Somers-Hall, this culminates in a broader structural model in which “Socrates is the final arborescent structure, characterized by a perpetual process of branching in terms of universal properties” (Somers-Hall 2012a, 44). What Somers-Hall terms here “structure” refers not to the branching relations between conceptual identities. This indicates that, on Aristotle’s account, structures are inherently based in identity. At the bottom level of these branches will be determinate individuals that are primary substances. At the highest level will be the most important or foundational conceptual identities within which those individuals are grouped.⁷¹

On Aristotle’s account, a genus is an undetermined concept with respect to a determined species. For example, the genus “tree” is an undetermined conceptual identity that organizes the differing determinate existence of individuals within species groups, such as pines or oaks. Deleuze terms the broader conceptual grouping “identity,” since it relates to a concept which is not yet determined. Second, Aristotle maintains that being is not the highest genus, but is understood through *pros hen* equivocation. Deleuze terms this “analogy,” but he notes that the interpretation of the categories through analogy does not occur until the uptake of Aristotle’s

⁷⁰ This account connects to Deleuze and Guattari’s later account of the tree-model of classification.

⁷¹ For a useful overview of Aristotle’s conception of metaphysics in contrast to other 20th-century accounts, see Schaffer (2009). Schaffer argues the Aristotelian approach conceptualizes structure as ordered and hierarchical, whereas Quine’s approach towards structure is flat (Schaffer 2009, 354-356).

system through Aquinas. The crucial part here is that the relation between beings as determinable concepts is an analogical difference.

Aristotle also distinguishes species in relation to a genus through contrary predicates. For example, the genus tree is divided into deciduous and non-deciduous species, where the opposing predicates are applied to distinguish branches within the genus. Deleuze terms this “opposition.” However, “opposition” here should not be confused with contradiction. As explained by Daniela Voss (2013), while these differences as “opposing,” they are contrary differences rather than contradictory differences. For instance, in the distinction between “terrestrial” and “aquatic” animals, Voss claims that “these two determinations [in species] do not necessarily include a logical contradiction but they nevertheless divide the genus into different species through their real opposition)” (Voss 2013, 39). Finally, individual differences within a species are understood through individual variations that nonetheless resemble each other. For example, individual pine trees within a species are not identical—even within the same species, each pine tree will differ slightly through variations in height, color, and foliage. This corresponds to the fourth feature of resemblance.

Representation is one of the major ways of theorizing the reality of structure. Through representation, structures are general trees that coordinate the relations between identities within general sets of classification. As an approach to the problem of structure, representation continues long after Aristotle. As noted by Manuel DeLanda (2002), these four features inform the construction of the biological taxonomies developed by Linnaeus.⁷² In addition, as explained by Somers-Hall (2012a), the model of representation informs the early development of set

⁷² On this point and how biological species can be understood in non-Aristotelian terms, see DeLanda (2002, 32–34).

theory, as well as Russell's theory of types.⁷³ More generally, representation can thus be taken as particular way of understanding the reality of structures as organizing determinate individuals within defined groups on the basis of identity, opposition, analogy, and resemblance. Deleuze terms this form of distribution *sedentary* distribution, since it conceptualizes structure as a statically organizing individuals into statically defined groups. He contrasts it with *nomadic* distribution (DR 37/46). What is important with respect to *nomadic* distribution is that, in a nomadic distribution, identities are understood not as coordinated tree-like structures, but rather as emerging through process and becoming.⁷⁴

The Rejection of Representation

Why should we reject representation? Although Deleuze presents several interrelated objections to representation, the overall form of his argument against representation is not always clear. Deleuze suggests both normative and ontological reasons for rejecting representation. On the normative side, Deleuze connects representation to a moralizing and conservative vision of the world,⁷⁵ one that supports and upholds what he terms the “dogmatic image of thought.”⁷⁶ On the ontological side, Deleuze claims that representation is unable to explicate core features of our reality, such as the nature of individuation and the reality of difference. In explicating this

⁷³ On the connection between representation and symbolic logic, see Somers-Hall (2012a, 56–60).

⁷⁴ As emphasized by Somers-Hall, nomadic distribution emphasizes becoming rather than beings: “There are no static points from which movement originates, but rather just movement itself” (Somers-Hall 2013, 42).

⁷⁵ As a normative objection concerning representation, Deleuze writes the following: “None of this would amount to much were it not for the moral presuppositions and practical implications of such a distortion... we are led away from the most important task, that of determining problems and realizing in them our power of creation and decision” (DR, 268). Note that this quote is in the context of Deleuze's critique of Hegel.

⁷⁶ On Deleuze's account, representation is the fourth postulate of the dogmatic image of thought.

critique, my focus will be on the ontological aspect of Deleuze's argument, specifically with respect to the nature of intensive difference.

On the ontological side, there are two reasons for rejecting representation that are often cited in Deleuze scholarship. The first reason concerns the univocity of being. According to this line of thought, the reason for rejecting representation is that such an approach precludes a univocal conception of being. For example, as suggested by Somers-Hall, "Deleuze's claim will be that if we see difference as spatial, then we have to see being as fragmented (analogical). Alternatively, if we see difference in terms of intensity, then our understanding of being will instead be univocal" (Somers-Hall 2013, 24). Following this interpretation, I agree that Deleuze's rejection of representation is closely connected to his preference for univocity, and that one of his reasons for rejecting representation is that it does not allow for a univocal conception of being. However, my sense is that, taken on its own, the preference for univocity does not present a sufficient argument against representation. This is because we still need to know why a univocal conception of being is preferable to an analogical conception of being.⁷⁷ While it is plausible to think that univocal theories may be preferable, the difference and tradeoffs between univocal and analogical theories of being would still need to be carefully evaluated.

A second reason Deleuze supplies for rejecting representation is that representation "subordinates" difference to identity. Illustrating this point, Voss writes: "Deleuze rejects both types of representation, since both finite and infinite representation suffer from the same

⁷⁷ In *Hegel, Deleuze, and the Critique of Representation*, Somers-Hall provides an extended line of argument for this critique through univocity, arguing that through analogical representation "totality and consistency remain mutually exclusive" (Somers-Hall 2012, 61). Although this line of criticism is illustrative, my sense is that the reasons for preferring univocity can only be fully understood when the problems with representation have been adequately diagnosed. As I will argue, the core problem with representation diagnosed by Deleuze is the inability to explain the reality of difference.

defect...that of subordinating difference to identity” (Voss 2013, 43). While I agree that the subordination of difference to identity is central to Deleuze’s argument, I think that this line of objection also requires further clarification. This is because an argument concerning the subordination of some X to Y only follows if there is some positive aspect of X that is not fully explained when understood in terms of Y. Objections about subordination between two elements need to show why the element in question is not adequately understood when thought of from the standpoint of the other element. In order for the objection concerning subordination to follow, Deleuze’s argument requires an account of the positive aspect of difference that cannot be explained when theorized through conceptual identities. Deleuze’s assertions concerning subordination should thus be understood as an initial step in a broader argument, one that needs to be considered in light of his ontological account of non-conceptual difference.

This second line of objection can be explicated more clearly through Deleuze’s reading of difference in Aristotle. Porphyry distinguishes between three ways in which we can talk about difference: “common, proper, and strict” (DR 308/46). At the level of common difference, Porphyry claims that something is different from another when it can be distinguished from itself or another “in any fashion”—this includes, for example, the way in which “Socrates differs from Plato,” and how Socrates the adult differs “from himself as a boy” (Porphyry 2006, 8–9). As we are constantly surrounded by these differences, such as, for example, one when stands up or sits down, they are called “common.” In contrast to common differences, *proper* differences are defined as differing through “inseparable accidents,” such as “blue-eyedness or hook-nosedness or even a hardened scar from a wound” (2006, 9). These differences are “inseparable differences,” but they are still nonetheless the result of accidents rather than differences in

essence.⁷⁸ Finally, the “most proper” differences are the differences that correspond to what something essentially is in relation to a genus, such as how Socrates differs from a horse through being rational in relation to the shared genus of animal. This third kind of difference analyzed by Porphyry corresponds to what Aristotle terms “contrariety” or “specific difference.” Examples that Aristotle gives of “contrary” differences include hot and cold, being and non-being, healthy and sick. Logically, contraries take a form whereby their relative members are mutually excluded—if you are sick, you are not healthy, and if you are healthy, you are not sick. However, unlike contradictory differences, the falsity of one does not necessarily imply the truth of the other—something may be neither hot nor cold, but just lukewarm. In relation to the previous senses of difference, Aristotle terms contrariety the “greatest difference” (Aristotle 2014, 1055a2-5; DR 30/45). Specific differences distinguish something not merely in accident but in essence relative to a shared genus.

Deleuze approaches Aristotle’s concept of difference through observing a strange result of this analysis: why is that what Aristotle calls “greatest difference” is theorized as specific difference? How is specific difference “greater” than the other kinds of difference? In addressing this question, Deleuze claims that “specific difference is the greatest only in an entirely relative sense” (DR 31/47). This is because, at least with respect to conceptual scope, differences in contradiction are greater than specific differences (since they do not concern individual types), and differences between genera are greater than specific difference (since they concern more general types). Deleuze claims that the importance of specific difference thus can be understood “only in relation to the supposed identity of a concept,” and that “it is in relation to the form of identity in the generic concept that difference goes as far as opposition, that it is pushed as far as

⁷⁸ Deleuze notes this distinction between accidental difference and difference in essence (DR 308/46).

contrariety” (DR 31/47-48). Even though Aristotle claims specific difference is the “greatest” difference, Deleuze claims that specific difference is still reliant on conceptual identity. Without conceptual identities, there would be no way to conceptualize specific differences at all, since specific differences are only differences between these branching identities. Deleuze asserts that instead of providing us with an adequate ontology of difference, Aristotle has rather theorized “a particular moment in which difference is merely reconciled with the concept in general” (DR 32/48). Difference is not thought of on its own terms. Rather, difference is only “reconciled” within a hierarchical ontology of being that takes identity to be primary.

On Deleuze’s reading, these problems culminate in Aristotle’s famous assertion that being is not a genus. Deleuze objects that the reason Aristotle cannot accept that being is a genus is because “differences *are* (the genus must therefore be able to attribute itself to its differences in themselves)” (DR 32/49). If being were conceptualized as highest genus in relation to non-being, then Aristotle would not be able to conceptualize the being of specific difference. This is because, insofar as there would be some difference that distinguishes being and non-being, differences would need to be external to being, and we could no longer conceptualize specific differences as existing. The assertion that being is not a genus presents problems for Aristotle’s account in relation to his claim in the *Metaphysics* that “there is a science that gets a theoretical grasp on being *qua* being [*on hei on*] and of the belonging intrinsically to it” (Aristotle 2014, 1003a20-21). In other words, the source of this problem is ultimately Aristotle’s awareness of the reality of difference (even as he aims to subordinate differences to identity); since differences exist, being is not the highest genus.

Deleuze interprets Aristotle’s theory of the categories as an alternative to conceptualizing being as the highest genus. Understood through the categories, being is not a genus. Instead,

being is “distributive and hierarchical” (DR 33/49). Specific difference is distinguished from generic difference. Generic or categorical difference is defined as difference understood relative to the theory of categories, such as quantity, quality, relation. On Aristotle’s account, the categories are maximally general concepts that are then applied to specific entities. Generic difference provides a form of difference in the form of judgments within the domain of each category; for example, we can say that three apples are greater in quantity than two, or that maroon is a qualitatively darker shade of red than rose. The differences between the categories are then theorized in terms of analogical differences within a central focal meaning, that of substance. This analogical difference between categories is distinguished from contrariety, where the differences between predicates are understood through opposition.

Deleuze argues that generic difference is no more sufficient a concept of difference than specific difference. Whereas the function of specific difference is to “inscribe difference in the identity of the indeterminate concept in general,” the function of generic difference is “to inscribe difference in the quasi-identity of the most general determinable concepts; that is, in the analogy within judgment itself” (DR 33-34/50-51). Generic difference stabilizes differences within conceptual schemas relative to stable identities that can be measured against each other. In effect, what this means is that generic differences between determinate entities can only be understood relative to the distinction between entities within the *same* conceptual category (e.g., differences in quality). In this respect, Deleuze claims that specific difference and generic difference are both necessarily parts of Aristotle’s account. Without generic difference, Aristotle would be forced to the earlier problems that concerned theorizing being as highest genus. But without species difference, there would be no means by which to classify beings in hierarchically organized models of genus and species. Specific difference allows for a model wherein

differences can be classified in relation to an undetermined genus. For Aristotle, distributing generic differences through the categories is thus necessary in order to understand the different senses of being through general concepts.

Through this analysis, Deleuze presents two important objections against Aristotle's account of difference. First, he claims that difference is not theorized as having its own ontological status. Rather, difference is understood only in relation to pre-established identities within concepts. Difference is specifically theorized to maintain the "coherence and continuity" of these identities (DR 31/47). Second, Deleuze claims that, due to being conceptualized from the standpoint of conceptual identity, the reality of difference is confused with the relations of difference in conceptual identities. This confusion, Deleuze writes, is "disastrous for the entire philosophy of difference," insofar as through this approach "the determination of the concept of difference is confused with the inscription of difference in the identity of an undetermined concept" (DR 32/48). As noted by Somers-Hall, this forms a more general problem in the history of metaphysics, where "difference itself has always been understood by thinkers as a difference between concepts" (Somers-Hall 2012a, 41).

Importantly, Deleuze's argument here relies on the premise that that difference cannot be fully understood as a relation between conceptual identities. Following this critique, it should be clear that Deleuze's account requires a positive ontological account of difference that is not analyzable merely through conceptual difference. In order for Deleuze's claims to follow, he needs to show both that difference has its own ontological status, and that this status cannot be theorized merely as a relation between conceptual identities. This general argument for the reality of difference will be clarified in the next section.

The Ontological Priority of Difference Over Identity

Deleuze develops a positive account of non-conceptual difference through an engagement with the concept of “intensity” in Duns Scotus, Spinoza, and Nietzsche, as well work in the science of thermodynamics.⁷⁹ Rather than providing a sustained account of his reading of each of these figures, my focus will be here on what I take to be the general argument for the priority of difference. Deleuze argues that previous historical accounts have failed to adequately conceptualize the reality of difference, and that a new concept of difference is required. On his account, differences are real. There are real differences, for instance, between entities such as weekends and weekdays, cars and bikes, surfers and golfers, and freshly-roasted coffee and three-month old coffee. These things are not the same.

The reality of difference is also acknowledged by representation, although difference is obscured through their accounts. As shown by Porphyry, Aristotle acknowledges the reality of various differences between species, individuals, concepts. More generally, representation aims to theorize differences through negation, analogy, opposition, or resemblance. First, negation conceptualizes differences as grounded in the logical negation of an identity. As understood through negation, to say that X is different from Y is to say that X is not Y.⁸⁰ Second, analogy theorizes differences as related through a shared meaning. For example, Aristotle claims although there are different senses in which something can be healthy, they all relate to a single

⁷⁹ On the major historical sources informing Deleuze’s concept of intensity, see in particular Duffy (2016), Mader (2014, 2017), and Voss (2017).

⁸⁰ Somers-Hall formulates this point in the following way: “We can sum up this characterization of difference with the claim that if x differs from y, x is not y” (Somers-Hall 2013, 177). However, insofar as this is understood as a theoretical understanding of difference as based in logical negation, the converse should also hold: if x is not y, then x differs from y. This representational framework supports the stronger claim that differences are grounded in negation; i.e., that negation is a condition of difference.

meaning of health (Aristotle 2016, 4.2 1003a33-35). Through this approach, differences are thus unified through their relation to a singular focal sense.⁸¹ As shown previously, the primary example of this is substance as the one focal sense in which being is understood. Third, opposition theorizes difference through contrary predicates. The differences between animals are grounded in contrary distinctions, such as “with feet” or “with wings” (DR 30/45). Finally, resemblance theorizes differences through relations of perceived resemblances between individuals.

Deleuze’s Critique of Conceptual Difference

For Deleuze, each of these prior conceptions of differences are at best superficial notions of difference. This is because these historical approaches to difference fail to explain the reality of difference. Specifically, he argues that these approaches are unable to account for what he terms *intensive difference*. In *Difference and Repetition*, Deleuze’s develops the account of intensive difference through reference to the science of thermodynamic systems. As examples, he supplies “differences of level, temperature, pressure, tension,” and “potential” (DR 222/286). In the context of energetics, intensive properties are often paired with extensive properties. For instance, in linear energy transfer, intensive force is related to extensive distance (DR 223/287). Intensive properties are distinguished from extensive properties in several respects. Unlike extensive properties like volume, intensities such as pressure cannot be divided “without changing [their] nature” (DR 237/305-6; DeLanda 2013, 49). In addition, although intensive differences are correlated with changes in extensive differences, they are not proportional to

⁸¹ Deleuze claims that analogy plays two roles, one with respect to the “highest determinable concepts” and another with respect to “the relations between determinate concepts and their respective objects” (DR 138).

these changes (DR 253/325).⁸² Finally, intensive differences are generative of extensive phenomena. To illustrate this point, Dan Smith provides the example of lightning, wherein the extensive quality of the lightning bolt “is the result of a difference of potential in the cloud, a difference in charge, but the condition under which the lightning appears is the resolution of this charge, the cancelation of the difference” (Smith 2012, 84). As in the case of lightning bolt, the intensive differences in pressure are not directly perceived, but only the flash of light.

As in the previous section, Deleuze’s account of the reality of intensive difference can be usefully understood through reference to Aristotle. Aristotle’s account of alteration forms a crucial basis for Medieval theories of *intensio* (Mader 2014). This conceptual history traced back to Aristotle informs crucial aspects of Deleuze’s account. Aristotle develops an account of alteration as a kind of change that pertains to quality. He argues that changes in quality “unquestionably admit of a more and a less: one man is called more grammatical than another, juster, healthier, and so on” (Aristotle 2014, *Cat.* 8.11a1-4). As explained by Mary Beth Mader, Aristotle’s account is not intended to explain “two qualities in two different beings or subjects” (2014, 228), but is rather meant to explain qualitative increase within a subject, such as a healthy person increasing in health, or a just person increasing in justness.⁸³ Aristotle provides a

⁸² This is a crucial difference between Deleuze’s conception of intensity and Hegel’s account of intensity. As explained by Simon Duffy, “Hegel considers the degree of intensive quantity to vary in direct proportion to the amounts of extensive quantity. That is, as the temperature increases in degree, or intensive quantity, the variation in amount of heat, or extensive quantity, as measured by the thermometer, is in direct proportion with the change of intensity of heat” (Duffy 2016, 106). In contrast with this position, Deleuze draws on the ontology of intensity in Duns Scotus wherein differences in intensity are not proportional to differences in extensity.

⁸³ As noted by Jean-Luc Solère, the oppositional difference between qualities is still a crucial part of Aristotle’s account: “the more and the less depend only on the preponderance of a quality over its opposite” (Solère 2001, 584). This is important, as the concepts of contrary or opposing differences between qualities (e.g., health and sickness) provide the crucial framework of difference that structures Aristotle’s ontology of intensity. Contrariety is in part what distinguishes the category of quality from quantity, as “a quantity has no contrary” (Aristotle 2014, *Cat.* 6.5b10-11). Following this point, Aristotle’s account of alteration as the increase or diminution of a quality is grounded in a conception of categorical difference as opposition. This presents an important puzzle for Medieval thought with respect to charity, since “charity, as a divine gift, has no contrary” (Solère 2001, 584).

philosophical framework for thinking about intensive difference in terms of quality, an approach that influences later historical approaches to intensity.

In contrast with Aristotle, Deleuze argues that quality presupposes intensity. “The perceived quality presupposes intensity,” he writes, “because it expresses only a resemblance to a ‘band of isolatable intensities,’ within the limits of which a permanent object is constituted—the qualified object which affirms its identity across variable distances” (DR 230/297).

According to this passage, there are two main reasons why Deleuze claims that quality presupposes intensity. The first reason he makes this claim is that qualities rely on the identity of a subject to which predicates can be attached. For instance, the quality “healthy” does not exist in isolation but must be predicated of a subject. So qualitative difference can thus only be understood through presupposing an already-established identity. The second reason is that quality is based in an oppositional conception of difference (DR 235/303). Since Deleuze argues that this oppositional account of difference is reliant on intensive difference, qualitative difference presupposes intensive difference.

In order to illustrate both of these points, we can consider the example of crystal formation. A formed crystal will have qualities such as hardness and color. However, a crystal is formed through intensive differences in temperature and force. The crystal’s qualities are the result of a stabilization of these intensities into an extensive state. This relation of genesis follows Deleuze’s general argument, according to which intensive differences are generative of and prior to the qualities of objects, which are “imprisoned in individuals as though in a crystal”

(DR 247/318).⁸⁴ For Deleuze, intensities cannot be understood merely as qualitative changes of increase or decrease, because qualities are ontologically dependent on intensity.

Deleuze claims that each of the prior four approaches to difference are unable to account for intensive difference. First, an account of intensive difference does not require negation. This is because intensities are affirmative and not negative. The increase or decrease in an intensity does not require a negation of a prior intensity. As explained by Somers-Hall, “we never actually discover the negation of an intensity, but only its difference from other intensities” (Somers-Hall 2013, 177). It is in this sense that Deleuze views negation as derived from intensive difference: “Negation, like the ripples in a pond, is the effect of an affirmation which is too strong or too different” (DR, 54).

Second, the oppositional approach to difference is likewise unable to account for intensive difference. This is because intensive differences do not require opposing predicates. Rather, Deleuze claims that oppositions are reliant on an objective intensive difference: “oppositions are roughly cut from a delicate milieu of overlapping perspectives, of communicating distances, divergences and disparities, of heterogeneous potentials and intensities” (DR 50/71). Oppositions apply to opposed qualities that are predicated of subjects. Opposition thus relies on qualitative differences, such as between hot and cold. Since these oppositions “presuppose difference” (DR 51/73), opposition cannot account for the reality of difference. Following Deleuze’s earlier argument that quality presupposes intensity, it follows that intensive difference cannot be conceptualized through opposition.

