Part II of the *Parmenides* and Its Reception in *Metaphysics*, Iota: Identity and Non-identity

Saloni de Souza

Balliol College, University of Oxford



Submitted for the degree of Doctor of Philosophy, 2019

For the late Fr. John and my parents, who never bailed

Abstract

Demonstrating that Aristotle is a careful reader of Plato whose interest does not merely lie in rejecting the ideas of his teacher is not a task that has been ignored by scholars. However, surprisingly, there has been no extensive attempt to approach Aristotle's reception of Part II of the *Parmenides* in this way. One of my overall aims in this thesis is to correct this by demonstrating that Aristotle's engagement with the first and second deductions of the Parmenides in *Metaphysics*, Iota 3 is sophisticated and complex. My second aim is also one that has been unattempted: to show that in both texts, we uncover important lessons for contemporary metaphysicians. My final goal is to show that my exploration of both texts has significance for our understanding of the *Parmenides* and *Metaphysics*, Iota and the study of Plato and Aristotle more generally. In achieving this, I focus on the treatment of numerical identity and non-identity in the first and second deductions of the *Parmenides* and *Metaphysics*, Iota 3.

The thesis falls into five chapters. In the first, I settle some important preliminary questions.. In the second, I uncover definitions of identity, non-identity, similarity and dissimilarity in both texts and argue that we might think they could aid contemporary proponents and opponents of a 'strict' Leibniz's Law. In my third chapter, I explore whether this is in fact possible. My fourth chapter concerns two laws of identity and non-identity that seem uncontroversial but which we might worry Plato and Aristotle violate in Part II and Iota. My final chapter deals with identity and non-identity in the context of wider discussions of relativity in Plato and Aristotle. I conclude by showing that I have met all three of the overall aims of this thesis.

Contents

Acknowledgements……6

Introduction……7

Chapter One: Limbering Up……14

The Place of Part II and Iota……14

Running Before You Can Walk……21

Getting One Thing Straight……36

A Fool's Errand? ……48

Key Terms……52

Chapter Two: Plato's Law and Aristotle's Ways……58

Plato's Law……59

Aristotle's Ways……90

Chapter Three: Plato, Aristotle and Leibniz's Law……134

Plato's Law: Defended? ……135

Plato's Law Defeated? ……159

Chapter Four: Unbreakable Laws Broken? ……172

Plato: Guilty as Charged? ……173

Aristotle: Guilty as Charged? ……200

Chapter Five: Relatives……217

Plato On Relatives……218

Aristotle and Opposition……247

Conclusion……262

Bibliography……277

Acknowledgements

In writing this thesis I have incurred more debts than most. I have been very fortunate indeed in having not one but many supervisors, Lindsay Judson, Lesley Brown and Ursula Coope, all three of whom took me on under difficult circumstances and have been extremely supportive, despite my many inadequacies.

Lesley guided me through the intellectual gymnastics of Part II of the *Parmenides* - often repeatedly and at length - and was more patient with my philosophical clumsiness than I would have thought possible. She encouraged me to trust my own instincts, to resist Aristotelianism when reading Plato and was incredibly generous with her time. Lindsay gave me the autonomy that allowed me to develop my own views and the confidence to stand by them. He was tolerant of my (occasionally obsessive) interest in Part II of the *Parmenides* and kind and funny in pointing out my many philosophical vices. Without his gentle insistence that I really ought to cite *some* secondary literature, this thesis would have lacked any kind of scholarliness. Ursula took the brave decision to supervise me in my final year. She read and commented extensively on vast quantities of my work and helped me to organise it into the form of a serious and more reader-friendly thesis in which the somewhat "distracting" Barry the whale did not feature quite as much as he might have. For this and much more, I thank them.

I have benefitted enormously from discussion with Mary Margaret "MM" McCabe, Alessio Santoro, Robert Crellin and both discussion and extensive feedback from Simona Aimar, Fiona Leigh, Matthew Duncombe and Ellisif Wasmuth. I am grateful as always to my online philosophy hive mind, especially the very busy bees, Nicholas Denyer and Shaul Tor.

My D.Phil was funded by the Lewis-Leventis scholarship - my thanks to the donors, who not only provided me with the financial means to study at Oxford but also took an active interest in my work. I am also grateful for Iris Geens, the Philosophy Faculty's resident wizard, who was integral in converting my degree to part-time, which made completing it a realistic prospect.

Without my long history of excellent teachers, I would not have been able to produce anything approaching a thesis. Being taught by the wise and indomitable MM McCabe for my MPhilStud was a wonderful experience. She helped me to better appreciate how rich ancient philosophy is, was enthusiastic about me developing my own interests and ideas and told me to pay no attention to the many people who recoiled at the idea of anybody studying Part II of the *Parmenides*. MM showed me that philosophy could be collaborative and not combative and that you can do philosophy seriously without being overly serious. She encouraged me to think of myself as something approaching a "proper philosopher" and reassured me that this is not only compatible with being a good human but deeply connected. MM continues to move the entire cosmos to help me and without her support, I would have given up long ago.

I first studied ancient philosophy with Robert Wardy as an undergraduate. Despite his formidable intellect, he was extremely patient and gave me the freedom to work on whatever piqued my interest, including Part II of the *Parmenides*. Many years later, he is still supportive and enthusiastic about my progress and I am still following his advice to "take a walk by the river and think." I am also grateful to Marina Frasca-Spada, under whose supervision I began to study metaphysics. She encouraged me not only throughout my undergraduate degree and beyond but before I even started. Without Fr. John Ball's tolerance of my truancy and our many discussions over beer and long walks I would never have realised that what I was most interested in was philosophy. He continued to be enthusiastic about my progress and had faith that I would eventually finish, despite his obvious, ever-increasing anxiety about it.

Without a great deal of support, I would never have made it this far. I am indebted to more people than I can count in the NHS but particularly to Dr. Berelowitz, Samantha Swinglehurst, Dr. Graham and Dr. Young, to whom I owe my life (in both senses). It was as a result of the superhuman efforts of Dr. Berelowitz and Samantha Swinglehurst to help me that I could even hope to reach university. Dr. Graham and Dr. Young gave me an enormous amount of support for over ten years that kept me there and I would not have coped half as well with half as much without them. I am grateful too to the long-suffering Dr. Cuttell and Dr. Peter, who put up with me for so long, and Prof. Corrigan, who took a risk that paid off with my temperamental lungs.

I am also indebted to my friends, who are far better than I deserve. The other members of "H Crew", Joshua Granshaw and Julia "Kremlin" Crellin have tolerated long silences from their woefully inadequate third musketeer. Lucy Moseley encouraged me to apply for postgraduate study and Poppy Beddoe and Nicholas Denyer entertained me and endeavoured to distract me from worrying about work when I was too ill to study. Phoebe Taylor kept my ever-extending submission date (somewhat) amusing and Daniel Vázquez reassured and regaled me with tales of his own doctorate. Vanessa Quigg has been extraordinarily generous with her time and Olivia D'Cruz was unwavering in her belief that I would eventually finish. My co-conspirator, the stalwart Sarah Acton has been more patient, understanding and encouraging than I could ever have expected.

I could not have had a more supportive family. I found philosophy in part through Maria Pinto, my late grandmother, who was extremely generous with her bookshelves and always had unshakeable and entirely misplaced confidence in me. My brothers, Antony and Rowan de Souza, indulge my interest in philosophy with mild amusement and have sacrificed a great deal without complaint to allow me to pursue it. I owe most of all to my parents, Jim de Souza and Zoë Pinto, who have endured so much for so little. Despite being utterly bewildered by my philosophical endeavours and his increasing despair about my doctorate, which was "going on and on and on", my father has supported me far past the point at which many parents would have insisted that it was time to give up. My mother has kept her doubts entirely to herself and never stopped encouraging me, even during long periods of stagnation - and in spite of her suspicion that everything there is to say about ancient philosophy had already been said! For this and far more, I am grateful.

Introduction

The story of the relationship between Aristotle and Plato has long been characterised as one of conflict and rejection. Initially Plato's star pupil, Aristotle began question and challenge many Platonic views, rejecting them altogether in his own work – or so the story goes. This story has fallen out of favour in recent scholarship, and there have been interpretations of Aristotle as a keen and sophisticated reader of Plato, engaged in conversation and not at war with him.[1] Surprisingly, there has been virtually no attempt to approach Aristotle's reception of Part II of the *Parmenides* in this way.[2] Yet, it seems to be the best text to look for ammunition against the traditional story. After all, if there is any Platonic text that we would expect Aristotle to respond with hostility to, it is surely the one in which we find an 'Aristotle' who takes on the role of a passive interlocutor, apparently quite happy to agree to contradiction after contradiction. If we find that Aristotle's engagement with Plato is subtle and respectful even in the case of Part II of the *Parmenides*, the case for the longstanding characterisation of Aristotle's relationship with Plato turns out to be very weak indeed.

---

[1] Adamson (2010), Carpenter (2010), Fine (2010), McCabe (2010), Scott (2010), Sheffield (2010)

[2] I do not mean that Aristotle is never mentioned in connection with Part II of the *Parmenides* in secondary literature. Allan (1960) draws attention to some passages in Aristotle where he may have had the *Parmenides* in mind but makes little of what these might tell us about Aristotle's relationship with the dialogue. Likewise, Menn (2017) occasionally refers to Part II of the *Parmenides* in his analysis of the *Metaphysics* but does not make much of it. In their commentaries on the *Parmenides*, Allen (1997), Cornford (1939), Coxon (1999), Scolnicov (2003) and Turnbull (1998) sometimes bring up Aristotelian passages in connection with arguments in the second part of the dialogue. However, these are often just mentioned in passing and where they are not, they are largely used to cast light on Plato, not Aristotle. Cherniss (1944) notes that Aristotle does allude to the second part of the *Parmenides*. However, he argues that this is only in order to reject Platonic views - in fact, according to Cherniss, Aristotle is so committed to opposing Plato that he is perfectly happy to deliberately misconstrue Platonic ideas. In doing so, Cherniss paints the very picture of Aristotle that I am attempting to reject.

This is not to say that there is no explanation for why this project has been avoided. However, it likely lies in reasons of priority, difficulty, ambition and scope, rather than utility or interest. Part II of the *Parmenides* has something of a reputation as being 'tedious',[3] 'a vexing experience',[4] 'obscure'.[5] As a result, the dialogue has been described as 'notoriously the most difficult to interpret',[6] 'quite possibly the most enigmatic of Plato's dialogues',[7] 'notoriously puzzling',[8] 'avoided and at times feared, by even the most seasoned among scholars'[9] - and those by scholars who engage with Part II of the *Parmenides* in detail.

Off-putting as this reputation may be for a potential reader of Part II of the *Parmenides*, it is not entirely unfair. There is disagreement about even the most basic features of Part II of the *Parmenides*: how it relates to Part I (if at all), its purpose, its subject, its structure.[10] Markedly different in style from any other Platonic passage, Part II consists of a series of intricate, often highly compressed arguments. Relentless, Parmenides presents us with argument after argument and contradiction after contradiction – and Aristotle is of little help, largely monosyllabic, simply agreeing with Parmenides, with an occasional request for elaboration. The range of issues raised in Part II is also vast; the nature of the one, not-being, time, the generation of number, place, the infinite, change are just a fraction of them. Consequently,

[3] Ryle, (1939b), p. 316

[4] Hermann, Hedley and Chrysakopoulou (2010), p. 3

[5] Meinwald (1991), p. 3

[6] Scolnicov (2003), p.1

[7] Rickless (2016)

[8] Harte (2002), p. 48

[9] Hermann, Hedley and Chrysakopoulou (2010), p. 3

[10] Note that these are problems that are either absent or far more easily solved in other dialogues. For example, I take it that most would agree that the 'theme' of the *Euthyphro* is piety, the purpose of the *Statesman* is finding the statesman and when Socrates asks the 'What is F itself?' questions in the early dialogues, he is asking for a definition. In addition, there is no other dialogue where we find such a dramatic change in style.

detailed study of the arguments in Part II is a formidable undertaking on its own, whether focused on small passages or lengthy portions of the text, considered independently of Part I, in the context of the dialogue as a whole or in Plato more generally.

Examining the reception of Part II in any subsequent philosopher would be difficult enough then. However, Aristotle is a particularly challenging candidate.[11] I pointed out above that the sheer philosophical breadth of Part II of the *Parmenides* makes it a difficult text. Unsurprisingly then, the Aristotelian passages that deal with these issues make up an enormous portion of the vast Aristotelian corpus. There are also difficulties with interpreting basic features of some of the relevant texts, such as dating and the extent to which we should regard them as reflecting consistent views. In addition, it is not always clear when Aristotle is talking about the Platonists, rather than Plato himself – or, indeed, if he conflates the two. Moreover, even in cases where it seems obvious that he is referring to Platonic dialogues, it is difficult to tell which text he is discussing – and this is further complicated by the fact that passages in other late Platonic dialogues are very closely related to some of the arguments in Part II of the *Parmenides*.

Hence, although one of my main aims in this thesis is to show that Aristotle is in fact a careful and sophisticated reader of Part II of the *Parmenides* and that treating him as such is philosophically fruitful, my discussion will be very restricted in some respects. I either assume or provide only brief justification for my interpretation of the basic details of the texts. I restrict my discussion to very small Platonic and Aristotelian passages: a small set of arguments in the first and second deductions of Part II of the *Parmenides* and the third chapter of *Metaphysics*, Iota. This decision is not merely pragmatic; *Metaphysics*, Iota is most natural

[11] This is perhaps why in *Plato's 'Parmenides' and Its Heritage'* (2010), a two-volume work on the legacy of the *Parmenides*, Aristotle is set aside.

place to expect Aristotle to engage with Part II of the *Parmenides* since both texts share a focus on the one. In addition, as I demonstrate in the next chapter, there is especially good textual reason to suppose that Aristotle engages with Part II of the *Parmenides* in the third chapter of Iota. Since the passage in which this occurs is one in which identity and non-identity are at issue, I limit my discussion to issues relating to numerical identity and non-identity.

I have two other overarching aims. One is simply to show that my findings could contribute to scholarship on Part II of the *Parmenides* and *Metaphysics*, Iota and Plato and Aristotle more generally. The other is rather more ambitious: to demonstrate that reflection on the treatment of identity, non-identity and similarity and dissimilarity, which are very closely related, in Part II of the *Parmenides* and *Metaphysics*, Iota has significant lessons for contemporary philosophers who are interested in numerical identity.

This thesis falls into five chapters. The first is preliminary and I deal there with some basic but important issues relating to methodology, dating and the relationship between Part II and Iota and their respective works and the Platonic and Aristotelian corpuses more generally. I also offer a new interpretation of the nature, purpose and subjects of the demonstration that comprises Part II of the Parmenides and take a view on the meaning of key terms in both texts.

In the second chapter, I uncover plausible, closely connected definitions of identity, non-identity, similarity and dissimilarity in Part II of the *Parmenides*. I also find two laws of identity and non-identity. I show that these amount to a strict version of Leibniz's Law, familiar to us from contemporary philosophy. I argue that Plato's definitions of similarity and dissimilarity point to a new strategy for contemporary metaphysicians hoping to defend

this strict Leibniz's Law from a particular objection: it cannot accommodate what seem to be obvious cases of identity.

I proceed to outline my view of the definitions of identity, non-identity, similarity and dissimilarity in *Metaphysics*, Iota *3* and demonstrate that Aristotle's account of identity and non-identity is not a strict Leibnitian account. However, like Plato, Aristotle gives us clear criteria for similarity and dissimilarity, which are also closely connected to identity and non-identity. I argue that also this points to an area that deserves attention in contemporary metaphysics: the role that Aristotle could play in strengthening arguments against strict Leibniz's Law.

In the third chapter, I discuss whether we can in fact provide good arguments either for or against strict Leibniz's Law by adopting the definitions of similarity and dissimilarity in the first and second deductions of the *Parmenides* or *Metaphysics*, Iota. I argue although we cannot, reflection on this issue yields important lessons for contemporary proponents and opponents of strict Leibniz's Law.

The fourth chapter concerns two laws that seem uncontroversial: firstly, necessarily, for any x and any y, x is either identical or non-identical to y and secondly, necessarily, for any x and any y, x is not identical to y if and only if x is identical to y and x is not non-identical to y if and only if x is identical to y. Yet, we might worry that both Plato and Aristotle violate these laws in the *Parmenides* and *Metaphysics*, Iota by claiming that there are some things that are neither identical nor non-identical to some things. I argue that in fact, Plato is not breaking these laws. Rather, he is prompting us to reflect on some cases that are genuinely difficult to reconcile with them because they are difficult to justify as identical or non-identical to one another. I then argue that Aristotle does not mean to suggest that there are some things that are neither identical nor non-identical to some things. Moreover, he does not reject the laws

of identity and non-identity. Rather, he points to a need to refine them, given his definitions of identity and non-identity.

The fifth chapter deals with identity and non-identity in the context of relatives. I begin by outlining an Owenian view of relatives in Plato, according to which incomplete predicates are relatives. I proceed to examine two arguments in the first deduction of Part II of the *Parmenides*, where shifts between complete and incomplete uses of *ταὐτό* and *ἕτερον* prompt a worry: Plato seems to be presenting his reader with the idea that identity and non-identity are both relative and non-relative, which is obviously false. I argue that in fact, there is good reason for Plato's shifts in language: it invites us to reflect on difficulties with justifying identity and non-identity as either relative or non-relative.

I then turn to *Metaphysics*, Iota 3 and claim that there, identity cannot count as a relative but it is an incomplete predicate. This gives us good reason to reject two versions of a widespread view of relatives in Aristotle: relatives are incomplete predicates and vice versa and relatives correspond to incomplete predicates and vice versa. I also show that Aristotle responds to one of the difficulties that Plato draws attention to. I then argue that there is a problem with Aristotle's treatment of identity and non-identity in the context of relativity. I end the chapter by drawing attention to an interesting consequence of my discussion: although we tend to think of 'one' and 'not-one' as complete and non-relative, for Aristotle, 'not-one' is a relative and they are both incomplete.

In my conclusion, I argue that my exploration of Aristotle as a reader of Part II of the *Parmenides* in *Metaphysics*, Iota shows that the old story of Aristotle as at war with Plato is a weak one. I also point to important and interesting consequences that my discussion has for our understanding of Part II of the *Parmenides* and *Metaphysics*, Iota and demonstrate that it

can contribute to scholarship that deals with Plato and Aristotle more generally. In addition, I argue that I have shown that reflection on the treatment of identity, non-identity, similarity and dissimilarity in Part II and Iota has significant lessons for contemporary debates about a particular version of Leibniz's Law. Thus, I meet all three of my overarching aims.

Chapter One: Limbering Up

In this chapter, I address some problems that will be important for the rest of this thesis. I begin with some issues relating to dating. I also discuss the place of Part II of the *Parmenides* in the context of the dialogue as a whole and other Platonic dialogues and the relationship between Iota and the rest of the *Metaphysics* and Aristotelian thought more widely. I then turn to deal with two particularly thorny issues in the study of the *Parmenides*: what exactly is going on in Part II and what its subjects, the one and the others, are. Next, I address some objections to my methodology, which involves reading the first and second deductions of the *Parmenides* and *Metaphysics*, Iota 3 together. Finally, I briefly establish the meanings of key terms in both texts.

The Place of Part II and Iota

There is an important question for any reader of either Part II of the *Parmenides* and *Metaphysics*, Iota: how should we take their relationships to the rest of their respective works and the Platonic or Aristotelian corpus more generally? Both Part II and Iota have been taken to be particularly difficult to place,[12] leading to a great deal of disagreement among scholars of the *Parmenides*[13] and a tendency to neglect Iota in scholarship on the *Metaphysics* - Castelli's

[12] See. Menn (2017), 'Ig2: Iota and the attributes of being' for brief discussion about how Iota might fit with the rest of the *Metaphysics*.

[13] For surveys of the literature on this issue, see Allen (1997), Cornford (1939), Hermann, Hedley and Chrysakopoulou (2010) , Miller (1986).

recent translation and commentary[14] is the only extended, focused study of Iota of its kind.[15] In what follows, I briefly discuss some of these problems.

The 'Parmenides': A Lopsided Dialogue

Reading Part II of the *Parmenides* makes for a very different experience from reading Part I. It is considerably longer and packed with dense arguments. The style also changes drastically. Prior to Part II, we find examples of simile[16] and autobiography.[17] Socrates, Parmenides and Zeno are dynamic, three-dimensional characters who inspire enthusiasm, admiration and interest (albeit to differing degrees) in each other[18] and seem to be engaged in genuine conversation. In contrast, in Part II of the dialogue, simile and autobiography are entirely absent. Aristotle makes for a lacklustre interlocutor and even Parmenides is two-dimensional,[19] while Socrates and Zeno fade into the background as mere spectators, falling entirely silent.[20]

[14] Castelli (2018)

[15] There is also a commentary by Elders (1961). However, his is less detailed and far less useful, since he excises significant portions of the text based on assumptions that he makes about Aristotle's philosophical development and his relationship with the Academy.

[16] 128c1-2, 136e9-137a2

[17] 126a1-c7, 128d6-e1

[18] 128a2-3, 128c1-2, 129e3, 130a3-b1, 131b7

[19] The change in Parmenides goes unnoticed in the secondary literature but it quite clear that there is a striking contrast; his responses to Aristotle are flat and we find no assessment of Aristotle at all, negative or positive. This is markedly different from his engagement with Socrates prior to Part II, where Parmenides expresses admiration for Socrates and displays an interest in Socrates' philosophical development (135d3-6).

[20] Compare the *Euthydemus*, where the spectators at least cheer and laugh in the background (276b7-c1, 276d1-3, 303a).

In addition, the frame of the dialogue is puzzling. The set up of the dialogue is lengthy and detailed.[21] It begins with Cephalus describing a meeting he had with Adiemantus and Glaucon. According to Cephalus, the three of them visited Antiphon, who agreed, somewhat reluctantly, to repeat an account of the discussion between Zeno, Parmenides and Socrates, which he in turn had heard from Pythodorus, a friend of Zeno's. Unlike other dialogues then, the *Parmenides* is narrated at three removes. This might lead us to expect a lengthy return to the frame, in which we find Cephalus, Antiphon and Pythodorus' assessment of the conversation – or, at the very least, some description of how the various meetings ended. However, the dialogue never returns to the frame; in fact, we are not even told what response Socrates has, despite the demonstration that comprises Part II apparently being undertaken for his sake. Instead, with Aristotle's apparently wholehearted agreement[22] to what is perhaps the biggest contradiction in ancient philosophy, the dialogue comes to an abrupt end. In light of these asymmetries, some have taken Part II to have been written at a later date.[23] If this is so, we might think that we should not connect the two parts of the *Parmenides* too closely.[24] Alternatively, even if both parts of the dialogue were written at the same time, we might think that they are so disconnected as to make reading the two Parts together futile. I am wholly unconvinced by this.[25] Firstly, a dialogue whose unity is difficult to account for

---

[21] For example, we find out about Antiphon's interest in horses and are told that he was ordering a bridle when his visitors arrive (126c7-127a2).

[22] Ἀληθέστατα (166c5)

[23]See Ledger (1989), Ryle (1966), pp.288-289, Sayre (1985), pp.256-257, Sayre (1996), p. ix for discusssion of this issue.

[24] This is a particularly worrying inference; even if Part II were written later, given Plato's literary and philosophical skill, it would be very surprising indeed if he were able to do no more than loosely stitch the two parts together.

[25] McCabe (1996) also offers an attractive argument for why we should take the *Parmenides* to be one, unified dialogue: 'The *Parmenides* is not, after all, a haphazard collection of parts but a unified whole, in three respects. Firstly, the literary construction of the dialogue, indeterminate though it initially appears, parallels the layered way that the arguments proceed. Secondly, the separate stages of the argument are ordered because each stage reflects on its predecessor. Thirdly, the dialogue is unified by its topic. The metaphysical question that underlies

would be very appropriate for a discussion of how one thing can be many, a dominant issue in both parts of the dialogue. Secondly, there are some passages of Part I that are not entirely unlike Part II, for example, 128e6-129b1. Thirdly, as Harte has argued very persuasively, the *Parmenides* more naturally falls into three parts: Zeno's conversation with Socrates, Socrates' conversation with Parmenides, Parmenides' 'conversation' with Aristotle[26] - and there are mereological themes common to all three.[27] Acknowledging this makes a stronger case for the unity of a dialogue, which is deliberately structured in this way. For these reasons, I take the dialogue to be a single work, written at the same time. I also assume that the basic structure of the *Parmenides* is as follows,[28] although I continue to refer to 5 below as the traditional 'Part II', so as to minimise confusion, given the balance of existing scholarship:

1. Setting up: 126a1- 127d5
2. Socrates' discussion with Zeno 127d6- 130a2
3. Parmenides' discussion with Socrates: 130a3- 135c8
4. Transition: 135c9-137c3
5. Parmenides' 'discussion' with Aristotle: 137c4- 166c5 i.e. 'Part II'

I take Part II to be split into two hypotheses, the first with four deductions and an appendix and the second with four deductions in addition to a small conclusion, as follows:

each stage is: 'What is it to be an individual?" (p.46). As I discuss below, I do not take Part II to commit us to reading the *Parmenides* as primarily dealing with individuals, as she does. Since her account of the unity of the dialogue is closely tied to this view, I do not rely on her argument here.

[26] 'Unity in the *Parmenides*', unpublished paper presented at Trinity College Dublin, 2014.

[27] Harte (2002), ch 2-3

[28] See Hermann, Hedley and Chrysakopoulou (2010), pp. 41-54, Gill (2014), Owen (1986), Sayre (1978) and Scolnicov (2003), pp. 25-39 for more detailed analyses.

First hypothesis: if one is…[29]

First deduction: …then, for a variety of properties, F and G, the one is neither F nor G, where F and G are opposites (137c4-142a8).

Second deduction: …then, for a variety of properties, F and G, the one is both F and G, where F and G are opposites (142b1-155e3).

Appendix: …then for a variety of properties, there is no time at which the one changes from being neither F nor G to being both F and G, where F and G are contradictories. (155e4-157b5).

Third deduction: …then for a variety of properties, F and G, the others are both F and G, where F and G are opposites (157b6-159b1).

Fourth deduction: …then, for a variety of properties, F, the others are neither F nor G, where F and G are opposites (159b2-160b4).

Second Hypothesis: if the one is not…

Fifth deduction: …then for a variety of properties, F and G, the one is both F and G, where F and G are opposites (160b5-163b6).