⁸⁴ Deleuze uses the crystal example with reference to Gilbert Simondon. Simondon provides a complex analysis of crystal formation as determined through energetic thresholds in pressure and temperature, and in which “the limits of a structural type of domain of stability are determined by energetic considerations” (Simondon 2020, 67). Simondon argues that (contra Aristotle) matter cannot account for individuation: “Individuation as an operation is linked not to matter,” he writes, “but to a state modification...a substance conserves its individuality when it is in the most stable state proportionate to its own energetic conditions” (Simondon 2020, 70).

Third, analogy is also unable to account for intensive difference. This is because intensive differences are not analogical. For example, a difference in temperature is not said in many ways, such as temperature on a hot afternoon or during a winter storm. Differences in temperature do not require an analogous difference between general categories. There are not many different competing senses, but rather differences that are indicated only by greater and lesser intensities. Since intensive differences are not differences in the sense of *pros hen* equivocation, the analogical approach is insufficient.

Finally, resemblance is also unable to account for intensive difference. The function of resemblance is to coordinate individual differences in identity within a shared species. But on Deleuze's account, intensive differences are prior to and generative of identities. Following this point, Deleuze argues that resemblance is "an effect, a functional product, an external result—an illusion which appears once the agent arrogates to itself an identity that it lacked" (DR 120/158). Since resemblances presuppose identity, they also cannot account for intensive difference.

This account of intensive difference provides a concise general argument for the ontological priority of difference over identity. Whereas prior accounts of difference attempted to explain difference through coordinating differences within conceptual identities (variously related through negation, analogy, opposition, and resemblance), each of these accounts is insufficient. They are insufficient because they do not explain intensive difference. Intensive differences are real, but they are prior to and generative of identities, as well as the qualities attributed to those identities. This supports a more general claim according to which difference is ontologically prior to identity.

In making this argument, Deleuze maintains the underlying premise whereby if some ontological feature X can explain another feature Y and the conditions through which Y is

constituted, and if the reverse does not hold, then X is ontologically prior to Y. As shown above, Deleuze argues that an account of intensive difference can explain the conditions through which identities are generated and sustained, whereas identities are unable to sufficiently explicate the ontological nature of difference. Since differences explain the constitution of identities, identities are grounded in difference.

Importantly, Deleuze's account of the priority of difference does not further imply that identities are not real. As explained by Dan Smith, "It is not that Deleuze denies subjects and objects have identities—it is simply that these identities are secondary; they are the effect of more profound relations of difference" (Smith 2012, 82). This is a useful summary of Deleuze's position, which is that identities are real but secondary to difference. At the same time, Smith's use of the term "effect" might be misleading, as it could suggest that Deleuze understands the relation between difference and identity to be causal. Rather than understanding this claim in terms of causation, I think the better framework is that of grounding. Grounding claims can be distinguished from causal claims in that they are constitutive. Interpreted as a grounding argument, Deleuze's claim is not that identities are the causal effects of difference but is rather that identities are constituted through difference. Since identities are ontologically constituted through difference, and since representation thinks difference only on the basis of conceptual identity, representation is unable to account for the reality of difference.

Having clarified what I take to be Deleuze's general argument for the priority of difference, I will also raise a further complication. Note that in each case Deleuze's rejection of prior accounts of difference requires a notable ontological thesis: namely, that intensive differences are real. Interpreting the basis of this thesis concerning intensive difference presents two difficulties. The first difficulty is that intensive differences are not themselves sensed or

directly experienced. As explained by Dale Clisby, “intensity occupies a position as paradoxically that which gives rise to sensation but also that which is not perceived directly” (Clisby 2017, 255). At the level of experience, Deleuze claims that what we encounter are sensible qualities—e.g., the hotness of a heater, the coldness of ice, a flash of lightning.⁸⁵ The second difficulty is that Deleuze’s ontology of intensity is inspired by but not limited to scientific explanation. Although he references thermodynamics, he explicitly states that “intensive quantity is a transcendental principle, not a scientific concept” (DR 240-1/310). In this respect, he develops the ontology of intensity in other domains outside of the empirical, such as literature and aesthetics. For example, as explained by Dan Smith, intensity is crucial to Deleuze’s reading of modern art: “The artist takes a given energetic material composed of intensive traits and singularities and synthesizes its disparate elements in such a way that it can harness or capture these intensities” (Smith 2012, 101). This means that Deleuze’s ontology of intensive difference cannot merely rely on the intensity as understood in the sciences.⁸⁶

Taken together, these difficulties suggest a skeptical concern: what is intensive difference, exactly? How do we *know*? And in what exact sense are intensive differences objective? Unlike objects like chairs or tables, one cannot merely point at an intensive difference. Although these are important concerns, I will not fully address these difficulties here. Suffice it to say for the moment that I think the strength of Deleuze’s account of intensive difference is in what it allows us to explain. As I will argue, one of the major strengths of Deleuze’s ontology is

⁸⁵ This point is also explicated by Somers-Hall: “Just as the difference in the intensity of temperature gives rise to work, Deleuze’s claim is that more generally, differences in intensity manifest themselves as qualities in the phenomenal world” (Somers-Hall 2013, 168).

⁸⁶ On the distinction between scientific accounts of intensity and Deleuze’s own account, see Mader (2014). One of the crucial distinctions here is that whereas science investigates co-ordered differences, Deleuze’s account of intensity concerns only ordered differences: “The domain of intensity, philosophy and the concept is the domain of the ordinate, not of the co-ordinate” (Mader 2014, 241).

that it enables a generative account of identities through structures, without taking those identities as fundamental or already given.

I will briefly indicate how I take Deleuze's argument for the priority of difference to inform an account of structure. Although the full uptake of these claims is developed more fully in chapters III and IV, these points will be stated in a concise form now. First, the priority of difference means that structures cannot themselves be thought of as merely coordinating already-established individuals within domains of classification. Second, the inadequacy of the model of representation means that we cannot view structures as secondary to the existence of identities. Rather, following Deleuze's argument, what we require is an account of the underlying processes through which identities are constructed, transformed, and destroyed. When theorized in a way that prioritizes difference over identity, structures do not merely coordinate the relations between already-formed identities but rather provide the conditions through which identities are formed.

Two Positive Concepts of Structure in Deleuze's Early Work

Deleuze's early work develops at least two concepts of differential structure which will be the focus of the two chapters that follow. Both accounts aim to present alternatives to the philosophical framework of representation. The first concept of structure is his account of problematic "Ideas" as developed in chapter IV of *Difference and Repetition*. As an alternative to a certain version of Platonism, Deleuze develops a dialectical account of structures as inherently problematic.

The second account of differential structure I will explicate is Deleuze's account of structure in *The Logic of Sense*. On this account, structures are conceptualized as a differential

series that communicate by means of a “paradoxical element.” Deleuze develops this account of structure with reference to classical structuralist thought, including Roman Jakobson, Claude Lévi-Strauss, and Jacques Lacan. In addition, Deleuze also develops his account through reference to a Stoic ontology of events.

While the concepts of structure developed in both *Difference and Repetition* and *The Logic of Sense* often overlap in their explication (both including, for instance, the notions of “series,” “multiplicity,” and “event), these concepts are developed in relation to somewhat different fields of inquiry.⁸⁷ In the first case, Deleuze is addressing the broader philosophical framework of representation that was initiated with Plato. His account of dialectical Ideas thus works to overcome representation through a reversal of Platonism. This reversal is enacted partly through an engagement with the “minor” structuralist thought of Albert Lautman. In the second case, Deleuze’s project is that of addressing the problematic of sense.

As I will argue, both concepts nonetheless aim to address the broader problem of how to conceptualize the reality of structure in a way that takes difference as ontologically prior to identity. Although these concepts of structure are each theorized in slightly different areas (first in the context of representation, then in the context of developing a logic of sense), they nonetheless share a related aim of addressing the broader problem of structure.

Chapter Conclusion

This chapter provided an account of Deleuze’s argument in *Difference and Repetition* that

⁸⁷ On this point, Bowden (2011) argues that the concept of structure in *Difference and Repetition* and the *Logic of Sense* are the “same concept” (161), insofar as both share key features such as the connection to problems, reciprocal determination, and singularity.

difference is ontologically prior to identity. Focusing on Deleuze's reading of difference and conceptual identity in Aristotle, I claimed that Deleuze's rejection of representation relies on his ontological thesis concerning the reality of intensive difference. At the same time, this thesis also provides a compelling reason for rejecting structural ontologism. According to ontologism, the notion of "structure" apart from an existing identity was conceptually incoherent. However, if difference is prior to identity, then ontologism must be misguided. This point further informs Deleuze's analysis of structure. Rather than thinking of structures as identities, Deleuze's task instead will be reconceptualize structures as emerging from difference.

Chapter III: Deleuze's Inversion of Structural Platonism

Chapter Overview

This chapter examines how Deleuze's realist ontology of structure responds to *platonism*.⁸⁸ I address both Deleuze's response to the historical Plato, as well as how his position differs from views in more recent versions of platonism. In the opening section, I provide an overview of structures across different domains, using some examples that help to set up the problem of the reality of structure as it relates to platonism. After setting up this problem, I introduce a view called *structural platonism* that aims to explain their reality. Whereas structural platonism is intricately connected to the theory of structuralism in the philosophy of mathematics, I introduce structure as something that is not limited to any one domain. I then evaluate some of the main concerns with the platonist approach.

Following this problem, the second part of the chapter explores Deleuze's positive account of structure through his "reversal" of platonism. The focus here is explaining how Deleuze adopts Plato's terminology of "Ideas." While Deleuze rejects the platonist solution to the problem of structure, he nonetheless finds a useful aspect of Plato's thought in the account of the dialectic. In illustrating this move, I explore how Deleuze's concept of "dialectical Ideas" develops through engagement with Albert Lautman's dialectical interpretation of platonism.

Structures in Different Domains

⁸⁸ I use the lower-case "platonism" to mark a distinction between contemporary platonism and Plato's own views on structure, a topic that I address in the second half of this chapter.

One of this chapter's aims is to introduce the concept of structure as it applies to different domains. This is because I want to explore structures as having a reality that is not limited to any one domain. In doing so, my focus will be on examples drawn from the domain of mathematics, as well as from other areas including film, games, and music.

Let us focus first on the concept of structure in mathematics. The reason for focusing on examples from mathematics is that much of the existing contemporary scholarship on the reality of "structures" is in that philosophy of mathematics, which helps provide a useful reference for the topic. In addition to this, Deleuze often uses examples from mathematics to develop his argument.

In *Philosophy of Mathematics: Structure and Ontology* (2000), Stewart Shapiro defends as "structuralist" account of mathematics wherein the existence of mathematical objects is dependent on their role within a structure. A useful reference point here to illustrate this view is the series of natural numbers as described by Peano arithmetic. As argued by Shapiro (2000), the natural numbers do not exist independently from each other. Rather, each individual number is no more than a "position" in the structure of arithmetic:

The subject matter of arithmetic is a single abstract structure, the pattern common to any infinite collection of objects that has a successor relation with a unique initial object and satisfies the (second-order) induction principle. The number 2, for example, is no more and no less than the second position in the natural-number structure; 6 is the sixth position. Neither of them has any independence from the structure in which they are positions, and as places in this structure, neither number is independent of each other. (Shapiro 2000, 72)

Each number does not exist outside of its relation within the structure—the number is just its "position" in that structure. Shapiro (2000) focuses mostly on structuralism in mathematics, but

also claims that “it would be nice if structuralism could be extended beyond mathematics” (Shapiro 2000, 258). While he does not fully develop this view, Shapiro provides some suggestions of what this account would look like. According to a more general structuralism, he suggests that “all objects are places in structures. For each stone, there is at least one pattern such that the stone just *is* a position in that pattern” (259). More recently, Ryan Nefdt (2019) argues that a Shapiro-inspired account of structuralism can also be applied to linguistic items, such as words.

I find this line of thought compelling, and I think mathematics provides a good starting point for theorizing the reality of structure. However, while mathematics is a useful point of reference, I think it’s especially important to think of structures as not inherently mathematical. There are two main reasons for this. First, while much of the existing scholarship on this topic is closely tied to the philosophy of mathematics, I do not think that for Deleuze the problem concerning the reality of structure is not limited to any single domain. As we will see, although Deleuze often draws from problems in mathematics to illustrate certain arguments, he aims to provide a general ontological account of structure where no one domain is ultimately reducible to the others.

Second, I think the focus on other areas, such as film and music, is also useful, because it helps to separate questions concerning the reality of structure from questions concerning fundamentality. While, following Deleuze, I will defend the view that structures are real, I am not committed to the view that all structures are metaphysically fundamental. In this respect, I draw from Karen Bennet (2017), who, in a chapter titled “In Defense of the Nonfundamental,” argues against “the common thought that the proper topic is the fundamental nature of reality, the basic or ultimate structure of the world” (Bennett 2017, 214). Rather, according to Bennett,

metaphysics is also concerned with the nonfundamental: “Nonfundamentalia are neither outsiders to nor anomalies in metaphysics. They pervade it” (Bennett 2017, 325). I think this approach is especially useful in engaging with the concept of structure, because it allows us to provide a more general account of structure in different domains, without having to address questions about whether those domains themselves are fundamental or not. Furthermore, while I do think that, on Deleuze’s account, structures are *more* fundamental than individual objects, I do not think he is committed to the view that structures are fundamental in an absolute sense. With this in mind, the focus on structures in domains like music and film helps to prevent the association between structure and fundamentality.

What is a “structure,” considered apart from any single domain? In addressing this question, it will be helpful to provide a preliminary account that can guide the inquiry that follows. While this ontology of structure will be elaborated in more detail in Chapter IV, this preliminary account will nonetheless help to clarify the scope of Deleuze’s account. In the *Logic of Sense*, Deleuze provides an account of structure as defined through three conditions: (1) two heterogenous series, (2) each series is “constituted by terms that exist only through the relations they maintain with one another, and (3) both series “converge toward a paradoxical element” (LS 50-51).

In order to clarify this account, let us first focus on an example of a structure that Deleuze takes from film, Orson Welles’s (1941) *Citizen Kane*. While Deleuze does not cite this film until his later work in *Cinema 2*, it nonetheless provides a useful point of reference for illustrating some of his claims about structure above, especially with respect to the paradoxical element. Ontologically, following the three conditions above, the film’s structure is separated into two “series.” The initial series is of images organized into shots and scenes. The second series is the

narrative of events as they unfold in the film's subjects—Charles Foster Kane's death in Xanadu, followed by the investigative steps and character decisions that follow from it.

On Deleuze's account, the second condition indicates that the existence of each structural element is constituted only through its relation to the other elements. Consider, for instance, the scene in which the character Kane damages furniture, before holding a snow globe and uttering the phrase "Rosebud." The different elements in the narrative series of the scene depend on their relation to each other—if Kane had not first been damaging the furniture, then his caution in holding the snow globe would have an entirely different meaning. Just as the elements within each depend on their relations, the function of each scene also depends on the relation that scene has to the other scenes.

Finally, the third condition of structure is that the two series converge towards a "paradoxical element." By this, Deleuze means that there is an element that orients the series, but that does not have a specific identifiable meaning within the structure. In our example, a good candidate for this paradoxical element would be the utterance of "Rosebud." In the film, the meaning of term "Rosebud" is a mystery that sets into motion the film's investigation. While the meaning of the term "Rosebud" is seemingly revealed at the end, in *Cinema II* Deleuze claims that the term has no meaning at all: "Not only could Rosebud have been anything; in so far as it is something, it goes down into an image which burns independently, is totally pointless and of interest to no one" (C2 111).⁸⁹ This is because Deleuze's main focus is on the role that the term Rosebud plays in the film's structure. When considered in relation to the film's structure, the

⁸⁹ In *Cinema 2*, Deleuze further describes Rosebud as belonging to the virtual: "We do not know in advance if the virtual seed ('Rosebud') will be actualized, because we do not know in advance if the actual environment enjoys the corresponding virtuality" (C2 74).

function of term “Rosebud” is that it has no meaning—having no meaning, it is the single focal point that draws together the other elements in each series.⁹⁰

Leaving aside some technical details surrounding the notion of the paradoxical element for the moment, I would like to emphasize two separate points concerning this initial account. First, an element in a structure depends on its position relative to the other elements in that structure. Consider, for example, the ontological status of a character in the play. In the context of a play, the character cannot be isolated from its position in relation to the other characters.⁹¹ Second, these structural “positions” are not identical to the objects (material or otherwise) that make up that structure. For example, although a character requires an actor to play the part, the ontological status of the character’s “role” in the play needs to be carefully distinguished from the actor as a person. Using Shapiro’s terminology, we can say that an actor occupies a *role* within the dramatic structure, and this role is ontologically dependent on position in that structure. Note that, on Deleuze’s account, a *role* is not equivalent to a character. Deleuze writes: “The role played is never that of a character, it is a theme (the complex theme or sense) constituted by the components of the event, that is, by communicating singularities effectively liberated from the limits of individuals and persons” (LS 150). This suggests that if we want to understand how the dramatic structure operates, we need to think at the structural level of the role rather than at the level of the character. Deleuze thinks that to say that an actor plays a “character” is therefore misleading, since it assumes that the structural role could be adequately described through an ontology of individuals.

⁹⁰ I develop the Deleuze’s account of the “paradoxical element” in more detail in Chapter IV, section 4.

⁹¹ Note that Deleuze distinguishes the notion of “character” from that of a “role.” He writes: “The role played is never that of a character, it is a theme (the complex theme or sense) constituted by the components of the event, that is, by communicating singularities effectively liberated from the limits of individuals and persons.”

Furthermore, when considered as a whole, these structures are ontologically defined through the relations between these various elements, rather than through the elements themselves. Consider, for example, how a song can be shifted up or down a key. If the song's structure was composed only of isolated individual notes, it would be impossible to shift a song to a different key without changing the song entirely. But the same song can be played in different keys—or even in different languages—and although a change in key might change certain aspects of the song, we do not generally think that each time this happens we are encountering an entirely different song. Moreover, a musical structure can be transposed between instruments with vastly different qualities, and thus has a reality which is separable from its physical instantiations and individual performances. This is because what matters with respect to the musical structure are the relations between the notes and not the notes as individuals. The individual notes need to be there, but what really matters is the role that they play in the musical structure.

While structures can be realized in ordinary physical space and time, they are not reducible to their various realizations. A useful example here to illustrate this point—provided by Plato scholar Myles Burnyeat—is Bach's *The Art of Fugue*. The musical score of this work is unfinished, and both surviving editions of the score do not indicate instrumentation. Because of this, there is no official or authoritative answer to how the work should be performed. To date, the work has been performed by full orchestras, harpsichords, guitars, and even a talk box. Burnyeat (2000) illustrates this example in the following way:

What Bach really created, one might say, is the abstract structure represented by the notation (all those little diagrams) on the page. To undergo a Platonic conversion with respect to *The Art of Fugue* would be to come to think that, while it may be realized audibly in different sound-media, none of these performances...is as real, as beautiful, or as valuable, as the abstract structure which is '*The Art of Fugue* itself'.

(Burnyeat 2000, 55)

On Burnyeat's "Platonist" interpretation, the structure of the *Art of Fugue* is real, but it is not reducible to each of these individual performances and interpretations, nor even to all of these performances taken together. What this example helps to illustrate is the notion of a structure as separable from its various material instantiations. However, while Burnyeat draws a connection between the "score" and "structure" of *The Art of Fugue*, this association can also be misleading. To begin with, the score can indicate many aspects of the song may not be essential to its structure, such as the exact key. In addition, it misleadingly suggests that the structure of the song is ontologically connected to its written notation.

These examples from film and music help show that structures, while difficult to explain, are not as abstract and mysterious as they might seem initially. At the same time, such examples help to clarify some of the differences between structures and objects. Whereas, as indicated in Chapter I, objects are generally thought of as individuals with properties, structures (as encountered in film, music, and mathematics) are more like complexes of relations and elements. Whereas those elements may include individuals, the relations are by no means reducible to those individuals, and this means that developing an ontology of structure will require a different approach.

This provides a framework to engage with questions concerning the reality of structure. If structures like this are all around us, and if they exist independently from their various physical instantiations, then how are they real exactly? If symphonies and fugues are not reducible to individual physical performances, then *where* are they?

As indicated above by Burnyeat, the platonist approach provides one important option to address these questions. Because of this, an analysis of the platonist approach to structure can

help to illuminate certain aspects of this problem. While many aspects of the platonist solution are ultimately rejected by Deleuze, explaining the reasons for this rejection will be necessary in order to grasp the features of his account. In working to explain this, the next section will provide an overview of structural platonism and some of the core features of that view. Following this, I will then explicate what I take to be Deleuze's reasons for rejecting that approach.

Structural Platonism

Structural platonism is the view that structures exist independently from both the physical world and from mental experience. Structures are not merely in our minds. Nor are they in the physical universe. But, according to this platonist view, they are still real.

As indicated earlier, the term “structural platonism” is most often used in the philosophy of mathematics, where it is alternatively known as mathematical structuralism. Mathematical structuralism developed in response to problems with traditional platonist accounts (cf. Benacerraf 1965). In the context of mathematics, one of the important distinctions made is between structures and systems. Systems are defined as “a collection of objects together with certain relations on those objects,” and structures are defined as “the abstract form of a system, which ignores or abstracts away from any features of the objects that do not bear on those relations” (Hellman and Shapiro 2018, 3).

Within mathematical structuralism, there are three main variants on the relations between structures and systems: (1) *ante rem* structuralism, according to which structures are ontologically prior to systems in which they occur, (2) *in re* structuralism, according to which

structures are “posterior to the systems that instantiate them,” and (3) *eliminative* structuralism, according to which structures do not exist, and “talk of a given structure is just convenient shorthand for all systems that are isomorphic to each other in different ways” (Hellman and Shapiro 2018, 3–4). Mathematical structuralism can be developed using different logical and mathematical frameworks, including set theory, category theory, as well as second-order modal logic (e.g. Hellman 1996). While the origins of mathematical structuralism as a philosophical position are fairly recent,⁹² “structuralist” positions in mathematics can be traced back to the developments in non-Euclidean geometry, Richard Dedekind’s work on natural numbers (Reck 2003), as well as Hilbert’s Program to axiomatize mathematics.⁹³

Since I am considering structures in different domains, the view I am considering here, which I term *structural platonism*, is a variant on the more familiar position of *platonism*, the view that abstract objects exist that are neither merely mental nor physical.⁹⁴ For example, according to a platonist about the natural numbers, the number 7 exists, but it does not exist merely in our minds. Similarly, according to a platonist about properties, the property green exists, but does not exist within the physical world or merely in our phenomenal experience of greenness.

One of the standard considerations in favor of platonism in mathematics is the idea that certain mathematical truths seem to be objective and necessary in a way that does not merely reflect the subjective experience of the mathematician—that is, we might say they seem to be “discovered” and not merely “invented.” Take, for example, Euclid’s proof that there is an

⁹² The criticisms of standard Platonism in Benacerraf (1965)’s seminal essay “What Numbers Could Not Be” was one of the major launching points for structuralism in the philosophy of mathematics. For an overview of the structuralist solution to the problems raised by Benacerraf, see Gasser (2015).

⁹³ For a useful history of structuralism in mathematics, see Hellman and Shapiro (2018, chap. 2).

⁹⁴ For a broad overview of metaphysical platonism, see Balaguer (2016).

infinitude of prime numbers:

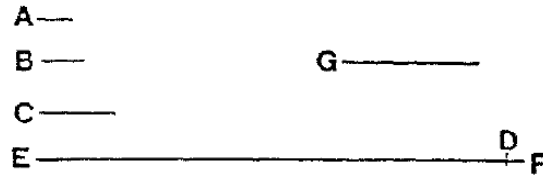


Fig. 1 Euclid’s Proof of the Infinity of Prime Numbers (Euclid 1956, 412)

Euclid’s proof begins by considering a finite list of prime numbers A , B , and C . Given this initial starting point, we then take the product of these numbers (DE) and add one to the result (EF). Either this result is prime, or it is not. If the result is prime, then there is an additional prime number EF greater than the initial list of A , B , and C . If the result is not prime, then it has some prime factor G . This is because all non-prime numbers are (by definition) divisible by a prime number. However, G cannot be either A , B , or C , since if it were, it must both be a factor for ED and EF . If this is the case, then it must also be a prime factor for the unit DF : “Now A , B , C measure DE ; therefore, G will also measure DE . But it also measures EF . Therefore G , being a number, will measure the remainder, the unit DF : which is absurd” (Euclid 1956, 412). So, whether or not EF is prime, there must be a prime number which is not equivalent to A , B , or C . Since this result holds for any finite list of prime numbers, there must be an infinite amount of prime numbers.

As indicated by Timothy Gowers (2011), it’s not at all clear whether “proofs” like this are discovered or invented (or both or neither). On the side of discovery, there is the sense in which “mathematicians often talk of ‘the right proof’ of a statement, meaning not that it is the only correct proof but that it is the one proof that truly explains why a statement is true” (2011,

7). At the same time, there is also a sense in which different proofs seem to be “invented,” since one can produce different proofs for the same theorem (7). However, if one accepts the notion that Euclid’s proof was not made up, then that seems to support the view that mathematical objects exist at least in some way as mind-independent.⁹⁵ At the same time, this result seems strange and puzzling—if it is true that there are an infinite number of primes, and if these primes are not merely in our heads, what is it that makes this true?

In response to these questions, mathematical structuralism builds on certain aspects of standard platonism. However, in contrast to standard platonism, mathematical structuralism argues that the objectivity of certain mathematical results should be considered not merely through reference to the entities themselves (e.g., prime numbers), but to the underlying formal structures within which abstract objects are embedded. In the case of Euclid’s proof, the relevant structure would be the definitions concerning the relations between arithmetic numbers.

According to *ante rem* structuralism, proofs like this indicate something about the abstract form of the relations between these entities. From the structuralist viewpoint, prime numbers are thus not free-standing abstract individuals, but are structural “roles” within the structural relations that define arithmetic. Following this, the infinitude of primes is a structural “result” that has less to do with counting the number of primes (considered as individual abstract entities) than it does to do with how arithmetic numbers are defined through their relations.

While I will draw on certain aspects of these debates as they are useful, it is important to clarify that what I term here *structural platonism* is a much stronger view than the mathematical structuralism defended by Shapiro (2000) and Resnik (2000), since it concerns the reality of structures not just as they exist in mathematics, but in other domains as well. In particular, my

⁹⁵ Note that notion of “independence” also requires precision. On this point, see Balaguer (2016).

main focus will be on an all-encompassing structural platonism, according to which all structures that are real are said to be (1) objective, (2) are non-physical and non-temporal, and (3) exist in an abstract realm that is distinct from the physical world. Shapiro defines “objective” to mean that mathematics has “truth-values independent of the minds, languages, conventions, and so forth, of mathematicians” (Shapiro 2000, 37).⁹⁶ Structural platonism is thus much stronger than even *ante rem* mathematical structuralism, because mathematical structuralism can be agnostic on the nature of structures in other domains. For example, one could be a mathematical structural platonist while at the same time rejecting platonist realism about other kinds of structures, such as social structures or biological structures.

Structural platonism does not necessarily have any specific connection to Plato, and it is not entirely certain whether Plato himself would have endorsed it. Whereas the standard platonist view would be committed to the mind-independent existence of mathematical objects, the mathematical structuralist is committed to the mind-independent existence of mathematical structures that determine the nature of mathematical objects. Also, like standard platonism in mathematics, structural platonism is not quite as mysterious as it might seem initially. If one accepts that structures are real, that they are not reducible to physical objects, and that they are not merely in our minds, then platonism is a plausible option.

We can also distinguish between two variants of structural platonism, a *strong* structural platonism and a *weak* structural platonism. According to the strong position, *all* structures exist independently from both mental experience and the physical world. According to the weaker view, some structures exist independently from mental experience and the physical world, but

⁹⁶ There are a wide range of complications concerning the concept of the “objective” that I do not address here. On the historical emergence of the concept of “objectivity” in the sciences more general, see Daston and Gallison (2010).

there may also exist physical structures, as well as structures that are dependent on mental experience. The weaker view thus can accommodate positions such as those developed in the context of ontic structural realism. For example, on the weak view, we could maintain both that mathematical structures are real and that they can be used to describe real physical structures as they exist in the world.⁹⁷

My focus here will be primarily on strong structural platonism. In order to show just how all-encompassing strong *structural platonism* is, it is useful to imagine what the realm of structure includes. We can call this place the Land of Structure. A good reference point might be Frege's *third realm*, understood as a land of abstraction more generally that includes mathematical objects and logical functions.

On the strong view, the Land of Structure includes all mathematical structures, such as the arithmetic structure defined by the Peano axioms, or the geometrical structures that define a triangle within Euclidean geometry. On the strong view, the Land of Structure also includes the abstractions governing all physical structures: the cosmological structure described by the physics governing the early universe, the structures of tectonic plate formations, and the structures of wind-patterns and hurricanes. Furthermore, it also includes all social structures. In this land we can find the structure of feudalism in the 14th-century, the structure of trade in classical antiquity, and the social structure of capitalism in the 21st-century. And finally, it includes structures that are smaller in scale, such as the structure of a baseball defense, the legal structures governing water rights disputes in Arizona, and the structure of Monopoly. According to structural platonism, if some structure exists, then it must exist independently from the

⁹⁷ On Platonism as a problem for ontic structural realism, see Cao (2003) and French (2014). Cao argues that ontic structural realists “have reduced physical theories to their mathematical structures,” and that this presents a problem for the structuralist viewpoint (Cao 2003, 18). In response to this objection, French (2010) argues for the existence of physical structures apart from their mathematical representation.

physical world. Notably, even the term “land” is somewhat misleading, as it does not indicate a physical space or domain. Existence in this case does not imply a physical or spatial location.

While this view seems extreme, positions like this are not entirely unfamiliar in the context of the philosophy of mathematics. For example, *plenitudinous platonism* argues that *all* consistent mathematical theories entail the existence of abstract objects (Linnebo 2018).

However, what is unique about strong structural platonism is that it not only accepts the reality of all mathematical structures, but that it also asserts the ontological reducibility of structures as they exist in our physical world to mathematics.

Against Structural Platonism

Why not accept structural platonism, particularly strong structural platonism? Well, mostly because I don't think platonism is the best way of thinking about structure. But to explain this short response: even if one accepts mathematical structuralism, I don't think that all structures are reducible to mathematical structures. However, even apart from this, I also think that there is a more fundamental problem concerning platonist approach to structures in other domains, and even (as we will see) in mathematics. To state this point briefly, my sense is that structural platonism (even the weaker versions of it) leaves unanswered important questions about the spatial and temporal dynamics of structures. Moreover, unlike Frege's “third realm,” I don't think we should think of structures as existing in a non-physical realm of their own that is entirely separable from the physical world.

Finally, I agree with Deleuze's claim, drawn from Nietzsche, that “the task of modern philosophy” is to “overturn Platonism” (DR 59). Of course, Nietzsche and Deleuze's main

philosophical target is not contemporary versions of platonism in mathematics. For Deleuze, Platonism refers to the historical-philosophical trajectory of representation that Plato set into motion, one that treats difference as ontologically secondary to identity. Still, I will claim that Deleuze's account provides the crucial reasons to show why a platonist account of structure is misguided.

At the same time, and brushing these reasons aside for the moment, I don't think that platonism should be rejected on the whole. As suggested by Deleuze, "That this overturning [of Platonism] should conserve many Platonic characteristics is not only inevitable but desirable" (DR 59). Following this point, I don't think that being against structural platonism requires rejecting every aspect of the platonist position. Rather, as will become apparent, I think it requires reformulating certain aspects of the platonist position so that it can better address the problem of structure. In this sense, what we need to clarify is not merely the reason that structural platonism is misguided, but also the theoretical characteristics of platonism that should be preserved, even if these characteristics must also be formulated in a new way.

However, before making my argument against structural platonism, it will be useful to consider an argument against strong platonism. While I do not think this argument is ultimately effective, an analysis of it will help to illustrate certain problems that arise with extending an account of structure from other domains. While I associate this line of argument with some common objections against platonist positions more generally, this is my own formulation of the objection as it relates to the reality of structure.⁹⁸ This argument proceeds as follows:

⁹⁸ For a useful overview of the problem of contingency as it relates to mathematical platonism, see Colyvan (2000).

The Argument from Contingency

1. Structural platonism implies that structures are necessary and not contingent.
2. Structural platonism also implies that structures are outside of space and time.
3. So if structural platonism is correct, then structures are “discovered” and not invented.
(1-2)
4. Aesthetic and social structures are real.
5. The reality of aesthetic and social structures is contingent.
6. The reality of aesthetic and social structures has a specific temporal and historical nature.
7. Aesthetic and social structures are not discovered. (4-6)
8. So structural platonism is unable to account for the reality of aesthetic, social, and perhaps other structures as well. (3, 7)

This argument presents a challenge for structural platonism. Even if we accept that mathematical structures are objective and necessary, this does not seem to be the case with structures as we find them in other domains. Social structures are rightly understood to be somewhat arbitrary—they are products of specific contingent history, one that could have been otherwise. Even if we might be convinced that mathematical truths are discovered, aesthetic structures can be explicitly constructed and invented. For instance, in the earlier example of Bach’s *The Art of Fugue*, the work was explicitly invented in a time and place. If Bach did not exist, then presumably the work would have never been written. Similarly, in the case of chess, the structure of chess seems to have a historically contingent aspect to it. Many variants of chess exist with slightly different rules. Even if the rules themselves have a necessary aspect to them, they nonetheless are

developed within a contingent history. Moreover, this argument seems to be stronger for the structure of a film or novel.

So, according to this objection, and as shown through these examples, structures in other domains do not seem to have the same kind of necessity as mathematical structures. They are contingent and open to constant revision. Moreover, unlike mathematical entities, many structures seem to be ontologically dependent on their historical and social development. This suggests that platonism about structures in other domains cannot be well-founded, since it implies a result that is manifestly false with respect to structures in other domains.

This argument has convincing aspects to it. However, I do not think this argument against structural platonism works. This is for three reasons. First, even if we might think of structures in some sense as constructed, there nonetheless remain non-trivial aspects of those structures that remain open to discovery. For instance, even if the game of chess was invented, there is nonetheless an objective and nontrivial answer to whether, in the case of perfect play, the game results in a draw or win. Similarly in the case of musical structures, I don't think the notion of a musical "discovery" is entirely misguided.⁹⁹ As an example, we can note how John Cage describes his *Sonatas* as precipitated on the discovery of a "micro-macrocosmic rhythmic structure," one that "could be expressed with any sounds, including noises, or it could be expressed not as sound and silence but as stillness and movement in dance" (Cage 1991, 61). Although a musical work involves composition, it is also built on the discovery of rhythmic and sonic structures. Moreover, it is plausible that these structures are not merely invented but are rather in some sense independent from human existence. If Cage's account of "discovering" a structure is plausible, then the platonist argument for structuralism in these domains remains a

⁹⁹ On the relation between invention and discovery in Bach, see Dreyfus (2004).

viable option. What this suggests is that the notion of discovering a musical structure is at the very least as plausible as it is in the case of mathematics. *Mutatis mutandis*, I think the same consideration can apply to structures in other domains.

Second, an additional problem for this argument against platonism is that I do not think the notion of “construction” versus “discovery” gives significant insight into the problem of whether structures are real. As argued by Paul Balaguer (2001), platonism can avoid this problem.¹⁰⁰ If we accept this point, the question concerning the reality of structures should not hinge on whether they are or are not constructed, invented, or discovered. Moreover, it seems incorrect to assume that structural platonism necessarily implies that all structures are discovered—at the very least, the notion of mathematical “discovery” would need to be clarified in a way that accounts for the many different ways in which mathematical systems can be formulated.

Finally, a third problem with the argument from contingency is that its appeal to historicity conflates two ways of considering structure. From a classical French structuralist standpoint, it ignores the distinction between what Saussure terms “synchronic,” as opposed to “diachronic” analysis. In his *Course on General Linguistics*, Saussure famously argues that an account of how a linguistic system operates at a single moment in time is not reducible to *diachronic* analysis, that is, an account of how a linguistic system develops over time. “We do not learn about synchronic states,” Saussure claims, “by studying bodies, i.e. diachronic events, any more than we learn about geometric projections by studying, even carefully, the different types of bodies” (Saussure 2011, 87). For example, an ontological account of the present-day

¹⁰⁰ Balaguer argues that both “full-bodied platonism” and fictionalism about mathematical entities “offer a neutral sort of view on the question of whether mathematical theory construction is primarily a process of invention or discovery” (Balaguer 2001, 155).

linguistic function of a word is not equivalent to the etymological development of that word through history. To illustrate this point, Saussure makes a comparison to a game of chess—to explain the situation of a chess game at a single move (e.g., to say that white is in a losing position) does not require an analysis of the steps that led up to that position.¹⁰¹ Following this distinction, the argument from contingency fails to account for the possibility of structures considered “synchronically,” that is, apart from the shifting historical dynamics through which structures are generated. Platonism remains plausible insofar as it concerns the synchronic analysis of systems, even if such an analysis would also need to be supplemented by diachronic analysis. So, aside from the question of whether structures are “invented” or “discovered,” the platonist could argue that there is nonetheless an objective synchronic aspect to structures that requires further explanation, and for which platonism is the best account.

A Deleuzian Objection Against Structural Platonism

Although the argument from contingency seems initially plausible, we need a better argument against structural platonism. In particular, I think we need an approach that does not rest either on the distinction between discovery and invention, or on the distinction between contingency and necessity. In working towards an alternative argument, I think it is useful to briefly consider one of the standard arguments against traditional platonism, known as the epistemological objection. To summarize it briefly, the core of the epistemological argument goes as follows: (1) human beings exist in space of time; (2) abstract objects are not in space or time; thus, (3)

¹⁰¹ Saussure describes the analogy to chess as follows: “In a game of chess any particular position has the unique characteristic of being freed from all antecedent positions; the route used in arriving there makes absolutely no difference; one who has followed the entire match has no advantage over the curious party who comes up at a critical moment to inspect the state of the game” (Saussure 2011, 89).

because we can have no knowledge of abstract objects, platonism is misguided. Note that the first premise is assumed to imply a further point that, because human beings exist in space and time, they cannot gain knowledge of things outside of space and time.¹⁰²

However, setting aside the question of our knowledge of structures, I think this objection correctly identifies one of the core problems with structural platonism. One of the main problems with structural platonism is that, in the second premise, it renders structure as timeless and spaceless. From the platonist viewpoint, structures have a reality that is completely separate from time and space. Of course, this point might seem like a reasonable assertion—what would it mean, for example, to think of the mathematical structures as having a specific temporality or spatiality? Mathematical structures do not seem to exist in time and space in the way that ordinary objects do. Unlike a rock falling down a mountain, the truth of the equations that describe a falling rock do not themselves seem to be spatiotemporal.

Because structures are not causal (at least in the way that ordinary objects are), it seems plausible to say that they are outside of space and time, at the very least if by this we mean linear time and Euclidean space. On standard platonist accounts, then, it seems to follow that structures are eternal. Structures are always there, and nothing that happens in the physical world will ever change this. However, I do not think the move from a lack of causality to the eternal is ultimately warranted. Although we can accept that certain structures are not subject to cause and effect in the same way that physical objects are, this does not necessarily mean that they have no temporal or spatial aspects at all.

In order to make this point, it will be useful to consider a parallel case, that of the experience of temporality. A metaphysical account of space and time in the physical world can

¹⁰² For a more extended overview of this objection, see Balaguer (2016, sec. 5).

be distinguished from a phenomenological account of how a person experiences time. One could, for example, be a nihilist about metaphysical time and a Husserlian with respect to temporal phenomenal experience. Or one could plausibly be a B-theorist about metaphysical time and a Humean with respect to temporal experience. In a similar way, I think we can provide an account of the temporal and spatial aspects of structures that is distinct from the metaphysics of time and space in the physical world—there are more alternatives for explaining the temporal and spatial aspects of structures than linear time and Euclidean space. This is not to say that I am providing a “phenomenological” account of structure, but rather to suggest that the one could provide an alternative account of the temporality and spatiality of structures that does not correspond to time and space in the physical world.

Explaining the temporal and spatial dynamics of structures requires seeing how structures are not merely static and eternal, but rather are caught up in complex webs of spatial and temporal relationships, ones that are neither reducible to the physical nor merely subjective. Consider, for example, the spatial relationships in a game of chess. Of course, the spatial relationships between pieces cannot be described adequately through measuring the extensive distance between pieces. The same chess game could be played on multiple boards of varying sizes and shapes. However, this does not imply that pieces have no spatial relationships whatsoever. Regardless of the extensive size of the board, we can still say that some pieces are closer to each other than others. So, rather than say they have no spatial relationships at all, the structure of a chess game needs to be understood *topologically*, that is, as having spatial relations that are not merely extensive.¹⁰³

¹⁰³ On the concept of topology in relation to Deleuze and Guattari, see Massumi (2002, chap. 5).

Similar considerations apply to time as well. Of course, and although a chess game may be timed, moves are not ultimately accounted for in physical time. But this is not to say that a chess game has no temporality or temporal relationships whatsoever. Moves are “after” or “before” one another, even if the game is not timed. What this suggests is that the temporality of the structure needs to be explained through a series of moves and their relationships (what Deleuze will term “ordinal relations”) rather than through minutes and seconds.¹⁰⁴ Moreover, as will become clear in Deleuze’s account, I don’t think that these spatial and temporal relationships are merely phenomenal, or a matter of subjective conscious experience.

Finally, I also think the same analysis applies to the spatial and temporal relationships of structures of society more generally. In a well-known essay, the historian Jacques Le Goff distinguishes between the development of “church time” and “merchant time” in the Middle Ages (Le Goff 1970). Le Goff’s analysis follows how the changes in social and economic structures resulted in different theoretical conceptions of time. Whereas church time was teleological (154), merchant time was “measurable, even mechanical,” but “also often discontinuous, broken by stops and pauses” (163). When considered from the standpoint of structural analysis, what Le Goff’s analysis indicates is not merely that there were different social *conceptions* of temporality at play in the Middle Ages, but rather that these ideological differences were a result of the underlying temporality of these economic structures.¹⁰⁵ Time, Le Goff claims, is “implied in objective structures and mental frameworks, collective experiences and individual destinies” (163). What Le Goff’s analysis suggests is that the social structures of

¹⁰⁴ The notion of an “ordinal series” is addressed in more detail in Chapter IV, section 3.

¹⁰⁵ For Le Goff, the distinction in church and merchant time also entails two different approaches towards spatiality: “At the same time as the merchants discovered the price of Time they were exploring Space, because for them the duration of time was essentially the time taken for a journey whereas in the Christian tradition Time was ‘neither a kind of parallel of space nor a formal condition of thought’” (Le Goff 1970, 161).

the Middle Ages temporal dynamics that were distinguishable from each other, and that these structures were not merely timeless.

In order to further illustrate the temporal complications concerning structure, we can consider again the earlier example of *Citizen Kane*. To begin with, the temporality of the film is not reducible to the series of images. Rather, the film's structure involves complex juxtapositions between many chronologically disordered events. In *Cinema II*, Deleuze explicitly argues against the reduction of the film's temporal structure to chronology. "It is true," he writes, "that these regions of past have a chronological course, which is that of the former presents to which they refer. But if this course can easily be upset it is precisely because in themselves, and in relation to the actual present where the quest begins (Kane dead), they are all coexistent, each containing the whole of Kane's life in one form or another" (C2 105-106). What Deleuze finds in the film's structure is a specific temporality that develops throughout the film. The images of the film, he claims, are neither merely referencing a past moment in time, nor are they timeless: "The hero acts, walks and moves, but it is the past that he plunges himself into and moves in: time is no longer subordinated to movement, but movement to time" (106).¹⁰⁶ On Deleuze's analysis, the film thus has a temporal structure that is not reducible to either the sequence of images, or even to the progression of the narrative.

The upshot of this example is that developing an ontology of structure requires accounting for the different temporal and spatial dynamics of structures. The point here is not that structures differ from each other, but rather that the temporality and spatiality of structure is different than that of linear time and extensive space. Moreover, the main problem with structural platonism is not that it suggests that structures have a reality which is both independent

¹⁰⁶ For a more comprehensive account of Deleuze's reading of Welles, see Shores (2016).

from human experience and non-physical, but rather that platonism assumes that structures are merely timeless and eternal. In so doing, platonism avoids rather than explains the problem.