[29] *εἰ ἕν ἐστιν* poses two problems. The first is how we should translate *ἕν*. The usual translation is 'one', however it has also been translated 'unity' (Allen (1997), Ryle (1939a, 1939b), Sayre (1978)). I opt for *ἕν*, since 'unity' seems to be to be more metaphysically loaded than the text justifies. The second concerns the two possible translations of *εἰ ἕν ἐστιν*: 'if (one) is one' and 'if one is'. Gill (Gill and Ryan (1996), p. 57) takes the hypothesis to be the former in the first deduction and the latter in the second deduction, since the first deduction seems to proceed on the basis of the one's being only one and the second on the basis that the one exists. However, at the beginning of the second deduction (141b1-2), Parmenides asks if they should take up the hypothesis from the beginning again (*πάλιν ἐξ ἀρχῆς*) and see whether different results seem to follow (*ἐάν τι ἡμῖν ἐπανιοῦσιν ἀλλοῖον φανῇ*). This suggests that it is the very same hypothesis that is under consideration in the second deduction. In addition, we need not take the hypotheses to be different in the two deductions in order to make sense of the text; we can just maintain with Kahn ((2013, pp. 23-24)) that Parmenides focuses on the 'one' in 'if the one is' in the first deduction and the 'is' in 'if the one is' in the second deduction. Hence, I take the hypothesis to be the same in both the first and second deductions.

Sixth Deduction: …then for a variety of properties, F and G, the one is neither F nor G, where F and G are opposites (163b7-164b4).

Seventh Deduction: …then for a variety of properties, F and G, the others are both F and G, where F and G are opposites (164b5-165e1).

Eighth Deduction: …then then for a variety of properties, F and G, the others are neither F nor G, where F and G are opposites (165e2-166c2).

Conclusion: if the one is and if the one is not…

…then, the one and the others are and are not and appear and do not appear with respect to themselves and each other (166c3-5).

In addition, I avoid examining the *Parmenides* in the context of other dialogues[30] and do not commit to a particular view of the place of the dialogue in the context of chronology[31] or in Plato's philosophical development, focusing instead on the dialogue on its own. Nor am I interested in discovering definitive Platonic views, hence, I concentrate on what Plato prompts the reader to reflect on.

Who put the 'I' in Iota?

Some of the problems that Iota poses for interpreters are not all that different from those that arise when studying any book of the *Metaphysics*: is the *Metaphysics* intended to be a single,

[30] See, Gill (2012) and Kahn (2013) for detailed studies of this sort.

[31] See Frede (2002), p. 35, Hermann, Hedley and Chrysakopoulou (2010), p. 9, Ryle (1966), p. 289, Thesleff (2009), p. 304 for contrasting views of the chronological significance of Plato's allusions to the *Parmenides* at the *Sophist*, 217c1-7 and the *Theaetetus*, 183e4-184a1. Kahn (2002) gives a good account of various views based on stylometry in the context of a general discussion of chronology in Plato.

unified work with a distinct and pervasive theme?[32] Is it a set of scribbled down lecture notes or a carefully written treatise? Was it all written at the same time? Answering these sorts of questions helps to establish some methodological rules, about, for example, the extent to which relying on one book of the *Metaphysics* to fill in the gaps in another is permissible, how we should interpret apparent back-references. In addition to these more general questions, there are others that are more specific to Iota:

1. Is it carefully written?
2. Which texts (if any) are we entitled to draw on when studying Aristotle? This depends on answering a number of difficult questions: when did Aristotle write Iota relative to other books of the *Metaphysics* and other texts? Does Iota belong in the *Metaphysics* at all?[33] Are there strong enough philosophical connections between Iota and other texts to justify reading them together?[34] Are we entitled to look to other Aristotelian texts in order to better understand Iota?

---

[32] The difficulty with taking it to be a single, unified work is that there are a number of conflicts, which many commentators take to be irreconcilable. In addition, it is not clear that there is a single theme; Aristotle deals with metaphysics, epistemology, ontology, theology. There is also a great deal of overlap between the the *Metaphysics* and other Aristotelian texts, especially the *Categories* and the *Physics*. As a result, there are a number of views about the unity of *Metaphysics*, which Menn ((2017), Ia1: The Metaphysics and the skopos of metaphysics) helpfully divides into the following categories:

I. Maximalist readings: all books (or all except a) belong in the Metaphysics, which is a single work.

II. The Brandis Bonitz view: ΑΒΓΕΖΗΘ comprise a single, integrated work. Ι, perhaps Μ and Ν and Λ are more loosely connected.

III. The Jaeger 1912 view: ΑΒΓΕΙΜΝ are part of a single, largely integrated work (although Μ and Ν are more problematic to account for). ΖΗΘ comprise a separate treatise joined to the *Metaphysics* after Aristotle's death.

IV. The Jaeger 1923, Ross, Frede and Patzig view: ΑΒΓΕΖΗΘΙΜΝ are one work.

[33] This has not been widely addressed in detail, for example, Ross (1924), pp. xxii-xiii discusses Iota in the context of the unity of the *Metaphysics* very briefly indeed. See Menn (2018) and Castelli (2018) for lengthier discussions.

[34] For example, Menn ((2017), 'Ig2: Iota and the attributes of being') argues that Iota draws very heavily on Delta and also Gamma and Beta and maintains that there is one reference to Zeta and he relies on these connections to explicate Iota. Although she does not commit to an interpretation of Iota as one book of a very

3. Should we attempt to integrate the material in Iota into a wider, unified body of Aristotelian thought?

I cannot hope to resolve all of these issues here – and in any case, since I am interested in Aristotle's reception of Part II of the *Parmenides*, addressing them is less important than it would be in a discussion of Aristotle alone. Thus, I remain agnostic as to whether or not Iota belongs in the *Metaphysics* and issues related to dating. Nevertheless, I do make some minimal assumptions. I take it that Iota is carefully written (whether it amounts to lecture notes or not) and should be read as such. In addition, I acknowledge that it would be foolish to think that Iota is entirely disconnected from other Aristotelian passages, both in the *Metaphysic*s and more widely. However, I avoid relying on texts other than Iota as far as possible here and will not be concerned with how to reconcile tensions between them and Iota so as to present overarching, consistent Aristotelian views.[35]

Running Before You Can Walk

A great deal of ink has been spilt over interpreting very basic features of Part II of the *Parmenides*. One of the most contentious issues is what exactly Parmenides and Aristotle are doing in Part II: merely intellectually limbering up?[36] Philosophy proper?[37] Joking?[38] Here,

unified *Metaphysics* contra Menn, Castelli (2018) also maintains that Delta and Iota are closely connected and relies on these connections to illuminate Iota.

[35] In this sense, my approach is very different from Castelli's (2018) since one of her main interests is in investigating Iota in the context of Aristotle more generally.

[36] For example, Cherniss (1957), Gardner (2018), Shorey (1904)

[37] For example, Cornford (1939), McCabe (1994), McCabe (1996), Meinwald (1991), Schofield (1977)

[38] Taylor (1926), p. 351, Taylor (1937), pp. 10-12, Frye (1939), p.28

I dismiss the third suggestion before turning to argue that reflection on the metaphor of gymnastics shows us that, ultimately, Part II of the *Parmenides* is a demonstration through which we can discover first principles. I then argue that this allows us to resolve many other puzzles and use this discussion to justify my approach to the arguments in Part II.

Why might someone argue that Part II of the *Parmenides* is nothing more than a joke? This view is not entirely groundless. Firstly, there is obviously some humour involved in Part II. That we find Parmenides of all people offering helping Socrates to save Forms is surely intended to be funny; after all, the real Parmenides would presumably be interested in no such thing[39] and Aristotle, famously critical of the Forms, lending a hand is less likely.[40] In addition, this interpretation can explain why Zeno is amused (*γελάσαντα*)[41] at the prospect of the demonstration that comprises Part II. It also makes sense of the emphasis on embarrassment and pressure around Parmenides performing the demonstration in front of a crowd;[42] this is supposedly due to his age, but really it is a clue to the sort of embarrassment that would arise if he were seen to be helping to defend the Forms, which he has no intention of doing. Similarly, on this interpretation, Parmenides' reaction to being asked to demonstrate the method of hypothesis is explicable. It is deliberately exaggerated; being uncomfortable with the demonstration would make sense if Parmenides were genuinely interested in helping Socrates to save the Forms. However, here, Parmenides' comparison of himself with Ibycus' horse, who was trembling in anticipation of the racecourse[43] and his talk of fear at the prospect of swimming through a vast sea of words[44] just indicates that

[39] I am grateful to Mary Margaret McCabe for this point.

[40] I argue below that Plato is deliberately inviting us to think about Aristotle himself with the Aristotle of the dialogue.

[41] 136d4

[42] 136d5-e3, 137a6-7

[43] 136e9-137a4

[44] 137a5-6

Parmenides is poking fun at Socrates. This would also explain why he picks such an inept interlocutor with Aristotle; he is mocking the method of questioning and answering, destroying rather than saving the power of conversation.

However, if Part II is merely an extended joke at Socrates' expense, it is one that wears very thin indeed, continuing far past the point of being funny. In addition, we would expect Plato to describe some kind of response on Socrates' part for maximal amusement; surely the best part of a joke at someone else's expense is their reaction? Indeed, even if Socrates were completely oblivious to the joke, which might make it funny, we would expect some kind of description of this. Whilst the idea of Parmenides helping Socrates to save the Forms with Aristotle's help is surely supposed to strike us as odd and amusing then, it is implausible to think that Part II of the *Parmenides* is nothing but a joke.

However, choosing between the other options – a set of exercises for the budding philosopher or philosophy proper - is not easy. Consider how the transition section begins. Faced with the prospect of the impossibility of philosophy, a perturbed Socrates is told by Parmenides that he has failed because he has not yet been properly trained (*πρὶν γυμνασθῆναι*).[45] If he is to save the Forms and conversation and attain the truth, he must commit to a training programme.[46] Later, Parmenides suggests that the deductions are childish games.[47] This implies that Part II is simply a demonstration of a training exercise for an inexperienced philosopher, not philosophy proper. Thus, we might expect a set of arguments that a beginner can use to identify good and bad arguments before creating similar arguments and doing the same themselves.

[45] 135c8

[46] 135d2-6

[47] 137b1-2

Yet, Zeno refuses to cooperate with Socrates in demonstrating the method, suggesting he ask Parmenides instead. This seems to be because of the difficulty of the anticipated training exercise, which Zeno describes as not easy (*οὐ φαῦλον*)[48] and more onerous a task than Socrates might realise.[49] Parmenides is also reluctant to demonstrate the method, eventually bowing to intense pressure from those present.[50] After assenting, he compares himself to a horse, 'trembling with fear' in anticipation of a course that he has run many times before and to Ibycus, who also compares himself to this horse in falling in love against his will.[51] He describes the method as swimming through a vast sea of words.[52] These reactions are very surprising indeed if Part II is a mere training exercise; surely demonstrating a set of philosophical exercises is easier than doing philosophy proper, at which Parmenides has shown himself to be so able?[53]

The metaphor of physical training is also an odd choice for Plato to use if Part II is just preliminary work for a young philosophical novice. Plato repeatedly emphasises Parmenides' old age, suggesting that it will hamper his ability to demonstrate these exercises. Ageing after a certain point undoubtedly correlates with a decline in physical ability; even an Olympic sprinter would find herself becoming increasingly slow, eventually unable to run at all, if she were to live long enough. However, we might think that age and intellectual ability do not seem to work like this. In fact, we might suppose, age often correlates with an improvement in cognitive ability – and Parmenides seems to be a prime example of this. He is very old but

[48] 135d5

[49] 135d6

[50] 136e5-9

[51] 136e9-137a4

[52] 137a4-6

[53] Note, Socrates suggests that the Parmenides of the dialogue was a skilled philosopher at 217c1-7 in the *Sophist* and 183e4-184a1 in the *Theaetetus*.

has shown himself to be philosophically sprightly in Part I of the dialogue - perhaps even more so than the young Socrates.

The idea that Part II of the *Parmenides* is nothing over and above a set of training exercises is implausible for two reasons then. Firstly, it does not explain why Zeno and especially Parmenides react with such aversion when asked to demonstrate them; after all, we ordinarily think of training as being easier than practice and Parmenides in particular has shown himself to be a competent practitioner of philosophy. Secondly, both Zeno and Parmenides suggest that Parmenides' age will be an obstacle in performing the demonstration. However, although old age might be problematic for Parmenides in the gym, it is not obvious that it should hinder him at all in intellectual training.

I suggest that we can reconcile these tensions by further reflecting on the metaphor of gymnastics. Suppose my friend, Barry, a one hundred and four-year-old whale, is an expert diver and I am a young virtual beginner. After several attempted dives, during which I struggle to reach the surface and Barry ends up diving in to pull me out, Barry says to me, "The problem is that you haven't been properly trained. If you are going to dive properly and safely, you need to become a competent swimmer, so that you can reach the surface of the water without drowning". Keen to learn, I ask Barry to give me a demonstration of the sort of training that he thinks is necessary. Barry is extremely worried and reluctant to agree, repeatedly claiming that it will be very difficult, especially for somebody of his age and in front of the crowd who are watching. In what follows, I argue that the kind of training that Barry would need to demonstrate would be genuinely difficult and that we can explain his apparently disproportionate reaction to my request. Similarly, I argue, Parmenides' demonstration is difficult because it does not simply involve providing a set of arguments for

the student to learn how to identify good and bad arguments. As such, his response to the prospect of performing it is perfectly understandable.

Duckin' and Divin'

First, let us reflect on how watching Barry's demonstration might work for me. Barry has not had time to watch me dive extensively, or watched all the different sorts of dives I have tried from various heights. Thus, although he obviously feels that I have missed some important steps somehow, he has not had time to learn exactly what might have gone wrong and where. In this situation, it seems that the most appropriate kind of demonstration would not be one in which Barry alternately simulates a good and bad diver, expecting me to identify when he has or has not made a mistake. Rather, the exercises he shows me must help me to understand the very basics; what floating is and what the conditions for this are, which movements help to propel me through the water and why.

This also seems true of certain intellectual skills. Suppose I am a very good maths teacher. I have not taught my class for very long but notice that one of my students seems very bright but keeps making the same sorts of mistakes without understanding why when she is multiplying fractions, adding them instead of multiplying them. In this scenario, it is not sufficient to write a selection of sums, some wrong and some right, on the board while she watches and expect this to make her a better mathematician. Instead, I must return to basics; I need to give her a method that will allow her to learn her times tables, to understand the difference between addition and multiplications and what fractions are etc. If I am to show my student how to become a better mathematician, the method I offer must help her to uncover these first principles.

I suggest that Parmenides is doing something similar. He is not simply offering a set of exercises comprised of some good and some bad arguments;[54] rather he is demonstrating how Socrates ought to go about discovering first principles. This interpretation has a number of advantages. Firstly, it fits with the gymnastics metaphor; first principles are prior to practice. Secondly, it explains the way in which Parmenides proceeds. At its heart, Part II deals with a single question: what follows if the one is and if the one is not? As such, Plato asks us to reflect on some things that are clearly important for very basic ontology and metaphysics: whether the one exists and/or is one, what other properties it might have and what this tells us about the existential and metaphysical status of other things. Discovering first principles is obviously basic too. Thirdly, it makes some sense of why we find the demonstration in the mouth of Parmenides with Aristotle responding and Socrates and Zeno as spectators; it deals with material that is important for *all* of them.[55]

Finally, it goes some way to explaining Parmenides' and Zeno's reactions. Dealing with first principles is genuinely difficult, even if you excel at practice; explaining mathematical axioms, why multiplication works the way it does, what fractions are etc. might even be considered more difficult than simply multiplying fractions, even for a competent mathematician. Taking Part II of the *Parmenides* in this way seems to resolve many of the tensions I outlined above. As such, we have good reason to read Part II as a demonstration of how to obtain first philosophical principles is plausible.

[54] Many of the arguments are valid and sound. However, some of them are not. Hence, I take it that some of the arguments are deliberately, albeit not obviously, bad.

[55] Corrigan ((2010), p. 26) takes Socrates' role as as a mere spectator and Parmenides as the main character in Part II to simply indicate Plato's move away from using Socrates as the star of his dialogues. However, this does not explain why we find Zeno, Parmenides and Aristotle as the main interlocutors in the dialogue.

Talkin' 'Bout My Generation

Recall that I suggested that we might think that the gymnastics metaphor is inappropriate because physical decline correlates with ageing but cognitive decline does not. Moreover, despite being elderly, Parmenides seems to be philosophically able. Here, I argue that in fact the gymnastics metaphor is compatible with Plato's emphasis on Parmenides' age because he is demonstrating a method that allows us to uncover first principles.

Consider one reason why Barry's age would make demonstrating how to discover first principles difficult. Although he is an expert diver, he now only swims when reaching the surface after a dive. However, demonstrating swimming from first principles will take much longer than his usual diving sessions. At one hundred and four years old, this will be exhausting. Likewise, Part II of the *Parmenides* is much longer than Part I. Simply making it through the 'vast sea of words'[56] will be difficult for an elderly man like Parmenides, even if he is a very capable philosopher.

Remembering how he trained will be difficult for Barry, especially on the spot, for two reasons, both of which are related to the nature of memory. In general, the bigger the disparity in time, the harder it is to remember something that I have not thought about recently; it is more difficult for me to remember what I ate for breakfast last Monday now than it was last Monday lunchtime. It is perfectly plausible that Barry, who is now one hundred and four, would struggle to remember his training, which he did as a calf, then. Similarly, we are told that Zeno has not heard the demonstration for a long time[57] and

[56] 137a4–6

[57] 136e3–5

Parmenides implies it is associated with youthful pursuits.[58] Consequently, it would be genuinely difficult for both them to remember the demonstration.

In addition, Barry's age would also make demonstrating a method to learn how to swim from first principles harder because ageing after a certain point involves a decline in our ability to remember, even where other cognitive abilities are not affected. This is relevant for both physical and intellectual demonstrations. Although swimming and diving are physical activities, demonstrating a method that Barry himself used as a calf requires cognitive skills, notably memory. As a one hundred and four-year-old, this is something that Barry will struggle with. Likewise, suppose my eighty-year-old grandmother is an expert Su Doku player. She might be as excellent a player as she was twenty years ago, but struggle to recall things that twenty years ago she would have found easy. She asks for regular breaks so that she can have time to think back. Similarly, Parmenides' age would genuinely make performing the demonstration difficult and require frequent breaks, as Parmenides suggests he needs.[59] In fact then, age hinders physical *and* intellectual demonstrations of discovering first principles.

It seems then that taking Part II of the *Parmenides* as a demonstration of uncovering first principles allows us to explain Plato's metaphor of physical gymnastics and the emphasis on Parmenides' age as a barrier to performing the demonstration. However, there are two objections to this. Firstly, some might object that Parmenides says that he overheard Aristotle conversing with Socrates the day before.[60] Thus, his memory is intact. This is not troubling. That Parmenides can recall something from the day before does not indicate that

[58] 137b1-2

[59] In fact, as I point out later, it turns out that Parmenides does not get much time to rest at all, given Aristotle's brief replies.

[60] 135d1-2

his memory has not deteriorated; it just means that it has not deteriorated to the point that he has lost the ability to remember things that happened the day before. In addition, we get a clue that Parmenides' memory might not be all that good after all; he does not describe this discussion in detail, which is surprising given its apparent relevance.

The second objection is that the deterioration associated with ageing usually affects short-term memory, not long-term. Once it begins affecting long-term memory, the decrease in other cognitive abilities will also be evident. Since Parmenides is still a good philosopher, his long-term memory must still be intact. This is also easily discarded. A loss in short-term memory would still affect both physical and intellectual demonstration. For example, suppose Barry has an intact long-term memory but a bad short-term memory. In order to reproduce the demonstrations, he must move between recalling what he did many years ago and reproducing it in the present. Doing this whilst presenting a good demonstration would involve remembering which steps he has already completed, which are yet to come etc. The same goes for Parmenides. In fact, we might think that this is one reason why Parmenides deviates from the plan he outlines in the transition section; he has forgotten.[61] We can then reconcile Plato's use of gymnastics as a metaphor and the emphasis on Parmenides' age.

Sounds Like Too Much Hard Work to Me

Age is not the only reason for Zeno's and Parmenides' suggestion that the demonstration will be taxing. As I pointed out above, they also think that the task itself is difficult. Yet, we would expect a good and experienced philosopher to find running through preliminary exercises

[61] I give a second reason for this below.

easy. Taking Part II of the *Parmenides* to be a demonstration of how to uncover first principles and paying close attention to the metaphor of gymnastic can help us to explain this.

Although Barry is an excellent diver and now swims perfectly well for his purposes, he is daunted when asked to demonstrate the training exercises because although he needed them as a means of becoming an expert diver, there are many aspects of his training that he no longer relies on – or relies on only indirectly.

This might be for a number of reasons. Firstly, there are basic principles that Barry needed to understand before reaching his current stage: what he must do in order the float, why he should cup his fins when pulling back in swimming breaststroke etc. Barry's swimming depends on these principles, although he might struggle to demonstrate an exercise that will reveal these principles now because he relies on them only indirectly. Intellectual activity is analogous. For example, suppose I am a competent mathematician. I know that if I square a negative number, the result will be a positive number and often use this principle in my work. In my early mathematical training, I knew why this was the case, although now I would struggle to construct a demonstration that would allow a novice to discover this.

Similarly, there are first principles that Parmenides needed to be able to work out and explain to become a good philosopher but which he now only relies on indirectly. One reason why he would struggle with preliminary work then is simply that he no longer needs to worry about some of the explanatory work that was a necessary step towards working out first principles, thereby becoming a skilful philosopher.

Secondly, as a calf, it was important that Barry learnt how to count strokes and ensure that each stroke was uniform while swimming backstroke so as not to crash into the side of the

pool. However, he now instinctively knows when he has reached the end of the pool without needing to do this. Although this process in his initial training was necessary to reach this stage, he no longer relies on it. If asked now, he might have to think much harder about the stroke counting process than he did as a calf, when his training involved stroke counting all the time.

The same is true of certain intellectual activities. Suppose I am a Tolstoy expert. When I was first learning Russian, I relied on a particular, paradigmatic regular verb to work out which tense a verb was in when translating and I needed to parse it by reciting it in a certain order.[62] Now I am an expert Russianist, I no longer rely on this process. As such, I would have to think about reciting the verb much harder than I did when I was new to Russian. Likewise, Parmenides may also struggle to demonstrate various processes that he no longer relies on. For example, he often states the conclusion at the beginning of an argument and again at the end of it, where he likely does not need to do this himself. Thus, this is something that he will need to make a concerted effort to do.

Thirdly, since Barry is now primarily concerned with diving from low boards, the range of swimming skills he relies on is much smaller. As a calf, he needed to practise and be able to hold his breath for long periods of time to prepare for different sorts of diving before he had chosen a specialty. When attempting to demonstrate holding his breath for long periods of time now, he might genuinely be unable to do it, although, he could not have become a talented low board diver without this. Again, this applies to intellectual skills. As a Tolstoy expert, I now only translate prose and regularly use a set of vocabulary that is commonly found in Tolstoy. However, in starting from the beginning with my students, I must ensure

[62] I am grateful to Karen Margrethe Nielsen for the suggestion that a very competent linguist might find demonstrating these sorts of activities difficult.

that I provide the general education that I myself received when starting off. Likewise, the general training programme Parmenides engaged in in his youth would have involved all sorts of training, not all of which is directly relevant for his current philosophical interests. For example, it is not obvious that Parmenides himself was interested in mathematics, whereas in Part II we find mathematical arguments, most notably about the generation of number.[63] Demonstrating a general method would also be difficult because he is now a specialist.

Finally, as an adult, proficient diver, Barry takes a number of shortcuts, which would have interfered with his development as a calf; he now no longer bothers to stretch and warm up before a diving competition. Failing to stretch and warm up before he was properly trained could have resulted in frequent cramp and interfered with Barry's swimming training in his youth, whereas now he knows that he can rescue himself without trouble and swim with good technique despite cramp – which he rarely experiences these days anyway. Like Barry, Parmenides can take shortcuts now that he could not (and should not) have done in his youth. This might explain the lengthy, complex arguments we find where shorter ones would do in Part II. For instance, in the first deduction, Parmenides gives us complex, more sophisticated arguments, despite the fact that most of the conclusions he gives could be derived from the following, simple argument that uses premises that are established in the opening moves of the deduction:[64]

1. The one cannot be many.

2. The one cannot have parts.

---

[63] 143c1-144a9

[64] It is widely acknowledged that what I have termed 1-3, which are established at the beginning of the first deduction, are what drive the arguments that follow - see Harte (2002), ch 2-3 and McCabe (1994), ch4 for good explanations of how.

3. Properties are parts.

4. F and not-F are properties.

5. Therefore, the one cannot be F and not-F.

We can then give a good explanation of why Parmenides is so concerned about the difficulty of the task. Although his expertise was reached by such demonstrations and his work depends on the principles established through them, he may not even be able to explain them now. As a beginner, Parmenides also needed to use procedures that he no longer relies on. His specialisation also means that some of the principles that an introduction to philosophy would require are not relevant for the work he now does. Finally, Parmenides can take shortcuts that as a young philosopher, he should not have done.

Under Pressure

I turn now to explain a final oddity of the text that I pointed to above: Parmenides' and Zeno's concern at the prospect of his performing the demonstration in front of a crowd. I have shown that dealing with first principles is demanding. However, we might think that this does not justify quite how extreme Parmenides' reaction is; he is not merely apprehensive, but seemingly terrified because it is such a difficult undertaking.[65] Nor does it explain why he should be worried about embarrassing himself in front of a crowd; surely, as a good philosopher, he should not be concerned with humiliating himself when demonstrating a method to discover first principles?

[65] See, for example, 136e9-137a6.

Again, the metaphor of gymnastics helps us explain why Parmenides is so averse to performing the demonstration. Reconsider Barry's task. Notice that the stakes are very high for me; if he fails, I might well drown. As an expert hoping to help a novice swimmer, training me badly, especially if I make mistakes about first principles, is something that anybody who is genuinely invested in helping a beginner would quite rightly be worried about. The situation would be even more fraught if others are watching Barry, hoping to learn too.

Being afraid on this basis seems to be a perfectly sensible attitude for a teacher of an intellectual skill to have. Despite being a good mathematician, I might quite reasonably feel daunted at the prospect of providing a method to my student that will help her to discover first principles because if it goes wrong, she will be left with the wrong principles that will inhibit her ability to progress – and these kinds of basic error are very difficult to unlearn later on. If other students gathered around hoping to learn too, the pressure would be even more intense. Similarly, if Parmenides is genuinely invested in Socrates' and the spectators' philosophical development, it is quite understandable that he would feel anxious about performing in front of a crowd; Parmenides might contribute to their making errors at a very basic level, which would lead to mistakes at higher levels.