But if structures are not merely timeless and eternal, then how should we conceptualize their temporality? In answering this question, I will suggest that it can be addressed in part through looking at Deleuze's reading of Plato. Although Plato is the founder of historical Platonism, Deleuze argues that Plato also provides many of the necessary conceptual resources for overturning it. Moreover, Deleuze suggests that Plato is one of the first to consider the reality of structures as a temporal problem. Even before Kant, Deleuze claims that, in Plato's theory of reminiscence, "time is introduced into thought" (DR 166). Leaving aside the intricacies of Plato's account of reminiscence for the moment, what is important to emphasize is that Deleuze finds useful resources in Plato for theorizing temporality, even if this temporality is theorized in the form of a mythic past.¹⁰⁷ Deleuze draws on a version of the dialectic wherein structures need to be understood in relation to problems. As we will see, the main theoretical reference for Deleuze is the French mathematician Albert Lautman, who argued for a specific mathematical interpretation of platonism that prioritized dialectical becoming over abstract and unchanging essences.

An Objection from Transcendence

In addition to the problem of temporality, the second concern with structural platonism is that it risks conceptualizing structures as transcendent. By "transcendent," I mean that structures are

¹⁰⁷ Although he views Plato's account as providing an important innovation, Deleuze criticizes reminiscence insofar as "Platonic time introduces difference, apprenticeship, and heterogeneity into thought only in order to subject them again to the mythical form of resemblance and identity, and therefore to the image of thought itself" (DR 166).

understood as above or beyond the physical world. In the context of contemporary debates surrounding platonism, *transcendent* realist theories are contrasted with *immanent* theories. For example, David Armstrong (1980) defends an immanent account of universals, and explicitly argues against the platonist accounts defended by Moore and Russell. As pointed out by Armstrong, one of the crucial problems with transcendence is that it renders our physical world as merely a reflection of some higher plane of reality. “In Plato’s philosophy,” he writes, “particulars are in danger of being swallowed up by the Forms” (Armstrong 1980, 69). In response to this concern, contemporary platonists might argue that this is merely a historical result, and that thinking of abstract entities as more real than particulars is not required for the platonist viewpoint.

However, the danger is more difficult to avoid than it seems. Armstrong illustrates this difficulty as follows:

Russell says that the philosopher should take an egalitarian attitude to every entity which he admits into his ontology. But there are real intellectual pressures behind the Platonic position, pressures of which Russell is insufficiently aware. Once particulars are admitted to be as real as the Forms, the case for their properties being the particulars’ own, and not simply constituted by the particulars’ relation to external Forms, is enormously strengthened. (Armstrong 1980, 69)

A parallel concern also occurs in relation to structural platonism. Once structures are considered as no more real than ordinary objects, then the case for structures as having a reality that is independent from objects is no longer as strong. Moreover, in contrast to transcendent realist

theories, one of the stronger features of *immanent* theories is that they no longer require us to think of the non-physical world as something separated from the physical world.¹⁰⁸

Deleuze also agrees that transcendence is the major problem with platonist viewpoints. In his short essay “Plato, the Greeks,” Deleuze argues that transcendence is one of the crucial negative features that characterizes historical Platonism: “The poisoned gift of Platonism,” he writes, “is to have introduced transcendence into philosophy, to have given transcendence a plausible philosophical meaning (the triumph of the judgment of God)” (ECC 137). Even more strongly, Deleuze argues for immanence as the main theoretical alternative to Platonism: “Every reaction against Platonism,” he claims, “is a restoration of immanence...in truth, only the philosophies of pure immanence escape Platonism” (ECC 137). But why reject transcendence with respect to structures? And why should we prefer immanence?

Addressing these questions requires considering the relation between transcendence and the ontological status of difference. From the standpoint of a transcendent realist theory, difference is understood as something that results from an overarching identity that is superior to the physical world. This means that difference takes on a secondary status in relation to that identity. Following Kant, Deleuze understands these overarching abstract entities as merely postulated. As indicated by Dan Smith, transcendence “falsely posits or constitutes an object that supposedly corresponds to the problem” (D. W. Smith 2012, 109). Note that this quote is in the context of Kant’s distinction between a (legitimate) immanent use of Ideas, and an (illegitimate)

¹⁰⁸ When considering the possibility of defending structuralism outside the context of mathematics, Shapiro also anticipates the problem of separation between the mathematical and the physical. His response, however, is to suggest a “healthy blurring” of the boundaries between the mathematical and the physical. Along these lines, he suggests that a more all-encompassing structuralist viewpoint beyond mathematics could suggest that “to speak of objects at all, we must ‘structure’ the universe, and this structuring is a move towards the mathematical” (Shapiro 2000, 256).

constitutive use of Ideas.¹⁰⁹ Making a Kantian move, Deleuze maintains that one of the major concerns with the structural platonist position is that it solves the problem concerning the reality of structure through postulating structures as transcendent identities, rather than providing an immanent account of their role in the world.

Deleuze's own approach to structure aims to avoid the need for transcendence, while at the same time not approaching structures as individual objects. The difficulties in making this move can be understood in part through Deleuze's use of the term "Ideas," a concept that Deleuze develops as a response to Plato. At the same time, Deleuze's use of the term "Ideas" indicates that there is nonetheless something productive about Plato's approach, even if that approach is ultimately unsatisfactory.

Deleuze's Theory of Ideas

In Chapter IV of *Difference and Repetition*, Deleuze develops an account of what he terms "problematic Ideas." Although the terminology of Ideas is not maintained in later work, my view is that this theory is central to his ontological project. Having rejected philosophical representation and the "dogmatic Image of thought" that the notion of representation supports, the theory of problematic Ideas is one of Deleuze's first major attempts to elaborate a theory of structure that takes difference as ontologically primary in relation to identity. More specifically, and in a way that maintains crucial similarities with the mathematical platonism defended by Shapiro (2000), Deleuze provides an account whereby structures are defined through differential relations that are prior to and generative of individual objects.

¹⁰⁹ For a broader historical account of the role of immanence in Deleuze's ontology, see Dan Smith's essay "The Doctrine of Univocity: Deleuze's Ontology of Immanence" (D. W. Smith 2012, 27–42).

Nonetheless, many aspects of Deleuze's theoretical account present interpretive difficulties. Providing an explanation of his theory of Ideas requires navigating how Deleuze's account simultaneously seems to be doing all of the above: (1) continuing and responding to a Kantian project primarily concerning the (real and not merely possible) conditions for experience, (2) developing a speculative ontology of multiplicities that is supported by insights and developments of dynamical systems theory, (3) drawing on the history of the calculus in order to argue for the ontological priority of difference, (4) developing an account of problems; (5) defending a novel ontological modal thesis that concerns the status of the "virtual" and the "actual"; (6) making good on his initial aims to develop an ontology that, contrary to representation, takes non-conceptual intensive difference as prior to and generative of identities as they exist in the world; and, finally (7) providing a preliminary framework for how this ontological model can be broadly applied to conceptualize the existence of various physical, biological, and social domains.

Given the multifaceted issues that concern (1) through (7), it should not be surprising that there are a number of interpretive and (more importantly) argumentative questions that concern each of the above moves. Take, for example, the first issue concerning Deleuze's relationship to Kant. Although Deleuze develops his argument largely in the context of Kant's theory of Ideas, it is often unclear to what extent Deleuze adopts the Kantian framework. While evaluating certain interpretations will require further analysis, the goal here is to provide an overview of some of the major aspects of his position.

While Deleuze cites a number of different sources in developing his argument, the exact function of these sources in relation to the theory is often unclear. One of the difficult aspects of approaching Deleuze's argument is that he develops his views within the context of other thinkers, a

method that Joe Hughes describes as “free indirect discourse” (Hughes 2009, 14). Because Deleuze does not often specify the exact use to which the various discourses he engages with are being used, extracting Deleuze’s own argument from these different theoretical contexts presents a number of difficulties.

One tension that will be important to with respect to Chapter IV of *Difference and Repetition* is Deleuze’s relationship to the French mathematician Albert Lautman (1908–44) and the post-Kantian philosopher Salmon Maimon (1753–1800). While both thinkers are important for Deleuze’s account, clarifying the exact nature of this importance presents difficulties. As indicated by Jim Bahoh (2019), Lautman’s account of dialectic is one of the crucial sources for Deleuze’s claim that “problems are always dialectical” (DR, 179). However, even given this influence, Simon Duffy claims that “Deleuze does not subscribe to Lautman’s Platonism,” and that, “Ideas for Deleuze are rather Kantian, or more specifically post-Kantian, and it is to Maimon’s critique of Kant that one should look to characterize Deleuze’s post-Kantianism” (Duffy 2013, 143).¹¹⁰ Leaving aside the specifics of this interpretive tension, what is important to emphasize is that, when it comes to the text of *Difference and Repetition*, Deleuze often gives little guidance on the exact use to which he adopts the terminology and discourse of these different thinkers.

Partly because of this difficulty, the existing scholarship on Deleuze also disagrees on several of the core ontological claims concerning the nature of *dialectical Ideas*. For DeLanda (2002), dialectical Ideas are another term for *multiplicity*, and “the Platonic term shows he means

¹¹⁰ On Duffy’s argument, the key distinction is that whereas for Lautman the dialectic is external to problems, for Deleuze problems are immanent in relation to Ideas: “There are therefore no overarching governing ideas in Deleuze, but rather ideas are constituted by the purely problematic relation between conceptual pairs” (Duffy 2013, 24). According to Voss, Deleuze’s conception of Ideas as “an open and differential multiplicity...is more influenced by Maimon and Bergson than by Lautman” (Voss 2013, 185).

to replace essences with multiplicities” (DeLanda 2002, 38). Unlike essences, multiplicities are not “clear and distinct,” nor are they “abstract and general entities” (DeLanda 2002, 8–13). Rather, multiplicities are *concrete universals*, defined as “concrete sets of attractors (realized as tendencies in physical processes) linked together by bifurcations (realized as abrupt transitions in the tendencies of physical processes)” (DeLanda 2002, 13–14). In this passage, DeLanda interprets Deleuze as providing an account of Ideas as alternative to essences, but one that occurs within a metaphysical realist framework—multiplicities are independent from and external to human thought.¹¹¹

This presents a sharp contrast to commentators who prioritize Deleuze’s ontology as developing within the Kantian philosophical framework. For example, according to Hughes (2008), Deleuze’s account of Ideas should be understood as necessarily connected to sensible experience: “The Kantian notion of the Idea out of the supersensible puts it at the heart of the sensible in the form of a positive indeterminacy or as a ‘focus or horizon within perception’” (Hughes 2008, 115). Rather than thinking of Ideas as independent multiplicities, Hughes argues that “the Deleuzian Idea is the form that any concrete object takes before we fully recognize or know what that object is.” In contrast to more overtly metaphysical and “scientistic” readings, Hughes argues that Deleuze’s ontology of Ideas is fundamentally connected to human representation.¹¹²

Is Deleuze’s account of Ideas meant to indicate a metaphysical reality that is external to human thought? Or is Deleuze’s aim rather to provide an account of the underlying conditions of

¹¹¹ DeLanda does not reference Deleuze’s reading of Maimon, nor does he address Deleuze’s relationship to Kant.

¹¹² Hughes defends this Kantian interpretation against ‘scientistic’ interpretations of Deleuze: “There can be no question about it: the actual is an empirical and human actual. Actualization is the process which leads from the virtual Idea to the representation of a thing in an empirical consciousness” (Hughes 2008, 117–18).

thought? What is at stake in these questions is more than the question of whether (or in what sense) Deleuze's work is Platonist, anti-Platonist, Kantian, or post-Kantian. These interpretive concerns with regard to Deleuze's thought are important because they map onto a broader philosophical problem concerning how to explain the reality of structure: are structures independent from human experience, or not? And if not, then how do we account for their reality?

In *Conditions of Thought*, Daniela Voss (2013) presents an important alternative to both (DeLanda 2002) and Hughes (2008). Voss argues that although Deleuze adapts certain elements of Kant's critique, his aim is not merely to provide an account of the conditions of human experience. In this respect, Voss analyzes the distinction between Kant's and Deleuze's theory of Ideas as follows:

For Deleuze, Ideas are *problematic, objective structures* providing a sufficient reason for the genesis of thought. Kant, on the contrary, still refers to them as subjective, *a priori* principles providing unity and systematicity as transcendental conditions of knowledge. ... Deleuze, on the contrary, releases transcendental Ideas from their attachment to the subject and defines them as objective structures. (Voss 2013, 150)

As explicated here, although Deleuze develops his ontology of Ideas through reference to Kant, his aim is not merely to provide an explanation of the conditions of human experience. Rather, Voss claims that Deleuze is providing an account of Ideas as an objective reality, one that is not ultimately dependent on human experience for its existence. Voss's interpretation is supported by Deleuze's explicit claim that Ideas "do not exist only in our heads but occur here and there in

the production of an actual historical world” (DR 190/246).¹¹³ However, this approach also presents its own questions. If Ideas are neither merely external to thought nor subjective, then what is the relationship between Ideas and thought? In what sense are Deleuzian Ideas “objective” structures, and what is the nature of their reality?

Problematic Ideas as Structures

As I will argue, one of the problems that has not been sufficiently explained in the literature is Deleuze’s explicit claim that Ideas *are* structures. Although this claim is often acknowledged, it is often merely overlooked as an artifact of Deleuze’s early interest in structuralism. For example, as indicated by Constantin Boundas, “The claim that Ideas are structures in large part comes from the prevailing structuralist vocabulary Deleuze uses throughout *Difference and Repetition*” (Boundas 2010, 301–2). However, this observation does not provide a reason for *why* Deleuze draws on this structuralist vocabulary, or what he gains in doing so. In addition, Deleuze does not devote a significant amount of analysis in this chapter to classical structuralist thought, with a few exceptions.¹¹⁴ His main sources for a philosophical account of structure concern other figures, such as the biological structuralism of Geoffroy St. Hilaire and the mathematical structuralism of Albert Lautman. Moreover, and although he references them, Deleuze’s primary

¹¹³ One nonetheless needs to be careful about the claim that Kantian Ideas are “subjective.” As noted by Voss, Kant nonetheless takes Ideas to be objective, albeit with an important qualification that “the imagined objects in the Ideas should not be thought in themselves, but only relative to the world of sense” (Voss 2013, 153). In this respect, Deleuze also acknowledges that “Kant likes to say that Ideas are both objective and undetermined,” and whereby “the undetermined is...a perfectly positive, objective structure which acts as a focus or horizon within perception” (DR 169/219–20). Voss’s claim concerning the subjectivity of Ideas in Kant should thus primarily be understood not as opposed to objectivity, but as indicating the necessary connection between Ideas and the transcendental subject.

¹¹⁴ The main exceptions to this are Althusser, who is referenced in relation to the social Idea (DR 186), as well as Saussure and Trubetzkoy, who Deleuze references in relation to the linguistic Idea. While Deleuze references Althusser positively, Deleuze criticizes Saussure and Trubetzkoy’s conceptions of linguistic difference (DR 204).

concern is not with the theories of structure developed in classical structuralist thought, but rather with the philosophical nature of structure. More specifically, his argument that Ideas *are* structures is a philosophical claim that develops in response to Platonism, one that follows (in certain respects) Kant's critique of Plato.

In order to clarify the ontological importance of Deleuze's claim that Ideas are structures, it will be helpful to draw on an example, adapted from Verity Harte (2005, 158–67)'s account of the concept of structure in Plato. Consider that you are inviting guests to a dinner party, and that you wish to seat partners opposite each other. So, the structure of the seating arrangement is such that, if two guests are partners, then they will be seated across from their respective partner. Now, considering the group as a whole, we can distinguish between two ways of considering the relation between the seating arrangement's structure and the group as a whole. Under the first way, the seating arrangement is essential to the group as a whole, but not the parts (Harte 2005, 161). By contrast, under the second way of considering structure, the structure is essential to both the whole and the parts: "the parts—the guests—are thus not identifiable independently of the structure they compose" (161).¹¹⁵ What Harte indicates here is a similar version of the earlier claim concerning the ontological dependence of the elements of a structure on their relations to the others. However, Harte also notes here another ontological distinction concerning two different ways of thinking about structure. Under the first view, structure *belongs* to the whole as a property. Under the second way, however, "structure is rather something that a whole *is*" (162,

¹¹⁵ Note that this point is made with respect to the structural "role" that the guests play in the arrangement, not with respect to the persons themselves.

my emphasis), and it is this structure that determines the relation between both the parts and the whole.¹¹⁶

With respect to Deleuze's theory of Ideas, I will claim that he endorses the second rather than the first conception of structure. His claim is not merely that Ideas have structure, but that they *are* structures. As we will see, the constituent "parts" of the structure (which, as we will see in Chapter IV, I think are better thought of as "elements") are not merely incidental to the whole but are essential to the definition of what a structure is. At the same time, and although he uses the terminology of Ideas, Deleuze develops his theory as a sharp rejoinder to historical Platonism, as well as more generally to contemporary platonist theories of structure. Clarifying this theoretical move requires an account of Ideas and structures in Plato, as well as Deleuze's reading of and response to Platonism.

Ideas and Structure in Plato

There are three broad features of Plato's account of Ideas that are important for Deleuze's theory.¹¹⁷ First, Forms are transcendent in relation to the sensible world—put roughly, the existence of Forms is independent from sensible particulars.¹¹⁸ Second, Forms are unchanging

¹¹⁶ On Harte's interpretation, it is the second view rather than the first that characterizes Plato's ontology of structure: "In Plato's conception of wholes, structure is no less essential to the parts of such a whole than to the whole" (Harte 2002, 268).

¹¹⁷ Note that my concern here will be some of the broader features that are often used to identify a standard "Platonist" viewpoint. I will not, for instance, address the question of whether Plato himself believed in the existence of Forms or whether Plato revised the theory of Forms.

¹¹⁸ For a useful overview of some different senses in which Plato's theory of Forms might be understood as "transcendent," see Ademollo (2013, 74–83).

and eternal.¹¹⁹ Whereas the world of everyday sensible objects is constantly in flux, the world of Forms is stable and constant. Finally, Forms work to ensure the intelligibility of our experience of particulars. Our experience of two stones as equal in relation is only possible because of prior acquaintance with the Form of Equality. Put very broadly, Plato's theory of Forms thus aims to answer the question of how knowledge is possible in a world of sensible becoming.¹²⁰ Our access to the Forms is secured through recollection, which allows for knowledge in the face of sensible particulars that are in constant flux.¹²¹

One of the central sources for Deleuze's theory of Ideas is Plato's *Phaedo*.¹²² In the dialogue, one of the focal points for the debate concerning the reality of Ideas or Forms occurs through the consideration of equality: "Consider...we say that there is something that is equal. I do not mean a stick equal to a stick or a stone to a stone, or anything of that kind, but something else beyond all these, the Equal itself. Shall we say that this exists or not?" (Plato 1997, 74a). The first question is whether the Forms exist above and beyond ordinary objects such as rocks and stones. Notably, the question concerning the existence of the Equal quickly leads to a second question:

"Whence have we acquired knowledge of it? Is it not from the things we mentioned just now, from seeing sticks or stones or some other things that are equal we come to think of that other which is different from them? Or doesn't it seem to you to be different?" (74b)

¹¹⁹ Note that this is not necessarily to claim that Forms are universals. For instance, Anna Marmodoro argues recently that while Aristotle interprets the Forms as "abstract universals," Plato conceives of them not as universals but as "non-recurrent individuals" (Marmodoro 2021, 98–99).

¹²⁰ On Aristotle's interpretation of the origins of the theory of Forms as a solution to the problem of sensible becoming, see Fine (1995, 44–46).

¹²¹ As indicated by Deleuze, this is one way in which "the Heraclitean world still grows in Platonism" (DR 59). Yes.

¹²² Note I use the terms "Ideas" and "Forms" interchangeably in this section.

In working to answer this question, Socrates argues that sensible experience on its own is insufficient to provide knowledge of Forms on their own. Although two equal sticks or stones strive to be equal, they are always “deficient” in their realization of Equality (75a). This implies that the knowledge of Forms is not inferred merely through the experience of objects. Rather, in imperfectly striving towards the Forms, objects can activate a prior existing knowledge, one that existed “before birth” and was “then lost” (75e). In order to illustrate this point, Plato draws an earlier analogy to lovers: “whenever they see a lyre, a garment or anything else that their beloved is accustomed to use...the image of the boy to whom it belongs comes into their mind” (73d). Just as the lyre activates the prior knowledge of the beloved only indirectly and imperfectly (without the prior knowledge of the beloved, the lyre would have no effect), the experiences of sensible particulars activate a prior knowledge of the Forms.

For Plato, Forms such as Beauty and the Good are real but non-physical. Moreover, they are often understood to be beyond or ‘over’ the world of appearance, insofar as they are “that other which is different from them” (74b).¹²³ Plato also takes this to indicate a further epistemological point. In the context of the *Phaedo*’s reminiscence argument, knowledge of sensible relations (e.g., that two stones are equal, or that one stone is greater than another) is only possible on the condition of our prior knowledge of the Forms (e.g., the Form of Equality). Perception of sensible equal relations is grounded in the reality of Forms. In *The Republic*’s famous divided line analogy, the higher level of the understanding distinguishes mathematical

¹²³ Plato’s argument in *Phaedo* 74a-d does not appear intended to demonstrate the existence of Forms or Ideas. Rather, it presupposes them, and uses this to develop an argument for reminiscence (and, following this, for the immortality of the soul). I draw this point from Pierre Laberge: “To suppose that the reminiscence argument is intended to establish the Theory of Ideas renders it circular: there are Ideas; therefore we recall them when we perceive; since we recall them when we perceive, there are Ideas!” (Laberge 1991, 42).

entities from higher Ideas (such as the Good). The latter category is distinctive in that reason grasps it “without making use of anything visible at all, but only of forms themselves” (Plato 1997, 511c). In addition, Plato frequently indicates that there are ontological relations between some Forms and others such that not all have equal ontological importance. For instance, in the *Sophist*, candidates for the most important Forms include “being,” “difference,” “motion,” and “rest” (Plato 1997, 254d-e).

Although Plato is widely credited for having a theory of Forms, he is less often acknowledged as developing a theory of structure. One of the major accounts of Plato’s concept of structure is given by Verity Harte (2002). Using the earlier example of a dinner party’s seating arrangement, Harte argues that for Plato “structure is rather something that a whole *is*” (162). Connecting the second view to certain versions of mathematical structuralism, and writing in the context of mereology, Harte argues that Plato provides an account of structural wholes as not reducible to their parts. As examples, Harte analyzes the syntactic structures of well-formed sentences in the *Sophist*, the musical structures of harmonious tonal relations in the *Philebus*, as well as the multi-structural layering of the cosmos in the *Timeaus*. Although Harte remains agnostic on the relation between such structures and Forms, a recent explicit connection to Forms is made recently by Dorothea Frede (2020), who argues that (at least certain of) Plato’s Forms should be understood as structures. On Frede (2020)’s account, Platonic structures are defined as the “conditions of the possibility for the existence of all objects that display a harmonious and orderly nature” (Frede 2020, 312). Moreover, Frede claims that one of the distinctive aspects of this nature is that this harmony “can even be described in mathematical terms” (309). But what is the relationship between Platonic Forms and mathematics? And how does this inform Deleuze’s account of Ideas?

In approaching these questions, an account of mathematical structure provides a useful framework to (1) analyze Deleuze's critique of Platonic Ideas, as well as to (2) explain why Deleuze chooses to adopt the terminology of Ideas from Plato, even if he rejects certain aspects of Platonism. One of the crucial distinctions here is in the differing ways in which both Deleuze and Plato draw on mathematical examples in developing accounts of structure. As will become clear, both Deleuze and Plato find mathematics useful as a point of reference in developing a theory of Ideas. However, while Plato's references to mathematics often focus on Euclidean geometry, Deleuze focuses primarily instead on calculus. But why does this difference matter? And how does this choice inform each of their accounts?

A useful way of approaching these questions is to focus on the temporal nature of this distinction. In this respect, Dan Smith provides a useful summary of how different temporalities inform Plato and Deleuze's different relationships to mathematics: "If Plato found in Euclidean geometry a model of static and unchanging essences, Deleuze finds in the calculus a model of pure change (and thus a transformation in the corresponding theory of Ideas)" (D. W. Smith 2012, 83).¹²⁴ While Plato looks to geometry and finds an ideal of static and unchanging essences that seem to be beyond the world of particulars, Deleuze finds in calculus an ideal example of a mathematics that concerns dynamic processes and becoming. This distinction between stasis and change also recalls Bergson's account of the difference between modern and ancient geometry. Bergson claims that whereas ancient geometry was "purely static" and "worked with figures drawn once and for all," modern mathematics originates with "the introduction of motion into the genesis of figures" (Bergson 1998, 37). On Bergson's account, one of the distinctive aspects of geometrical space is that requires a temporal "halting," which is something "that happens in

¹²⁴ Note that although Euclidian mathematics was not quite yet developed at the time of Plato, many of the core features of the *Elements* are believed to have been previously discovered (Burnyeat 2000, 24).

geometry, but in geometry alone” (Bergson 1998, 236). If Bergson’s claim follows, one of the possible reasons that Plato chooses geometry as his model could be that it provides an example of unchanging essences, one that is analogous to the eternal and unchanging nature of the Forms.

However, although I agree with Smith’s claim that both Deleuze and Plato’s use of mathematics informs their respective theories of Ideas, this does not fully answer the question of *why* Plato turned to geometry as a source of inspiration, especially when compared to other areas in mathematics that were studied at the time such as arithmetic, mechanics, and harmonics. If we take, for instance, the *Republic*’s divided line analogy as our guide, it seems unclear that Plato’s choice of example merely has only to do with the identification of static and unchanging essences. As I will explain, what I think is more important for Plato in this example is the concept of ratio and proportionality that the Divided Line indicates. The eternity of Ideas is an important connection, but it does not fully explain the appeal to geometric concepts of ratio and proportion that Plato uses to develop his account. The identification of geometry with static essences does not explain why the *Republic* is critical of two important mathematical approaches of the day, astronomy, and Pythagorean harmonics, at least the latter of which would also seem to concern universal essences.¹²⁵ Finally, as I will explain, I think we also need to take account of Plato’s own criticisms of geometry in the *Republic*, which makes clear that Plato does not merely take the results of geometrical demonstration as something that can be accepted without qualification.

In order to clarify the specific details of Plato’s use of geometry in clarifying his theory of Forms, we can briefly consider the critique of Pythagorean harmonics in *Republic* Book VII.

¹²⁵ Burnyeat argues that Plato deliberately excludes many areas of mathematics from the curriculum in the *Republic*, including “Pythagorean harmonics, contemporary mathematical astronomy, mathematical mechanics,” and “mathematical optics” (Burnyeat 2000, 17).

Pythagorean harmonics is the study of musical ratios and intervals, such as the perfect fourth, perfect fifth, and the octave. Socrates develops a critique of Pythagorean harmonics, and this specific form of mathematics is not recommended for inclusion in the philosopher's mathematical curriculum. What is important to emphasize is that the critique of Pythagorean harmonics is directed at not at the object of investigation, but at the *way* in which the investigation operates. This rejoinder is made in a puzzling passage: "They do not," Socrates claims, "make the ascent to problems. They don't investigate, for example, which numbers are consonant and which aren't or what the explanation is of each" (Plato 1997, 531c). As interpreted by Burnyeat (2000, 47–49), the problem with Pythagorean harmonics does not concern the object of its study, which was no less universal and unchanging than the objects of the study of geometry. Rather, the problem Plato has with Pythagorean harmonics is that it relies too much on sensation for its results, and this is why its account of harmony is insufficient. Plato's concern is that these studies of harmonics do not address problems at a level that is general enough to go beyond sensation. Contrasted with Pythagorean harmonics (which was not recommended for inclusion in the *Republic's* ten-year mathematical curriculum), Plato might have thought that geometry is better because it uses hypothetical reasoning which does not rely as much on perception for its results.¹²⁶

Still, it would be misleading to say that Plato merely endorses the geometry of his day without reservation. In the *Republic*, geometry does not ultimately rise to the level of the dialectic. This is because, unlike philosophy, geometry still relies on the use of images for demonstration. Geometrical analysis is still aided by the use of images, even these images

¹²⁶ I note that Socrates does advocate for the inclusion of mathematical harmonics, just not Pythagorean harmonics.

themselves indicate ideal figures.¹²⁷ Furthermore, Plato claims that geometry does not investigate the sources of its axioms: “They make these their hypotheses and don’t think it is necessary to give any account of them, either to themselves or to others, as if they were clear to everyone” (510c). According to this objection, geometers proceed on the basis of hypothetical axioms, but they take these axioms to be obvious. The truth of the axiom is merely assumed to be true.

A notable example of this criticism can be found through considering Euclid’s fifth axiom, the parallel postulate.¹²⁸ Although this postulate was widely accepted for many years (and assumed to be provable on the basis of the first four postulates), it was not until the 19th-century that figures such as Gauss, Lobachevsky, and Riemann, developed alternative geometries where the postulate did not hold.¹²⁹ Although the postulate was initially widely taken to be obvious, it could no longer be assumed to apply to any geometrical system—Euclidian geometry became one geometrical system among others. Keeping Plato’s own objections towards geometry in mind, it seems clear that Plato’s use of geometry in developing a theory of Forms should not merely be understood as an appeal to the authority of geometers. But if Plato is not making an appeal to its authority, and if his concern is not only with stable essences, then what is the nature of his appeal to geometry?

In response to this question, what is important to emphasize is that what Plato finds in geometry is not only static and unchanging essences, but rather the existence of unified and harmonious mathematical relations that are ontologically prior to the world of particulars. The

¹²⁷ Kenneth Sayre clarifies this point in the following way: “the mathematician relies for examples and illustrations upon objects of the very sort which themselves are imaged in reflections and shadows” (Sayre 2005, 197).

¹²⁸ Euclid states this postulate as follows: “That, if a straight line falling on two straight lines make the interior angles on the same side less than two right angles, then two straight lines, if produced indefinitely, meet on that side on which are the angles less than the two right angles” (Euclid 2015, 155)

¹²⁹ These later developments in non-Euclidean geometry are important for Deleuze, who draws on Riemann in developing a concept of multiplicity. On this connection, see Widder (2019).

study of geometrical structure thus opens the way for seeing the ultimate harmonious structure and nature of reality. At the time, many of the crucial concepts used in mathematics, such as ratio, proportion, harmony, order, and unity, were not only mathematical abstractions, but were also taken to be deeply normative concepts.¹³⁰ There is thus a crucially normative aspect to geometrical relationships, one that ultimately points the way to the Good. As indicated by Burnyeat (2000), “What is distinctive about Plato is his systematic exploitation of the fact that Greek value-concepts like concord, proportion, and order are also central to contemporary mathematics” (Burnyeat 2000, 76). Plato is thus clearly aware of the moral aspects of his account, and this is something that he exploits in order to develop his account. Following his approach, Plato draws an explicit analogy from the harmony and unity of mathematical and Euclidean geometrical structures to the harmonious unity that the Forms provide to sensible particulars. This can be seen again through in the Divided Line, wherein the division between understanding and thought, on the one hand, and belief and imagination, on the other, are explicitly specified to be “in the same ratio” (509d). This appeal to geometry suggests that the broader metaphysical divisions of reality together form a balanced and well-ordered whole.

Deleuze’s Reading of Platonism

The normative aspects of Plato’s account of structure provide a useful framework within which to understand Deleuze’s uptake of Ideas. Drawing from Nietzsche, Deleuze argues that the task of modern philosophy is to reverse Platonism. As indicated by Dan Smith, the meaning of this

¹³⁰ Burnyeat makes this point as follows: “In the cultural climate of the time it was not idiosyncratic to regard concord, attunement, proportion, order, and unity as important values. They are values that crop up constantly when Greeks talk about art and beauty, and about the things and people they admire” (Burnyeat 2000, 76).

may seem to be straightforward: whereas Plato prioritized the world of stable Forms as ontologically prior to the shifting flux world of appearance, Deleuze aims to reverse this relation such that the seeming stability of structures is in turn ontologically grounded in becoming. However, in determining the nature of this reversal, we should note Deleuze's claim that the original problem in Plato is not the distinction between essence and appearance.

One of the main sources Deleuze uses in this analysis is the *Sophist*. In his reading, Deleuze claims that there are two distinctions in Platonism that are more important than essence and appearance. The first distinction is between "the model and the copy" (DR 264). Deleuze interprets this distinction through the lens of rivalry. Deleuze's claim follows the work of Jean-Pierre Vernant, who argued that rivalry was one of the defining features of war between Greek city-states. By rivalry, Vernant does not mean relations between those who are merely opposed to each other. Rather, Vernant claims that "rivalry can only exist between those who are similar, who recognize the same values, use the same criteria of judgment, and play the same game" (Vernant 1984, 41). Analogous to the relations of rivalry between city-states, Platonism addresses the problem of how to distinguish between the true and false claimants, each of whom contest each other to adequately represent the Idea.¹³¹

As clarified by Michael James Bennett, Platonism aims to distinguish between the *true* imitators ("icons") and the *false* imitators ("idols") (Bennett 2017, 14). Following this need suggests what Deleuze claims is an even "more profound" distinction between "the copy itself and the phantasm" (DR 265). *Copies* represent something through remaining true to the original proportions of the thing that they imitate. Alternatively, *phantasms* (what Deleuze terms "simulacra") distort the proportions of the original in order to produce the effect of likeness. As

¹³¹ As explained by Michael James Bennett, "These pretenders or rival claimants are imitators or copies, and what they imitate is the Platonic Form or *Idea* in its capacity as a model" (M. J. Bennett 2017, 14).

an example of this contrast, Bennett (2017) notes the distinction between a photo-realistic portrait and Michelangelo's *David*. Whereas the photorealistic portrait follows the same proportions as the original person depicted, the sculpture exaggerates certain features, such as the size of the head, in order to create the effect of proportionality (M. J. Bennett 2017, 15).

As in the case of the Divided Line, one of the crucial concepts that Plato uses to deploy this distinction is that of *ratio*.¹³² Ratio was a central concept in mathematics at the time of Euclid, and the study of ratio or proportion had wide applicability to areas including music, geometry, and arithmetic. Euclid defines ratio as “a sort of relation in respect of size between two magnitudes of the same kind,” and further stipulates that “magnitudes which have the same ratio be called proportional” (Euclid 1956, 114).¹³³ As we saw earlier, the distinction between proportionate and disproportionated ratios provided the distinction between copies and simulacra. The true copy will retain the same ratio among its parts as the original. For instance, in a photorealistic painting the ratio of the eyes to the head will be equivalent to the ratio of the eyes to the head in the original:

True Copies: $A:B$ (imitation) = $C:D$ (original)

Phantasms/Simulacra: $A:B$ (imitation) \neq $C:D$ (original)

For the copy, each part A that is part of some original B, the ratio of part to whole will be equivalent to the corresponding relation of that corresponding part in the original C to the original's whole D. But in the case of the phantasms, this relation will be distorted, and the proportions will no longer correspond to the “true proportions” of the original (236a). In turn, the

¹³² On the notion of musical ratio in Ancient Greece, see Burnyeat (2000, 49–50).

¹³³ On the connection between Euclid's account of equal ratios and Dedekind cuts, see Thomas Heath's analysis in Euclid (1956, 124–26).

relation between the true copy and its original will be concordant, whereas the relation in the case of simulacra will be discordant.

Why does this distinction matter? Following this account, we might think that this is primarily a metaphysical distinction between two kinds of appearance. However, Deleuze correctly points out that there is a normative aspect to this account: for Plato, the icons are clearly preferable to the phantasms. As the dialogue indicates, the phantasm becomes one way of approaching the true nature of the sophist. “The function of the notion of the model,” Deleuze claims, “is not to oppose the world of images in its entirety but to select the good images, the icons which resemble from within, and eliminate the bad images or simulacra” (DR 127). Deleuze thus finds in this distinction a moral wish to secure the status of the philosopher in contrast with the sophist: “Platonism as a whole is erected on the basis of this wish to hunt down the phantasms or simulacra which are identified with the Sophist himself, that devil, that insinuator or simulator, that always disguised and displaced false pretender” (DR 127). Specifically, Deleuze identifies Platonism as a kind of attempt to preserve an ontological and moral primacy of the same, and in doing so to exclude difference.

Crucial to this account is the normative status that Plato gives to concordance. One of the major concerns in the later parts of the *Sophist* concerns the problem of concordance and discordance, or how to know “which kinds harmonize with which and which exclude each other” (253b). In reply, Theaetetus suggests that this is “probably just about the most important kind [of knowledge]” (253c). Examples of the knowledge includes the expert in grammar, who knows which letters can associate with which, and the musician, who knows which notes harmonize with each other (253b). With respect to Ideas, the Eleatic Stranger suggests that the philosopher “knows how to discriminate by kinds how things can associate and how they can’t,” something

that corresponds to “the pure and just love of wisdom” (276e). This is important because it indicates that for Plato structures have a positive moral value. As explained by Harte, for Plato “structure is normative; a good thing that good things—and only good things—have” (Harte 2002, 271). The normative value of structures is a result of their inherent inner harmony and concordance. Moreover, Plato understands this concordance on the basis of geometric proportionality and ratio. Harte’s analysis supports Deleuze’s claim that one of Plato’s main motivations is to use Forms in order to separate that false or discordant from the true and concordant: to separate simulacra out from the true models.¹³⁴ Since Plato wants to secure the status of structure as *good*, he develops Ideas as a criterion by which to separate out the true models from the false copies, and furthermore to distinguish the proportionate copies from the discordant and disproportionate phantasms.

This provides a framework through which to understand Deleuze’s critique of Platonism. There are three main ways in which Deleuze objects to Plato’s theory of Ideas. First, Deleuze rejects Plato’s account of Ideas as transcendent. On Plato’s account, Ideas are separated from the world of sensible particulars. By contrast, Deleuze will look to Kant for a theory of Ideas as immanent. Second, Ideas in Plato are understood to be eternal, and thus separated from the world of becoming. In contrast to this view, Deleuze develops a theory of Ideas whereby structures are inherently connected to change and becoming, even though the temporality of Ideas is not reducible to linear time. Finally, whereas Plato understands Ideas through a normative viewpoint and aims to secure positive moral value of Ideas, Deleuze by contrast aims to develop an account of Ideas that instead prioritizes discordance and lack of ratio or proportion. More generally, Deleuze claims that the priority of concordance is an attempt to uphold a certain kind of

¹³⁴ On Deleuze’s concept of the simulacrum, see Mayell (2014).

“common sense,” one that prioritizes clarity and distinctness: “The ‘clear and distinct’,” Deleuze claims, “is inseparable from the model of recognition that serves as the instrument of every orthodoxy, even when it is rational” (DR 146). The main problem with clarity and distinctness is that common sense accounts for reality of Ideas on the same model through which we approach empirical objects.¹³⁵ In contrast to common sense, Deleuze argues that the reality of Ideas needs to be approached in a new way, one that does not rely on the empirical. In developing an alternative to the ideal of concordance, Deleuze argues that the “true tone of philosophy” is “the symphony of the *discordant* Idea” (DR 146). As we will see, by claiming that Ideas are discordant, Deleuze will develop an account that rejects the normative and moralizing aspects of Plato’s account.

Lautman’s Dialectical Platonism

Although Deleuze rejects many aspects of Platonism, it would be too simplistic to say that he thinks every aspect of Plato’s thought should be rejected. Specifically, one of the aspects that he thinks is productive is the focus and priority that Plato gives to the dialectic. The move towards the dialectic allows for reconceptualizing Ideas not as abstract essences, but as structures that are grounded in problems. In this respect, Deleuze notes that “Plato defined the dialectic,” Deleuze writes, “as proceeding by ‘problems’” (DR 63).¹³⁶ More specifically, Deleuze’s finds a novel aspect of Plato’s account in the *Sophist’s* account of non-being. “Being,” he writes, “(what Plato

¹³⁵ A version of this objection is usefully illustrated by Henry Somers-Hall: “In treating the Ideas as objects, Plato has put into play a sedentary distribution. This essentially means that Plato’s conception of reminiscence is static, as opposed to Deleuze’s non-objectival, processual conception of difference” (Somers-Hall 2013, 117).

¹³⁶ This is one of the main ways in which Deleuze’s reading of Plato departs from Badiou. As indicated by Crockett, for Deleuze, “Problems are ideas, and Deleuze’s reversal of Platonism reveals that ideas are problems, not solutions” (Crockett 2013, 43)

calls the Idea) ‘corresponds to the essence of the problem or the question as such. It is as though there was an ‘opening,’ a ‘gap,’ an ontological ‘fold which relates being and the question to one another’ (DR 64).¹³⁷ Deleuze’s analysis suggests that Plato’s non-aporetic dialogues present a positive account of difference that is not reducible to contradiction.

In order to illustrate this positive aspect that Deleuze finds in Plato, my focus here will be on Albert Lautman (1908–1944), one of the major sources that Deleuze references for his account. Lautman draws from both Plato and Heidegger to argue that the development of mathematics needs to be understood as inherently dialectical.¹³⁸ Although Lautman’s work precedes the development of mathematical structuralism in philosophy, he nonetheless maintains an approach to mathematics that prioritizes structures over independent entities. For example, as indicated by Simon Duffy, Lautman considered the standard platonist viewpoint concerning the independence of mathematical entities to be “steeped in the analysis and geometry of the nineteenth century,” and, in contrast to this view, “championed the modern algebra” (Duffy 2013, 129). As an alternative to both constructivism and traditional platonism, Lautman develops an “axiomatic structuralism” according to which mathematical entities need to be understood through their development within structures. However, rather than viewing structures themselves through a standard platonist viewpoint (that is, as mind-independent and eternal entities), Lautman instead argues that mathematical theories need to be understood through reference to problems.

Lautman uses the term “mathematical theory” in a broad sense to include not just theoretical domains of mathematics (such as set theory, number theory, complex analysis, etc.),

¹³⁷ For a useful overview of the relation between non-being and negation in the *Sophist*, see (Lee 1972). On Deleuze’s account of “non-being,” see also Bennett (2017, chap. 1).

¹³⁸ On Lautman’s reading of Heidegger, see especially Bahoh (2019).

but the concrete problems and solutions worked out within those domains. As noted by Bahoh (2019a), for Lautman mathematics “designates the way mathematical theories articulate the fundamental problems that organize those theories, gain insight into those problems and become recast on the basis of that insight” (Bahoh 2019a). Following this point, Lautman’s primary aim is thus not merely to give an account of the generation of different mathematical domains or fields of study, nor is it to precisely determine the exact nature of subject matter studied in mathematics. His aim is rather to show how the practical activity of mathematics, as carried out through a field of problems and solutions, is in turn grounded in the reality of *dialectical Ideas*. This account in turn is framed more generally as a genetic relation between question and answer, as well as between problem and solution.

On Lautman’s account, dialectical Ideas are contrasted with “dialectical notions.” Dialectical notions concern two opposing dynamics, such as “whole and part, situational properties and intrinsic properties, basic domains and the entities defined on these domains, formal systems and their realization, etc.” (Lautman 2011, 204). *Dialectical Ideas* concern the relation between at least two dialectical notions. A crucial point here is that dialectical Ideas, while not mathematical theories or elements themselves, cannot be accessed outside of their instantiation within these mathematical theories and elements. As shown through his analysis, a dialectical Idea may thus concern, for example, the relations of reciprocity between inverse elements (Lautman 2011, 208-213), as well as the relation of distribution of prime numbers to the set of rational numbers, or, more generally, the relation of “the rapidity of increase to infinity of two constantly increasing quantities” (Lautman 2011, 218). An investigation into the reality of dialectical Ideas thus can only be shown through closer attention to the practical development of mathematical theory.

In order to illustrate this position, one of the examples Lautman considers is the relation between the infinite series of whole numbers to the infinite series of prime numbers. In his account, investigations into this relation have historically taken the form of different questions within this problematic, such as the following: (1) calculating “the n th prime...for any n ,” (2) “the interval separating two consecutive primes,” (3) the distribution of primes “within the different geometric progression of reason k ,” (4) “the number of primes below a given number,” and so on (Lautman 2011, 213). Within this problematic, mathematicians work to constitute solutions within a problematic field.