Moreover, it is quite plausible that even an expert like Barry might make mistakes when helping me to understand first principles, just as an expert mathematician might make a very basic mistake when demonstrating a basic proof that she has not rehearsed in many years, especially if elderly. Given how embarrassing this would be, a good mathematician might well be anxious to limit the number of spectators. Similarly, Parmenides (who is a famous philosopher after all) might make mistakes, which would be utterly humiliating in front of a crowd.

Worse still, it is perfectly possible that in taking me through the steps that will help me to become a good swimmer, Barry discovers that he has been wrong about something that he has believed for many years and is forced to revise his own beliefs. This would be highly embarrassing for a famous diver. The situation is akin in the case of intellectual activities; if I am a competent mathematician but realise that I have been mistaken about a first principle, whilst teaching a student, I will not only be obliged to revise many of my own beliefs but look very foolish indeed. Similarly, if Parmenides discovers that he has made a mistake, he must not only acknowledge that he must revise many of his own beliefs but do so in front of a crowd, potentially destroying his reputation.

*

It seems then that by reflecting on the nature of physical training, we can find a plausible account of the nature of the arguments in Part II and explain Zeno and Parmenides' reactions to Socrates' request to perform the demonstration. Part II is not merely a long and drawn out joke. Nor is it just a set of exercises for a student of philosophy. Rather, it is important preliminary work for discovering first principles, which a seasoned philosopher might legitimately find more difficult and apprehensive about than doing philosophy proper.

Getting One Thing Straight

Another problem for any interpreter of Part II of the *Parmenides* is what the subjects, the one (ἓν) and the others (τἆλλα) are. There is much disagreement about this; the one has been

taken to be a Form,[66] Parmenides' one,[67] a concept,[68] something more indeterminate than these.[69] The others have not received as much attention, with commentators often failing to explicitly address what they are, however there is also a range of ways they seem to have been taken: particulars/instantiations of other Forms (or both),[70] the many that Parmenides himself hoped to avoid,[71] anything other than the indeterminate one.[72] There are also other options, for example, the one is some property and the others are other properties, the one is the property of one and the others are other properties and/or anything else, the one is a mereological atom and the others are other mereological atoms and/or other mereological non-atoms.[73]

Reflecting on physical training can help us to see that interpreters are wrong to assume that we must pick between these, as they have done traditionally. Recall Barry's training programme. Suppose I have watched his demonstration. When I embark on his programme, I must repeat it over and over again. I might try it first with breaststroke, then front crawl, then backstroke, then butterfly. I might try to swim more and more quickly and then to swim the same distance with fewer and fewer strokes, then to breathe less frequently etc.

This is akin to what Parmenides says Socrates will need to do; the demonstration is about the one but Socrates, Parmenides says, will need to repeat the exercise using being, likeness etc.

---

[66] For example, Allen (1997), Dorter (1994), Runciman (1959).

[67] Brisson (2002), Taylor (1934)

[68] Beck (1947) p. 232

[69] For example, Gardner (2018) argues that the one is deliberately ambiguous. Hermann (Hermann, Hedley and Chrysakopoulou (2010)) takes it to be what is utterly simple. McCabe (1994), ch 4 argues that the one is some one austerely construed (like a Form) in negative deductions and generously construed in positive deductions.

[70] For example, Allen (1997), Dorter (1994), Runciman (1959)

[71] Brisson (2002), Taylor (1934)

[72] For example, Gardner (2018), Hermann, Hedley and Chrysakopoulou (2010), McCabe (1994)

[73] See Corrigan (2010) for further options.

in place of the one.[74] However, if we take the analogy seriously, we would expect repetitions of the demonstration in Part II, which would involve other alterations and which might be much subtler than these, just as swimming training will involve both larger changes when repeated, for example, different strokes, and smaller ones, for example, picking up speed, coordinating breathing. If we take the training metaphor seriously then, we should repeat Part II over and over again, with subtle changes each time, as well as creating deductions of our own. I suggest that some such repetitions would involve substituting different referents for 'the one' and 'the others'. As such, we do not need to commit to a particular view of what the one and the others are.[75]

There are two objections that somebody might have to this. The first is that it takes the training metaphor far too seriously. The second is that it is deeply speculative. In what follows, I address these objections by showing that my claim that gymnastics indicates that we are supposed to repeat the demonstration makes sense of many details of Part II of the *Parmenides* that are otherwise difficult to explain. As such, it is persuasive.

Ambiguity

There are numerous places in Part II of the *Parmenides* where Plato uses language that sends us conflicting signals or gives us very little hint as to what certain terms that are of real importance in particular arguments mean or that are metaphysically loaded. For example, although the language associated with the Forms is sparse, it is not entirely absent[76] and

[74] 136b1c5

[75] Note, this is different from the view that we find in Gardner (2018). Gardner argues that the one is indeterminate in the sense that we should not read Part II with *any* specific kind of one in mind and that Part II is just a set of training exercises designed to prepare Socrates for the task of defending the Forms.

[76] For example, *ὅπερ ἔστιν* (139c1)

Parmenides says that the one is the sort of thing that we might think is a Form.[77] Likewise, as I discuss in more detail later, in the first deduction, Parmenides suddenly introduces the idea that the one and the same have a nature (*φύσις*), without any explanation of what a nature is. In the fifth deduction, we find talk of participation, without any clarification of what this might involve.[78] On my reading, all this is explicable; it allows us to take them differently on different repetitions.

Why So Quiet?

As I argued above, that the dialogue does not return to the frame is not a good reason for reading the two parts of the dialogue separately. However, we are still left asking why Plato ends the dialogue so abruptly, without any response from Socrates, Zeno or the other spectators and no return to the frame. We can explain this on my interpretation. Firstly, it shifts the focus from the characters in the dialogue to the reader; the onus is on us to respond. Secondly, it indicates to us that we have not finished yet; the demonstration is to be repeated over and over again. It also serves to prompt us to think very hard about what the appropriate reaction to each repetition is – after all, Plato does not give us any hints through Socrates, Zeno and the others.

My interpretation can also explain one of the oddest features of Part II: Parmenides' choice of interlocutor. After agreeing to demonstrate the method of hypothesis, Parmenides considers who would best serve as an interlocutor, picking Aristotle.[79] One of the reasons he chooses Aristotle reminds us of a demand that Socrates is often anxious for his conversational

[77] 135e3-5

[78] 160e2-161a5

[79] 136b6-8

partners to meet: saying what he thinks. Parmenides also chooses Aristotle because he will not give Parmenides too much trouble and will give him a chance to rest.

Parmenides' choice of Aristotle is peculiar for a number of reasons. Firstly, we would imagine that if the demonstration is really for Socrates' sake, it should be Socrates who participates in the demonstration, not Aristotle. Secondly, the justification that Parmenides gives for choosing Aristotle seems to conflict with what we find in Part II. If Aristotle really says what he thinks, he seems to be perfectly happy to agree with contradiction after contradiction. Yet, we are told that Parmenides overheard Socrates talking to Aristotle earlier.[80] Presumably then Aristotle is not incapable of proper philosophical conversation. In light of this, we might think Aristotle does not in fact say what he thinks but goes unreprimanded by Parmenides nonetheless. Thirdly, despite apparently being chosen to give Parmenides some respite, Aristotle's brief, flat responses hardly give Parmenides much of break. Moreover, whilst he does not interfere with or challenge Parmenides, in that sense causing no trouble, he often accepts lengthy, complex and compressed arguments without question and seems to agree to massive contradiction, which is surely troubling for everyone (or at least ought to be). Finally, that Plato names Parmenides' interlocutor 'Aristotle' is surely not unimportant; it reminds us of Aristotle himself.

[80] 135d1-2

Aristotle's responses have often been taken to be insignificant.[81] Cornford and Tabak, for example, take Aristotle's replies to be so unimportant that they omit them altogether.[82] Given that Aristotle is such an unusual sort of interlocutor and that Plato chooses to include Aristotle's replies throughout Part II, I take this to be utterly unacceptable. Brumbaugh takes Aristotle's function to be merely signposting the structure of the arguments.[83] This is also unsatisfactory. There are numerous places where what Aristotle says seems to be entirely redundant if his function is only to emphasise the form of the arguments in Part II; in fact, if we ignore Aristotle's responses as Cornford and Tabak do, the form of the arguments survives unscathed.

In contrast, on my interpretation, Aristotle is crucial. Firstly, that Parmenides chooses him over Socrates shifts the focus to the spectators. Since the reader is a certain kind of spectator, I suggest that Plato aims the philosophical work at us more directly than in Part I – or indeed, any other dialogue. This makes sense if we are intended supposed to repeat the demonstration over and over again, making changes each time. Secondly, the character of Aristotle is intended to remind us of Aristotle himself, who, we might imagine, would be very likely to have been engaged in fierce discussion with Socrates earlier. I take it then that Plato *deliberately* makes Aristotle's replies flat and his character two-dimensional. Part of this, I suspect, is simply due to Plato poking fun at Aristotle, whom we can hardly imagine

[81] Of course, implying that interlocutors' responses are not philosophically significant concerning other dialogues is not unheard of. For example, Livingstone (1938) opts to print the more conversational passages in the *Phaedo* in smaller type in order to allow his reader to ignore them. Barnes ((2003), pp. 27-28) suggests that we can always extract philosophical arguments from Platonic dialogues and ignore the conversational context. This will inevitably lead to dismissing interlocutors' responses in at least some passages in Plato as being of no real philosophical importance.

[82] Cornford (1939), Tabak (2015)

[83] Brumbaugh (1961)

responding to Parmenides in this way.[84] However, notice that Aristotle's responses also allow us to repeat Part II over and over again; we can interpret them differently depending on the changes we make.

It seems then that my interpretation can better explain puzzles about Aristotle. Of course, much of what I have said is rather speculative (as is common in the study of Part II of the *Parmenides*). However, that I can at least address these puzzles and provide good solutions is surely advantage.

And/or More

Another area of fierce debate among commentators is how to read the logic of Part II of the *Parmenides*. Some take the deductions conjunctively,[85] while others take them disjunctively or some combination of the two.[86] Again, the text is far from conclusive on this issue. On my reading, Plato is deliberately vague; on different repetitions, we can take the hypotheses and the logic of the deductions differently.

Two, Four, Six, Eight and a Half

We can also explain why Parmenides' description of the proposed structure of the demonstration seems to be so confused on my interpretation. At 1365e8-136a2, Parmenides suggests a kind of training that reminds us of what Zeno was doing but with a crucial difference: whereas Zeno saw what followed on a single positive hypothesis (if the many are),

[84] Cornford (1939), p. 109

[85] McCabe (1994), ch 4

[86] Gill and Ryan (1996), Gill (2014)

Socrates ought to examine the consequences of a negative hypothesis too (such as if the many are not). This leads us to expect a demonstration with the following structure:

First hypothesis: if the many are

1. What follows for the many

Second hypothesis: if the many are not

2. What follows for the many

However, when Parmenides elaborates, his proposed structured is more complex:

> *οἷον, ἔφη, εἰ βούλει, περὶ ταύτης τῆς ὑποθέσεως ἣν Ζήνων ὑπέθετο, εἰ πολλά ἐστι, τί χρὴ συμβαίνειν καὶ αὐτοῖς τοῖς πολλοῖς πρὸς αὑτὰ καὶ πρὸς τὸ ἓν καὶ τῷ ἑνὶ πρός τε αὑτὸ καὶ πρὸς τὰ πολλά· καὶ αὖ εἰ μή ἐστι πολλά, πάλιν σκοπεῖν τί συμβήσεται καὶ τῷ ἑνὶ καὶ τοῖς πολλοῖς καὶ πρὸς αὑτὰ καὶ πρὸς ἄλληλα·*
>
> *"Take, if you like," he said, "Zeno's hypothesis: if many is. What must follow for the many themselves with respect to themselves and with respect to the one and for the one itself with respect to itself and with respect to the many? And again, if many is not, consider again what will follow both for the one and the many and both with respect to themselves and with respect to one another."*
>
> 136a1-7

This suggests that the demonstration will have one of the following structures:[87]

Version 1

Hypothesis: if the many are…

[87] Cf. Gill and Ryan (1996), p. 55

1. …what follows for the many in relation to themselves, the many in relation to the one, the one in relation to itself and one in relation to the many?

Hypothesis: if the many are not…

2. …what follows for the one in relation to the many, the one in relation to itself, the many in relation to themselves and the many in relation to the one?

Version 2

Hypothesis: if the many are…

1. …what follows for the many in relation to themselves and in relation to the one?
2. …what follows for the one in relation to itself and in relation to the many?

Hypothesis 1: if the many are not…

3. …what follows for the one in relation to itself and in relation to the many?
4. …what follows for the many in relation to themselves and the many in relation to the one?

Version 3

Hypothesis: if the many are…

1. …what follows for the many in relation to themselves?
2. …what follows for the many in relation to the one?
3. …what follows for the one in relation to itself?
4. …what follows for the one in relation to the many?

Hypothesis 1: if the many are not…

5. …what follows for the one in relation to itself?
6. …what follows for the one in relation to the many
7. …what follows for the many in relation to themselves?
8. …what follows for the many in relation to the one?

Notice that there is a glaring discrepancy between any of these versions and what we find in the demonstration that Parmenides actually gives us; as Gill points out, none of these features an appendix.[88] In addition, given that the subject of Parmenides' hypotheses is the one, we expect him to simply invert the plan he outlines here: if the one is, what follows for the one in relation to itself, the one in relation to the many, the many in relation to the one and the many in relation to themselves and if the one is not, what follows for the many in relation to themselves, the many in relation to the one, the one in relation to itelf and the one in relation to the many? However, the third, fourth, seventh and eighth deductions concern what follows for the 'others', not 'the many'. Secondly, even if we take 'the others' to be equivalent to 'many', Parmenides' example suggests that the many ought to be the primary subjects in the third, fourth, fifth and sixth deductions. However, the others in Part II are the primary subjects in the third, fourth, seventh and eighth deductions.

Parmenides then describes a different structure, which is more akin to Part II:

> *καὶ αὖθις αὖ ἐὰν ὑποθῇ εἰ ἔστιν ὁμοιότης ἢ εἰ μὴ ἔστιν, τί ἐφ' ἑκατέρας τῆς ὑποθέσεως συμβήσεται καὶ αὐτοῖς τοῖς ὑποτεθεῖσιν καὶ τοῖς ἄλλοις καὶ πρὸς αὑτὰ καὶ πρὸς ἄλληλα. καὶ περὶ ἀνομοίου ὁ αὐτὸς λόγος καὶ περὶ κινήσεως καὶ περὶ στάσεως καὶ περὶ γενέσεως καὶ φθορᾶς καὶ περὶ αὐτοῦ τοῦ εἶναι καὶ τοῦ μὴ εἶναι· καὶ ἑνὶ λόγῳ, περὶ ὅτου ἂν ἀεὶ ὑποθῇ ὡς ὄντος καὶ ὡς οὐκ ὄντος καὶ ὁτιοῦν ἄλλο πάθος πάσχοντος, δεῖ σκοπεῖν τὰ συμβαίνοντα πρὸς αὑτὸ καὶ πρὸς ἓν ἕκαστον τῶν ἄλλων, ὅτι ἂν προέλῃ, καὶ πρὸς πλείω καὶ πρὸς σύμπαντα ὡσαύτως· καὶ τἆλλα αὖ πρὸς αὑτά τε καὶ πρὸς ἄλλο ὅτι ἂν προαιρῇ ἀεί, ἐάντε ὡς ὂν ὑποθῇ ὃ ὑπετίθεσο, ἄντε ὡς μὴ ὄν, εἰ μέλλεις τελέως γυμνασάμενος κυρίως διόψεσθαι τὸ ἀληθές.*

[88] Gill and Ryan (1996), p. 55

> *And again, if you were to hypothesise if likeness is or if it is not, what will follow on each hypothesis both for those things that are and those that are not and the others both with respect to themselves and with respect to one another. The same account holds regarding unlikeness and regarding motion and regarding rest and regarding creation and destruction and regarding being itself and not-being; in short, always, regarding whatever is hypothesised, as being and not being and as undergoing any other affection whatsoever, it is necessary to examine what follows with respect to itself and with respect to each one of the others, whichever you might choose and with respect to more and with respect to all of them in like manner. And the others again, should be examined both with respect to themselves and with respect to anything else you might choose, whether and what you hypothesise as being or not being, if you are to be completely trained accurately to discern the truth.*
>
> 136b1-c5

Here, Parmenides suggests that the subject of the deductions will be some thing and other things, as in Part II. However, again, there is no mention of the appendix.

What is going on here? Is the plan of the deductions just hopelessly confused? I think not. Recall the metaphor of training. There are a number of changes that I might need to make when training; changes in strokes, concentrating on leg movements, then arm movements, then coordinating the two etc. As is commonly observed, Parmenides suggests that the exercise will need to be repeated with different subjects; like, unlike, being, not being and so on. This is one respect in which training will require repetition with alterations each time. However, the apparent inconsistencies in the plan of the deductions give us an idea of other alterations we might make: structural changes. Multiple alterations in the method is exactly

what we would expect if it constitutes training. Thus, the plan of the deductions gives us good reason to suppose that there are a number of alterations that we might make when repeating the exercise in Part II.

*

I have argued that we should reject the view of Part II as a mere joke. By reflecting on what physical training might involve, as the metaphor of gymnastic suggests we ought to, I have argued that Part II of the *Parmenides* is the demonstration of a method for uncovering first principles - and one that we are supposed to repeat, substituting different referents and reading the logic differently, as well as creating similar demonstrations.

Of course, there are limits to what we are allowed to change or substitute; we cannot make changes that are incompatible with the text and consider what results to be a repetition of Part II itself. For this reason, although I remain agnostic about what the one might be and whether we ought to read the first and second deductions conjunctively or deductively, I am committed to studying the text as it is. Hence, I take it that the first and second deductions mirror one another; after all, the conclusions of the first and second deductions have the following contrasting structures: if the one is, then it is neither F nor G, where F and G are opposites (first deduction), if the one is, it is both F and G, where F and G are opposites (second deduction) and the very same properties are ascribed to and denied of the one. Both deductions are governed by opening moves that establish contrasting underlying principles: the one is not many, is not a whole and has no parts (first deduction) and the one is many and a whole of parts (second deduction), F is predicated of some x if and only if F is a part of x

(both deductions).[89] I also read the text consistently in the sense that the meanings of the words that pick out the properties that are denied of or ascribed to the one and the others are static, except where we have good reason to think that they shift. I also maintain that in some cases, the meanings of words are non-negotiable; hence, I argue below that *ταὐτό* (without *πεπονθέναι*), *ἕτερον* (without *πεπονθέναι*), *ὅμοιον* and *ἀνόμοιον* have specific meanings that are the same in both the first and second deductions.

A Fool's Errand?

I turn now to show that my suggestion that Part II of the *Parmenides* is in the background of *Metaphysics*, Iota is a plausible one. Of course, much of my justification will hang on what I show in the remainder of the thesis. However, some might object that I am wrong to link the two texts from the outset. I address these objections here.

Some might argue that the Aristotle of the *Parmenides* is not supposed to be Aristotle himself. We are explicitly told that he is one of the Thirty at 127d2-3, which Aristotle the philosopher was not. As such, we have no real reason to think that Part II would have special significance for Aristotle.

However, even if the Aristotle of Part II of the *Parmenides* is not supposed to refer to Aristotle himself, merely sharing the same name is surely sufficient reason for thinking that it would draw Aristotle's attention. In addition, taking Plato to have Aristotle himself in mind is not

[89] This is uncontroversial, although I make a case for it in the next chapter.

as implausible as has commonly been supposed.[90] Given that we already have three philosophical superstars in the dialogue (Parmenides, Zeno and Socrates) and one in the background (Plato), it is hardly far-fetched to imagine that Aristotle might feature too. In addition, that Aristotle is said to be one of the Thirty might well be a joke, rather than a biographical detail intended to be taken seriously. Alternatively, it might serve an additional philosophical purpose: to remind us of the cost of failing to discover first principles.[91]

That the Aristotle of the dialogue should be identified with Aristotle himself becomes more convincing when we think about another character in the dialogue whose identity is questionable: Cephalus.[92] We are told that the Cephalus of the *Parmenides* has travelled with others to Athens from their home in Clazomenae.[93] Consequently, we might think that we should not take Cephalus to be the Cephalus from the *Republic* since in the *Republic*, Cephalus seems to live in his son's house in Athens.[94] This is likely the motivation behind some commentators' claim that Cephalus is significant because he is from Clazomenae (Anaxagoras' birthplace); it functions as an indication that Anaxagoras, not the *Republic* is in the background of Part II.[95]

---

[90] In some cases, Aristotle has been transliterated as 'Aristotles' rather than Aristotle for example, Cornford (1939), Fowler (1925), Tabak (2015). This discrepancy leads the reader to suppose that the character is different from Aristotle because they do not share the same name, which is misleading.

[91] The suggestion that the mention of the Thirty might be included to indicate the cost of failing to commit to being properly educated was made to me by Ellisif Wasmuth.

[92] Surprisingly, the connection between the mysterious identity of Cephalus and that of Aristotle has largely gone unnoticed. For a notable an exception, see Hermann, Hedley and Chrysakopoulou (2010).

[93] 126a1-4

[94] 328b9-d6

[95] See Brumbaugh (1961), pp. 28-29, Miller (1986), Sayre (1996), p. 58. Hermann (Hermann, Hedley and Chrysakopoulou (2010). p. 7) argues that making this connection is 'questionable' since Anaxagoras is not specifically discussed in the *Parmenides*. I am not persuaded by this argument; a distinct discussion of Anaxagoras is not necessary for having him in mind being helpful (especially on my interpretation of the purpose of Part II outlined above).

Yet, any reader of the Parmenides who is familiar with other Platonic dialogues (as ancient readers surely were) would be sorely tempted to think that Cephalus is the same Cephalus that we find in the *Republic*, especially given that he meets Adeimantus and Glaucon, who also appear in the *Republic*. As in the case of the character Aristotle, we can explain this discrepancy by not taking the biographical details too seriously. Cephalus (along with Adeimantus and Glaucon) prompts us to have the *Republic* in mind when reading the *Parmenides*.[96] The reference to Clazomenae (Anaxagoras' birthplace) also serves to encourage the reader to reflect on other philosophers, either Anaxagoras specifically or the pre-Socratics more generally.[97]

I turn now to address two further objections. The first is that since Aristotle only mentions Plato by name once in Iota,[98] it is implausible that Part II is in the background at all. The second is that even if Aristotle did have Plato at the forefront of his mind when writing Iota, there are a number of passages that might lead us to believe that Aristotle has dialogues other than the *Parmenides* in mind. Particularly relevantly for my project, we find puzzles about sameness/identity and difference/non-identity, similarity and dissimilarity elsewhere in Plato, notably, at *Theaetetus* 159a1- e5.

It is true that Aristotle only explicitly refers to Plato once in *Metaphysics*, Iota. Nevertheless, we have ample reason to think that Aristotle is actively engaging with Plato there. Firstly,

[96] Corrigan (2010), p. 26, Miller (1986), pp.18-25, Thesleff (2009), p. 306

[97] Schofield (1973), p. 4 argues that the arrival of philosophers from Clazomenae prompts us to have Anaxagoras in mind because Plato is acknowledging a debt to him in the development of the Forms. Since he also maintains that the Forms of the middle period are very much at issue in Part II, I take it that Schofield would not object to my claim that Cephalus also serves to remind us of the *Republic*.

[98] 1053b13

Aristotle's reference to Plato plays an important role in motivating his discussion. His mention of Plato occurs in a contrast between the ways that we might think one exists and can be described, which is surely relevant for Iota. It is not just an aside then. Secondly, in the last chapter of Iota, Aristotle returns to deal with Platonic metaphysics.[99] He relies on contraries, which he has argued previously in Iota are a kind of difference for an argument against Forms.[100] The consequences of the large portions of Iota then are linked with Platonic metaphysics. Taking at least some reflection on Plato to feature in *Metaphysics*, Iota is plausible then.

Furthermore, I am perfectly happy to concede that there are other parts of Plato that Aristotle has in mind in places in Iota; indeed, it would be surprising if there were not, given the plethora of passages in Plato that deal with similar problems to those in Part II and Iota. However, this does not render my project futile. Part II must surely play an important role in Iota, given they are both the most extensive discussions of the one in Plato and Aristotle. In addition, there are certainly striking similarities between Part II and Iota, notably that they both deal with the one and its relationship to the many.

Moreover, there is definitive evidence for Part II being in play in Iota, which occurs in the third chapter of Iota, the text I concentrate on and which deals with identity and non-identity, my focus. As I argue in detail in Chapter Four, there is a premise in Part II that is striking and surprising:

> ***πᾶν που πρὸς ἅπαν ὧδε ἔχει, ἢ ταὐτόν ἐστιν ἢ ἕτερον***· *ἢ ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον, μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη.*

[99] 1059a10-14.

[100] See Castelli (2018), pp. 254-255 for further analysis.

Parmenides, 146b2-5

Although I do not argue for this until Chapter Four, I take it that few would disagree that in the following passage, Aristotle refers to 146b2-5 not once but three times:

> *ὥστε δῆλον ὅτι καὶ τὸ ἕτερον καὶ τὸ ἀνόμοιον πολλαχῶς λέγεται. καὶ τὸ μὲν ἄλλο ἀντικειμένως καὶ τὸ ταὐτό, διὸ* **ἅπαν πρὸς ἅπαν ἢ ταὐτὸ ἢ ἄλλο**· *τὸ δ' ἐὰν μὴ καὶ ἡ ὕλη καὶ ὁ λόγος εἷς, διὸ σὺ καὶ ὁ πλησίον ἕτερος· τὸ δὲ τρίτον ὡς τὰ ἐν τοῖς μαθηματικοῖς. τὸ μὲν* **οὖν ἕτερον ἢ ταὐτὸ διὰ τοῦτο πᾶν πρὸς πᾶν λέγεται**, *ὅσα λέγεται ἓν καὶ ὄν· οὐ γὰρ ἀντίφασίς ἐστι τοῦ ταὐτοῦ, διὸ οὐ λέγεται ἐπὶ τῶν μὴ ὄντων (τὸ δὲ μὴ ταὐτὸ λέγεται), ἐπὶ δὲ τῶν ὄντων πάντων· ἢ γὰρ ἓν ἢ οὐχ ἓν πέφυχ' ὅσα ὂν καὶ ἕν. τὸ μὲν οὖν ἕτερον καὶ ταὐτὸν οὕτως ἀντίκειται, διαφορὰ δὲ καὶ ἑτερότης ἄλλο. τὸ μὲν γὰρ ἕτερον καὶ οὗ ἕτερον οὐκ ἀνάγκη εἶναι τινὶ ἕτερον·* **πᾶν γὰρ ἢ ἕτερον ἢ ταὐτὸ** *ὅ τι ἂν ᾖ ὄν·*

Metaphysics, 1054b13-25

In light of all this, taking Aristotle to be engaging with Part II of the *Parmenides* in *Metaphysics*, Iota, especially Iota 3, is both very plausible and potentially fruitful.

Key Terms

I turn now to give some reasons for the way that I take some important terms in both texts, *ταὐτό* (without *πεπονθέναι* and without *ἔχειν*), *ἕτερον* (without *πεπονθέναι* and without

ἔχειν),[101] *ὅμοιον* and *ἀνόμοιον*, although full justification will depend on the definitions I outline in the next chapter. There are also four related and important terms, *ταὐτό* (with *πεπονθέναι*), *ἕτερον* (with *πεπονθέναι*), *ταὐτό* (with *ἔχειν*) and *ἕτερον* (with *ἔχειν*) that I deal with in the next chapter.

In the first and second deductions of the *Parmenides*, I take these terms to be used consistently throughout both deductions, which is uncontroversial; after all, the first and second deductions are clearly supposed to mirror one another. I also take *ταὐτό* (without *πεπονθέναι*), *ἕτερον* (without *πεπονθέναι*), *ὅμοιον* and *ἀνόμοιον* to indicate identity, similarity, non-identity respectively.[102]

However, there is an objection to taking them in this way. Uses of *ταὐτό* (without *πεπονθέναι*) and *ὅμοιον* often overlap in Greek and *ὅμοιον* has been used to mean identical in a philosophical context.[103] As such, we might think that there is no substantive difference between them in the first and second deductions. We might also believe that *ἀνόμοιον* and *ἕτερον* (without *πεπονθέναι*) are used interchangeably. However, this is implausible. Firstly, the cases where *ὅμοιον* is obviously used to indicate identity in Plato tend to occur in conversational passages, where philosophically precise language is less important. In addition, in these cases, *ὅμοιον* usually feature with *ἀεὶ*. For example, in the *Symposium*, we find **ἀεὶ ὅμοιος** *εἶ, ὦ Ἀπολλόδωρε· ἀεὶ γὰρ σαυτόν τε κακηγορεῖς καὶ τοὺς ἄλλους* (You always the same, Apollodorus - always bad mouthing yourself and others).[104] In the *Charmides*,

[101] In the next chapter, I discuss what difference adding *πεπονθέναι* in Part II and *ἔχειν* in Iota makes.

[102] McCabe (1994) is unusual in explicitly holding this. However, it seems to me that some agree with this implicitly - see Ryle (1939b), Schofield (1996).

[103] Melissus A1

[104] 173d4–5

Socrates says ἀλλ' ἐγὼ κινδυνεύω **ἀεὶ ὅμοιος** εἶναι· (but I am likely always the same).[105] In these passages, *ἀεὶ* is what does the work in giving it a sense of identity rather than just similarity. Thus, Plato is not in the habit of using *ὅμοιον* alone to mean identity.

Secondly, it is clear that in the first deduction, Parmenides offers us a set of arguments for the conjunctive conclusion that the one is not *ταὐτό* with respect to itself or something *ἕτερον* or *ἕτερον* to itself or something *ἕτερον*, which is separate from the arguments that conclude that the one is neither similar nor dissimilar to itself or anything else. Likewise, in the second deduction, we find two distinct sets of arguments. One set purportedly shows that the one is both *ταὐτό* and *ἕτερον* with respect to itself and something else. The other supposedly shows that the one is both similar and dissimilar to itself and something else. In addition, Plato is very careful to avoid using *ὅμοιον* and *ἀνόμοιον* in the arguments about *ταὐτό* (without *πεπονθέναι*) and *ἕτερον* (without *πεπονθέναι*). Thus, he must have something quite specific and separate in mind with *ταὐτό* (without *πεπονθέναι*), *ἕτερον* (without *πεπονθέναι*), *ὅμοιον* and *ἀνόμοιον*.

Once we recognise this, we can see that *ὅμοιον* and *ἀνόμοιον* must mean similarity and dissmilarity; there is nothing else that they could mean.[106] Nevertheless, some might hold that *ταὐτό* (without *πεπονθέναι*), *ἕτερον* (without *πεπονθέναι*) indicate indistinctness and distinctness, not identity and non-identity. This is unpersuasive. As I argue in the next chapter, plausible definitions of *ταὐτό* (without *πεπονθέναι*), *ἕτερον* (without *πεπονθέναι*) in the first and second deductions are: for any x and any y, x is *ταὐτό* with respect to y if and only if x is similar to y in every respect and not dissimilar to y in any respect and for any x

[105] 170a2

[106] See LSJ entries on this.

and any y, x is *ἕτερον* with respect to y if and only if x is dissimilar in at least one respect and not similar in every respect These are more obviously definitions of identity and non-identity than indistinctness and distinctness. In addition, Plato's language indicates that he is aware aware of subtle distinctions between cases of non-identity and what we might loosely term difference. For example, when Parmenides seems to be talking about the one and *ταὐτό* as co-extensive, he says that they *μηδαμῇ διαφέρει* (do not come apart at all).[107]

What about Aristotle? It is very clear that *ὅμοιον* and *ἀνόμοιον* are not the same as *ταὐτό* and *ἕτερον* (without *ἔχειν*) in *Metaphysics* Iota; after all, the ways of being *ταὐτό* and *ἕτερον* and *ὅμοιον* and *ἀνόμοιον* are separate in Iota 3. In light of this, it is difficult to see what *ὅμοιον* and *ἀνόμοιον could* mean other than similar and dissimilar - and there is no dispute about this in the secondary literature. Hence, I take *ὅμοιον* and *ἀνόμοιον* to indicate similarity and dissimilarity.

It is also clear that Aristotle uses *ἄλλο* and *ἕτερον* interchangeably, as the following passage demonstrates:[108]

> *ὥστε δῆλον ὅτι καὶ τὸ ἕτερον καὶ τὸ ἀνόμοιον πολλαχῶς λέγεται. καὶ τὸ* **μὲν ἄλλο ἀντικειμένως καὶ τὸ ταὐτό**, *διὸ* **ἅπαν πρὸς ἅπαν ἢ ταὐτὸ ἢ ἄλλο**…*τὸ δ' ἐὰν μὴ καὶ ἡ ὕλη καὶ ὁ λόγος εἷς, διὸ σὺ καὶ ὁ πλησίον ἕτερος: τὸ δὲ τρίτον ὡς τὰ ἐν τοῖς μαθηματικοῖς* **τὸ μὲν οὖν ἕτερον ἢ ταὐτὸ διὰ τοῦτο πᾶν πρὸς πᾶν** *λέγεται…***πᾶν γὰρ ἢ ἕτερον ἢ ταὐτὸ** *ὅ τι ἂν ᾖ ὄν*:
>
> *Metaphysics*,1054b15-25

[107] 139d6

[108] I argue for this in detail in Chapter Four.

Aristotle is also aware that there are important distinctions between cases of what we might loosely term difference; he explicitly says that διαφορὰ is non-identical to ἕτερον.[109] In light of this and the explicit reference to 146b2-5 above, it is plausible to think that, like Plato, he consistently uses ταὐτό and ἕτερον/ἄλλο (without ἔχειν) to indicate identity and non-identity. As such, this is the way that I take Aristotle to use ταὐτό and ἕτερον/ἄλλο (without ἔχειν) in *Metaphysics*, Iota 3, although I do not justify this in full until the next chapter.

*

In this introductory chapter, I have addressed a number of issues that will be important for the remainder of the thesis. The first were problems relating to dating and the relationship between Part II and Iota and their respective works. I argued that the parts of *Parmenides* should be read as just that: parts of a one whole work. I stated that I will avoid reading the *Parmenides* in the context of other dialogues and taking any view on when it was written. I also indicated that I remain agnostic as to issues of the dating and place of Iota with respect to the *Metaphysics* and the Aristotelian corpus more generally and avoid referencing other Aristotelian texts where possible.

I then offered an interpretation of Part II of the *Parmenides*, according to which it is not merely a joke or a set of exercises for a budding philosopher. Rather, is a kind of intellectual training in that it is a demonstration that is designed to help the reader uncover first principles. I also argued that the demonstration is one that we are intended to repeat and alter to construct new demonstrations. Since, I argued, we can coherently substitute different referents for 'one'

[109] 1054b23

and the 'others' without altering the text, we should avoid committing to exactly what the one and the others are. Finally, I outlined key terms, taking *ταὐτό* (without *πεπονθέναι*), *ἕτερον* (without *πεπονθέναι*), *ὅμοιον* and *ἀνόμοιον* to indicate identity, non-identity, dissimilarity and similarity in Part II of the *Parmenides* and *ταὐτό* (without *ἔχειν*), *ἕτερον*/*ἄλλο* (without *ἔχειν*), *ὅμοιον* and *ἀνόμοιον* to indicate identity, non-identity, similarity and dissimilarity in *Metaphysics*, Iota 3.

Chapter Two: Plato's Law and Aristotle's Ways

What are the criteria for identity and non-identity? Answers to this question in contemporary metaphysics fall into two camps. Some opt for a strict version of Leibniz's Law. Then there are those who forego the logical clarity of this version of Leibniz's Law in favour of a more intuitive account. In what follows, I uncover definitions of similarity, dissimilarity, identity and non-identity in the first and second deductions of Part II of the *Parmenides* and *Metaphysics*, Iota 3 and suggest that we can think of identity and non-identity there as divided along these lines. I also argue that reflection on these definitions reveals new strategies that contemporary proponents and opponents of strict Leibniz's Law might use to strengthen their positions.

I begin with the first and second deductions of the Part II of the *Parmenides* and extract plausible definitions of similarity, dissimilarity, identity and non-identity from the text. I argue that these definitions of identity and non-identity yield laws that entail a strict version of Leibniz's Law: for any x and any y, x is identical to y if and only if for any property that x has, y has it and for any property y has, x has it; for any x and any y, x is non-identical to y if and only if there is some property that x has and y does not or that y has and x does not. However, there are differences between the way that contemporary philosophers tend to think of strict Leibniz's Law and the way that Plato treats identity and non-identity in Part II of the *Parmenides*. The most significant of these for contemporary metaphysicians is that in Part II, unlike contemporary metaphysics, identity and non-identity are tightly connected to

similarity and dissimilarity and we find clear definitions of all four. I argue that recognition of this connection reveals a new strategy for defending strict Leibniz's Law.

I then turn to *Metaphysics*, Iota 3. I show that for Aristotle, there are different ways of being identical and non-identity and that his is a not a strict Leibnitian account. However, like Plato, Aristotle holds that similarity and dissimilarity are closely connected to identity and non-identity and he gives us clear definitions of them, in contrast with contemporary metaphysicians. This also points to an area in contemporary philosophy that deserves attention: the role that definitions of similarity and dissimilarity could play in strengthening arguments against strict Leibniz's Law.

Plato's Law

In the previous chapter, I pointed to key terms in the first and second deductions of Part II Plato: *ταὐτό* (without *πεπονθέναι*), *ἕτερον* (without *πεπονθέναι*), *ὅμοιον* and *ἀνόμοιον*. Scholars tend either to assume definitions for these terms with little or no argument[110] or fail to provide them at all.[111] Here, I examine some of the similarity, dissimilarity, identity and non-identity arguments in the first and second deductions in order to extract definitions, show that they are well-supported by the text and fit with taking *ταὐτό* (without *πεπονθέναι*), *ἕτερον* (without *πεπονθέναι*), *ὅμοιον* and *ἀνόμοιον* to indicate identity, similarity, non-identity respectively, as I took them to in the previous chapter.[112]

[110] McCabe (1994), ch 4, Schofield (1996), Scolnicov (2003), pp.85-88, pp.112-115

[111] Allen (1997)

[112] Cf. Allen (1997), McCabe (1994), ch 4, Schofield (1996), Scolnicov (2003)

I begin by reiterating an uncontroversial assumption that I made in the previous chapter: since the first and second deductions mirror one another and Plato uses the same terms in both, we should take the properties that are denied or attributed to the one to be the same in both deductions.

Similarity and Dissimilarity

I turn now to the argument we find at 139e8-140a6. As with all future arguments that I deal with in detail, I do not translate questions and answers as such and although I do sometimes stick very closely to the text,[113] I also translate more loosely where I believe that it helps to clarify arguments without philosophical loss. As such, I provide a table in which the left column contains what I take to be the argument and the right column features the corresponding text:

Argument A	Text (139e8-140a6)
1. That which suffers the identical [with respect to something] is similar [to it].	1. *τὸ ταὐτόν που πεπονθὸς ὅμοιον. - ναί.* (139e8-9)
2. If the one is, it cannot be many.	2. Tacit, from 137d1-2
3. The nature of identity was shown to be separate from that of the one.	3. *τοῦ δέ γε ἑνὸς χωρὶς ἐφάνη τὴν φύσιν τὸ ταὐτόν - ἐφάνη γάρ.* (139e9-140a1)
4. If the one suffered something separate from being one, then it would have suffered being more than one, but this is impossible.	4. *ἀλλὰ μὴν εἴ τι πέπονθε χωρὶς τοῦ ἓν εἶναι τὸ ἕν, πλείω ἂν εἶναι πεπόνθοι ἢ ἕν, τοῦτο δὲ ἀδύνατον. - ναί.* (140a1-3)

[113] See, for example, my translation of *ταὐτό* (with *πεπονθέναι*) and *ἕτερον* (with *πεπονθέναι*).

5. So, the one cannot suffer the identical with respect to itself or something else.	5. *οὐδαμῶς ἔστιν ἄρα ταὐτὸν πεπονθὸς εἶναι τὸ ἓν οὔτε ἄλλῳ οὔτε ἑαυτῷ. - οὐ φαίνεται.* (140a3-4)
6. Therefore, it is not possible for (the one) to be either similar to itself or similar to something else.	6. *οὐδὲ ὅμοιον ἄρα δυνατὸν αὐτὸ εἶναι οὔτε ἄλλῳ οὔτε ἑαυτῷ. - οὐκ ἔοικεν.* (140a5-6)

Premise 1 of this argument tells us that if something 'suffers the identical' with respect to something, it is similar to it. 2 is a principle that underlies the whole of the first deduction[114] and 3 is lifted from a previous argument.[115] 4 tells us that if the one 'suffers something other than being one', it would be more than one, which is impossible (given 2). Since the one cannot 'suffer the identical' either with respect to itself or something else (given 4), it cannot be similar to itself or something else, hence 7.

1 gives us the sufficient conditions for similarity: if something 'suffers the identical' with respect to something, it is similar to it.[116] Notice that this is a general claim and is not limited to any particular things. Hence, we can extract the first important feature of similarity:

I. For any x and any y, if x suffers the identical with respect to y, x is similar to y.

For the time being, I set aside what exactly the opaque 'suffering the identical' means and consider the following argument from the second deduction:

[114] This is uncontroversial – see Harte (2002), McCabe (1994), ch 4 and Rickless (2007) for detailed exposition.

[115] 139d2-5

[116] Cf. 148a3: *τὸ δέ που ταὐτὸν πεπονθὸς ὅμοιον· οὐχί; - ναί.*

Argument B	Text (147c2-8)
1. Since (the one) was shown to be non-identical to the others, the others would also be non-identical to it.	1. *ἐπειδὴ γοῦν ἕτερον τῶν ἄλλων ἐφάνη, καὶ τἆλλά που ἕτερα ἂν ἐκείνου εἴη. – τί μήν;* (147c2-3)
2. So, in this way, (the one) is non-identical to the others so that the others are also non-identical to it, neither more nor less.	2. *οὐκοῦν οὕτως ἕτερον τῶν ἄλλων, ὥσπερ καὶ τἆλλα ἐκείνου, καὶ οὔτε μᾶλλον οὔτε ἧττον; - τί γὰρ ἄν;* (147c3-5)
3. If then they are neither more nor less in this way, they are similar.	3. *εἰ ἄρα μήτε μᾶλλον μήτε ἧττον, ὁμοίως. – ναί.* (147c5-6)
4. By suffering the non-identical with respect to the others and the others likewise suffering the non-identical with respect to (the one), the one suffers the identical with respect to the others and the others suffer the identical with respect to the one.	4. *οὐκοῦν ᾗ ἕτερον εἶναι πέπονθεν τῶν ἄλλων καὶ τἆλλα ἐκείνου ὡσαύτως, ταύτῃ ταὐτὸν ἂν πεπονθότα εἶεν τό τε ἓν τοῖς ἄλλοις καὶ τἆλλα τῷ ἑνί.* (147c6-8)
5. Therefore, the one is similar to the others and the others are similar to the one (implied).	5. (implied)

This argument moves from the one's being non-identical to the others to its being similar to the others and the others being similar to it. In 1, we are told that the one is non-identical to

the others and the others are non-identical to the one, which is straightforward enough. However, Parmenides infers from 1 that the one is non-identical to the others and vice versa 'neither more nor less' in 2, which requires some explanation. I take it that Parmenides does not mean that that the one is non-identical to the others to the same degree that the others are non-identical to it; non-identity does not come in degrees. Instead, he means that in being non-identical to the others, the one has the very same property that the others have in being non- identical to the one: non-identity.

Once we understand this, we can see that Argument B gives us a new feature of similarity. Premise 2 tells us that the one is non-identical to the others, which are non-identical to the one, so that they both have the property of non-identity. According to 3, since they both have the property of non-identity, the one and the others are similar. In 4, after suggesting that the one suffers the non-identical with respect to the others and vice versa,[117] Parmenides claims that the one and the others thereby suffer the identical with respect to one another. Given the conclusion and that the one and the others exhaust all existing things, we can provide another feature of similarity:

II. For any x and any y, if x is similar to y, x suffers the identical with respect to y.

From I and II together, we can infer the following definition of similarity: for any x and any y, x is similar to y if and only if x suffers identical with respect to y.

[117] Notice that this fits with what I show below: in the first and second deductions, for any x and any y, x suffers the identical with respect to y if and only if for any property that x has, y has it and for any property that y has, x has it.

I turn now to provide a definition of dissimilarity based on the text. Consider this argument from the first deduction:

Argument C	Text (140a6-b3)
1. The one cannot be many.	1. Tacit, from 137d1-2
2. That which suffers the identical (with respect to something) is similar (to it).	2. Tacit, from 138e8-9 (Cf. 148a3)
3. The one does not suffer the non-identical [with respect to something], for in that way it would suffer being more than one.	3. *οὐδὲ μὴν ἕτερόν γε πέπονθεν εἶναι τὸ ἕν· καὶ γὰρ οὕτω πλείω ἂν πεπόνθοι εἶναι ἢ ἕν. - πλείω γάρ.* (140a6-7)
4. That which suffers the non-identical either with respect to itself or something else would be dissimilar to itself or something else, if that which suffers the identical with respect to something is similar to it.	4. *τὸ γε μὴν ἕτερον πεπονθὸς ἢ ἑαυτοῦ ἢ ἄλλου ἀνόμοιον ἂν εἴη ἢ ἑαυτῷ ἢ ἄλλῳ, εἴπερ τὸ ταὐτὸν πεπονθὸς ὅμοιον. - Ὀρθῶς.* (140a7-b1)
5. Since, it seems, the one never suffers the non-identical with respect to something, the one is in no way dissimilar either to itself or something non-identical.	5. *τὸ δέ γε ἕν, ὡς ἔοικεν, οὐδαμῶς ἕτερον πεπονθὸς οὐδαμῶς ἀνόμοιόν ἐστιν οὔτε αὑτῷ οὔτε ἑτέρῳ. - οὐ γὰρ οἷόν.* (140b1-3)

Premise 4 tells us that if something 'suffers the non-identical' with respect itself, it is dissimilar to itself and if something 'suffers the non-identical' with respect to something else, it is dissimilar to it. Thus, the following is a feature of dissimilarity:

a. For any x and any y, if x suffers the non-identical with respect to y, x is dissimilar to y.

Notice that this depends on feature I of similarity: *εἴπερ τὸ ταὐτὸν πεπονθὸς ὅμοιον*, hence, the tacit premise 2. Given that Parmenides seems to endorse feature I later in the deduction[118] and that similarity and dissimilarity are clearly supposed to correlate, I take it that there is a second feature of dissimilarity, b, that corresponds to feature II of similarity:

b. For any x and any y, x is dissimilar to y if x suffers the non-identical with respect to y.

Thus, the definition of dissimilarity I adopt is: for any x and any y, x is dissimilar to y if and only if x suffers the non-identical with respect to y.

In order to fully understand the definitions of similarity and dissimilarity, we must establish what 'suffering the identical' (*ταὐτό* + *πεπονθέναι*) and 'suffering the non-identical' (*ἕτερον* + *πεπονθέναι*) mean. They cannot simply indicate identity and non-identity since Plato is careful to change his language in the similarity and dissimilarity arguments; 'suffering the identical' and 'suffering the non-identical' never occur in the identity and non-identity arguments, only in the similarity and dissimilarity arguments. Instead, I suggest that if something 'suffers the identical' with respect to something, there is some feature that they both share. If something 'suffers the non-identical' with respect to something, there is at least one feature that one has and the other does not. Although I do not argue for it here, I take it that in the first and second deductions, having any feature whatsoever amounts to having a property. Hence, I clarify the definitions of similarity and dissimilarity as follows:

[118] 148a3: *τὸ δέ που ταὐτὸν πεπονθὸς ὅμοιον· οὐχί; - ναί.*

For any x and any y, x is similar to y if and only if there is some property that x has and y has.i.e. $\forall x \forall y$ (Sxy $\leftrightarrow \exists F(Fx \wedge Fy)$).

For any x and any y, x is dissimilar to y if and only if there is some property that x has and y does not have or that y has and x does not have i.e. $\forall x \forall y$ (Dxy $\leftrightarrow \exists F$ (Fx $\wedge \neg$Fy) $\vee$ (Fy $\wedge \neg$Fx)).[119]

This interpretation has several advantages. Firstly, taking *ταὐτό* + *πεπονθέναι* and *ἕτερον* + *πεπονθέναι* as I have fits with the following sub-argument from the second deduction:

Argument D	Text (147e6-148a4-6)
1. The one is non-identical to the others and the others are non-identical to the one.	1. Tacit, from 147c2-3
2. Insofar as the one is non-identical to the others and the others are non-identical to the one, in accordance with ⌜the⌝ suffering ⌜of⌝ the non-identical itself, the one would not suffer anything other than the identical with respect to the others.	2. *ἦι ἄρα ἕτερον τῶν ἄλλων τὸ ἓν καὶ τἆλλα τοῦ ἑνός, κατ' αὐτὸ τὸ ἕτερον πεπονθέναι*[120] *οὐκ ἄλλο ἀλλὰ τὸ αὐτὸ ἂν πεπονθὸς εἴη τὸ ἓν τοῖς ἄλλοις·*(147e6-148a3)

[119] I do not mean to commit Plato to the idea that similarity and dissimilarity are relations in the contemporary sense; indeed, Argument D below suggests that they are relative properties. Moreover, as I pointed out above, in the first and second deductions any feature whatsoever to something, including talking or thinking of it in some way, amounts to a property.

[120] A literal translation is: to suffer in accordance with the non-identical itself. However, it is difficult to make sense of an infinitive in this context. In addition, it is not clear what difference 'itself" makes on this translation. Hence, my alternative is preferable, although it deviates somewhat from the text.

3. That which suffers the identical is similar.	*3. τὸ δέ που ταὐτὸν πεπονθὸς ὅμοιον· οὐχί; - ναί.* (148a3)
4. Insofar as the one suffers the non-identical with respect to the others and the others suffer the non-identical with respect to the one, in accordance with this itself, everything with respect to everything [else] would be similar. For everything is non-identical to everything (else).	*4. ἦι δὴ τὸ ἓν ἕτερον τῶν ἄλλων πέπονθεν εἶναι, κατ' αὐτὸ τοῦτο ἅπαν ἅπασιν ὅμοιον ἂν εἴη· ἅπαν γὰρ ἁπάντων ἕτερόν ἐστιν. - Ἔοικεν.* (148a4-6)

Notice that in 4, Parmenides is quite happy to move from the one and the others having the property of dissimilarity with respect to one another to being similar to one another. Thus, it seems that having even one property in common (dissimilarity)[121] is sufficient for similarity, as my proposed definitions suggest.

Secondly, the way that *πεπονθέναι* is used in these arguments is very unusual in Plato.[122] My claim that *ταὐτό* + *πεπονθέναι* and *ἕτερον* + *πεπονθέναι* cannot simply mean having the property of identity or having the property of non-identity fits with a rare, similar use of *πεπονθέναι* at 245a1-2 in the *Sophist*, [123] where, as in the first deduction of the *Parmenides*, there seems to be a tension between something's being one if it is many in any way:

[121] I take it that 'in accordance with this itself' in 4 serves to make it clear that they are similar in virtue of the property of dissimilarity and not in virtue of the respects in which the one and the others are dissimilar - more on this below.

[122] See LSJ

[123] I am grateful to Lesley Brown for pointing this out to me.

Ξένος: *ἀλλὰ μὴν τό γε μεμερισμένον* ***πάθος*** *μὲν* ***τοῦ ἑνὸς*** *ἔχειν ἐπὶ τοῖς μέρεσι πᾶσιν οὐδὲν ἀποκωλύει, καὶ ταύτῃ δὴ πᾶν τε ὂν καὶ ὅλον ἓν εἶναι.*

Θεαίτητος: *τί δ' οὔ;*

Ξένος: *τὸ δὲ* ***πεπονθὸς ταῦτα*** *ἆρ' οὐκ ἀδύνατον αὐτό γε τὸ ἓν αὐτὸ εἶναι;*

Θεαίτητος: *πῶς;*

Ξένος: *ἀμερὲς δήπου δεῖ παντελῶς τό γε ἀληθῶς ἓν κατὰ τὸν ὀρθὸν λόγον εἰρῆσθαι.*

Θεαίτητος: *δεῖ γὰρ οὖν.*

Ξένος: *τὸ δέ γε τοιοῦτον ἐκ πολλῶν μερῶν ὂν οὐσυμφωνήσει τῷ ὅλῳ λόγῳ*

Θεαίτητος: *μανθάνω πότερον δὴ πάθος ἔχον τὸ ὂν τοῦ ἑνὸς οὕτως ἕν τε ἔσται καὶ ὅλον, ἢ παντάπασι μὴ λέγωμεν ὅλον εἶναι τὸὄν;*

Θεαίτητος: *χαλεπὴν προβέβληκας αἵρεσιν.*

Ξένος: *ἀληθέστατα μέντοι λέγεις.* ***πεπονθός*** *τε γὰρ τὸ ὂν* ***ἓν*** *εἶναί πως οὐ ταὐτὸν ὂν τῷ ἑνὶ φανεῖταικαὶ πλέονα δὴτὰ πάντα ἑνὸς ἔσται.*

Θεαίτητος: *ναί.*

Stranger: Nevertheless, nothing hinders that which has parts from having ***the suffering of the one*** *distributed over all of its parts*[124] *and thereby being one since it is all and whole.*

Theaetetus: Very true.