Lautman’s key argument here is that the problematic field should be understood not simply as “a curiosity about primes” (Lautman 2011, 214), but as grounded in a dialectical Idea. In other words, according to Lautman, it is not as if number theorists are just interested in numbers. Rather, their investigations are the result of a dialectical Idea.

To demonstrate this point, Lautman draws on mathematical explanations of how, through the work of Legendre, Gauss, and others, emerging mathematical engagements of prime numbers drew from areas outside of number theory. In particular, problems concerning prime numbers were reformulated as a question concerning the relation between $\pi(x)$ and x as both increase to infinity, where $\pi(x)$ indicates the number of prime numbers below x (214). Stated in this new way, the Idea that generates the various mathematical theories of prime numbers corresponds to the question of how to compare “the rapidity of increase to infinity of two constantly increasing quantities and connect one to the other” (218). As a dialectical Idea concerning the nature of the relation between notions, this Idea in turn operates as the genetic condition that enables the solutions that follow in response to it, such as the various solutions to this problem given by Legendre and Gauss’s work on approximating the prime counting function, as well as Riemann’s

work as connecting the frequency of primes to the nontrivial zeros on the *zeta* function (214-215).¹³⁹ Since the Idea of connecting two related quantities increasing to infinity is not itself specific to any specific mathematical domain, Lautman thus argues that this can explain why similar mathematical results are often obtained in various fields of study, such as arithmetic, algebra, complex analysis, and topology (218). “The various theories in which the same Idea is incarnated,” Lautman writes, “similarly find in it the reason for their structure and the cause of their existence, principle and origin” (218). Insofar as this idea transcends or surpasses its instantiation in mathematical theory, and without which this theory would not exist, Lautman argues that dialectical Ideas are thus the genetic condition through which these various mathematical theories are realized.

This point in turn works to distinguish his own use of “Ideas” in relation to platonism. In his “Essay on the Notions of Structure and Existence in Mathematics,” Lautman articulates the differences between his own dialectical account and traditional platonism. “Mathematicians have become accustomed,” he writes, “to summarily designate under the name Platonism any philosophy for which the existence of mathematical entity is taken as assured...it goes without saying that this is a superficial knowledge of Platonism” (Lautman 2011, 190). In contrast to traditional platonism, Lautman argues that “all modern Plato commentators...insist on the fact that Ideas are not immobile and irreducible essences of an intelligible world, but that they are related to each other according to the schemas of a superior dialectic that presides over their arrival” (190). On Lautman’s account, the reality of dialectical Ideas is therefore not one of fixed essences or static ideal entities. Rather, dialectical Ideas indicate a dialectical process of

¹³⁹ Of course, and as shown through, for example, the currently unproved status of Riemann’s conjecture, the relation between prime numbers and whole numbers has not been solved. Lautman’s point is rather that various solutions have clarified the nature of this question in more precise ways.

questioning which is structurally open-ended. Moreover, Lautman characterizes this structurally open-ended feature of questions as an “essential insufficiency.” This essential insufficiency can be explained through the way that dialectical Ideas, as ontological questions, surpass their various ontic instantiations as answers.

While Lautman’s focus is the genesis of mathematical theory, he also suggests that this approach can be applied more widely. “It is possible,” he writes, “to see the utility of mathematical philosophy for metaphysics in general,” and to function as a model for “other domains of incarnation,” such as “physical reality,” “social reality,” and “human reality” (Lautman 2011, 203). This wider approach to ontological genesis is later taken on explicitly by Deleuze, who argues for the structuring role of dialectical Ideas as providing the condition of genesis across different levels of physical, biological, and social reality.

In developing a theory of dialectical Ideas, one of the most important features that Deleuze takes from Lautman’s version of platonism is the argument that structures can be explained through processes of becoming, rather than merely as static and unchanging essences. For Lautman, and in contrast to traditional platonism, Ideas are not separated from becoming. Rather, he claims that there is a “becoming within Ideas” (Lautman 2011, 190). Deleuze thus takes Lautman to provide a framework for developing a genetic account of structure. However, Deleuze also claims that “the genesis takes place in time not between one actual term, however small, and another actual term, but between the virtual and its actualization” (DR 183). What we should emphasize for the moment is that, by drawing from Lautman’s notion of the dialectic, Deleuze argues that developing a philosophical account of Ideas as structures will thus require accounting for the specific temporality of structures as neither merely subjective nor reducible to linear time.

Chapter Conclusion

In this chapter, I explored how platonism provides one of the main options for explaining the reality of structures. One of the advantages of structural platonism, according to which structures are real and mind-independent, is that it aims to explain and account for structures in a way that is not reducible to physical objects. However, despite these ambitions, one of the major problems with structural platonism was that it was unable to explain the specific temporality and spatiality that characterizes the reality of structures. Structures were theorized merely as timeless abstractions, meaning that we were unable to account for the temporality of structures as they occur in the world. A final problem was that a platonist approach rendered structures as transcendent, a move that further limits our ability to explain how structures function in our world.

For Deleuze, responding to this problem requires not merely a full rejection of platonism, but rather a closer diagnosis of the original problems that led Plato to posit the existence of Ideas. As we saw, the core motivation Deleuze finds in Plato's theory is moral: Plato wants to secure the status of Ideas as good. More specifically, Plato drew on the normative aspects of ratio and concordance in order to secure the normative status of Ideas, and to exclude phantasms and simulacra. Despite his disagreements, Deleuze finds at least one compelling aspect in the platonist position, and this is the priority that is placed on the dialectic. Drawing from Albert Lautman, Deleuze's *Difference and Repetition* reconceptualizes Ideas as problematic. Through this reversal, structures are no longer taken to be transcendent and self-subsisting timeless entities, but are rather inherently differential and dynamic.

Chapter IV: Structure and Paradox

Chapter Overview

This chapter provides an account of Deleuze's ontology of paradox and its relation to structure in *Logic of Sense*. Clarifying this claim requires an explanation of his specific account of paradox, one in which paradoxes are not merely puzzles to be solved. In the opening section, I focus on some of the historical background that informs Deleuze's engagements with paradox, both with respect to Ancient philosophy and modern logic. In "The Paradox of Pure Becoming," I explore Deleuze's account of the paradox of Alice's becoming, showing how Deleuze's strategy towards the paradox is not based in refutation. Next, I explicate Deleuze's account of the Sorites paradox, focusing on his reading of a philosophical dispute between Chrysippus and Carneades. In the final section, I provide an analysis of Deleuze's concept of the "paradoxical element" and its place in his ontology of structure.

Historical Background for Deleuze's Concept of Paradox

Deleuze introduces the *Logic of Sense* as "a series of paradoxes which form the theory of sense" (LS i). However, Deleuze's engagement with paradox is by no means limited to this work.

Unlike many other terms in this work, paradox remains a key reappearing concept throughout much of the rest of Deleuze's later work, through and including his collaborations with Guattari.¹

¹ See, for example, Deleuze and Guattari 1980, 75-78 and 221; Deleuze and Guattari 1987, 230-31).

Later in *What is Philosophy?*, Deleuze and Guattari argue that “philosophy is paradoxical by nature” (WIP 80) and that “philosophy develops in paradox” (WIP 82).

While a longer account of the history of paradox is outside the scope of this chapter, some brief points should be made concerning the background context approach paradox that informs Deleuze’s concept of paradox within the *Logic of Sense*, which develops both out of Ancient and Stoic conceptions of paradox, as well as out of early 20th century developments in logic. In Ancient philosophy, a *paradox* was primarily understood as a view which opposed the prevailing *doxa*. Aristotle, for example, defines paradox as “a view contrary to men’s usual positions about which we have an argument” (*Topics* 1.11, 104^b19-25).² Under such a definition, a view can be *paradoxical* without any *prima facie* logical contradiction between its claims. The force of such paradoxical views, such as, for example, the Stoic view that the sage alone is free, is that they challenge commonly held beliefs. This Ancient view of paradox can be distinguished from the early 20th century logical account of paradox, emblematic in figures such as Cantor, Frege, Whitehead, and Russell, for whom paradox was understood as logical contradiction that develops within a set or system, regardless of whether such a system (e.g. Frege’s *Begriffsschrift*) is held as commonly accepted belief.

The Ancient conception of paradox often overlapped with ethical concerns. Within Stoicism, for example, the wisdom of the sage is closely connected to their ability to live according to reason, even if such a life is opposed to the “common sense” understandings of

² Examples of such “paradoxical” views, for Aristotle, include Antisthenes’ claim that contradiction is not possible, Heraclitus’s argument that all things are in motion, and Melissus’ claim that all things are one.

received wisdom.³ While this Ancient account of paradox involves some notion of “contradiction,” the contradiction is not explicitly self-contradiction but rather a view that contradicts established *doxa*. By contrast, in the development of modern logic, the priority was more towards developing logical systems that could avoid self-contradiction. The preface of the Whitehead and Russell’s *Principia Mathematica*, for instance, claims that “a very large part of the labor involved...has been expended on the contradictions and paradoxes which have infected logic and the theory of aggregates” (Whitehead and Russell 1925, vii). As a solution to these logical paradoxes, the Introduction claims that “the system is specially framed to solve the paradoxes,” and that the theory of types it develops “leads both to the avoidance of contradictions, and to the detection of the precise fallacy which has given rise to them” (1).⁴

One of the famous problems in modern logic—now known as Russell’s paradox—was the paradox of the set of all sets that are not members of themselves. In addition, however, there were several other paradoxes that threatened earlier forms of set theory.⁵ Because paradoxes threaten the internal consistency of a system, they must be solved and overcome. Moreover, this negative conception of paradox as (1) something to be avoided, and (2) arising from fallacies or errors in reasoning, continues to inform many early analytic conceptions of paradox in subjects

³ Deleuze’s engagements with stoicism are largely informed through Goldschmidt (1953) and Bréhier (1962). As shown by Sellars (2006), they sometimes do not in fact correspond with Stoic ontology. Note that this claim should not be taken to mean that Ancient philosophers were not concerned with the logical and formal implications of paradox.

⁴ For Whitehead and Russell, because all paradoxes arise from violations of Poincaré’s vicious circle principle, overcoming paradox is thus a matter of avoiding “illegitimate totalities,” examples of which include the set of all sets. See Landini (2004) for a useful overview of Russell’s distinction between logical and semantic paradoxes.

⁵ See Whitehead and Russell (1925, 60-61) for a useful overview of seven paradoxes that challenged earlier versions of set theory. It includes the Liar’s paradox, but also includes many that are less well-known, such as the paradox of the “least integer not nameable in fewer than 19 syllables” (61). In this case, the least integer has a precise denotation in English of 111,777. The name of the number (quoted earlier) can be named in 18 syllables: “hence the least integer not nameable in fewer than nineteen syllables can be named in eighteen syllables, which is a contradiction” (61).

in domains outside of logic. For instance, in *An Inquiry into Meaning and Truth*, Russell explicitly connects paradoxes within language to the proliferation of nonsense, arguing that “all the paradoxes arise from the attribution of significance to sentences that are in fact nonsensical” (Russell 1940, 172).⁶

Deleuze’s *Logic of Sense* engages with both historical traditions of paradox, paying crucial attention to both Stoic accounts as well as being informed by the more recent work on logical paradox following from Russell and Frege. In response to more recent work, Deleuze draws from Russell’s association of paradox and nonsense and the relationship between sense and contradiction.⁷ *Logic of Sense* directly cites Russell’s *An Inquiry Into Meaning and Truth*, and in addition claims that “Russell was always inspired by Lewis Carroll” (LS 83). One of Deleuze’s major secondary sources on recent developments in logic was Franz Crahay’s (1957) *Le Formalisme logico-mathématique et le problème de non-sens*.⁸ Deleuze’s also comments on Russell’s paradox (LS 69), using it as a reference point in developing his account of the “paradoxical element” (LS 66).

In addition to responding to these more recent developments, *Logic of Sense* also draws on the ancient account of paradox as opposed to *doxa*, something that Deleuze takes as central to his “definition” of paradox. To date, the relevant historical background in Ancient philosophy

⁶ For Russell, the task in *responding* to paradox is thus a matter of removing the nonsense which generates such paradoxes, and to formulate “syntactical rules for the exclusion of nonsense” (172). Under Russell’s method of exclusion, rules thus need to be developed in order to prevent the proliferation of nonsense in language, allowing us to avoid paradoxes more effectively.

⁷ See LS (68-69 and 341) and Crahay (1957), especially chapter 4.

⁸ See LS (341), where Deleuze claims that Russell’s account of nonsense is preferable to Husserl’s distinction between “nonsense” and “counter-sense.” The work that Deleuze cites, Crahay (1957), covers many of the recent developments in set theory and type theory. One of the work’s major focuses is on the question of whether formal theory of sense can be provided. Crahay argues for a negative answer to this, concluding that “such a system can never be anything but partial and incomplete” (Duthie 1960, 286).

that informs Deleuze's *Logic of Sense* has received comparatively more scholarship.⁹ One of the main sources for Deleuze's reading of Stoicism is the Victor Goldschmidt's (1953) *Le système stoïcien et l'idée de temps*. But another important source is Émile Bréhier's (1928) *La théorie des incorporels dans l'ancien stoïcisme*. Without engaging all of the details that Deleuze draws from these sources, it will be useful to note that Deleuze's account of paradox is informed by the Stoic metaphor of philosophy as an "egg": logic as the shell, ethics as the whites, and physics as the yoke. For paradox, what this implies is that paradoxes cannot be merely confined to logic but will concern ethics and metaphysics as well.

Also, as indicated in chapter I, I think it would be a mistake to only approach these historical backgrounds as "influences" on Deleuze, even though each historical background informs his approach. Deleuze often switches very quickly between vastly different historical conceptions of paradox—for instance, alternating between a set theoretic notion of paradox and a Stoic account within the same passage. While he focuses closely on historical philosophical problems, Deleuze does not always prioritize historical accuracy—rather, he draws on the sources are useful in approaching the underlying problem he is addressing. In *The Logic of Sense*, this problem is winding and complex. Deleuze claims that the "most general problem of the logic of sense" is as follows: "What would be the purpose of rising from the domain of truth to the domain of sense, if it were only to find between sense and nonsense a relation analogous to that of the true and the false?" (LS 68). Stated another way, one could understand the goal of the work as developing a theory of the relation between sense and nonsense that is not reducible to contradiction.

⁹ For a useful overview of Deleuze's work in relation to Ancient philosophy in general, see Bennett (2017). On Deleuze's specific relation to Stoicism, see Johnson (2020), Johnson (2022), (2006), and Parsa (2023).

In working to develop a “logic of sense” that is not analogous to the relation between the true and the false, one crucial part of Deleuze’s theory will be the concept of the “paradoxical element.” Moreover, this concept will also involve a notion of paradox that is taken to be generative of contradiction rather than isomorphic with it: “The paradoxes themselves,” he writes, “enact the genesis of contradiction and inclusion in the proposition stripped of signification” (LS 69). For the purposes of this chapter, the problem that will be approached is as follows: how do we explain the ontological “status” of paradox? And how can an account of paradox inform a more general ontological account of structure?

The Paradox of Pure Becoming

The Logic of Sense opens with a paradox. It has two names: *the paradox of pure becoming* on the one hand, but also *the paradox of infinite identity*. Deleuze introduces it as follows:

When I say “Alice becomes larger,” I mean that she becomes larger than she was. By the same token, however becomes smaller than she is now. Certainly, she is not bigger and smaller at the same time. She is larger now; she was smaller before. But it is at the same moment that one becomes larger than one was and smaller than one becomes. (LS 2)

What exactly makes this relation between Alice’s becoming *larger* and *smaller* a paradox? The source of this paradox of becoming is not solely from Carroll. It also goes back to a discussion in Plato’s *Parmenides* concerning the question of whether the one is in time.¹⁰ One way to summarize the paradox is as follows:

- (1) Larger is only a difference from smaller. (definition)

¹⁰ Plato, *Parmenides*, 141a-d.

- (2) Alice becomes larger than she was. (premise)
- (3) When Alice becomes larger, past Alice becomes smaller than she is now. (1-2)
- (4) This difference does not exist *prior* to the moment of Alice's becoming larger.
(premise)
- (5) So, Alice must become smaller at the same moment she becomes larger. (3-4)
- (6) At any moment, Alice is exactly the same size as herself; she is neither larger nor smaller than herself. (principle of identity)
- (7) By (5), Alice becomes larger and smaller than herself at the same moment, which contradicts (6).

Premise (1) is based on the proposition that predicates such as *older/younger* and *larger/smaller* are relational differences: "older is a difference from younger and from nothing else" (*Parmenides*, 141c). To become larger is to become in a relational difference with something smaller; otherwise that it was larger. But this relational difference works in both directions: when something is smaller, it is also smaller than something larger. So, when Alice becomes larger than she was when smaller, we must also consider the way in which smaller Alice "becomes" smaller than Alice is now (who is larger). This inference from (1) and (2) seems counter to our ordinary understanding of "becoming," but it follows from the definition of larger and smaller as mutually inclusive terms and the observation that Alice becomes larger.¹¹ If Alice becomes larger, then by the same measure former Alice becomes smaller.

Moreover, we see in (4) that, prior to Alice becoming larger, there is no sense in which we can say that she is smaller. Because smaller Alice does not become smaller prior to her

¹¹ One might, of course, object here that *becoming* only be predicated in a future-oriented direction. See solution 3 for a more explicit account of this objection.

becoming larger, and because she *does* become smaller by (3), this must occur in the same moment as she becomes larger. In other words, because the relational difference between smaller and larger is mutually inclusive, something cannot become larger *prior* to it becoming smaller than something else; such a difference must occur at the same moment. However, this presents a problem with respect to the principle of identity in (6); at each specific moment, Alice is the same size as herself; she cannot be larger and smaller than herself “at the same time.” At any given moment in time, Alice is exactly the same size as herself, and is neither larger nor smaller than she is in that moment. So, the conclusion indicates that there must be some moment at which Alice simultaneously becomes larger and smaller than herself, and furthermore that there can be no such moment. Note that for the present purposes, I have used words like “time,” “moment,” and the “present” without much explanation. In *Logic of Sense*, Deleuze develops a theory of two different “times” of Aion and Chronos, both of which together challenge our ordinary conception of time as progressing from past to future.

With respect to time, the conclusion that Alice is both “larger and smaller” presents us with at least two distinct problems. The first problem is the question of *when* Alice becomes larger. During what moment does Alice become larger than herself and smaller than herself, if at any given moment she is also the same size as herself? The second problem is the nature of the temporal direction in which Alice is growing. Is Alice *really* getting bigger, or is she getting smaller—or, as Alice asks, “Which way, which way?” (LS, 3). Is she growing larger or smaller, older or younger, taller or shorter? In addressing these questions, I will first focus on a refutational strategy towards the paradox. I will then examine Deleuze’s own approach and how it differs from the strategy of refutation.

Refutational Approach to the Paradox of Becoming

One way to respond to this paradox would be to take a refutational approach. By *refutational* approaches, I mean here approaches which are an attempt to eliminate the paradox so that it no longer appears paradoxical. Generally speaking, refutational approaches attempt to identify an underlying error in reasoning that generates the paradoxical conclusion. By locating the error and altering the structure of the paradox to avoid it, the goal is to avoid the paradoxical conclusion. Four strategies for doing so are briefly presented below.¹² The task here is not to solve the paradox (or even to adequately to present a solution) but is rather to sketch a brief schematic map of refutational approaches so that we can then demonstrate the way in which Deleuze's approach differs from these approaches.

First, in trying to refute the paradox, we could identify a faulty premise. One strategy, for instance, would be to reject (2) and argue that there is no such thing as *becoming*. So, we could argue that the philosophical concept of becoming is illusory or misguided.¹³ Another likely target could be premise (6), the principle of identity as understood with respect to Alice at each individual moment. We could claim that, insofar as her identity is temporally extended, Alice *is* both larger and smaller than herself at each moment. Consider that at any given moment in time, Alice is larger than she was in the past and smaller than she will be in the future, as well as the same size in herself. We might therefore think that premise (6) is misguided. In other words, we

¹² These methods of refuting paradox are not meant to be exhaustive.

¹³ Of course, as Deleuze notes, the relation between being and becoming is one of the central problems in Plato.

might think that Alice *can* be simultaneously larger and smaller than herself, insofar as her identity extends beyond individual moments which can nonetheless differ from each other.¹⁴

Second, in trying to refute the paradox, we could reject an inference between premises. We could, for instance, argue that the inference from (1) and (2) to (3) is invalid. Even if (1) and (2) are true, we might think that the relational understanding of larger/smaller allows the controversial inference that past Alice becomes smaller. Alternatively, we could reject the inference from (3) and (4) to (5). Even if (3) and (4) are true, we might think that this doesn't allow us to infer that there must be a specific *moment* in which Alice becomes both larger and smaller. We might think that such talk of *moments*, or at the very least a specific moment in which Alice becomes larger and smaller, is inadequate to understanding the nature of temporal becoming.

Third, we might try to address the paradox through pointing out an equivocation. We could say that it equivocates between Alice's identity at different temporal positions. We could therefore try to solve the paradox through more clearly distinguishing between *past* Alice, *present* Alice, and *future* Alice. This would allow us to maintain (6) with respect to any specific temporal moments of Alice (past Alice is identical to past Alice, present Alice to present Alice, and future Alice to future Alice), but without the resulting contradiction. Present Alice would remain the same size as present Alice but would be larger than past Alice and smaller than future Alice. We would no longer be forced to say that present Alice is larger than present Alice, or that future Alice is smaller than future Alice.

¹⁴ This solution is the most straightforward, but I think also the least satisfying, because it fails to fully explain why we should reject the straightforward intuition that, with respect to any given moment of time, something is the same size as itself and is neither larger nor smaller. Such an approach would thus need to explicate the different ways in which at any given moment Alice is the same size as herself, while *also* differing from herself at other moments.

Finally, in trying to refute the paradox, we could introduce a further principle which clarifies and resolves the underlying concept of “becoming” in order to avoid the paradoxical conclusion. We could, for instance, introduce the following principle:

Principle of Future-Oriented Becoming

If there is some past X which becomes a future Y, the direction of becoming from past X to future Y is given by the order of relation between past to future, and not by future to past.