[124] *ἔχειν ἐπὶ τοῖς μέρεσι* is difficult to translate; in fact, it seems to me that this is deliberately ambiguous precisely because the relationship between one and parts is difficult to capture.

Stranger: But isn't it impossible for that which ***suffers these things*** *to be itself one absolutely?*

Theaetetus: How so?

Stranger: That which is truly one must surely be said to be entirely without parts, according to right argument.

Theaetetus: It must.

Stranger: But this kind of thing, consisting of many parts, will not fit at all with this argument.

Theaetetus: I understand.

Stranger: Then does ***being suffer the one*** *and is it in this way one and a whole or should we say that being is not a whole at all?*

Theaetetus: You're offering me a difficult choice.

Stranger: Very true, for, in ***suffering the one,*** *being is obviously not identical to the one, rather everything will be more than one.*

Sophist, 245a1-2

As many commentators have noted, this passage is crucial for understanding the wider context of the dialogue, in part because of Plato's use of *πάθος* and *πεπονθός*, although there is a great deal of disagreement as to why and what its significance is more precisely.[125] This is not a debate we need concern ourselves with here since my aim is just to show that the use

[125] See, for example, Bluck and Gordon (1975) Leigh (2010), Moravcsik (1962).

of *πάθος* and *πεπονθός* in the *Sophist* supports the significance I take from Plato's use of *πεπονθέναι* in the first and second deductions of the *Parmenides*.

The Stranger begins in this passage by arguing that since something with parts must be all and whole, it has the *πάθος* of one distributed among its parts and is thereby one. However, this kind of one cannot be truly one since what is truly one must be partless, whereas this kind of one has many parts. The Stranger then offers Theaetetus a 'difficult choice' (*χαλεπὴν προβέβληκας αἵρεσιν*): either being suffers (*πεπονθός*) the one and is thereby one and a whole or it is not a whole at all. He continues to argue that if being suffers (*πεπονθός*) the one, is not identical to the one; in fact, everything will be more than one.

How should we understand *πάθος μὲν τοῦ ἑνὸς ἔχειν* and *ἑν + πεπονθός* here? Notice that the Stranger's motivation for his claim that something with parts must have the *πάθος* of one distributed among its parts is that it must be all and whole and therefore one. Therefore, having the *πάθος* of one distributed over its parts ought to explain why a whole is one and therefore a unified whole. Reading *πάθος μὲν τοῦ ἑνὸς ἔχειν* as 'having the change of one' and *ἑν + πεπονθός* as 'undergoing the change of oneness' is not fit for this purpose; something with parts is a unified whole because it *is* one, not because it is becoming one. 'Having a share of the one' cannot be right either since it is at odds with the language Plato usually uses to indicate sharing; in fact, Leigh argues that Plato deliberately avoids sharing language here because he later uses participation to solve problems about the relationship between being, one and many.[126]

Nor should we take *πάθος μὲν τοῦ ἑνὸς ἔχειν* and *ἑν + πεπονθός* to indicate being in some state of oneness. Although the meaning of having the *πάθος* of one distributed amongst a whole's parts is obscure, it is unlikely that this could mean having the state of oneness

[126] Leigh (2010)

distributed amongst a whole's parts, given the context of this passage, where the pervasive worry is not about states but rather about parts of oneness, being etc. Plato also makes a distinction between a whole which *is* one and a whole that has the *πάθος* of one distributed over its parts. Thus, it is unlikely *πάθος μὲν τοῦ ἑνὸς ἔχειν* and *ἓν + πεπονθός* also mean having the property of one. Nor can, 'suffering the one' simply mean 'being one' since the Stranger is quite clear that suffering the one is the reason why being would be one. Instead, it seems that it must mean that its parts must be one in some way that explains why, taken collectively, they constitute the whole, although how exactly is opaque.

The way that I have interpreted *ταὐτό + πεπονθέναι* and *ἕτερον + πεπονθέναι* in Part II, as indicating neither states nor change nor simply being identical and being non-identical, fits with Plato's similar use of *ἓν + πεπονθέναι* in the *Sophist* then. However, some might object that there is there are some features of another argument in the second deduction that are at odds with my reading, which occur in the following argument:

Argument E	Text (148c4-d5)
1. Insofar as something suffers the identical, it would not suffer the another.	1. *ἦι ταὐτὸν πέπονθε, μὴ ἀλλοῖον πεπονθέναι* (148c4)
2. In not suffering the another, it would not be dissimilar.	2. *μὴ ἀλλοῖον δὲ πεπονθὸς μὴ ἀνόμοιον* (148c4-5)
3. In not being dissimilar, it would be similar.	3. *μὴ ἀνόμοιον δὲ ὅμοιον εἶναι* (148c5-6)
4. Insofar as it suffers the other, it would be another.	4. *ᾗ δ' ἄλλο πέπονθεν, ἀλλοῖον* (148c6)
5. In being another, it would be dissimilar.	5. *ἀλλοῖον δὲ ὂν ἀνόμοιον εἶναι - ἀληθῆ λέγεις.* (148c6-7)

6. Since the one is identical to the others and because it is non-identical (to the others), for both or either one of these reasons, it is similar and dissimilar to the others.	6. *ταὐτόν τε ἄρα ὂν τὸ ἓν τοῖς ἄλλοις καὶ ὅτι ἕτερόν ἐστι, κατ' ἀμφότερα καὶ κατὰ ἑκάτερον, ὅμοιόν τε ἂν εἴη καὶ ἀνόμοιον τοῖς ἄλλοις - πάνυ γε* (148c7-d1)
7. Since it is non-identical to itself and identical to itself, for both or either one of these reasons, it is similar and dissimilar [to itself].	7. *οὐκοῦν καὶ ἑαυτῷ ὡσαύτως, ἐπείπερ ἕτερόν τε ἑαυτοῦ καὶ ταὐτὸν ἑαυτῷ ἐφάνη, κατ' ἀμφότερα καὶ κατὰ ἑκάτερον ὅμοιόν τε καὶ ἀνόμοιον φανήσεται; - ἀνάγκη* (148d1-4)

Notice that in this argument, we find a new use of *πεπονθέναι*: *ἀλλοῖος/ἄλλο + πεπονθέναι.*[127] Plato cannot be using *ἕτερον + πεπονθέναι* and *ἀλλοῖος/ἄλλο + πεπονθέναι* interchangeably since there is a marked shift from the former to the latter when we reach this argument. Moreover, he is quite consistent in using *ἀλλοῖος/ἄλλο + πεπονθέναι* and not *ἕτερον + πεπονθέναι* this passage. Thus, *πεπονθέναι* must have some significance that explains why it features with both *ἀλλοῖος/ἄλλο* and *ἕτερον* such that *ἀλλοῖος/ἄλλο + πεπονθέναι* is not reduced to *ἕτερον + πεπονθέναι*. Some might argue that I am unable to offer such an explanation.

This objection is not persuasive. Notice that the argument begins with Parmenides saying, '*Insofar as* (*ᾗι*) something suffers the identical'. I take it that this means something like 'to the extent that something is similar to something' i.e. in respect of shared properties. On my understanding of the definitions of 'suffering the identical' and 'suffering the non-identical', 'insofar as something suffers the identical, it does not suffer the non-identical' is true; for any

[127] I take it that *ἀλλοῖος + πεπονθέναι* and *ἄλλο + πεπονθέναι* are equivalent.

x and any y, with respect to those properties that both x and y have, there is no property that x has and y does not or vice versa. Hence, if Iqbal the aardvark and Magid the elephant both have the property of being grey, then insofar as they are grey, there is no property that Iqbal has that Magid does not or vice versa.

I suggest that 'insofar as something suffers the identical, it does not suffer another/the other' means something slightly different: for any x and any y, in respect of those properties that x has and y has, it is not the case that x has the property of being another *thing* from from y and vice versa. Hence, if Iqbal the aardvark and Magid the elephant have the property of being grey, then insofar as they are grey, Iqbal cannot have the higher-order property of being another thing with respect to Magid and Magid cannot have the higher-order property of being a another thing with respect to Iqbal. Conversely, insofar as something suffers the non-identical with respect to something, it will suffer the other with respect to it; if Magid the elephant has the property of being able to swim and Iqbal the aardvark does not, they must have each have the higher-order properties of being another thing with respect to the other.

This explains why Plato uses *ἀλλοῖος/ἄλλο* + *πεπονθέναι* in this passage. The others are any of the things that are not the one, so *ἀλλοῖος/ἄλλο* is appropriate. We can also see why Plato uses *πεπονθέναι* with *ἀλλοῖος/ἄλλο*, just as he did with *ταὐτό* and *ἕτερον*: shared properties and a discrepancy in properties are relevant. Nevertheless, there is an important difference between Plato's uses of *ἕτερον* + *πεπονθέναι* and *ἀλλοῖος/ἄλλο* + *πεπονθέναι*; the former occurs at a lower order than the latter and the focus on the latter is on things as well as properties.

I adopt the following definitions of similarity and dissimilarity then: for any x and any y, x is similar to y if and only if there is some property that x has and y has.i.e. $\forall x \forall y$ (Sxy $\leftrightarrow$

$\exists F(Fx \wedge Fy)$); for any x and any y, x is dissimilar to y if and only if there is some property that x has and y does not have or that y has and x does not have i.e. $\forall x \forall y$ (Dxy $\leftrightarrow \exists F(Fx \wedge \neg Fy) \vee (Fy \wedge \neg Fx)$.

Identity and Non-Identity

Equipped with these definitions, we can provide plausible definitions of identity and non-identity. Reconsider Argument E:

Argument E	Text (148c4-d5)
1. Insofar as something suffers the identical, it would not suffer the another.	1. *ᾗι ταὐτὸν πέπονθϵ, μὴ ἀλλοῖον πϵπονθέναι* (148c4)
2. In not suffering the another, it would not be dissimilar.	2. *μὴ ἀλλοῖον δὲ πϵπονθὸς μὴ ἀνόμοιον* (148c4-5)
3. In not being dissimilar, it would be similar.	3. *μὴ ἀνόμοιον δὲ ὅμοιον ϵἶναι* (148c5-6)
4. Insofar as it suffers the other, it would be another.	4. *ᾗ δ' ἄλλο πέπονθϵν, ἀλλοῖον* (148c6)
5. In being another, it would be dissimilar.	5. *ἀλλοῖον δὲ ὂν ἀνόμοιον ϵἶναι - ἀληθῆ λέγϵις.* (148c6-7)
6. Since the one is identical to the others and because it is non-identical (to the others), for both or either one of these reasons, it is similar and dissimilar to the others.	6. *ταὐτόν τϵ ἄρα ὂν τὸ ἓν τοῖς ἄλλοις καὶ ὅτι ἕτϵρόν ἐστι, κατ' ἀμφότϵρα καὶ κατὰ ἑκάτϵρον, ὅμοιόν τϵ ἂν ϵἴη καὶ ἀνόμοιον τοῖς ἄλλοις - πάνυ γϵ* (148c7-d1)

7. Since it is non-identical to itself and identical to itself, for both or either one of these reasons, it is similar and dissimilar [to itself].	7. *οὐκοῦν καὶ ἑαυτῷ ὡσαύτως, ἐπείπερ ἕτερόν τε ἑαυτοῦ καὶ ταὐτὸν ἑαυτῷ ἐφάνη, κατ' ἀμφότερα καὶ κατὰ ἑκάτερον ὅμοιόν τε καὶ ἀνόμοιον φανήσεται; - ἀνάγκη* (148d1-4)

Premise 2 tells us that if something does not have the property of being another thing from something, it would not be dissimilar to it. Since the Parmenides does not qualify 'dissimilar' here, I read this as 'dissimilar in any respect'. I also take it that for any x and any y, if x does not have the property of being another thing from y, x is not non-identical to y and since identity and non-identity are mutually exclusive, x is identical to y.[128] This allows us to extract the following features of identity/non-identity:

I. For any x and any y, if x is not non-identical to y, x is not dissimilar to y in any respect.
II. For any x and any y, if x is identical to y, x is not dissimilar to y in any respect.

According to 3, if something thing is not dissimilar to something in any respect, it would be similar to it. i.e. for any x and any, if there is no property that x has and y does not or that y has and x does not, x must be similar to y (because any two things must have some properties). On the definitions of similarity and dissimilarity above, for any x and any y, if x is not dissimilar to y in any respect, it must be similar to y in every respect since nothing can both share and not share the very same property with anything. This, together with I and II, gives us further features of identity and non-identity:

[128] In Chapter Four, I address a worry that there is a point in the second deduction where Parmenides denies this but argue that this is misguided.

III. For any x and any y, if x is not non-identical to y, x is similar to y in every respect.

IV. For any x and any y, if x is identical to y, x is similar to y in every respect.

Consider 5. Here, Parmenides tells us that if something is another thing from something, it is dissimilar to it. Parmenides does not qualify dissimilarity here. Consequently, we might think that he means for any x and any y, if x is another thing from y, it is dissimilar to y in every respect. Alternatively, we might interpret it as: for any x and any y, if x is another thing from y, it is dissimilar to y in at least one respect. I opt for the second since, on my understanding of *ἀλλοῖος*/*ἄλλο* + *πεπονθέναι*, there is no good reason to suppose that something can only have the higher order property of being another thing for something if they share no properties whatsoever.

I assumed above that if something is another thing from something, it is non-identical to it. I also pointed out that nothing can be both similar and dissimilar in the same respect on the definitions of similarity and dissimilarity in the first and second deductions of the *Parmenides*. This, together with 5, gives us two further features of non-identity:

V. For any x and any y, if x is non-identical to y, x is dissimilar to y in at least one respect.

VI. For any x and any y, if x is non-identical to y, x is not similar to y in every respect.

II, IV, V and VI together give us part of the definitions of identity and non-identity:

For any x and any y, if x is identical to y, x is not dissimilar to y in any respect and is similar to y in every respect.

For any x and any y, if x is non-identical to y, x is dissimilar to y in at least one respect and x is not similar to y in every respect.

As they stand, these allow for:

There is some x and some y, such that x is not dissimilar to y in any respect and is similar to y in every respect and x is non-identical to y.

There is some x and some y, such that x is dissimilar to y in at least one respect and x is not similar to y in every respect and x is identical to y.

However, the former is just obviously false. Thus, I take the full definition of identity to be: for any x and any y, x is identical to y if and only if x is not dissimilar in any respect and similar to y in every respect. The latter is not obviously false. However, it is incompatible with the full definition of identity. Thus, I adopt the following definition of non-identity: for any x and any y, x is non-identical to y if and only if x is dissimilar to y in at least one respect and x is not similar to y in every respect.

I have uncovered definitions of similarity, dissimilarity, identity and non-identity that are plausible, given the text. However, there are a number of objections to my approach to uncovering definitions of similarity, dissimilarity, identity and non-identity from the first and second deductions. Firstly, it might be argued that the very fact that the similarity, dissimilarity, identity and non-identity arguments end in contradictory conclusions means that we are not entitled to extract plausible definitions from the text. This is not troubling. Arguments in Part II of the *Parmenides* often contain sensible premises even if the conclusions are contradictory; in fact, that is what makes the arguments so worrying on some repetitions of the demonstration. In addition, these sensible premises often occur at the beginning of arguments, which are the parts of the arguments I have largely focused on. Furthermore, my claim is not that we find Plato's definitive concepts of similarity, dissimilarity, identity and non-identity here; rather I am simply extracting definitions that are plausible if we read the text closely.

The second objection is that I have uncovered these definitions by examining the treatment of dissimilarity and similarity before identity and non-identity. However, the identity and non-identity arguments precede the similarity and dissimilarity arguments in the text. Thus, my definitions depend on reading the text in the wrong order, which we are not entitled to do. We can also discard this objection. In Platonic dialogues, we are often prompted to reflect on material in light of what has already been said. For example, in Book X of the *Republic*, understanding Socrates' justification of his new views on the place of poetry in the state requires looking back to the division of the soul in Book IV. Nevertheless, Book X also helps us to further understand the division of the soul in Book IV. Moreover, the identity and non-identity arguments do not require having firm definitions of identity and non-identity. The identity and non-identity arguments in the first deduction are driven by the assumption that the one cannot be many or have parts and the corresponding arguments in the second deduction are driven by the assumption that the one is many and a whole of parts.[129] We can assess these arguments without having definitions of identity and non-identity then.

Leibniz's Law

Adopting the plausible definitions of similarity, dissimilarity, identity and non-identity above is defensible then. I turn now to show that these definitions entail two laws that relate to Leibniz's Law, reflection on which could contribute to contemporary debates.

Recall the definitions of similarity, dissimilarity, identity and non-identity:

[129] This is uncontentious - see Harte ((2002), ch 2) McCabe ((1994), ch 4) for detailed exposition.

For any x and any y, x is similar to y if and only if there is some property that x has and y has i.e. $\forall x \forall y (Sxy \leftrightarrow \exists F(Fx \wedge Fy))$

For any x and any y, x is dissimilar to y if and only if there is some property that x has and y does not have or that y has and x does not have i.e. $\forall x \forall y (Dxy \leftrightarrow \exists F(Fx \wedge \neg Fy) \vee (Fy \wedge \neg Fx))$.

For any x and any y, x is identical to y if and only if x is not dissimilar to y in any respect and x is similar to y in every respect.

For any x and any y, x is non-identical to y if and only if x is not dissimilar to y in any respect and x is similar to y in every respect.

These definitions allow us to extract laws of identity and non-identity:[130]

For any x and any y, x is identical to y if and only if for any property that x has, y has it and for any property that y has, x has it i.e. $\forall x \forall y ((x=y \leftrightarrow \forall F (Fx \leftrightarrow Fy))$

For any x and any y, x is non-identical to y if and only if there is at least one property that x has and y does not or that y has and x does not i.e $\forall x \forall y (x \neq y \leftrightarrow \exists F((Fx \wedge \neg Fy) \vee (Fy \wedge \neg Fx))$[131]

There are a number of principles associated with Leibniz's Law. The first two are:

[130] There is a question about how these laws differ from the definitions of identity and non-identity, especially given that the definition of dissimilarity and the law of non-identity are so close (more on this closeness in the next chapter). Although I do not have space to discuss it here, I take it that one important difference is that the definitions of identity and non-identity tell us about the relationship between identity and non-identity and similarity and dissimilarity, whereas we can consider these laws independently of similarity and dissimilarity.

[131] It follows from this that for any x and any y, x is non-identical to y if and only if x is dissimilar to y, which we might find troubling - more on this in the next chapter.

1. The Identity of Indiscernibles: for any x and any y, if, for every property F, x is F if and only if y is F, then x and y are identical i.e. $\forall x \forall y((\forall F (Fx \leftrightarrow Fy) \rightarrow x=y)$.
2. The Indiscernibility of Identicals: for any x and any y, if x and y are identical, then for every property, F, x is F if and only if y is F i.e $\forall x \forall y((x=y \rightarrow \forall F (Fx \leftrightarrow Fy))$.

In contemporary metaphysics, discussions of Leibniz's Law have often focused on these principles and taken non-identity to fall out of them.[132] However, there are correlates of 1 and 2 that are often implicit:[133]

3. For any x and any y, if there is some property that x has and y does not or that y has and x does not, x is non-identical to y i.e $\forall x \forall y(\exists F(((Fx \wedge \neg Fy) \vee (Fy \wedge \neg Fx)) \rightarrow x \neq y))$.
4. For any x and any y, x is non-identical to y if there is some property that x has and y does not or that y has and x does not i.e. $\forall x \forall y(x \neq y \rightarrow \exists F((Fx \wedge \neg Fy) \vee (Fy \wedge \neg Fx))$

Notice that these Leibnitian principles are all entailed by the laws that I uncovered in Part II; 1 and 2 follow from the law of identity and 3 and 4 follow from the law of non-identity. In this sense then, the laws of identity and non-identity that we find in Plato are familiar to us from contemporary metaphysics.[134]

---

[132] For example, Hawthorne (2003), Forest (2016), Quine (1960), pp. 114-118

[133] McTaggart ((1900), vol. 1, ch 10) is unusual in making 3 explicit.

[134] I am not the first to notice the connection between the treatment of identity and non-identity in the first and second deductions of Part II of the *Parmenides* and Leibniz's Law; McCabe ((1999), ch 4) makes the same observation. However, she does not offer a detailed textual analysis and does not extract clear definitions of identity and non-identity to support this. In addition, she does not separate out the principles associated with Leibniz's Law, as I do.

However, there is also an important discrepancy between what we find in Plato and in contemporary metaphysics. Discussions of numerical identity and non-identity in contemporary metaphysics usually focus on answering three, tightly connected questions:

1. What is the definition of identity?[135]
2. How can we account for what seem to be uncontroversial instances of identity and non-identity?[136]
3. Can we reconcile the definition of identity with formal logic?[137]

Plato occupies an unusual position when we reflect on him alongside most contemporary metaphysicians. He seems to be equally interested in identity and non-identity, consistently including non-identity arguments as well as identity arguments. In addition, in Part II of the *Parmenides*, we are presented with puzzles concerning identity and non-identity, rather than attempts to provide explicit, definitive answers to any of the above questions, which contemporary philosophers usually take to be the aim of discussions about identity. For example, in Part II, we are confronted with the idea that absolutely anything that holds of something imports a property; being related in some way to something, being in some particular state etc.; in fact, we find that even treating something in some way imports a property. This is particularly evident at the end of the first deduction, where Parmenides infers from his claim that there is no name, description, knowledge, perception or belief of the one that the one is not named, spoken of, known. This suggests that there are properties like has a name, has a description (which would pluralise the one) and different properties, is

[135] See, for example, Cameron (2014), Lowe (1989), Williamson (1990), ch 9.

[136] See, for example, Baxter (1988), Edgington (2002).

[137] See, for example Bacon and Russell (2017), Caie et al. (2019), Diehl (2018), Dummett (1991).

named x by y, is spoken of as x by y (which would pluralise the one for a different reason). However, we might think that these are not really distinct properties. Thus, Plato prompts us to reflect on what exactly a property is and what sorts of things count as properties, which is obviously relevant for any notion of identity.[138]

There is a much more significant discrepancy. In contemporary debates about numerical identity, similarity and dissimilarity are rarely given explicit attention and where they are, clear definitions of similarity and dissimilarity are not provided. In contrast, as we have seen, identity, non-identity, similarity and dissimilarity are closely connected and we can find definitions of all four, as well as the two laws of identity and non-identity above, in Part II of the *Parmenides*.[139]

I suggest here that definitions of similarity and dissimilarity may have an important role for contemporary metaphysicians in constructing a defence of what I call strict Leibniz's Law: the four principles above taken together. Reconsider the questions that I suggested contemporary metaphysicians are concerned with:

1. What is the definition of identity?
2. How can we account for what seem to be uncontroversial instances of identity and non-identity?
3. Can we reconcile the definition of identity with formal logic?

One of the strengths of strict Leibniz's Law, as I suggested above, is that it makes formal logic possible; indeed, we might think that a good quantificational theory is impossible

[138] Compare contemporary debates about 'thisness' or 'haeccity' and 'abundant' and 'sparse' properties in the context of identity.

[139] Interestingly, Leibniz also connected the identity of indiscernibles with (perfect) similarity – see, Rodriguez-Pereyra (2014) for a discussion of how.

without it.[140] Thus, its proponents can give a good answer to 3. However, supporters of strict Leibniz's Law are often criticised for failing to adequately deal with 2 and thereby 1.[141] This is the criticism that I concentrate on here.

One reason why a proponent of strict Leibniz's Law will struggle to deal with 2 is that strict Leibniz's Law entails that many of the things that seem very obviously identical are not. Suppose Nemo on Monday has seven hundred and three scales but Nemo on Tuesday only has seven hundred and two. According to strict Leibniz's Law, Nemo on Monday is non-identical to Nemo on Tuesday since Nemo on Monday has a property that Nemo on Tuesday does not have (seven hundred and three scales) and Nemo on Tuesday has a property that Nemo on Monday does not (seven hundred and two scales). Worse still, even if Nemo on Tuesday has exactly the same number of scales as Nemo on Monday, they cannot be identical since Nemo on Monday has the property of existing on Monday but Nemo on Tuesday does not and Nemo on Tuesday has the property of existing on Tuesday, whereas Nemo on Monday does not.

At first, we might think that this simply amounts to the problem of how things can be identical over time since each of these changes occurs over time. As such, we might expect contemporary metaphysicians who subscribe to strict Leibniz's Law to solve this just by providing a good solution to the problem of persistence. Matters are a little more complicated than this. Although the problem of identity over time that contemporary metaphysicians are concerned with is closely related to the problem above, it is not the same. In providing solutions to the problem of identity over time, philosophers tend to begin by assuming that things *must* be identical over time, not by providing criteria for identity and then worrying

[140] Black (1952), p. 8, Cartwright (1979), Wiggins (1967), pp. 1-7, Quine (1951).

[141] Cf. Black (1952)

about how to reconcile them with change, if at all.[142] Hence, when outlining the differences between three- and four-dimensionalism, a purported solution to the problem of identity over time, Sider writes, 'Yet another poor characterisation of the dispute is the claim one sometimes hears that the disagreement is over whether an object at one time is ever "strictly" identical to an object at another. This claim about "strict identity" isn't at all controversial: since everyone agrees that every object is strictly identical with itself, everyone who accepts the basic phenomenon of persistence over time accepts the existence of objects that exist at one time and are strictly identical with objects that exist at other times.'[143]

Nevertheless, contemporary attempts to solve to the problem of identity over time may provide a way to defend strict Leibniz's Law. There are a plethora of strategies that contemporary metaphysicians have used in attempting to deal with the problem of persistence that I do not have space to discuss here. However, a broad characterisation of what I take to be the most promising approaches is enough to show how they might be used to attempt to defend strict Leibniz's Law and some of the problems with them.

Some philosophers respond to the problem of identity over time by maintaining that objects 'endure' or 'perdure'. Lewis characterises the difference as follows:

> *Let us say that something* ***persists*** *iff, somehow or other, it exists at various times; this is the neutral word. Something* ***perdures*** *iff it persists by having different temporal parts, or stages, at different times. though no one part of it is wholly present at more than one time; whereas it* ***endures*** *iff it persists by being wholly present at more than one time. Perdurance corresponds to the way a road persists through space; part of it is here and part of it is there,*

[142] See for example, Thomson (1983), van Inwagen (1990), Wiggins (1980).

[143] Sider (1997), p. 2

> *and no part is wholly present at two different places. Endurance corresponds to the way a universal, if there are such things, would be wholly present wherever and whenever it is instantiated. Endurance involves overlap: the content of two different times has the enduring thing as a common part. Perdurance does not.*
>
> *On the Plurality of Worlds* (1986), p. 202

On Lewis' understanding of perdurance and endurance, those who subscribe to perdurance would think of Nemo as having temporal parts, each of which he has at a different time and none of which is wholly present at more than one time. Consider this in the context of strict Leibniz's Law: for any x and any y, x is identical to y if and only if for any property that x has, y has it and for any property that y has, x has it. A perdurantist can claim that Nemo is identical to himself even if he has seven hundred and three scales on Monday and seven hundred and two on Tuesday because he has both properties; one of his temporal parts has the first property and another has the second property. However, this solution is not free from objections. For example, we might think that what is doing the work in identity claims for the perdurantist is not properties but temporal parts. Thus, they are not relying on strict Leibniz's Law but something different: for any x and any y is identical to y if and only if for any temporal part that x has, y has it and for any temporal part that y has, x has it. Alternatively, we might complain that temporal parts on their own are not enough to explain the unity of an individual - for that, we need some, additional mereological account that explains how these parts form a unified whole. As such, appealing to perdurance is not straightforward.

How does the endurantist fare? As Lewis characterises her, she would maintain that objects like Nemo have spatial parts but not temporal parts. Nemo and each of his spatial parts are

wholly present on both Monday and Tuesday. We might think that this allows us to explain obvious cases of identity without abandoning strict Leibniz's Law. Nemo has one spatial part that has seven hundred and three scales and another that has seven hundred and two. Since both parts are wholly present in Nemo, he has all and only those properties that he himself has. Likewise, Nemo has all and only those properties that he himself has, despite existing on both Monday and Tuesday. Again, this argument is not unproblematic. For example, it again seems that what is doing the work here is not properties but parts: for any x and any y, x is identical to y if and only if for any spatial part that x has, y has it and for any spatial part that y has, x has it. Thus, strict Leibniz's Law is abandoned. Again, we might also complain that this requires a complex story about how these parts are structured so as to explain the unity of an individual. As such, appealing to endurantist accounts of persistence is by no means straightforward.

A simpler solution is to just argue that Nemo atemporally has the property of having seven hundred and three scales on Monday.[144] Nemo also atemporally has the property of having seven hundred and two scales on Tuesday. Likewise, Nemo atemporally has the property of existing on Monday and atemporally has the property of existing on Tuesday. Since there is never any time at which he does not share all and only those properties that he himself, he is identical to himself in both cases. Again, we might think that this is also problematic for two reasons. Firstly, we might argue that on this view, although there is no time at which he does not share all and only those properties that he himself has, there is no time at which he does either. Thus, it is difficult to see how the criteria for strict Leibniz's Law could be met. Secondly, it is difficult to see how something in time like Nemo could have the property of *existence* at some time atemporally.

[144] See Myro (1997) for an interesting discussion of atemporality in identity claims.

Of course, I have not shown that any of these approaches are indefensible or given them anything more than a very cursory treatment here. However, I have demonstrated that they are not without challenges. In addition, there is another way that proponents of strict Leibniz's Law might be able to deal with this problem that I turn to discuss next - and it is one that requires fewer ontological and metaphysical commitments. As such, I take it to be attractive.

This strategy involves maintaining strict Leibniz's Law but explaining cases like Nemo above by arguing that although Nemo on Monday and Tuesday are non-identical, they appear identical because they are similar. Although it has not been widely discussed in contemporary metaphysics, it is the approach that Douven and Decock use.[145] They begin by outlining various 'paradoxes of identity'.[146] The first is context-sensitivity. Nemo on Monday and Nemo on Tuesday seem to be identical to most. However, suppose I am breeding fish for a competition, in which the judges examine the fish over a number of days, looking for any damage at all. In this context, it seems to me that Nemo on Monday and Nemo on Tuesday are non-identical.

[145] Douven and Decock (2010). Note that similarity/resemblance is also discussed in connection with identity by Greenlee (1968) and Deutsch (1998) However, Greenlee's argues only that there is a principle - if x and y are discernible, then x and y are similar – that is worth exploring without committing to a definition of similarity. In addition, he does not apply similarity to a defence of strict Leibniz's Law. Deutsch argues that a relation of 'general similarity' can be accommodated by formal logic but neither explains what 'general similarity' is nor connects it with this problem. In light of this and for reasons of space, I have chosen to discuss Douven and Decock's more promising paper.

[146] It does not seem to me that what they consider to be paradoxes really are. Since this is not relevant for my discussion, I leave this problem aside here.

The second paradox is what Douven and Decock term 'Intrasitivity'. Nemo with seven hundred and three scales and Nemo with seven hundred and two seem to be identical and Nemo with seven hundred and two scales seems to be identical to Nemo with seven hundred and one and so on. However, if Nemo loses a scale every day until he has no scales, we think that Nemo with seven hundred and three scales is not identical to Nemo without any scales. This violates the transitivity of identity that is entailed by strict Leibniz's Law.

The third paradox is 'Vagueness'. Consider Amy Winehouse's version of 'Valerie', which was originally written and sung by the Zutons. Are the two versions identical? A perfectly legitimate answer may be not "Yes" or "No" but something less precise: "Sort of". The fourth is 'Interpersonal Variability'; people's intuitions about what count as cases of identity and non-identity differ.

Douven and Decock argue that none of these are paradoxes that should worry philosophers. Rather, they just reveal that that ordinary notions of identity are often incompatible with philosophical notions of identity.[147] In light of this, they propose that the criteria for true ordinary identity statements are different from true philosophical identity statements. In the latter, the criteria are those on Leibniz's Law. In the former, the criteria are: for any x and any y, x is identical to y if and only if x and y are highly similar in all relevant respects, where 'highly' and 'relevant' are context-dependent.

Initially, Douven and Decock's distinction between philosophical and ordinary notions of identity looks promising for proponents of strict Leibniz's Law since they appear to be able to use it to maintain that what they provide is criteria for identity proper whilst explaining

[147] Baxter (1988) also discusses stricter and looser notions of identity but does not connect them with these paradoxes or with similarity.

why this is at odds with what seem to be obvious cases of identity. However, Douven and Decock provide no precise criteria for what counts as similar. In addition, there are cases where context-sensitivity, intrasitivity, vagueness and interpersonal variability do not seem to play any role in our ordinary notions of identity but still conflict with strict Leibniz's Law, for example, in the case of Nemo at t1 and Nemo at t2, where the difference between t1 and t2 is immeasurably small. In light of this, the opponent of strict Leibniz's Law will simply respond by claiming that similarity is too loose a notion to be genuinely explanatory.

Moreover, she will argue, there are at least some cases where things seem to be identical, despite not meeting the criteria for strict Leibniz's Law because they are identical for *both* philosophers and non-philosophers, not because they are highly similar in relevant respects in non-philosophical contexts. Without proper criteria for similarity, this looks troubling for Douven and Decock. However, we have found quite clear criteria for similarity in the first and second deductions of the *Parmenides*. As such, relying on similarity and dissimilarity as they are characterised there is more promising.

Another weakness of Douven and Decock's account is that they provide no definition or criteria for dissimilarity. Yet, we might think this is crucial, given its obvious correlation with similarity. Since Plato provides a definition of dissimilarity, this is available to him. Again then, it seems that the definitions I have uncovered in Part II of the *Parmenides* may provide tools to construct a defence of strict Leibniz's Law that we do not find in contemporary metaphysics. As such, it is plausible to think that contemporary philosophers may have something to learn from Plato.

I have extracted plausible definitions of similarity and dissimilarity, identity and non-identity, which entail two laws of identity and non-identity from the first and second deductions of

Part II of Plato's *Parmenides*. I adopt these for the remainder of this thesis. I have also suggested that in considering these alongside contemporary metaphysics, we find some interesting discrepancies. The most significant of these is that in Part II, similarity and dissimilarity are closely connected with identity and non-identity and we find clear criteria for all four. I have argued that this is relevant for contemporary metaphysicians since a good account of similarity and dissimilarity of this sort may make a stronger case for strict Leibniz's Law.

Aristotle's Ways

I turn now to outline what I take Aristotle's definitions of identity, non-identity, similarity and dissimilarity to be in *Metaphysics*, Iota 3. I begin by discussing identity and non-identity before moving on to similarity and dissimilarity. I then show that uncovering Aristotle's accounts of similarity and dissimilarity in the context of my discussion of Plato reveals another gap in the debate about strict Leibniz's Law in contemporary metaphysics.

Metaphysics, Iota 3 begins with discussion of opposites. Aristotle claims that one and many are opposites and suggests that identity and non-identity, similarity and dissimilarity and equality and inequality have a close relationship to one and many.[148] As Castelli points out, that Aristotle apparently references the lost work *The Division of the Contraries* in outlining this relationship suggests that Aristotle is thinking of some kind of table of opposites, where identity, similarity and equality belong in a column with one at its head and non-identity, dissimilarity and inequality belong in a different column with many at the top.[149] She also

[148] 1054a20-33

[149] Castelli (2018), p. 100.

recognises that, given that Aristotle later defines identity, non-identity in terms of one and not one and then similarity and dissimilarity in terms of identity and non-identity, it seems very likely that the tables listed of pairs of opposites in order of definitional priority.[150]

Identity and 'Metaphysics' I.1

Aristotle's definition of identity immediately follows this discussion of opposites:

> λεγομένου δὲ τοῦ ταὐτοῦ πολλαχῶς, ἕνα μὲν τρόπον κατ' ἀριθμὸν λέγομεν ἐνίοτε αὐτό, τὸ δ' ἐὰν καὶ λόγῳ καὶ ἀριθμῷ ἓν ᾖ, οἷον σὺ σαυτῷ καὶ τῷ εἴδει καὶ τῇ ὕλῃ ἕν· ἔτι δ' ἐὰν ὁ λόγος ὁ τῆς πρώτης οὐσίας εἷς ᾖ, οἷον αἱ ἴσαι γραμμαὶ εὐθεῖαι αἱ αὐταί, καὶ τὰ ἴσα καὶ ἰσογώνια τετράγωνα, καίτοι πλείω· ἀλλ' ἐν τούτοις ἡ ἰσότης ἑνότης.
>
> *Since identity*[151] *is said in many ways, in one way, that which we sometimes call 'it itself'(is called identical) according to number, in another way if (what is called identical) is one in number and account, for example, you are one with yourself in both form and matter. Furthermore, we call things identical if the account of the primary substance is one: for example, the equal straight lines are identical and so also are the quadrangular figures that are equal and have equal angles and there are more such cases, but in these, equality is oneness.*
>
> 1054a33-1054b3

In the passage above, Aristotle tells us that things are identical in three ways:

[150] ibid.

[151] Recall that I maintained that *ταὐτό* indicates identity in *Metaphysics*, Iota 3 in the previous chapter, hence my translation.

1. In number
2. If they are one in number and account
3. If the account of their primary substance is one.

In order to understand these, we must first reflect on what is meant by number (*ἀριθμός*), account (*λόγος*) and one (*ἕν*). For this, I suggest that we look to the ways of being one that Aristotle outlines in Iota 1:[152]

> *τό τε γὰρ συνεχὲς ἢ ἁπλῶς ἢ μάλιστά γε τὸ φύσει καὶ μὴ ἁφῇ μηδὲ δεσμῷ (καὶ τούτων μᾶλλον ἓν καὶ πρότερον οὗ ἀδιαιρετωτέρα ἡ κίνησις καὶ μᾶλλον ἁπλῆ)· ἔτι τοιοῦτον καὶ μᾶλλον τὸ ὅλον καὶ ἔχον τινὰ μορφὴν καὶ εἶδος, μάλιστα δ' εἴ τι φύσει τοιοῦτον καὶ μὴ βίᾳ, ὥσπερ ὅσα κόλλῃ ἢ γόμφῳ ἢ συνδέσμῳ, ἀλλὰ ἔχει ἐν αὑτῷ τὸ αἴτιον αὐτῷ τοῦ συνεχὲς εἶναι. τοιοῦτον δὲ τῷ μίαν τὴν κίνησιν εἶναι καὶ ἀδιαίρετον τόπῳ καὶ χρόνῳ, ὥστε φανερόν, εἴ τι φύσει κινήσεως ἀρχὴν ἔχει τῆς πρώτης τὴν πρώτην, οἷον λέγω φορᾶς κυκλοφορίαν, ὅτι τοῦτο πρῶτον μέγεθος ἕν. τὰ μὲν δὴ οὕτως ἓν ᾗ συνεχὲς ἢ ὅλον, τὰ δὲ ὧν ἂν ὁ λόγος εἷς ᾖ, τοιαῦτα δὲ ὧν ἡ νόησις μία, τοιαῦτα δὲ ὧν ἀδιαίρετος, ἀδιαίρετος δὲ τοῦ ἀδιαιρέτου εἴδει ἢ ἀριθμῷ· ἀριθμῷ μὲν οὖν τὸ καθ' ἕκαστον ἀδιαίρετον, εἴδει δὲ τὸ τῷ γνωστῷ καὶ τῇ ἐπιστήμῃ, ὥσθ' ἓν ἂν εἴη πρῶτον τὸ ταῖς οὐσίαις αἴτιον τοῦ ἑνός. λέγεται μὲν οὖν τὸ ἓν τοσαυταχῶς, τό τε συνεχὲς φύσει καὶ τὸ ὅλον, καὶ τὸ καθ' ἕκαστον καὶ τὸ καθόλου, πάντα δὲ ταῦτα ἓν τῷ ἀδιαίρετον εἶναι τῶν μὲν τὴν κίνησιν τῶν δὲ τὴν νόησιν ἢ τὸν λόγον.*
>
> *For what is continuous, either without qualification or most of all, (that which is continuous) by nature and not by contact or in virtue of bonds (is said to be one) - and of these things, those*

[152] Castelli ((2018) pp.103-108), uses a different strategy, relying on texts other than Iota to explicate the ways of being *ταὐτό*, although she acknowledges that this will be controversial.

are more one and prior whose motion is more indivisible i.e. simpler in a higher degree. Furthermore, that which is a whole and has some shape and form is such in still higher a degree, and most of all if something is such by nature and not by force (like those things which are joined together in virtue of glue or nails or bonds) but has in itself the cause of its being continuous. And something is such if its motion is one and indivisible in place and time; so that it is clear that if something has by nature the primary principle of the primary motion, as circular motion is – I say – with respect to local motion, this is the primary magnitude that is one.

Some things, then, are one in this sense, as continuous or whole. Other things are one if their account is one and things of this kind are those of which the thought is one and such things of this kind are those of which the thought is indivisible and a thought is indivisible if it is of what is indivisible in form or number. Each individual[153] *is indivisible in number, whilst what is indivisible in comprehension and knowledge is indivisible in form, so that the cause of the one for substances would be a primary one.*

The one then is said in these many ways: the continuous by nature and the whole and the individual and the universal and all these things are one because in the former cases, their motion, in the latter cases, their thought or their account is indivisible.

1052a19-1052b1, trans. Castelli ((2018), p. I), minor modifications

We might expect the ways of being one to straightforwardly correspond to the ways of being identical since anything that is one must presumably also be identical to itself. Instead, we find four ways of being one, and but only three ways of being identical.[154] Hence, it is not the

[153] Castelli translates this 'particular' ((2018), p. I). I opt for 'individual' because Aristotle claims that he is interested in things that are one in their own right and not accidentally (1052a15-16).

[154] Cf. Castelli (2018), p. 108

ways of being one themselves but rather the details of this passage that are most helpful for understanding the ways of being identical. There are a number of features of the passage above that are potentially useful in explicating the three ways of being identical:

1. Aristotle tells us that individuals are indivisible in number. This may help us to understand the first way of being identical: in accordance with number.
2. According to this passage, where things are one in account, they are things of which the thought is indivisible because they are indivisible in number or form. This is potentially helpful on a number of fronts: in understanding 'one in number and account' and Aristotle's example of being identical in number and account (being one with yourself in matter and form).
3. In the above passage, the primary sense of being one is what is responsible for the unity of substance. This might help us to understand details of the third way of being identical, in particular, what is meant Aristotle means by 'if the account of their primary substance is one' and the connection that he makes between one and equality.

Identical in Number and Identical in Number and Account

Understanding the first and second ways of being identical depends on what 'in accordance with number' and 'one in number and account' mean. Here, I point to a reason why being identical in accordance with number is difficult to see as equivalent to being identical by being one in number. I then point to a problem that arises if we take being one in number to correspond to being one in matter and being one in account to correspond to being one in form, as we might initially think we ought to. I argue that we can avoid this by recognising that accidental unities are at issue here and that doing so reveals what the first and second ways of being identical are more precisely.

Notice that Aristotle does not explicitly link the first way of being identical with one, saying instead that things are identical in this way 'in accordance with number'. In light of this, we might think that 'in accordance with number' cannot just be 'being one in number'.[155] Yet, as I pointed out above, Castelli shows that Aristotle likely sees identity as belonging in a column with one above it, where one is definitionally prior to identity; indeed, Aristotle explicitly defines the second and third ways of being identical in terms of one. In addition, Aristotle tells us that things that are identical in the first way are those that we call 'it itself' and anything that can be described in this way must surely be one. Further, he writes about being *one* in *number* and account when outlining the second way of being identical, which suggests that being one in number was at issue in the first way of being identical after all. Thus, I must provide an explanation of why Aristotle says that things that are one in the first way are one in accordance with number and not that they are one in number.

A second difficulty stems from the way that Aristotle defines the second way of being identical. Aristotle's example of being identical in number and account is being one with yourself in matter and form.[156] We might think that this indicates that things that are one in number are those that are one in matter and things that are one in account are those that are one in form.[157] However, further reflection shows that this correspondence is problematic.[158] Consider part of the passage above:

---

[155] Cf. Castelli (2018), pp. 101-103

[156] 1054a34-35

[157] We might think that this fits with accounts of identity/sameness in other Aristotelian texts, notably *Metaphysics*, Delta 6, 1016b31-2, where Aristotle famously suggests that it is matter that determines number. See *Topics*, I.7, *Sophistici Elenchi*, 24, 179a26-b7, *Physics*, III.3, 202b14-16 for Aristotle's other accounts of identity/sameness.

[158] Castelli ((2018) p. 103) also notes that the connection that Aristotle makes between number and matter is difficult to explain. She claims that we face two problems. Firstly, we might think that it implies that the first way of being *ταὐτό* ought to be explained in terms of one and matter. Secondly, we might think that numerical

> *Some things, then, are one in this sense, as continuous or whole. Other things are one if their account is one and things of this kind are those of which the thought is one and such things of this kind are those of which the thought is indivisible and a thought is indivisible if it is of what is indivisible in form or number. Each individual*[159] *is indivisible in number, whilst what is indivisible in comprehension and knowledge is indivisible in form, so that the cause of the one for substances would be a primary one.*
>
> 1052a29-34, trans. Castelli ((2018, p. I), minor modifications

Here, Aristotle tells us that something is one in one way if it is one in account. In these cases, the thought of the thing is indivisible. A condition for this is indivisibility in form or number. Consequently, account and form are separable since something can be one in account but not indivisible in form. Moreover, if being indivisible is being one, being one in number is sufficient for being one in account. Thus, if being one in number correlates to being one in matter and one in account to being one in form, anything that is one in number will also be one in account. If whatever is identical in accordance with number is also one in number, the first and second ways of being identical will collapse. The second challenge then is to explain why Aristotle would use the example of being one with yourself in matter and form to illuminate the second way of being identical without writing it off as just a bad example.[160]

---

identity in general ought to be defined in terms of one and matter. I am currently concerned with the first but not the second since the ways of being identical I arrive at below will solve the second problem.

[159] Castelli translates this 'particular' ((2018), p.1). I opt for 'individual' because Aristotle claims that he is interested in things that are one in their own right and not accidentally (1052a15-16).

[160] Castelli ((2018), p.103) also complains about this example, arguing that if the form of of something determines its matter, it is difficult to see how they can be separable in such a way that they can illuminate one in number and one in account. She deals with this by maintaining that the example is probably used to indicate that Aristotle is talking about the same 'chunk of stuff'. However, if this is so, the example is misleading. In contrast, as I demonstrate below, my solution allows us to see that the example is a useful one that serves an important and specific purpose: showing us that things that are identical in the second way are individuals or universals.

Happily, I can explain why Aristotle tells us that things that are identical in the first way are one in accordance with number and show that the first and second ways of being identical do not collapse and that Aristotle's example is an apt one. Recall that Aristotle holds:

I. Individuals are indivisible in respect of number.
II. What is indivisible in comprehension and knowledge is indivisible in respect of form.
III. What is indivisible in form or number is that of which the thought is single.
IV. That of which the thought is single is that of which the account is one.

I tells us things that meet the criteria for being one in number: individuals. This is because they are indivisible. II tells us why things are indivisible in form; they are indivisible in comprehension and knowledge. III gives us the reason for things being one in form or number: they are things of which the thought is single. According to IV, anything that is single in thought is also one in account.

Consider the accidental unity, a drunk whale. I can count drunk whales, so a drunk whale must be one and identical to itself in some way. A drunk whale is not an individual.[161] Therefore, it cannot be one by being an indivisible individual and it is not the case that the thought of a drunk whale is single. I can know and understand what 'drunk' means without knowing what 'whale' means. Thus, a drunk whale is obviously not indivisible in comprehension and knowledge and is therefore not indivisible in form, thought or account. A drunk whale then cannot be one in account or identical to itself in the second way. Nor is a drunk whale identical to itself in the third way, since, as I argue later, this is limited to

[161] As Ursula Coope pointed out to me, this claim requires committing to a particular view of what an individual is. I do not have space to justify this assumption here but it is worth noting that this is a plausible view and one that helps us to resolve the problem under discussion.

abstract geometrical objects of a particular shape and size. Whilst it must be identical to itself in some way then, a drunk whale cannot be identical as an indivisible individual or in the second or third ways.

In fact, there is good reason to think that the first way of being identical is the way in which accidental unities are one. In outlining the ways of being one in *Metaphysics*, Iota prior to chapter 3, Aristotle is consistent in using *ἀδιαίρετον* (indivisible) when talking about the one. The opening of Iota 3 marks a change. Here, he suggests that the one and the many are opposed not only as indivisible (*ἀδιαίρετον*) to divisible (*διαιρετόν*) but also as undivided (*μὴ διῃρημένον*) to divided (*διαιρετὸν*):

> *ἀντίκειται δὲ τὸ ἓν καὶ τὰ πολλὰ κατὰ πλείους τρόπους, ὧν ἕνα τὸ ἓν καὶ τὸ πλῆθος ὡς ἀδιαίρετον καὶ διαιρετόν· τὸ μὲν γὰρ ἢ διῃρημένον ἢ διαιρετὸν πλῆθός τι λέγεται, τὸ δὲ ἀδιαίρετον ἢ μὴ διῃρημένον ἕν.*
>
> *The one and the many are opposed in many ways, in one of which the one and the plurality are opposed as indivisible and divisible. For what is divided or divisible is said to be a certain plurality, whereas what is indivisible or undivided is said to be one.*
>
> 1054a20-24

This change allows us to explain why drunk whales are countable and identical to themselves. A drunk whale is not indivisible but it is undivided, since drunk and whale coincide in the same substance. Thus, it must be one in some way. I suggest then that in the context of Iota 3, being identical in accordance with number in the first way is intended to capture only things that are undivided but not indivisible: accidental unities. In contrast, things that are

one in number and account are undivided (and therefore one in number) *because* they are indivisible and it is their indivisibility that is responsible for their being one in account.

On this interpretation then, things are identical to themselves in the first way (in number only) because they are undivided i.e. they are accidental unities. Individuals are identical to themselves in number because they are undivided (as indivisible). Since they are indivisible, they must be one and identical to themselves in account too. Universals meet these criteria too, since they are undivided because they are indivisible in form and thereby identical to themselves in number. Since they are indivisible in form, they must also be identical to themselves in account.

One advantage of this reading is that it explains why Aristotle introduces a distinction between divided and undivided and indivisible and divisible. It also meets the requirements for a good interpretation that outlined above. It allows us to explain why Aristotle puts the first way of being identical as he does: that which we sometimes call 'it itself' is said to be identical according to number. We describe an accidental unity 'it itself' in that we talk about it and treat it as if it is one self-identical thing. In addition, accidental unities *are* one in number but not fundamentally so; unlike individuals and universals; they are undivided but not indivisible. Hence, Aristotle does not say that they are one in number, but that they are in accordance with number.

We can also show that the first and second ways of being identical are substantively different; things that are identical to themselves in the first way cannot be identical to themselves in the second way and vice versa, since nothing can be both an accidental unity and a proper, unified individual or universal. This is because things that are one in number and account are undivided because they are indivisible, whereas things that are only one in number are

undivided but not indivisible. Thus, the first and second ways of being identical do not collapse.

Finally, on this reading, Aristotle's example of being identical as one in number and account is genuinely helpful. Recall the example that Aristotle uses to illustrate being identical in number and account: being one with yourself in form and matter. As we have learnt, things can be one in account in one of two ways: by being one in thought by being one in number (as an undivided, indivisible individual) or by being one in form (as an undivided, indivisible universal). Aristotle uses being one with yourself in form and matter, not because account corresponds to form and matter to number, but because it shows that you are a unified individual. Further, Aristotle has claimed that anything that is one in account is one in thought. 'You' and 'yourself' are synonymous; indeed, they are so closely related that it is difficult to imagine a situation in which you could even make a mistake about them being one in thought or know one word without the other, unlike other cases of synonymy, for example 'fairy' and 'pixie'. Thus, it is a particularly good example.

Nevertheless, some might object to my reading because if accidental ones deserve a distinct way of being identical, Aristotle ought to have included being accidentally one as a way of being one in his outline of the ways of being one at the beginning of Iota, not excluded them. This need not trouble us. Accidental unities are not properly one thing in that they are not fundamentally one; as long as it is undivided, I can specify an accidental unity however I like and use it as a measure: drunk whales, fat whales, friendly whales, silly whales. In light of this, it makes sense that Aristotle would not begin with accidental ones but those that are fundamental: non-accidental ones.

Thus, I take it that for Aristotle in *Metaphysics*, Iota 3, things are identical to themselves in the first way if they are undivided (and so one in number) but not indivisible in form or as individuals (and so not one in account) i.e. they are accidental unities. Things are identical to themselves in the second way if they are undivided (because they are indivisible in number or form) and one in account; they are individuals or universals.