This principle attempts to codify our common beliefs about becoming—it reinforces our general intuition that, for example, children grow older and not younger. According to this principle, the future orientation of becoming would always be privileged over the past orientation. Thus, if future Alice is becoming larger than past Alice, then Alice is really becoming *larger*, even if past Alice is simultaneously becoming smaller. Similarly, this principle would allow us to stipulate that tomorrow I will be *older*, even though my past self will simultaneously become *younger*, because according to the principle, the direction of past to future becoming is what matters and not the direction of future to past. The introduction of this principle would thus be an attempt to solve the second question of which way Alice is growing in, because it would allow us to stipulate as a general rule that the past-future direction of becoming is more important than the future-past direction, even though both occur simultaneously. Such a principle would allow us to reject (3), and thus would prevent the paradoxical conclusion.

For now, we’ll leave aside the question of whether any of these approaches would ultimately refute the paradox. The more useful question, I think, is whether such approaches amount to anything interesting. This is not to say that refutational approaches are never interesting or remarkable, but to say that we can evaluate solutions to paradox on criteria *other*

than those of the true and the false.¹⁵ As we'll see, where I think Deleuze is helpful here is not only regarding the question of how to respond to paradoxes, but more importantly helps us to diagnose the question of why we might be drawn to refute them in the first place, and what we might give up when approaching paradoxes primarily with an aim to eliminate them.

Deleuze's Approach to the Paradox of Becoming

In responding to the paradox of Alice's becoming, Deleuze has little interest in attempting to refute it.¹⁶ Rather, as we'll see, he uses the paradox productively as a point of entry into the philosophical problem of the event: specifically with respect to how the event of Alice's becoming larger challenges the *good sense* interpretation of time as flowing from past to future with respect to a present moment. "This is the simultaneity of a becoming," he writes, "whose characteristic is to elude the present. Insofar as it eludes the present, becoming does not tolerate the distinction of before and after, or of past and future." The first point, then, is that, as the paradox demonstrates, *becoming* challenges our conceptual distinction of time as a distinction between past and future which can be made with respect to a present moment. The paradox thus demonstrates that the concept of an isolated present moment which cleanly separates the past and

¹⁵ This is not to say that truth is unimportant or irrelevant to the question of whether a solution is worthwhile. As suggested by Deleuze and Guattari's later comments: "Philosophy does not consist in knowing and is not inspired by truth. Rather, it is categories like Interesting, Remarkable, or Important that determine success or failure... We will not say of many books of philosophy that they are false, for that is to say nothing, but rather that they lack importance or interest, precisely because they do not create any concept or contribute an image of thought or beget a persona worth the effort" (WIP, 80-81).

¹⁶ This point is helpfully clarified by James Williams, who writes that "These additions are not designed to solve the paradoxes; instead, paradoxes are signs indicating and generating the necessity of complementary but irreducibly different aspects of language in relation to events" (Williams 2008, 29). However, we should note here that Deleuze is not opposed to any solution of paradoxes whatsoever but is rather opposed to *refutational* responses to paradox which attempt to eliminate it.

future into two distinct parts is in some way unable to account for the nature of *becoming*. Second, in eluding the present, the paradox also demonstrates the way in which *becoming* challenges the directional flow of time *from* past to future. “It pertains to the essence of becoming,” Deleuze writes, “to move and to pull in both directions at once” (LS, 1). The paradox thus indicates the *becoming* does not have a specific directional flow from past to future, but rather occurs in multiple temporal directions at once.

Rather than merely solving a puzzle, this analysis allows us to reexamine the concepts deployed in the initial paradox. Deleuze argues that hidden within the initial temporal distinction between past and future, is another “more profound and secret dualism” (LS, 2). First, there is a dimension of “limited and measured things, of fixed qualities.” This dimension has to do with “pauses and rests, the fixing of presents, and the assignation of subjects.” It allows us to distinguish Alice’s size at a particular fixed moment, such as the moment, for example, when she was ten inches high. The first dimension identifies fixed moments where some specific subject has a specific measurable quantity. The second dimension, meanwhile, is that of “a pure becoming without measure, a veritable becoming-mad, which never rests” (LS 1-2). The second dimension, contrary to the first, does not have a specific directionality, but rather “moves in both directions at once” (LS 2). It has no fixed rests or points but rather “is always going a point further” (LS 2). With respect to the paradox of Alice’s becoming, this changes our analysis. The original distinction between past and future moments, one in which Alice was smaller, and another in which she is larger, gives way to another hidden distinction between (1) Alice as a subject fixed at particular points in time, having a specific size at each point, and (2) Alice’s becoming, in which she is always becoming different than herself, and the directionality and even sense of herself is unclear.

Leaving aside some of the theoretical developments that follow from this, it should be noted that Deleuze's strategy towards the paradox differs from refutation in three ways. First, Deleuze begins with the general presupposition that the paradox of Alice's becoming has something worthwhile to say; that it is not, in other words, an error in reasoning that merely needs to be found and corrected. He begins with the presupposition that the paradox is not merely the result of a mistake in reasoning or of propositions which are not clearly stated. Second, while Deleuze accepts the paradox, he does not accept the concepts deployed as uncontested. Especially with respect to terms such as "now," "before," and even "Alice," what the paradox demonstrates is that these terms cannot be taken as merely given initially. While the meaning of terms like the "now" and "Alice" seems to be initially clear, the paradox also makes them unclear; in doing so, it shows that these concepts require further investigation. Finally, these two differences further structure the way in which Deleuze works through the paradox. Because the paradox is not merely the result of a mistake in reasoning, and because it may deploy terms which require further investigation, confronting the paradox is therefore not a matter of eliminating faulty premises to avoid the contradiction, or rewording terms so as to avoid the confusion, but is rather a matter of following its conclusions, pushing them further than originally stated, and rearticulating the concepts it deploys so that they produce a new sense of the problem. In practice, what this means is that the original problem, while not ever fully being eliminated, nonetheless opens itself up to new and hidden distinctions, and the examination of one paradox leads us to another paradox. The paradox of Alice's becoming leads us to the paradox of infinite identity, and this in turn leads us to further paradoxes throughout each series in the work. When Deleuze presents the overall work as a series of paradoxes, they are thus not meant as individually isolated problems, but as building from each other.

Paradox as Opposed to Doxa

Deleuze's most explicit ontological account of paradox is in the twelfth series.

"Paradox," he writes, "is opposed to *doxa*, in both aspects of *doxa*, namely, good sense and common sense" (LS, 74). Through opposing paradox to *doxa*, Deleuze thus defends a concept of paradox more closely aligned with a Stoic and Ancient understanding of the term as opposed to the modern logical conception of paradox as resulting from logical contradiction. He writes:

The force of paradoxes is not that they are contradictory; they rather allow us to be present at the genesis of the contradiction. The principle of contradiction is applicable to the real and the possible, but not to the impossible from which is derives, that is, to paradoxes or what paradoxes represent. (LS, 74)

The force of paradox operates at the level of sense, and not at the level of signification. While paradoxes such as Russell's can emerge at the level of signification as well as the level of sense, the force of paradox is not generated *through* contradiction at the level of signification, for if it did, there would be no purpose for rising from the level of the true and the false to the level of sense. In disassociating the productive power of paradox from logical contradiction, Deleuze is, however, not advancing an entire rejection of the law of non-contradiction, but is rather restricting its application to the level of the real and the possible, but *not* to the "impossible" level of sense from which the real and the possible relations of signification and denotation are derived. Deleuze thus locates the power of paradox not at the level of signification, but at the level of sense: paradox is that which is opposed to *good sense* and *common sense*.

In *Difference and Repetition*, Deleuze argues that good sense and common sense together form the second postulate of the dogmatic image of thought: "the postulate of the ideal,

or common sense (common sense as the *concordia facultatum* and good sense as the distribution which guarantees this accord)” (DR, 167). Common sense and good sense thus together uphold a harmonious concordance of the faculties, one which paradox contests. In contesting this concordance between the faculties, paradox contests both good sense and common sense. With respect to common sense, “paradox breaks up the common exercise of the faculties and places each before its own limit” (DR, 227). And with respect to good sense, paradox contests the sedentary distribution of good sense which would attempt to cancel difference between the faculties, and “communicates to the broken faculties that relation which is far from good sense” (227). *The Logic of Sense* further expands this concept of paradox as opposed to good sense and common sense. *Good sense*, Deleuze argues, functions according to six key determinations: (1) a single (as opposed to multiple) direction, (2) the movement of this direction from “most to the least differentiated,” (3) the arrow of time as something that moves from past to future, (4) the present as that which directs this past-future orientation in time (5) the possibility of prevision, and (6) a sedentary (as opposed to a nomadic) distribution (LS 76).

Good sense is primarily defined through its determination of a *single* direction from most to least differentiated, and from past to future. In addition, Deleuze indicates that good sense functions primarily at the level of determining relations of signification, precisely because the level of sense itself *has* no such direction: “it is the characteristic of sense not to have any direction or ‘good sense’” (LS 77). Sense is always multiple. This is important, because it means that paradox as the contestation of good sense is not merely a matter of selecting the opposing direction, such as, for example, proceeding from least to most differentiated or from future to past. Selecting the other direction leaves us at the level of signification rather than the level of sense. By contrast, in rising to the level of sense, the power of paradox is in showing that “one

cannot separate two directions, that a unique sense cannot be established—neither a unique sense for serious thought and work, nor an inverse sense for recreations and minor games” (LS 77). In opposing good sense *at the level of sense*, paradox does not consist merely in choosing the opposite direction (and thus remaining at the level of signification), but is rather in rising to the level of sense and showing that no unique sense can be established.

In opposing good sense, paradox also opposes common sense. *Common sense*, Deleuze writes, “is called ‘common,’ because it is an organ, a function, a faculty of identification that brings diversity in general to bear upon the form of the Same. Common sense identifies and recognizes, no less than good sense foresees” (LS, 77-78). As something connected to identification and recognition, common sense operates both at both subjective and objective levels. At the level of subjectivity, common sense functions through the unification of the various parts of the self under a single subject: it “subsumes under itself the various faculties of the soul, or the differentiated organs of the body, and brings them to bear upon a unity which is capable of saying ‘I’” (78). And at the level of objectivity, common sense works to unify the diversity of experience into objects and an individualized world. “It is the same object which I see, smell, taste, or touch...it is the same world that I breathe, walk, am awake or asleep in” (78). Common sense thus functions through a logic of unification, both with respect to the identity of the self and to the identity of objects. It is through this relationship between the unified identity of common sense, on the one hand, and the sedentary distribution of good sense given to this identity, on the other, that both good sense and common sense require each other. Without common sense, good sense would have no differentiated starting point from which to organize the arrow of time as moving from past to future. And without good sense, the identity given by common sense would be “empty”: there would be no movement of identity from past to future,

and therefore would be no means by which this identity could be recognized as the same at various temporal moments.

This provides us with a conceptual framework from which to reevaluate the paradox of Alice's becoming and the various solutions that were proposed. According to the Principle of Future-Oriented Becoming, the earlier solution suggested that Alice is growing larger and not smaller, because the directionality of becoming moves from past to future and not from future to past. However, following Deleuze's account of good sense and common sense, invoking this principle to solve the paradox is nothing other than the reassertion of good sense. The "refutation" of the paradox through the principle, then, is on the condition that one allows good sense to determine which direction Alice is becoming. The solution of the paradox proposed earlier, then, provides a reassertion not only of good sense (Alice's becoming from past to future), but also of common sense (Alice as a subject that is recognized at various temporal points). What is important is that this association between refutation and *doxa* is that Deleuze claims this to be a feature of paradox in general: paradoxes can only be refuted through the reassertion of good sense and common sense. This view is made explicitly in *Difference and Repetition*, where Deleuze writes that: "the only refutation of paradoxes lies in good sense and common sense themselves, but on the condition that they are already allowed everything: the role of judge as well as that of party to the case, the absolute along with the partial truth" (DR, 227-8). Paradoxes can be refuted, but only at the cost of the reintroduction of the underlying *doxa* which was originally contested.

Drawing from Kierkegaard, Deleuze suggests that rather than being thought of as puzzles, paradoxes should be understood as the "the Passion of thought" (LS 74). The context for this construction of paradox is the distinction between recreational and non-recreational

approaches to paradox. When paradoxes are merely considered recreations (*récréations*), they are understood to be “initiatives of thought” (LS, 74)—they are, in other words, games or puzzles that we engage in playfully, or even distractions from more serious work. When approached recreationally, paradoxes are considered to be a “false image of thought” (LS 74) in much the way that the fictions of a children’s games are thought to be distinct from the sober realities of adult life. The key problem with this approach is that it assumes that thought is something clear to itself—that the act of thinking is something that is clear and transparent, and thus the paradoxes of thought can be played out at the level of conscious reflection, without “putting into play all the powers of the unconscious” (LS 74). In relying on thought as something “clear and distinct,” such an approach towards paradox thus relies on the model of good sense and common sense.¹⁷

Still, even if we accept Deleuze’s ontological formulation of paradox as opposed to good sense and common sense, this leaves several questions open—what is wrong with good sense? What is the nature of the reality of paradox? And what role does this ontological account of paradox play in an ontology of structure? To address these questions, I will focus on Deleuze’s strategy towards another paradox, the Sorites.

Chryssipus, Carneades, and The Sorites Paradox

As a paradox that resists refutation, the Sorites paradox is formidable. In contemporary work, the Sorites is typically treated as concerning the problem of vagueness, and how to understand when

¹⁷ This close association between the “clear and distinct” understanding of thought and the logic of recognition is made clearly in *Difference and Repetition*: “The ‘clear and distinct’ itself is inseparable from the model of recognition which serves as the instrument of every orthodoxy...Clarity and distinctness form the logic of recognition” (DR, 146).

certain vague predicates (e.g., “heap,” “tall,” “bald,” etc.) meet their truth conditions. However, in Ancient philosophy, the paradox was typically presented in the form of a dialectical game of questioning. The questioner asks: “Does one grain of wheat make a heap?” The respondent answers: “No.” The questioner continues: “Do two make a heap?” “No.” “Do three?” “No,” and so on. If the respondent ever says “yes,” then they will have conceded the absurd claim that one additional grain is sufficient to make something into a heap. And if the respondent always says “no,” then they will be committed to affirming the proposition that some excessively large number of grains of wheat, such as 10 million, do not make a heap. As noted by Ricardo Santos (2019), in this context it was understood as a fundamental rule that the response must be either ‘yes’ or ‘no’—an answer like “I don’t know” or “maybe” would not be allowed.

Deleuze suggests that the Sorites informs the Stoic approach towards paradox more generally. “The Stoics,” he claims, “are amateurs and inventors of paradox” (LS, 8). Referencing the Stoic study of *dialectic* (for the Stoics, this was under the subcategory of logic), Deleuze interprets it as the “science of incorporeal events as they are expressed in propositions, and of the connections between events as they are expressed in relations to propositions” (LS, 8).¹⁸ Paradox is a crucial part of this science, since it investigates the tensions between propositions and events as they develop. A useful example of this that Deleuze references is the “chariot” example from Chryssipus: “If you say something, it passes through your lips, so if you say ‘chariot’, a chariot passes through your lips” (LS, 8). What is interesting about this paradox, for Deleuze, is not that it is especially difficult to refute. Of course, one could easily object to the equivocation between saying “chariot” and a chariot itself. Rather, Deleuze suggests that the paradox is compelling because it illuminates the ontological relation between propositions and events:

¹⁸ For a useful overview of the general role of Dialectic in Stoic thought, see Lerodiakonou (2018).

The event is coextensive with becoming, and becoming is itself coextensive with language: the paradox is thus essentially a ‘sorites,’ that is a series of interrogative propositions which, following becoming, proceed through successive additions and retrenchments. (LS, 8)

This passage suggests that the Sorites paradox is important because it provides a more general framework for how the Stoics approached paradox. But what does it mean to say that a paradox “follows becoming”? And how can this be seen in the Sorites?

In developing his account of paradox, Deleuze addresses a historical debate between Chryssippus the Stoic and Carneades the Skeptic. Chryssippus is reported to have developed a novel response to the Sorites paradox, one which is recounted by both Cicero and Sextus Empiricus. The passage Deleuze cites in Cicero reads as follows:

Chrysippus thinks that when one is asked to specify gradually whether, e.g., three things are few or many, one should come to rest (*hêsukhazein*, as they put it) a little before one reaches ‘many’.

As far as I’m concerned, Carneades replies, you can snore if you like as well. But how does that help you? There’s someone coming after you who’s going to wake you from your sleep and keep asking you the same questions ...

Well, it does me no harm, you say: I will hold back my horses like a skilled charioteer before I come to the limit, especially when the spot the horses are headed to is precipitous. That’s how I restrain myself—by not replying for too long when I’m asked captious questions.

(Cicero 2006, 53-54, Book 2 section 29)

In the passage, Chrysippus suggests a method of replying to the paradox by coming to a rest before the critical moment in the series. When, for example, asked whether three things are few or many, the response is to withhold making a statement at that point, perhaps until the series continues so that an answer is easier to establish. If, for example, one says nothing at “three” but

waits until “seven,” then one can safely say that seven is many. In turn, Carneades objects that this is no better than taking a nap. No matter how long one sleeps, the same question still remains. One can always be woken up again and asked: what about one more? In response to this objection, Chryssipus replies by claiming that, rather than merely taking a nap, he is acting more like a skilled chariot driver. Just as the driver pulls back on the reins before reaching the dangerous “limit” on the edge of a cliff, his response is likewise to “restrain himself” and to hold back from giving an answer before getting to the dangerous part of the questioning. Chrysippus’ answer suggests a common Academic expression used to explicate *epokhê* (suspension of assent): “Hold back your chariot and horses as a good charioteer often must!” (Cicero 2006, 54f).

In Kierkegaard’s *Philosophical Fragments*, Climacus argues that Carneades’ objection is well-founded. Citing the debate, he comments that “trying to get rid of something by sleeping is just as useless as trying to obtain something by sleeping,” and that “it will not make any difference” (KW VII 43). By contrast, Deleuze does not think that this objection is a good one, and in a footnote suggests that Kierkegaard “arbitrarily lend support to Carneades” (LS 341). But why is it that it will make no difference? And why does Kierkegaard’s Climacus support this view?

As suggested by Kierkegaard scholar M. Jamie Ferreira (1997), one reason is that Kierkegaard interprets Chryssipus’ answer as “an attempt to disguise the discontinuity of a qualitative transition” (Ferreira 1997, 210). Through suggesting that one can “pause” in response to the paradox, Climacus views Chryssipus as suggesting that the qualitative transition can be approached quantitatively, so long as one holds back at the right moment. Climacus is thus in effect trying to emphasize the qualitative break that occurs in critical thresholds (the transition from piles of grains to a heap, or from few to many), as the way in which these critical thresholds

cannot be understood in quantitative terms of gradual movement, but rather have to be understood as a qualitative leap.

On Deleuze's reading, Carneades misunderstands the response. When Chryssipus refers to the example of driving the chariot, he is instead trying to demonstrate the way in which "one can always manage in tandem, slowing the horses when the slope becomes steeper, or decreasing with one hand when increasing the other" (LS 80/98). But how is this point about riding a chariot in fact a response to the objection?

As interpreted Bennett (2017), Deleuze supports Chryssipus's interpretation because it indicates the "unconscious" aspect of paradox: "As Deleuze puts it, Chryssipus's recommendations—fall silent, go to sleep—are good ones because what is productive about paradoxes manifests itself 'behind the back of consciousness, contrary to common sense'" (Bennett 2017, 83–84; LS 80) I think this is a useful line of thinking, but on its own it does not provide a full answer to why Deleuze agrees with Chryssipus while rejecting Carneades. It does not explain, for instance, Deleuze's specific reference to the "slope" of the chariot. In addition, Kierkegaard would also agree with the notion that paradoxes are counter to common sense, but, despite this, he agrees with Carneades instead. So, what else it is about Chryssipus's reply that Deleuze finds convincing?

In answering this question, Deleuze carefully notes the mathematical notion of "slope" (*pente*) that is given in Chryssipus's response. Similar to the English "slope," the French term "*la pente*" also suggests a mathematical context—for example, when one learns to calculate the slope of a straight line (*la pente d'une droite*). In algebra, a slope has a specific relation to points. The points on a line can be graphed through a function. But the *slope* of a line can only be graphed through that function's derivative. While this distinction in calculus wouldn't have been

available to Chryssipus, Deleuze nonetheless thinks that his attention to the chariot's slope on the edge of a cliff is not coincidental.

This helps to reframe the original problem. The Sorites paradox presents the problem of how to understand at a which precise *point* a group of grains becomes a heap. As Kierkegaard emphasized, the question is at what “point” a qualitative change in becoming occurs: the moment at which a pile of grains becomes drastically different than it was before, no longer a pile of individual grains but now a qualitatively different “heap.” Similarly, in the case of whether “three” is few or many, the question is at what point this transformation occurs—at what point something which is only “few” becomes “many.”

Following this line of thought, Deleuze's argument is that the problem is that it takes all points to be equal. Chryssipus's attention to “slopes” involves the notion that not all points are like all the others. In calculus, for example, certain points on a slope will be entirely undefined, whereas others, for instance, will mark the transition where an increase transitions into a decrease. Of course, Chryssipus would not have had calculus in mind, but Deleuze claims that a similar logic of the “singular” can be found in the Stoic notion of the event. As we saw in the case of Alice's becoming, one of the crucial aspects of the event was that it seemed to have a strange temporality—it did not have a present “moment,” but was in some way both past and future. Deleuze suggests that the Sorites is affected by a similar problem—there is no one “moment” when the pile of grains become a heap, and yet there is an “event” of transformation which is simultaneously past and future-oriented.

Deleuze clarifies this difference through the distinction between ordinal and singular points. In order to understand the notion of “ordinal” points, we should first understand how Deleuze distinguishes cardinal and ordinal numbers. Cardinal numbers are numbers understood

as distinct extensive amounts: one, two, or three. Ordinal numbers are relational: first, second, third. In *Difference and Repetition*, Deleuze further distinguishes the two by claiming that cardinal numbers are extensive whereas ordinal numbers are intensive. Both cardinal and ordinal numbers can be “counted” on a sloped line—given a starting point, one can choose either method. But they are both distinct from “singular” points, which are those that are undefined. For example, in the function $f(x) = 1 / f(x)$, the point at which the graph is 0 is a singular point. The point $x = 0$ seems to be “real” in some sense, but it cannot be placed on any definite part of the sloped line.