Identity and Geometrical Objects

I turn now to the third way in which things are identical. I begin by showing that Castelli's interpretation, according to which the third way of being *ταὐτό* is not a way of being identical at all, is problematic, before offering my own, preferable reading.

Recall the way that Aristotle describes third way of being *ταὐτό*:

> *ἔτι δ' ἐὰν ὁ λόγος ὁ τῆς πρώτης οὐσίας εἷς ᾖ, οἷον αἱ ἴσαι γραμμαὶ εὐθεῖαι αἱ αὐταί, καὶ τὰ ἴσα καὶ ἰσογώνια τετράγωνα, καίτοι πλείω·ἀλλ' ἐν τούτοις ἡ ἰσότης ἑνότης.*
>
> *Furthermore, (we call things identical) if the account of the primary substance is one: for example, the equal straight lines are identical and so also are the quadrangular figures that are equal and have equal angles and there are more such cases, but in these, equality is oneness.*
>
> 1054a35-b3

Some might think that here Aristotle's holds that the third way of being *ταὐτό* holds between multiple things: equal, equal-angled rectilinear figures and equal lines. If so and *ταὐτό* indicates identity, Aristotle seems to maintain something obviously false: two non-identical

things can be identical. This seems to be why Castelli denies that the third way of being *ταὐτό* is a way of being identical, translating *ταὐτό* 'same' throughout. Consequently, she takes the first and second ways of being *ταὐτό* to include all instances of numerical identity: those things that are *ταὐτό* (identical to themselves) in the second way are individuals and those things that are *ταὐτό* (identical to themselves) in the first way are anything else (with respect to themselves). Castelli then claims that some x and some y are *ταὐτό* in the third way if they are one in account but not number (i.e. non-identical) but cannot be distinguished in terms of positive quantitative or qualitative features.[162]

This reading is not without its advantages. Firstly, we need not attribute something obviously false to Aristotle. Secondly, on her interpretation, Aristotle's examples are illuminating; we can see that equal, straight lines and equal quadrilaterals with equal angles are indistinguishable in the relevant way because they are congruent. Thirdly, some might think it fits well with with the details of 1054a32-b3, as Castelli translates it:

> *λεγομένου δὲ τοῦ ταὐτοῦ πολλαχῶς, ἕνα μὲν τρόπον κατ' ἀριθμὸν λέγομεν* ***ἐνίοτε αὐτό****, τὸ δ' ἐὰν καὶ λόγῳ καὶ ἀριθμῷ ἓν ᾖ, οἷον σὺ σαυτῷ καὶ τῷ εἴδει καὶ τῇ ὕλῃ ἕν· ἔτι δ' ἐὰν ὁ λόγος ὁ τῆς πρώτης οὐσίας εἷς ᾖ, οἷον αἱ ἴσαι γραμμαὶ εὐθεῖαι αἱ αὐταί, καὶ τὰ ἴσα καὶ ἰσογώνια τετράγωνα,* ***καίτοι πλείω·*** *ἀλλ' ἐν τούτοις ἡ ἰσότης ἑνότης.*
>
> *Given that the same is said in many ways, in one way that which we sometimes call* ***'it itself'*** *is said according to number in another way when what is the same is one in number and account, as you are one with yourself in both form and matter. Furthermore, we call things the same when the account of the primary substance is one: for instance, the equal straight lines are*

[162] Castelli (2018), p.106

> *the same, and so also quadrangular figures that are equal and have equal angles,* ***even if they are more than one****. But in these things, equality is unity.*
>
> 1054a32-b3, trans. Castelli (2018), pp.6-7

We might think that Aristotle's use of *ἐνίοτε αὐτό*, which does not occur when he describes the third way of being, serves to demonstrate that at the beginning of the passage, he is concerned with identity, which holds between one thing and itself. In contrast, with *καίτοι πλείω,* Aristotle shows us that the third way of being *ταὐτό* ('sameness') holds between more than one thing, unlike identity.

However, Castelli's interpretation is problematic. Firstly, she does not take the third way of being *ταὐτό* to apply exclusively to geometrical objects. However, Aristotle uses not only one but two geometrical examples in order to illustrate the third way of being identical. This is particularly striking when we reflect on the second way of being identical, where we find a single example and the first, where there is no example at all. Thus, it is unlikely that the third way of being *ταὐτό* is not restricted to geometrical objects.

Secondly Aristotle makes a distinction between *ταὐτό* and *ὅμοιον* (similarity). However, two non-identical objects that are quantatively and qualitatively indiscernible seem to be excellent candidates for similarity. Yet, if the third way of *ταὐτό* is being indistinguishable quantitatively and qualitatively, being *ταὐτό* and *ὅμοιον* do not seem to be different enough to warrant Aristotle's distinction - at least not without some justification on his part.

Thirdly, as I argued in the previous chapter, in the first and second deductions of the *Parmenides*, *ταὐτό* can only indicate identity. I also pointed out there that Aristotle explicitly refers to 146b2-5 of the *Parmenides* (where Plato uses *ταὐτό*), in *Metaphysics*, Iota 3, not once

but three times. Neither 146b2-5 nor Aristotle's engagement with it is straightforward; in fact, I dedicate the whole of Chapter Four to this issue. However, at this point it will suffice to note that if Aristotle believes that quantitative and qualitative indiscernibility is very closely related to identity but not itself a way of being identical, we would expect him to use different language from Plato to indicate this. Castelli's interpretation is unsatisfactory then.

I offer an alternative. Suppose I am looking at a square tablecloth with sides that are two metres long and I abstract a square with sides that are two metres long from this. Suppose now that Barry sees a rug of equal size and shape and abstracts a square from this. In fact, there is only one, self-identical abstracted thing involved in both cases because there is nothing in virtue of which they could be non-identical; they are congruent and have exactly the same mathematical properties. Likewise, suppose I abstract a straight line that is one metre long from one straight yellow line and Barry abstracts a straight line from a straight, red line of the same length and width as the yellow one. We have in fact abstracted the very same line, since there is nothing in virtue of which they could be non-identical; they are congruent and have exactly the same mathematical properties. I suggest things that are *ταὐτό* in the third way are abstracted geometrical objects of a particular size and shape with respect to themselves, not particular things that are the same shape and size as each other. Thus, the third way of being *ταὐτό* is a way of being identical after all.

This interpretation has a number of advantages. It explains why Aristotle suddenly introduces equality. If some x and some y are different in size or angle, where x and y are abstracted geometrical objects, they are not congruent and will have different properties, for example, the areas of a smaller and bigger square are different and unequal straight lines have different lengths. Hence, Aristotle's claim that in these cases, equality is oneness, makes sense.

In addition, we can see why Aristotle introduces a third way of being identical at all. These kinds of abstracted geometrical objects do not fit neatly into either the first or second ways of being identical. They are not indivisible as individuals because they are abstracted geometrical objects. They are not indivisible as universals, since even if we agreed that abstract geometrical shapes of a particular size could be universals, they are not indivisible in form; I can divide an abstracted square into four smaller squares or two triangles in thought. Thus, they cannot be identical in the second way. Nor can they be identical merely as undivided; unlike 'drunk whale', 'equal-angled', 'equal' and 'quadrilateral' do not simply happen to coincide in the same substance. In addition, we can make sense of Aristotle's condition 'if the account of the primary substance is one'. The primary substance is a particular geometrical shape and its account is one in the sense that the abstract, particular shape is congruent with respect to itself and it has exactly the same features as itself.

Nevertheless, there are a number of objections that some might make to my interpretation that I tackle here. The first is is that I cannot explain why Aristotle talks of multiple things at all. This is easy to respond to; it is how he conveys to us that he is thinking about geometrical objects of a specific size and shape that are abstracted from particular, shaped things, rather than a particular, shaped thing itself or some kind of mathematical universal like 'Quadrilateral' or 'Line'.

Others might object to this characterisation of the third way of being identical in light of the way that I have taken the text. Castelli argues that whether we choose the α text or Ross' text affects whether or not we take Aristotle to be talking exclusively about *congruent*

geometrical objects.[163] On the α text, one of Aristotle's examples is things that are equal and quadrilateral figures with equal angles. Castelli claims that this allows for shapes that are similar but not congruent. In contrast, on Ross' text, which I have used, Aristotle is talking about 'things that are quadrilateral and that are equal and have equal angles'. This only allows for congruent shapes.[164] If there is better reason to adopt the α text, the earlier objection still stands: Aristotle cannot be thinking of identity at all - or if he is, he is making a very basic error in thinking that two non-identical things are identical.

This need not trouble us. The α text does not force us to accept that Aristotle deliberately chooses to include some non-congruent things when outlining the third way of being *ταὐτό*, hence interpreting Aristotle as I have is not incompatible with the α text. In addition, as I argued in the previous chapter, we have good reason to think that for Aristotle, *ταὐτό* must indicate identity. This alone justifies maintaining that things that are *ταὐτό* in the third way must be abstract, geometrical objects of a particular size. This objection is not compelling then.

The final objection that some might make is that on my interpretation, we cannot explain those aspects of the text that Castelli's can. Recall her translation of 1054a32-b3:

> *λεγομένου δὲ τοῦ ταὐτοῦ πολλαχῶς, ἕνα μὲν τρόπον κατ' ἀριθμὸν λέγομεν* ***ἐνίοτε αὐτό****, τὸ δ' ἐὰν καὶ λόγῳ καὶ ἀριθμῷ ἓν ᾖ, οἷον σὺ σαυτῷ καὶ τῷ εἴδει καὶ τῇ ὕλῃ ἕν· ἔτι δ' ἐὰν ὁ λόγος ὁ τῆς πρώτης οὐσίας εἷς ᾖ, οἷον αἱ ἴσαι γραμμαὶ εὐθεῖαι αἱ αὐταί, καὶ τὰ ἴσα καὶ ἰσογώνια τετράγωνα,* ***καίτοι πλείω· ἀλλ' ἐν τούτοις ἡ ἰσότης ἑνότης.***

[163] Castelli (2018) pp. 105-106

[164] Castelli (2018), p.106

> *Given that the same is said in many ways, in one way that which we sometimes call '**it itself**' is said according to number in another way when what is the same is one in number and account, as you are one with yourself in both form and matter. Furthermore, we call things the same when the account of the primary substance is one: for instance, the equal straight lines are the same, and so also quadrangular figures that are equal and have equal angles, **even if they are more than one**. But in these things, equality is unity.*
>
> 1054a32-b3, trans. Castelli (2018), pp. 6-7

I pointed out that Aristotle uses *ενίοτε αὐτό* (it itself) in outlining the first way of being identical. However, this does not occur when he describes the third way; in fact, he uses *καίτοι πλείω* (although they are more than one). I argued that we might think that this is because the first way of being *ταὐτό* is a case of identity. In contrast, *καίτοι πλείω* suggests that the third way of being identical holds between more than one thing, unlike identity.

However, we can explain these features of the text on my interpretation too. Notice that Aristotle does not use *ἐνίοτε αὐτό* when outlining the second way of being *ταὐτό*, which is obviously a case of identity, as Castelli herself holds. In addition, he explicitly links the first and second ways of being *ταὐτό* with the third (*ἔτι*). As such, if *ἐνίοτε αὐτό* (it itself) indicates identity, its absence in Aristotle's description of the third way being *ταὐτό* does not justify maintaining that identity is not involved in the third way of being *ταὐτό*. In addition, there are two ways that *καίτοι πλείω* can be explained on my reading. We might translate *καίτοι πλείω* differently, as I have: 'and there are many such cases'.[165] On this translation, Aristotle is simply emphasising that there are lots of other examples. Alternatively, we might retain Castelli's translation but maintain that *καίτοι πλείω* serves to emphasise that an

[165] Cf. Ross, who translates 'there are many such'.

abstracted geometrical object of a particular size and shape itself is one and identical to itself, even though we can abstract it from multiple, particular shaped things.

Thus, I maintain that in *Metaphysics*, Iota 3, there are the three ways of being *ταὐτό*, where *ταὐτό* indicates identity. Firstly, something can be identical to itself by being one in number. Something that is one in this way is not one in form and is undivided but not indivisible: an accidental unity. Secondly, something can be identical to itself by being one in number and account i.e. something that is indivisible (and therefore undivided) and indivisible in form. Things that are identical to themselves in this way are individuals and universals. Thirdly, something can be identical to itself if the account of their primary substance is one. Things that are identical to themselves in this way are abstracted geometric objects of a particular size and shape.

It seems uncontroversial to think that everything must be identical to itself, hence I take it that for Aristotle everything must be identical to itself in one of these ways.[166] These ways of being identical must also be mutually exclusive, since things are at most one of the following: an accidental unity, an individual, a universals, an abstracted geometrical objects of a particular shape and size.

We are now in a position to give a definition of identity in *Metaphysics*, Iota 3: for any x and any y, x is identical to y if and only if:

1. x and y are one in number (since x and y are in fact a single accidental unity). Or (exclusive)

[166] Some might worry that in fact Aristotle does think that there are some things that are not identical to themselves. I leave this aside for discussion in Chapter Four, where I argue that this worry is misguided.

2. x and y are one in both number and account (since x and y are in fact a single an individual or universal)

Or (exclusive)

3. x and y are a single abstract geometrical object of a particular size and shape.

Non-identity

I turn now to examine the ways of being non-identical:

> *ὥστε δῆλον ὅτι καὶ τὸ ἕτερον καὶ τὸ ἀνόμοιον πολλαχῶς λέγεται. καὶ τὸ μὲν ἄλλο ἀντικειμένως καὶ τὸ ταὐτό, διὸ ἅπαν πρὸς ἅπαν ἢ ταὐτὸ ἢ ἄλλο· τὸ δ' ἐὰν μὴ καὶ ἡ ὕλη καὶ ὁ λόγος εἷς, διὸ σὺ καὶ ὁ πλησίον ἕτερος· τὸ δὲ τρίτον ὡς τὰ ἐν τοῖς μαθηματικοῖς. τὸ μὲν οὖν ἕτερον ἢ ταὐτὸ διὰ τοῦτο πᾶν πρὸς πᾶν λέγεται, ὅσα λέγεται ἓν καὶ ὄν·*
>
> *Thus, it is clear that*[167] *non-identity and dissimilarity are also said in many ways. And non-identity and identity are opposed to one another, thus every thing with respect to every thing is either identical or non-identical.*[168] *And non-identity is said of things in another way: if both their matter and account are not one, thus you are non-identical to the person next to you. The*

[167] Castelli ((2018), p. 7) translates: 'So that it is clear that', which renders the sentence as a whole ungrammatical in English, hence my alternative.

[168] Castelli ((2018), p. 7) translates: 'For this reason every thing of those that are said to be one and being is said to be either the same (*ταὐτό*) or other (*ἄλλο*) in relation to each thing'. I opt to begin by translation with, 'For this reason everything with respect to everything' because I believe it is a reference to 146b2-5 of the *Parmenides* and this better reflects that – more on this in Chapter Four.

> *third way is as in the case of mathematical objects. Thus, every thing with respect to every thing is either identical or non-identical, for as many things as are and are one.*
>
> 1054b13-19

It is clear that this account of non-identity should be understood in light of the preceding discussion of identity; after all, Aristotle begins by telling us that identity and non-identity are opposed and the second and third ways of being non-identical clearly correlate in some way with the second and third ways of being non-identical. In light of this, we might expect the first ways of being identical and non-identical to correlate too. However, Aristotle begins with what we might expect to be the first way of being non-identical by claiming that non-identity and identity and are opposed and every thing with respect to every thing is either identical or non-identical. This does not contain any explicit reference to the first way of being identical. Some might think then that the first ways of being identical and non-identical do not correspond after all.

In fact, these initial claims cannot themselves be the first way of being non-identical; if they were, the other ways of being non-identical would be redundant. Instead, I suggest that we are supposed to provide the first way of being non-identical ourselves and that these claims help us by pointing to how we should think about the relationship between non-identity and identity. They tell us that non-identity ought to be opposed to identity in some way and that for any x and any y, x must be either identical or non-identical to y. In light of this and the correspondence between the second and third ways of being non-identical and the second and third ways of being identical, I take it that first ways of being identical and non-identical ought to correlate too. Thus, the three ways of being non-identical should be: in number, in number and account and as abstract geometrical objects of a particular shape and size.

There are two ways of thinking about these ways of being non-identical:

Version A:

1. For any x and any y, x is non-identical to y in number if and only if x and y are not one in number.

2. For any x and any y, x is non-identical to y in number and account if and only if x and y are not one in number and account.

3. For any x and any y, x is non-identical to y if and only if x and y are not an abstract geometrical object of the same shape and size.

Version B:

1. For any x and any y, x is non-identical to y in number if and only if x is one in number (and thereby identical to itself in number).

2. For any x and any y, x is non-identical to y in number and account if and only if x is one in number and account (and thereby identical to itself in number and account).

3. For any x and any y, x is non-identical to y as in geometry if and only if x is itself an abstract geometrical object of a particular shape and size (and thereby identical to itself as an abstract geometrical object of a particular shape and size).

There are two problems with Version A. On Version A, for any x and any y, if x is non-identical to y, it will be so in all three ways. However, according Aristotle's account of identity, for any x and any y, if x is identical to y, it is identical in exactly one way. In contrast, on Version B, for any x and any y, if x is non-identical to y, it will be so in exactly one way and that way will correspond to the way in which it is identical to itself. As such, identity and non-identity are not as obviously opposed or correlative on Version A as on Version B.

Yet, according to what Aristotle tells us, identity and non-identity are opposed and must correlate, as I argued above.

The second difficulty is that outlining the ways of being non-identical in detail is redundant on Version A; Aristotle could simply have told us that identity and non-identity are opposed and every thing with respect to every thing is either identical or non-identical and left it at that. Some might also believe that there is a similar problem with Version B: it presupposes that x and y are non-identical in some way. Thus, there is no need for Aristotle to outline three ways of being non-identical. However, this is easily solved. On Version B, distinguishing between ways of being non-identical is especially important because it shows us that for any x and any y, if x is non-identical to y, it is non-identical in exactly one way. In contrast, distinguishing between the ways of being non-identical on Version A is not urgent, since according to Version A, if some x and y are not-identical, they will be non-identical in whatever ways there are. Hence, Version B is more attractive.[169]

Moreover, I argued above that for Aristotle, for any x and any y, x must be either identical or non-identical to y and that identity and non-identity are opposed in some way. I also pointed out that the ways of being identical and non-identical should correlate. Notice that on Version B, everything is both identical to itself and non-identical to anything else and the first ways of being identical and non-identical obviously correlate. In addition, the first ways of being identical and non-identical are opposed in that the first way of being identical only

[169] Note, on Version B, if x is non-identical to y in number, number and account or as an abstract geometrical object of a particular shape and size, it is not that x and y are two in number, number and account or as an abstract geometrical object since x and y might be identical to themselves in different ways. For example, a drunk whale and an abstract geometrical square are not two in number, two in number and account or two abstract geometrical objects of different shapes and/or sizes since a drunk whale has no account and is not an abstract geometrical object of any sort. Instead, since the drunk whale is itself is one in number, it is not one with an abstract geometrical square in number and non-identical to an abstract geometrical square in number.

ever holds of some thing with respect to itself and the first way of being non-identical only ever holds of something with respect to itself. Hence, the first way of being non-identical on Version B fits with the way that Aristotle characterises the relationship between identity and non-identity which I argued is supposed to guide us in supplying the first way of being non-identical. Version B is preferable then.

I turn now to explain the ways of being non-identical more precisely. Things that are non-identical in the first way (in number) are all and only accidental unities, since they are all one in number and nothing else is. It is clear that the second ways of being identical and non-identical are opposed and correspond to one another on my reading, as I argued they ought to; everything is identical to itself in exactly one way and non-identical to everything else in exactly one corresponding way. However, showing that my interpretation of the second way fits with the text is less straightforward in other respects.

Consider Aristotle's description of the second way of being non-identical in the context of his example: *τὸ δ' ἐὰν μὴ καὶ ἡ ὕλη καὶ ὁ λόγος εἷς, διὸ σὺ καὶ ὁ πλησίον ἕτερος* (non-identity is said of things in another way: if both their matter and account is not one, thus you are non-identical to the person next to you).[170] There are two options for the things that Aristotle is talking about here: one thing that is non-identical to something and is itself not one in both matter and account or a pair of things that are non-identical, where at least one of the pair is not one in matter and account with respect to the other, or one thing that is non-identical to something and is itself not one in both matter and account. I argued when outlining the ways of being identical that an individual is indivisible and one in matter and account and a universal is indivisible and one in account. Consequently, on my reading, the things that are

[170] 1054b16-17

non-identical in the second way must also be either individuals or universals. Yet, individuals clearly do not meet the criteria for being non-identical if we choose the first option above; they are one in both matter and account. Thus, I choose the latter option.

However, in making this decision, I face an objection. Recall the criteria for the second way of being non-identical on Version B: for any x and any y, x is non-identical to y in number and account if and only if x is one in number and account (and thereby identical to itself in number and account). Some might object that the way that I characterised the second way of being non-identical on Version A (for any x and any y, x is non-identical to y in number and account if and only if x and y are not one in number and account) seems far closer to what Aristotle actually writes.

I can defend myself from this objection. Consider the two versions of the second way of being non-identical side-by-side:

Version A: For any x and any y, x is non-identical to y in number and account if and only if x and y are not one in number and account.

Version B: For any x and any y, x is non-identical to y in number and account if and only if x is one in number and account.

Notice that we can put Version B differently so that it is closer to the text: for any x and any y, x is non-identical to y if and only if x and y are not one in matter and account. I have opted to put the second way of being non-identical on Version B as I have simply because it better captures the difference between the two versions. Hence, this objection is unpersuasive.

There is a further objection that stems from the criteria that Aristotle gives us for things that are non-identical being ambiguous: *τὸ δ' ἐὰν μὴ καὶ ἡ ὕλη καὶ ὁ λόγος εἷς* (if both their

matter and account are not one).[171] Notice that there are a range of ways that we could take this:

I. If they are not one in matter and also not one in account

II. If they are not one in matter and/or not one in account

III. If they are not one in enmattered account

On my interpretation, the second way of being non-identical must hold of all and only those things that are individuals or universals with respect to everything else. However, some might claim, that this is impossible, whichever way we take *τὸ δ' ἐὰν μὴ καὶ ἡ ὕλη καὶ ὁ λόγος εἷς*. I and II allow for accidental unities and geometrical objects, since they are neither one in matter nor (straightforwardly in the case of geometrical objects) one in substance, with respect to anything else. III might seem to us to include universals, geometrical objects and accidental unities, all of which will be not one in enmattered account with respect anything else.

There is also good reason to discard this objection. Note that on my reading, things are only 'not-one' (and therefore non-identical) in some way if they themselves are one and identical to themselves in that way; it is *because* a drunk whale is one and identical to itself in the first way (and only the first way) that it is not one and non-identical to anything else and therefore, it can only be non-identical in the corresponding way. Thus, not *having* matter or account is not sufficient for not being one and non-identical to everything else in matter or account. There is good reason philosophical reason for this; it better explains the opposition.

[171] 1054b16-17

Of course, this still rules out some ways of taking *τὸ δ' ἐὰν μὴ καὶ ἡ ὕλη καὶ ὁ λόγος εἷς*; since universals are not one in matter and account or enmattered account, I and III are not compatible with my interpretation. Hence, I opt for II, which can accommodate both universals and individuals. Linguistically, this does also allow for accidental unities, which are one and identical in matter but not account. However, given the philosophical advantages of Version B, quite how compressed this passage is and the vagueness of *τὸ δ' ἐὰν μὴ καὶ ἡ ὕλη καὶ ὁ λόγος εἷς*, I think we are entitled to assume that this was unintentional on Aristotle's part.

The third way of being non-identical on my interpretation is also compatible with the text. Aristotle simply tells us that the third way of being non-identical holds 'as in the case of mathematical objects', which I take to mean non-identity in the case of geometrical objects. This makes sense on my interpretation, since the third way of being non-identical can only hold of geometrical objects. In addition, it clearly correlates with and is opposed to the third way of being identical, as I argued it ought to, since every geometrical object of a particular shape and size will be identical to itself in the third way and only the third way and non-identical to anything else in the third way and only the third way.

Thus, I adopt the following definitions of non-identity in *Metaphysics*, Iota: for any x and y, x is non-identical to y if and only if:

1. x is one in number.

Or (exclusive)

2. x is one in number and account.

Or (exclusive)

3. x is an abstract geometrical object of a particular size and shape.

*

I have shown that for Aristotle, for any x and any y, x is identical to y if and only if:

1. x and y are one in number (since x and y are in fact a single accidental unity)

Or (exclusive)

2. x and y are one in both number and account (since x and y are in fact a single an individual or universal)

Or (exclusive)

3. x and y are one in mathematical properties (since x and y are in fact one abstract geometrical object of a particular shape and size).

For any x and any y, x is non-identical to y if and only if:

1. x is one in number (since x is an accidental unity).

Or (exclusive)

2. x is one in number and account (since x is an individual or universal).

Or (exclusive)

3. x is an abstract geometrical object of a particular shape and size.

We can think of Aristotle's account of identity and non-identity in two ways. For Leibnitians, for any x and any y, if they meet some set of criteria, x and y are identical. For any x and any y, if x and y meet some other set of criteria, they are non-identical (where identity and non-identity are mutually exclusive). In contrast, Aristotle provides six sets of criteria. In light of this, we might amalgamate his definitions so as to to provide two sets of disjunctive criteria, one for identity and one for non-identity. If so, we might think of him as a kind of Leibnitian, albeit not a strict one. Alternatively, we might think of him as non-Leibnitian because each of his ways of being identical and non-identical corresponds to a different *sort* of identity or

non-identity.[172] Although an interesting issue,[173] that Aristotle is not a strict Leibnitian is all that is necessary for my argument. Hence, I do not argue for either view here.