Given this distinction, Deleuze claims that Carneades misunderstands the relationship of priority between ordinal and singular points. As an example, to demonstrate the distinction, he considers how the question of “why water changes its state of quality at 0° centigrade” is “poorly stated” (LS 80/98-99). The reason this is a misstated question is because it is not the case that water happens to coincidentally freeze at 0°. Rather, 0 degrees is the initial start from which the ordinal series of points progresses. It is the singular point, determined from the event of water freezing, that structures the ordinal series of degrees that follow (positive and negative Centigrade), and not the other way around. Chryssipus’s appeal to slowing the reins is therefore productive because it understands the way in which the ordinal series of the Sorites is structured by the singular points of transformation. Once understood “as a singular point,” Deleuze writes, the transformation is “inseparable from the event occurring at that point, always being zero in relation to its realization on the line of ordinal points, always forthcoming and already passed” (LS 80). What this suggests for Deleuze is that it is the qualitative eventual change from individual grains to a heap that determines the ordinal series of counting, not the counting that determines the qualitative change.

On Deleuze's interpretation of the Sorites, it is thus not merely the problem that the notion of a "heap" is vague or cannot be precisely defined (as suggested by most contemporary approaches to the problem). Rather, he indicates that the paradox positively demonstrates a problem with our "common-sense" ontology. The ontological mistake is to think that the ordinal series of counting is ontologically prior to the event of transformation. What the paradox demonstrates instead is that the singular "point" of transformation is ontologically generative of the ordinal series of counting. Chryssipus's response is therefore a good one, because it respects the way in which the singular point of transformation cannot be "placed" on the ordinal series.

From Paradox to The Paradoxical Element

This provides a point where I can address some of the results of the earlier analysis. In the case of the paradox of Alice's becoming, Deleuze's strategy was not to try to refute the paradox, but to use it in developing new ontological concepts. In the Sorites paradox, Deleuze thinks that paradoxes are productive, because they help to show certain errors in our "common sense" ontology of individuals. However, this analysis does not answer the question of what a better ontology should look like. If paradoxes are not merely due to errors in reasoning, then how can a new ontology be developed which uses them positively rather than trying to avoid them? Finally, what is the relation between structure and paradox?

In order to address these questions, Deleuze develops a concept of what he terms the "paradoxical element." One of the major examples that Deleuze references in developing this concept is from Jacques Lacan's account of the "purloined letter," which he cites in *Logic of Sense* as well as in his essay on structuralism (LS 38; DI 183-186). In order to clarify this

concept, I will first provide a brief overview of Lacan's account. I will then explicate how Deleuze uses this concept in his account of structure in the *Logic of Sense*.

Lacan and the Purloined Letter

In the "Seminar on the Purloined Letter," Lacan gives a novel interpretation of Poe's (1844) short story "The Purloined Letter." Notably, Lacan does not analyze Poe's work through discussing genre elements, character development, or moral themes. Lacan argues that the work should not be understood not as a "mystery story" or moral "fable" (Lacan 2007, 10-11/16-17),¹⁹ but that it should be understood rather through a logical analysis of two "series." In the first series, the Queen hides the letter from the King, only to have it stolen from the Minister. In the second series, the Minister hides the letter from the police, only to have it stolen from Dupin. The series can be listed as follows:

First Series: King, Queen, Minister

Second Series: Police, Minister, Dupin

What is important here for Lacan is not so much the individual motivations or inner life of each character. Rather, he claims that these aspects of the story are the result of a logical relation between these two series. The fate of each character, he argues, is determined through the way in which they are displaced in their serial relation. Following this logic of displacement, Lacan interprets the story through a series of "three logical moments" (9/15). The first logical moment is "a glance that sees nothing" (10/15), indicating the characters of the King and the police, both of whom fail to see the letter even though it is in front of them. The second logical

¹⁹ In citing this text, I list the English pagination first and the French pagination second.

moment is “a glance which sees nothing and deludes itself as to the secrecy of what it hides” (10/15), and corresponds to the Queen and the Minister, both of whom see that the first glance sees nothing, and thus thinks that the letter is safely hidden. The third logical moment sees that the first two glances “leave what should be hidden exposed to whomever would seize it,” and corresponds to the Minister and Dupin. Each character is therefore not defined by their inner motivations, but by their structural role in relation to these logical moments.

This framing allows us to introduce what Deleuze later draws on as an example of a “paradoxical element.” In his reading, Lacan argues the relation between these two series is determined by the path of purloined letter. The letter is a “pure signifier” (Lacan 2007, 23/32) which traverses the two series. Following this claim, he argues that the primary focus of the story is not any of the characters, but is rather the letter itself, whose path along these two series is “the *true subject* of the tale” (21/29).

In what way is the letter paradoxical? In Lacan’s analysis, one of the paradoxical features of the letter is that it has the quality of always being misplaced. In both series 1 and 2, it is not only where it does not belong, but repeatedly hidden in plain sight. Drawing on this point, Lacan argues that the ability to discover the letter’s location is not a question of determining its real place in extensive space. Rather, he suggests that the letter has the “property of *nullibity*” (Lacan 2007, 16/23). “What is hidden,” he claims, “is never but what is *not in its place*, as a call slip puts says of a volume mislaid in a library” (17/25). Unlike other objects, which “must be *or* not be in a particular place,” Lacan argues the letter “will be *and* not be where it is, wherever it goes” (17/24). In making this claim, Lacan’s point is to demonstrate the way in which the logical displacements of the letter occur not at the level of the “real” or the “imaginary,” but at the

symbolic order.²⁰ This point can be understood through his example of the lost book in the library. A lost book in the library is *not* misplaced at the order of the “real,” since its real place is always its real location. Insofar as it concerns the real, Lacan claims, everything is “always in its place”—to slightly modify a more familiar expression, one might say that “it is where it is.” Lacan’s point is that something is only misplaced when considering its place within the “symbolic order.” In the case of the lost library book, the book is only misplaced with reference to structural ordering of the library’s system of classification. Lacan claims the purloined letter is misplaced at the level of the symbolic order: “For it can *literally* [*à la lettre*] be said that something is not in its place,” he says, “only of what can change places—that is, of the symbolic” (17/25). The letter’s “displacement” thus indicates its function at the level of the symbolic, rather than at the level of the real or the imaginary.²¹

Moreover, the letter’s status in the symbolic order explains why the police are unable to locate the letter, since they are unable to make this distinction. “The seekers have such an immutable notion of reality,” Lacan argues, “that they fail to notice that their search tends to transform it into its object—a trait by which they might be able to distinguish that object from all others” (Lacan 2007, 17/25). In other words, what the police fail to see is the way in which,

²⁰ In making this claim, I am drawing on Deleuze’s earlier distinction made in reference to classical structuralism between the orders of the real, imaginary, and symbolic: “The refusal to confuse the symbolic with the imaginary, as much as with the real, constitutes the first dimension of structuralism” (DI 171). Note that Lacan’s notion of the “real” is highly technical and should not be confused with realism in the sense that I have been using it.

²¹ Lacan repeatedly emphasizes the status of the letter at the symbolic as opposed to the imaginary: “The teaching of this seminar is designed to maintain that imaginary effects, far from representing the core of analytic experience, give us nothing of any consistency unless they are related to the symbolic chain that binds and orients them” (Lacan 2005: 6/11).

insofar it functions in relation to the symbolic order, the letter is not in any *one* place, but is continually displaced as a result of the search for it.²²

Displacement, following this point, is a key property of the paradoxical element. In the case of the purloined letter, the letter is “displaced” in at least three different ways. First, it is displaced insofar as its arrival in the royal boudoir is out of place, insofar as it would, if discovered, “jeopardize for the lady nothing less than her ‘honor and peace’” (Lacan 2007, 8/13). Second, it is displaced by the Minister, who takes it back to his study. Finally, it is displaced again by Dupin, who retrieves it from the Minister. Importantly, each displacement is not just a change of physical location but is rather a displacement in relation to its prior “place” within the structural series. Moreover, as Lacan emphasizes, it is this logic of displacement (first misplaced in the bedroom, second misplaced as a result of the Minister, and third misplaced as a result of Dupin) that orients the dramatic role of each character. The role of the King and police is to fail to see the displacement, even though it is in front of their eyes. The role of the Queen and Minister is to try to keep the displacement unnoticed in order to secure their power over it. And finally, the role of the Minister and Dupin is to see that the letter’s displacement is precisely what leaves it uncovered, thus allowing for its *further* displacement into another series.

This question helps to illustrate a second key feature of the paradoxical element, which is that it cannot be identified with any signified content. In Lacan’s analysis, a crucial feature of the letter is that it is not identified with its message. Rather, he claims that it is “the symbol of but an absence” (Lacan 2007, 17/24).²³ As he points out, it makes no difference to the story whether the

²² In Deleuze’s reading, the letter “is always displaced in relation to itself” (DI 185). See also Deleuze’s comments on the importance of topology: “It is not a matter of a location in a real spatial expanse, nor of sites in imaginary extensions, but rather of places and sites in a properly structural space, that is, a topological space” (171).

²³ Following this point, he argues that letters do not have a teleological function: “If we could admit that a letter has fulfilled its destiny after having served its function, the ceremony of returning letters would be a less commonly accepted way to bring to a close the extinguishing of the fires of Cupid’s festivities” (Lacan 2007, 18/26).

Minister and the Queen interpret the message of the letter in different ways: “the sequence of events would not be appreciably affected, not even if the letter were strictly incomprehensible to a reader not in the know” (18/26). The letter’s importance is not determined through its connection to a signified message which it transmits but is rather generated through the absence of a message. The Minister deduces the importance of the letter not through its message, but through the fact that it has no message. Similarly, Dupin infers its location and significance through its crumpled appearance. Importantly, Lacan’s claim here is not only that the message is irrelevant, but that absence of a message is necessary for the story in order to function, since it is this absence that displaces the role of each character. The absence of letter’s meaning is thus not an unresolved mystery, but a crucial part of how the story works.

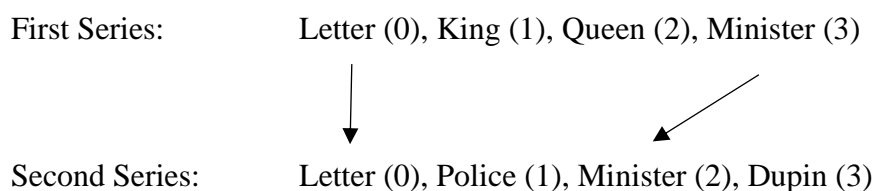
Deleuze’s Concept of the Paradoxical Element

In his essay “How do We Recognize Structuralism?” Deleuze claims that one of the ways in which structuralism can be understood is through the presence of a paradoxical element which resists identification. This paradoxical element is not defined through any one place within a structure, but through the way in which it continually displaces itself between multiple series and in turn determines their orientation. Moreover, the paradoxical element does not have any meaning or content. Citing Lévi-Strauss and Lacan as references, Deleuze claims that it has precisely no meaning, and this is the feature which in turn allows it to perform its function. Deleuze usefully summarizes the function of this paradoxical element as follows: (1) distribute the differences of each series, (2) displace them in relation to each other, and (3) to “make them communicate” (DI 185). These features can also work to explain the necessity of the paradoxical

element for structuralism more generally. Without a way to allow for communication between series which are themselves divergent, structuralism would be unable to move beyond the relation between the real and the imaginary, as there would be no path across discontinuous series.

In the essay on structuralism, Deleuze points out two specific features of the paradoxical element that help to clarify its role within a structure. First, he claims that while each series remains divergent, the paradoxical element is “the convergence point of the divergent series as such” (Deleuze 2004: 184). The paradoxical element allows for “communication” across series which are themselves divergent from each other. Insofar as it is continually displaced, the paradoxical element functions in order to draw a relation between series which are otherwise discontinuous.

As shown in Lacan’s analysis, the letter functions as a point of relation between the first series and the second. At the same time, it does so in a way that does not merely make them reflections of each other. In the case of the purloined letter, this relation of communication across series can be diagrammed in the following way:



What is important here is the way in which the letter determines the starting point of each series, but without any value of its own. The differential relations of each series are a result of the letter’s displacement from the first series to the second. At the same time, the displacement of

the letter allows the two series to communicate with each other, but in a way that does not simply reproduce them as images of each other. The police are not merely a copy of the king, since each series is determined distinctly from the letter's circulation. In other words, the values of each series are ordinal rather than cardinal, since they are determined through their relation to the preceding element. "Space," Deleuze claims, "is what is structural, but an unextended, pre-extensive space, pure *spatium* constituted bit by bit as an order of proximity, in which the notion of proximity first of all has an ordinal sense and not a signification in extension" (DI 174). Moreover, and drawing from Deleuze, the reason the series are not merely copies of each other, is due to the element of "slippage" from one series to the next. Each series communicates through the positional movements that occur from one series to the other, and, in doing so, some elements are shifted from the first series to the second. In the case of the purloined letter, for example, the drama occurs in part as a result of the Minister's demotion from one position to another from one series to the next—first the opportunistic thief, and second the overconfident victim.

A second notable feature is that the paradoxical element is necessary in order for structures to function: "Games need the empty square, without which nothing would move forward or function" (DI 186). This is a strong contrast from Russell and Whitehead's logical work, which aimed to develop logical systems that avoided paradox. In Deleuze's reading of structuralism, the paradoxical element is not opposed to structure, but rather is a critical aspect of how a structure functions. To illustrate the role that the paradoxical element plays, Deleuze suggests the case of music: "Such is the case with songs: the refrain encompasses an object = x , while the verses form the divergent series through which this object circulates. It is for this reason that songs truly present an elementary structure" (DI 185). Consider, for instance, the

transition from the chord of D minor 7 to G7. The resonance between chords is a result of the way in which some of the same notes exist in both series, but in different relative *places* within that series (in the first chord the F is a 3rd, then in the second it is 7th). Each chord taken on its own would not have the same resonance—what matters is the relation produced in the transition from one to the other.

The Paradoxical Element in Logic of Sense

In *Logic of Sense*, Deleuze builds on both of these features in developing an ontology of structure. However, there are also some discontinuities, as his aim is different. Whereas in the essay on structuralism his aim could be roughly summarized as explicating what he takes to be the key features of structuralism as a movement, Deleuze's aim in the *Logic of Sense* is rather to develop the concept in a new way.

In explicating this approach, my focus will be on the “Sixth Series on Serialization,” where Deleuze provides an account of the paradoxical element in relation to a series. A *series*, he claims, “brings about a synthesis of the homogenous, whereby each name is distinguished from the one preceding it only by type, rank, or name” (LS, 36). Series are formed from individual “elements,” but these elements are defined not as self-standing isolated units. Put it another way, their individual identity is the result of their “differences” from the other elements. Deleuze suggests that his account of series is “in compliance” with Russell's theory of types. This is because “each name denoting the sense of the one preceding it is superior in degree to that name and to which it denotes” (LS 36).

Just as each individual element in a series can only be understood through its relations to the other elements, Deleuze claims that the “serial form is necessarily realized in the simultaneity of at least two series” (LS 36). While he uses the example of a “signified” and “signifying” series in language, he also claims that these two series can be “determined in various ways,” such as, for instance, a “series of things and a series of events in which these things are or are not realized” (LS 37). As indicated by Deleuze, the two series are “never equal”—one is signified, and the other is a signifier. Deleuze defines these terms as follows: “We call ‘signifier’ any sign which presents itself an aspect of sense; we call ‘signified’, on the contrary, that which serves as correlative to this aspect of sense, that is, which is defined in a duality relative to this aspect” (LS 37). “Sense” is not reducible to either series.

Deleuze explains the concept of a “series” through three features. First, he claims that “the terms of each series are in relative displacement” to each other (LS 39). The two series are not merely reflections, but rather have an “essential lack of correspondence” (39)—the two series exist in a state of “perpetual disequilibrium” (40). Second, he claims that the series “must be oriented” such that one “presents an excess over the other” (40). The “signifying” series is excessive in relation to the signified.

The third feature that characterizes a series is the existence of a “paradoxical entity,” which Deleuze terms the paradoxical element. This element “ensures the relative displacement of the two series, the excess of one over the other, without being reducible to any of the terms of the series or to any relation between these terms” (LS 40). The paradoxical element is a “two-sided entity,” and is “equally present in the signifying and the signified series” (40). However, as Deleuze later notes, the element works to ensure a relation from each series to the other, but in a way that keeps these relations asymmetrical. This is why the paradoxical element has two

functions: first, “to coordinate the two heterogenous series,” and second, “to ramify the series” (LS 67). With respect to the first power, the paradoxical element is that which denotes itself: “it says its own sense” (67). In the case of the purloined letter, for example, this can be seen in how the letter only refers to itself—it is not connected to some other meaning that the reader is unaware of, but rather its structural function is such that indicates only its own sense. With respect to the second function, the paradoxical element indicates a disjunction between the series. This can be seen in how the purloined letter functions to separate and distinguish the two series that follow it, disjoining them while not having a specific ordinal value in either series.

In his account, Deleuze pays close attention to the ontological spatial characteristics that define the paradoxical element’s role in a series. Importantly, the element does not have a defined location within a structure: “As Lacan says, *it fails to observe its place*” (LS 41). This suggests that it would be misleading to describe the paradoxical element as “part” of a structure, since it would suggest that structures could be understood as a unified identity that was composed of various smaller parts. Rather, he claims that the paradoxical element “fails to observe its own identity, resemblance, equilibrium, and origin” (41). The paradoxical element does have a specific “identity” as a point on each series, but rather coordinates and disjoins the relative ordinal identities on each series.

Notably, Deleuze claims that paradoxes emerge as a result *of* the paradoxical element. Paradoxes emerge, in part, when we try to apply the rules that concern elements in a series to the paradoxical element that coordinates and disjoins those series. In the case of Alice’s becoming, for instance, the paradox was generated through tracing both the temporal series of becoming larger and becoming smaller to transformative moment that generates both series. In the case of the Sorites paradox, the paradox was generated through following the ordinal series of counting

up until the singular point of transformation. In both cases, attempts at refuting the paradox are often an attempt to ensure the coherence and continuity of each structural element in a series without the paradoxical element.

Chapter Conclusion

The main aim of this chapter was to connect Deleuze's account of paradox with his ontology of structure. In order to explicate Deleuze's engagements with paradox, I focused two paradoxes in the *Logic of Sense*: the paradox of Alice's becoming, and the Sorites paradox as debated by Chryssipus and Carneades. In the first case, I argued that Deleuze's strategy is not to refute the paradox, but rather that he aims to use it productively in order to illustrate an ontological feature of structures. In the second case, I followed this line of thought by examining how Deleuze argues that Chryssipus's response to the Sorites paradox to be a good one, because it indicates the ontological differences between ordinal and singular points. Finally, focusing on the example of the purloined letter, I examined Deleuze's account of the "paradoxical element" and how it provides an ontological explanation for the earlier paradoxes. What this analysis illustrates is that, on Deleuze's analysis of structure in *Logic of Sense*, structures are necessarily entangled with paradox.

CONCLUSION

In Chapter I of this dissertation, I set out the problem of structure, arguing that questions concerning the reality of structure ought to deserve more consideration in ontology. I provided an overview of the difficulties in investigating the reality of structure and indicated how these problems can impact ongoing work in different domains. In doing so, one of my goals was to distinguish the concept of object from the concept of structure, and to indicate how realism about structure provides a theoretical alternative to substance metaphysics. Furthermore, I also provided an explanation of the methodology that guides my reading of Deleuze. Rather than solely focusing on Deleuze's philosophical influences or on the concepts that he develops, I defended an interpretation that follows primarily on Deleuze's engagement with problems.

In Chapter II, I began by deploying this methodology in order to show how it clarifies certain aspects of Deleuze's relationship to structuralism. I provided reasons for skepticism about the standard interpretive line that Deleuze abandoned structuralism after his encounter with Guattari, not on the grounds that it is biographically inaccurate, but that it fails to address Deleuze's engagement with the problem of structure. Following this analysis, I turned towards Deleuze's argument for the ontological priority of difference. I showed how Deleuze presents a critique of Aristotle's account of conceptual identities. I argued that, rather than hinging on the notion of univocity, Deleuze's critique of Aristotle relies on his thesis concerning the reality of intensive difference. Furthermore, I claimed that Deleuze's critique of Aristotle opens up a new path towards conceptualizing the reality of structure.

Chapter III provided an overview of Deleuze's account of structural "Ideas" as it responds to platonism. In doing so, I first began by overviewing the concept of structure as it

relates to different domains, focusing on examples in mathematics, cinema, and music. After illustrating some of the puzzles surrounding these different structures, I presented an account of platonism as providing a notable option for realism about structure. Focusing both on the historical Plato as well as contemporary platonist views in mathematics, I contended that Deleuze's critique of platonism is a result of his rejection of transcendence. However, I also claimed that Deleuze's reading of platonism is not merely negative, exploring Deleuze's reading of Lautman's platonism and his account of problematic Ideas.

Chapter IV turned towards Deleuze's ontological account of structure in the *Logic of Sense*, focusing on the relation between structure and paradox. Starting with the paradox of Alice's becoming, I explained Deleuze's account of the paradox, contrasting his approach with refutation. Following this, I explored Deleuze's account of the Sorites paradox through his reading of the debate between Chryssipus and Carneades. I provided an illustration of why Deleuze agrees with Chryssipus's response to the paradox, showing how it illustrates a crucial ontological difference between singular and ordinal points. Finally, drawing on Deleuze's reading of Lacan, I developed an account of Deleuze's concept of the paradoxical element as a crucial part of his ontology of structure.

Abbreviations

ATP	<i>A Thousand Plateaus</i>
C2	<i>Cinema 2</i>
DI	<i>Desert Islands</i>
DR	<i>Difference and Repetition</i>
LOT	<i>Letters and Other Texts</i>
LS	<i>The Logic of Sense</i>
N	<i>Negotiations</i>
PS	<i>Proust and Signs</i>
TRM	<i>Two Regimes of Madness</i>
WP	<i>What is Philosophy?</i>

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