Similarity

In what follows, I examine the account of similarity and dissimilarity we find in Aristotle's *Metaphysics*, Iota 3. I begin by looking closely at 1054b3-14, where we find his account of similarity:

> *ὅμοια δὲ ἐὰν μὴ ταὐτὰ ἁπλῶς ὄντα, μηδὲ κατὰ τὴν οὐσίαν ἀδιάφορα τὴν συγκειμένην, κατὰ τὸ εἶδος ταὐτὰ ᾖ, ὥσπερ τὸ μεῖζον τετράγωνον τῷ μικρῷ ὅμοιον, καὶ αἱ ἄνισοι εὐθεῖαι· αὗται γὰρ ὅμοιαι μέν, αἱ αὐταὶ δὲ ἁπλῶς οὔ. τὰ δὲ ἐὰν τὸ αὐτὸ εἶδος ἔχοντα, ἐν οἷς τὸ μᾶλλον καὶ ἧττον ἐγγίγνεται, μήτε μᾶλλον ᾖ μήτε ἧττον. τὰ δὲ ἐὰν ᾖ τὸ αὐτὸ πάθος καὶ ἓν τῷ εἴδει, οἷον τὸ λευκόν, σφόδρα καὶ ἧττον, ὅμοιά φασιν εἶναι ὅτι ἓν τὸ εἶδος αὐτῶν. τὰ δὲ ἐὰν πλείω ἔχῃ ταὐτὰ ἢ ἕτερα, ἢ ἁπλῶς ἢ τὰ πρόχειρα, οἷον καττίτερος ἀργύρῳ ᾗ λευκόν, χρυσὸς δὲ πυρὶ ᾗ ξανθὸν καὶ πυρρόν. ὥστε δῆλον ὅτι καὶ τὸ ἕτερον καὶ τὸ ἀνόμοιον πολλαχῶς λέγεται.*
>
> *Things are (called) similar, even if they are not entirely identical and do not differ in the substance they are made up of. They are identical in form, just as the bigger square is similar to the smaller and unequal lines are similar. For these things are similar but not entirely*

[172] Aristotle is not subscribing to what contemporary metaphysicians term 'relative identity' on this view. Those who subscribe to relative identity maintain that some x can be both the same G as y and the same as F as y, for example, I am both identical to myself as a shopkeeper and as a fishmonger because on Friday I resigned from my job as a shopkeeper and two weeks later I was employed as a fishmonger. The literature on relative identity is vast - see Hawthorne (2003) and Noonan (2017) for general surveys.

[173] I am grateful to Donald Baxter for a helpful discussion about whether this is enough to deem Aristotle's account non-Leibnitian.

> *identical. Things are also (called) similar if they have the same form and are things in which the more and the less could arise, but which are neither more nor less.*[174] *Things, if they have some* πάθος[175] *which is is the thing that it is*[176] *and one in form, for example whiteness, whether to greater or lesser degree, is said to be similar because the form is one. Other things are said to be similar if they have more [properties] in common than [properties] that are not in common*[177] *either overall or with respect to the more obvious [properties] for example, tin is similar to silver with respect to white and gold is similar to fire with respect to yellow and orange. So, it is clear that non-identity and dissimilarity are also said in many ways.*
>
> 1054b3-14

Here, Aristotle seems to say that there are three ways that things can be similar:

1. If they I. are not entirely identical to each other, II. do not differ from one another in substance and III.are identical in form.
2. If they I. are identical in form, II. could be things in which the more or less could arise but do not.
3. If they have a property which is identical to itself and one in form to a greater or lesser degree.

---

[174] I translate 'more or less' and not 'bigger or smaller' because Aristotle previously used different language for what I have translated 'equal' and 'unequal' to indicate difference in size. Thus, the shift in language here suggests that he has properties other than spatial ones in mind.

[175] I leave this untranslated because it is not entirely clear what it means – more on this issue below.

[176] A more natural translation would be 'identical' or 'same'. I opt for my translation because 'same' is more metaphysically loaded than I think is justified here and Aristotle does not use *ταὐτὸς*, which is significant, as I explain below.

[177] Notice Aristotle's striking use of *ταὐτό* and *ἕτερον* with *ἔχέιν* here. I take it that this use is similar to Plato's use of *ταὐτό* + *πεπονθέναι* and *ἕτερον* + *πεπονθέναι*: it means having properties in common and having a discrepancy in properties, hence my rather loose translation.

4. If they have more properties in common than properties that one has and the other does not and vice versa either overall or with respect to their more obvious properties.

Consider 1. There is a problem in understanding this way of being similar that stems from the way that Aristotle uses *ταὐτὸ*. He tells us that things that are similar in this way are not entirely identical (*ταὐτὰ ἁπλῶς*). This is difficult to make sense of, since nothing in his description of the ways of being identical suggests that things can be identical by degree. Furthermore, Aristotle claims that things that are similar in the first way are identical to one another in form. However, being identical in form was not one of the ways of being identical.

I suggest that when Aristotle says that things are not *ταὐτὰ ἁπλῶς*, he is using *ταὐτὰ* loosely to convey the intuitive idea that if things are similar, they are somehow near-identical. This explanation is supported by Aristotle's claim that things that are similar in this way do not *differ* (*ἀδιάφορα*) in substance; he is careful not to use *ἕτερον* with a negative or *ταὐτὸ* because being *ἕτερον* in substance is not a way of being non- identical and being identical in substance is not a way of being identical.

I turn now to explicate the first way of being similar. The examples Aristotle gives for similarity in the first way are unequal squares and unequal lines. We are clearly supposed to have the third way of being identical in mind here, since the very same examples featured with one crucial difference: they were equal, whereas these are unequal. Inequality then must play an important role in the first way of being similar. Recall that the things that are identical to themselves in the third way are particular abstract geometrical objects of a particular shape and size. Since Aristotle tells us that they are identical in form here, I take it that he has particular, non-congruent geometrical objects with the same form in mind i.e. larger and smaller kites, larger and smaller squares, larger and smaller spheres etc. Notice

that these pairs of particular abstract geometrical objects would not differ in substance, since they are not proper substances.[178] They also fit with the intuitive idea that they are somehow near to being identical.

I turn now to examine the second way of being similar:

> *τὰ δὲ ἐὰν τὸ αὐτὸ εἶδος ἔχοντα, ἐν οἷς τὸ μᾶλλον καὶ ἧττον ἐγγίγνεται, μήτε μᾶλλον ἢ μήτε ἧττον.*
>
> *Things are also (called) similar if they have the same[179] form and are things in which the more and the less could arise, but which are neither more nor less.*
>
> 1054b7-9

Since Aristotle restates one of the conditions for being similar in the first way (identical in form), but not another (not differing in substance), I take it that things that are similar to in this way do differ in substance and therefore cannot include abstract geometrical objects of a particular shape and size. Thus, things that are similar in the first way cannot be similar in the second way. The other condition for being similar in the second way requires some unpacking. Aristotle tells us that things that are similar are 'things in which the more or less could arise but they are neither nor less'. I take it that this way of being similar holds only of individuals, since the idea that universals could be 'more or less' is difficult to make

[178] Notice that Aristotle does not say that they are *one* in substance. Nor does he tell us that they are the very substance that they are, a locution he later uses to mean 'one thing' but not identical in a particular way. This supports my claim that particular abstract geometrical meet this criterion because they are not proper substances.

[179] Notice that Aristotle avoids using *ταὐτὸς* here since this is not a way of being identical, hence my translation.

sense of. However, there are two ways to understand how similar individuals are those things in which 'the more or less could arise but they are neither more nor less':

1. They have some property to the same degree, although they could have it to a lesser or greater degree. For example, if Barry eats more than Harry, he will be heavier than Harry and if he eats less than Harry he will be less heavy. Since they are in fact as heavy as each other, they are neither more nor less heavy than one another and therefore similar in the second way.
2. They could have some property to either a greater or lesser degree but in fact, they do not have this property at all. For example, Barry could be red to a greater or lesser degree than Harry; I could paint half of Barry red and all of Harry red or vice versa. However, suppose they are not red at all, since I have not painted them. In this case, although the more and less red can arise in them, it does not. Thus, they are similar in the second way.

I opt for 1 because the idea that two things are similar because of some property that they might have but do not is an odd one and does not occur anywhere else in Aristotle's definitions of similarity.

Consider the third way of being similar:

> *τὰ δὲ ἐὰν ᾖ τὸ αὐτὸ πάθος καὶ ἓν τῷ εἴδει, οἷον τὸ λευκόν, σφόδρα καὶ ἧττον, ὅμοιά φασιν εἶναι ὅτι ἓν τὸ εἶδος αὐτῶν.*
>
> *Things, if they have some* πάθος *which is the very thing that it is and one in form for example whiteness whether to greater or lesser degree, are said to be similar because their form is one.*

1054b9-11

We might think that since Aristotle uses *πάθος* here, he must be referring to the definition of similarity in Part II, where *ταὐτό* + *πεπονθέναι* indicates similarity. Consequently, we should interpret *πάθος* here as we did in the first and second deductions of the *Parmenides.*[180] However, Aristotle does not use *πεπονθέναι* either on its own or with *ταὐτό* here; indeed, he seems to deliberately avoid using *ταὐτό*, using the more awkward *ἢ τὸ αὐτὸ*. Hence, he does not mean for us to interpret *πάθος* as we do in Part II of the *Parmenides.* Instead, I take Aristotle to mean affectation,[181] so that things that are similar in this way are those that undergo change (*πάθος*) to either a greater or lesser degree.

Of course, some might complain that Aristotle's example is whiteness, which we might think is a property, not a *πάθος*. I maintain that this is because Aristotle means to indicate that this kind of similarity holds of things that undergo same change with respect to the same property. There is good reason for this interpretation. That Aristotle uses *πάθος* at all suggests that change must be at issue. In addition, Aristotle has already included similarity by properties in the second way of being similar so that the second and third ways of being similar collapse if a *πάθος* is just a property. Finally, Aristotle uses *σφόδρα* and *ἧττον* here, whereas he used *μεῖζον* and *μικρῷ* in describing the second way of being similar. This suggests that he is now thinking of 'more' and 'less' in a different sense.

What sorts of things are similar in the third way? Since Aristotle does not stipulate things that are similar in this way do not differ in substance, I take it that this way of being similar must hold between different substances. It cannot hold of universals or particular abstract

[180] I am grateful to Michail Peramatzis and David Charles for this point.

[181] Cf. Castelli (2018), p.7, pp. 110-111

geometrical objects, since they do not undergo change. However, it is not clear whether both individuals and accidental unities can be similar in this way. At first, we are told that things are similar in this way because they have one *πάθος* which is one in form to a greater or lesser degree. However, we then find *ὅμοιά φασιν εἶναι ὅτι ἓν τὸ εἶδος αὐτῶν* (and these things are said to be similar because they are one in form). We might think that this is a repetition of one of the criteria for being similar in this way: having a *πάθος* that is one in form. Alternatively, we might take it to be an afterthought that indicates that things that are similar in this way must be one in form i.e. individuals (but not universals since these are things that undergo change, which universals do not).

In fact, neither of these is satisfactory. If the former is true, it seems that Aristotle is not only saying something redundant, but doing so immediately after his definition and implying that it is only one of the criteria that is important. If the latter is true, Aristotle's afterthought does not seem to be explanatory as the *ὅτι* suggests; after all, it is the *πάθος* that is distinctive of this way of being similar, not form. I suggest instead that 'said to be similar because their form is one' is included to show us that we should read 'to a greater or lesser degree' as 'to any degree'. Accidental unities and individuals can both have a *πάθος* that is one and the same in form. Thus, things that are similar in this way can be either individuals or accidental unities.

There is another feature of the third way of being similar that is important. We know that in the case of things that are similar in this way, the change can be to different or equal degrees. This could manifest in different ways, Barry the whale could be similar to Harry the whale because they are having baths and their skin is becoming white at the same rate i.e. they are undergoing the same *πάθος* at same speed. Alternatively, it might be that while both Barry and Harry are having a bath and becoming white, Barry becomes whiter than Harry

i.e. they have the same *πάθος* but one has become more intensely white than the other. Barry and Harry might both be becoming white, but since Harry cleans all of his skin but Barry leaves his fins, Barry and Harry undergo a *πάθος* (becoming white) to different degrees in spatial terms. Another way that Barry and Harry could meet the criteria for the third way of being similar is by being swept along by the current at the same rate. Since Aristotle does not specify any of these, I take it that things that are similar in the third way are accidental unities or individuals that undergo change to any degree and may do so in different ways.

Recall Aristotle's description of the fourth the way of being similar:

> *τὰ δὲ ἐὰν πλείω ἔχῃ ταὐτὰ ἢ ἕτερα, ἢ ἁπλῶς ἢ τὰ πρόχειρα, οἷον καττίτερος ἀργύρῳ ᾗ λευκόν, χρυσὸς δὲ πυρὶ ᾗ ξανθὸν καὶ πυρρόν.*
>
> *Other things are (called) similar if they have more[properties] in common than [properties] that are not in common either overall or with respect to the more obvious [properties] for example, tin is similar to silver with respect to white and gold is similar to fire with respect to yellow and orange.*
>
> 1054b11-13

Since nothing in this passage suggests that this kind of similarity is limited to particular kinds of things, I maintain that this kind of similarity could apply to accidental unities, individuals, universals and geometrical objects of a particular shape and size. Thus, I take it that for any x and any y, x and y are similar in the fourth way overall if the number of properties that both x and y have exceeds the number of properties that x has but y does not or y has but x does not. Being similar in the fourth way 'with respect to the more obvious properties' is harder to unpack, although it seems to lie in having some salient properties in common. The examples

that Aristotle uses here are tin, silver, gold and fire. Tin is similar to silver because they both have the same salient property (white) and therefore have more obvious properties in common than obvious properties that tin has and silver does not and that silver has and tin does not. Gold is similar to fire because they share their salient properties (yellow and orange) and therefore have more obvious features in common than obvious properties that gold has and fire does not or fire has and gold does not.

The obviousness here cannot lie in essential properties, since fire can be blue and not yellow or orange. Instead, Aristotle seems to just mean that tin is similar to silver and gold is similar to fire because they share salient properties. There are three ways to take this:

1. For any x and any y, x and y are similar if the number of perceivable properties that x and y both have is greater than the number of perceivable properties that x has and y does not have or that y has and x does not have.

2. For any x and any y, x and y are similar if the number of visible properties that x and y both have is greater than the number of visible properties that x has and y does not have or that y has and x does not have.

3. For any x and any y, x and y are similar if the number of prominent properties that x and y both have exceeds the number of prominent properties that x has and y does not or y has and x does not. Prominent properties here are just those that stand out as important to us somehow.

Tin and silver are both white. Fire and gold are both yellow and orange. However, it is not obvious that fire and gold and yellow have a greater number of shared perceivable properties than unshared perceivable properties: fire is hot and gold is not, fire and gold have different shapes, fire might be blue, whereas gold is never blue. Hence, I discard 1. 2 cannot be reconciled with the examples Aristotle uses either. Fire might be blue and not yellow or

orange, whereas gold is always yellow and/or orange and fire flickers but gold does not. Thus, 1 and 2 do not fit with Aristotle's examples, so I opt for 3.

As it stands, 3 might suggest that for any x and any y, x and y are similar only if they share *all* of their prominent properties or for any x and any y, x and y are similar in this way if the number of prominent properties that x has and y has exceeds the number of prominent properties that x has and y does not or y has and x does not. However, if Aristotle has the first option in mind, the way that he puts it is rather imprecise; it would have been clearer had he not connected it with 'more' and 'less'. Consequently, I choose the second option.

I take it that for Aristotle these four ways of being similar are intended to accommodate all and only instances of similarity. Thus, for Aristotle, the definition of similarity is:

For any x and any y are similar if and only if:
1. x and y are unequal particular non-congruent geometrical objects, which are one in form.
Or (inclusive)
2. x and y are individuals which could have some property to a greater or lesser extent but in fact have it to an equal extent.
Or (inclusive)
3. x and y are individuals or accidental unities and undergo one kind of change to any degree.
Or (inclusive)
4. the number of properties that x and y both have exceeds the number of properties that x has and y does not or y has and x does not or the number of prominent properties that x and y both have exceeds the number of prominent properties that x has and y does not or y has and x does not.

Dissimilarity

Aristotle does not give us an explicit account of dissimilarity,[182] merely telling us that, like non-identity, it is said in many ways.[183] Nevertheless, he gives us enough to infer the ways of being dissimilar that he might have had in mind. Recall that in *Metaphysics* Iota 3, Aristotle makes a connection between one, identity, similarity and unequal on the one hand and many, non-identity, dissimilarity and unequal on the other, listing them in order of definitional priority. Given that he is quite clear that one and many are opposed and that he draws attention the opposition between identity and non-identity immediately after telling us non-identity, similarity and dissimilarity ought to be opposed and mirror one another, as identity and non-identity did. Since Aristotle largely derives his account of non-identity from his ways of being identical, I approach teasing out the ways of being dissimilar by looking at the ways of being similar.

I begin with the first way of being dissimilar. Recall the criteria for the first way of being similar: things are similar in this way if I. they are not entirely identical, II. they do not differ in substance, III. they are one in form. Consider I. I suggested that 'not entirely identical' just meant close to identical somehow. I take it that the correlative criterion for the first way of being dissimilar is not being entirely non-identical; rather it is seeming close to being non-identical somehow. Consider II. We might think that the corresponding criterion is being one in substance. However, it is difficult to see how anything that meets this criterion could be dissimilar. Instead, I suggest that the criterion is 'they do not differ in substance' i.e. they are not proper substances. I take the third criterion for this way of being dissimilar to be 'not

[182] We cannot look to Delta for help since Aristotle does not give us any more hints as to what dissimilarity is there.

[183] 1054b13-14

one in form'. Thus, those things that are dissimilar in the first way are two particular abstract geometrical objects of different forms, for example, kites and squares, spheres and triangles.

Recall that things are similar in the second way if I. they are two substances, II. they are things in which some property could arise to a greater or lesser degree and in which it arises to an equal degree. I take it that the second way of being dissimilar must also hold between two substances since the idea that one substance could be dissimilar to itself seems implausible. We could take the second, correlative criterion for being dissimilar to mean:

a. They are things in which some property could arise to a lesser or greater degree and which does.

b. They are things in which a property could not arise to any degree and which does not.

c. They are things in which a property could arise to a greater or lesser degree and arises to an equal degree.

I opt for a, since the idea that two things are dissimilar because they have something in common, as in c, is odd and b is not an intuitive option. Abstract geometrical objects are not proper substances, so they cannot be dissimilar in this way and universals cannot have some property to a greater or lesser degree. Accidental unities and individuals can meet both criteria. Thus, things that are dissimilar in the second way are individuals of accidental unities that have some property that have to an unequal degree.

Recall that things that are similar in the third way if they have some *πάθος* that is one in form to any degree. There are three sets of criteria for dissimilarity in the third way that we might infer from this:

I. Things are dissimilar if there is some *πάθος* that one has and some other *πάθος* that the other has which are not one in form to the same degree.

II. Things are dissimilar if there is some *πάθος* that one has and some other *πάθος* that the other has which are not one in form to a greater or lesser degree.
III. Things are dissimilar if there is some *πάθος* that one has and some other *πάθος* that the other has which are not one in form to any degree.

It is difficult to decide between these, given that there is so little in the text to help us. However, III is the most plausible, since it seems sensible to think that the dissimilarity lies in the *πάθος*, rather than the degree of the *πάθος*, given that degree of *πάθος* was crucial for the correlative way of being similar. Since universals and geometrical objects do not undergo change in the relevant ways, I take it that things that are dissimilar in this way are accidental unities and individuals.

The fourth way of being dissimilar is one that is easy to understand in light of the fourth way of being similar. There are two sets of criteria. Firstly, for any x and any y, x and y are dissimilar if the number of properties that x has and y does not or y has and x does not exceeds the number of properties that x and y both have. Secondly, for any x and any y, x and y are dissimilar if the number of prominent properties that x has and y does not or y has and x does exceeds the number of prominent properties that both x and y have. This could apply to accidental unities, individuals and abstract geometrical objects.

As with the ways of being similar, I take it that Aristotle means for the ways of being dissimilar to capture all cases of dissimilarity. Thus, for Aristotle for any x and any y, x and y are dissimilar if and only if:
1. x and y I. are what we might think of as nearly non-identical II. do not differ in substance III. are not one in form i.e. they are particular, abstract geometrical objects that are different sorts of shape.

Or (inclusive)

2. x and y are things which are one in form (individuals of a particular form) and in which a property might arise to a greater or lesser degree and does.

Or (inclusive)

3. x and y are accidental unities or individuals and undergo different changes to any degree.

Or (inclusive)

4. the number of properties that x has and y does not or y has and x does not exceeds the number of properties that x and y both have or the number of prominent properties that x has and y does not or y has and x does not exceeds the number of prominent properties that both x and y have.

Against Leibniz's Law

I argued earlier that Aristotle's account of identity and non-identity is not a strict Leibnitian one. Here, I show there is good reason to suppose that, as in the first and second deductions of Part II of the *Parmenides*, in *Metaphysics*, Iota 3, similarity and dissimilarity are tightly connected. I suggest that this connection points to a strategy that an opponent of strict Leibniz's Law might use in attacking it.

Consider the way that Aristotle proceeds in 1054a33- 24. After his description of the ways of being identical, he immediately moves to address similarity, saying that things are similar if they are not entirely identical (*ταὐτὰ ἁπλῶς*). Aristotle's examples of the first way of being similar are unequal quadrilaterals and unequal straight lines. We are clearly supposed to have the examples he uses in illustrating the third way of being identical (equal equally angled quadrilaterals and straight equal lines) in mind here. After the ways of being similar, Aristotle moves on to stating that non-identity and dissimilarity are also said in many ways and then

outlines the ways of being non-identical. As I argued above, these are obviously supposed to be unpacked in part by looking to the ways of being identical and similar. Identity, non-identity, similarity and dissimilarity are obviously very closely connected in *Metaphysics*, Iota 3 then.

This points to way that some contemporary opponents of strict Leibniz's Law might respond to a proponent of it. Suppose the strict Leibnitians fail to provide a good account of similarity and dissimilarity and are unable to use similarity to explain why some things seem identical even though they are not. Their opponents may be able to show that, not only can they account for what seem to be uncontroversial instances of identity and non-identity, they can also provide a good account of similarity and dissimilarity. This would give them another reason to reject strict Leibniz's Law. Alternatively, suppose strict Leibnitians can provide a good account of similarity and dissimilarity. If their opponents can offer one that is just as good or better *and* treat what seem to be uncontroversial instances of identity and non-identity as just that, this could bolster their position. Thus, it seems that some contemporary metaphysicians who are interested in arguing against strict Leibniz's Law can find a new, promising strategy in Aristotle.

*

In this chapter I have outlined and justified the way that I take the definitions of identity, non-identity, similarity and dissimilarity in the first and second deductions of Part II of the *Parmenides* and *Metaphysics*, Iota 3. I have argued that contemporary metaphysicians would do well to pay attention to the connection that Plato and Aristotle make between identity, non-identity, similarity and dissimilarity, since it may have an important role to play in arguments between proponents and opponents of strict Leibniz's Law. In the next chapter,

I explore whether Plato and Aristotle themselves provide good accounts of similarity and dissimilarity and are consequently able to make successful arguments of the kinds I suggested we might expect to be helpful in this debate.

Chapter Three: Plato, Aristotle and Leibniz's Law

In the last chapter, I argued that in the first and second deductions of Part II of the *Parmenides*, we find laws of identity and non-identity that entail strict Leibniz's Law. In contrast, Aristotle does not subscribe to strict Leibniz's Law in *Metaphysics*, Iota 3. I suggested that the definitions of similarity, which are closely tied to identity, in these texts point to strategies that might be used by contemporary metaphysicians to defend or criticise strict Leibniz's Law. Here, I explore whether or not Part II of the *Parmenides* and *Metaphysics*, Iota 3 can yield successful arguments for or against strict Leibniz's Law using these strategies.

I begin by outlining three requirements for a good defence of this sort for strict Leibniz's Law. I proceed to tackle a number of arguments that we might think show we cannot meet them on the definitions in Part II of the *Parmenides* and conclude that although some of these arguments are unsuccessful, others are not. Nevertheless, I argue, reflection on similarity and dissimilarity in the first and second deductions of Part II of the *Parmenides* does yield important lessons for contemporary metaphysicians.

Next, I turn to *Metaphysics*, Iota 3 and again outline requirements for a successful way to strengthen an argument against strict Leibniz's Law based on Aristotle's definition. I then argue that although Aristotle fails to meet two of these requirements, we can still extract important lessons from reflection on his definitions in *Metaphysics*, Iota for contemporary opponents of strict Leibniz's Law.

Plato's Law Defended?

Recall the laws identity and non-identity that I extracted from the first and second deductions of Part II:

Law of Identity: for any x and any y, x is identical to y if and only if for any property that x has, y has it and for any property that y has, x has it i.e. $\forall x \forall y ((x=y \leftrightarrow \forall F (Fx \leftrightarrow Fy))$.
Law of Non-identity: for any x and any y, x is non-identical to y if and only if there is some property that x has and y does not or that y has and x does not i.e $\forall x \forall y (x \neq y \leftrightarrow \exists F((Fx \wedge \neg Fy) \vee (Fy \wedge \neg Fx))$.

In the previous chapter, I argued that these laws of identity and non-identity amount to strict Leibniz's Law. I pointed to an objection that strict Leibnitians face: on strict Leibniz's Law, many things that seem obviously identical are in fact non-identical. I suggested that in providing us with definitions and clear criteria for similarity, Part II of the *Parmenides* points to a possible defence to this objection: in these sorts of cases, things are non-identical but appear to be identical because they are similar. In addition, we find a correlative definition of dissimilarity, which is important for a good account of similarity.

I outline three requirements for a good defence of this sort. Firstly, it must be able to accommodate the way that we ordinarily think about similarity and dissimilarity, since non-intuitive notions of similarity and the correlative dissimilarity will not allow the strict Leibnitian respond persuasively to the complaint that they cannot accommodate our ordinary ideas about which things are identical and non-identical. Secondly, the account of similarity and dissimilarity must be genuinely explanatory; if not, the opponent of strict Leibniz's Law

will simply dismiss it as a bad account, irrespective of its consequences for strict Leibniz's Law. Thirdly, the differences between identity, non-identity similarity and dissimilarity must be such that they can be used persuade the opponent of strict Leibniz's Law that we can explain why some things appear to be identical when they are not.

Generous to a Fault

Can Plato's definitions of similarity and dissimilarity in the first and second deductions of Part II of the *Parmenides* fulfil the first requirement? One reason why we might think they cannot is that they are far too inclusive. Consider Iqbal the aardvark and my shoe rack. They seem patently dissimilar and not similar. However, on the definitions of similarity in Part II, all it takes for two things to be similar is for them to share a single property. Thus, since Iqbal is the same height as my shoe rack, they are similar. Equally, consider the identical twin elephants, Magid and Millat. They seem obviously similar and not dissimilar. Yet, according to the definitions in Part II, they are dissimilar, since there is least one property that Magid has that Millat does not or vice versa - Magid weighs one thousand kilograms and Millat weights nine hundred and fifty. Thus, we might worry, the first requirement cannot be fulfilled.

This worry is misguided. Suppose I am trying to re-arrange things in my room. I decide that the best way to proceed is to line things up in order of size. "What should I put in line after Iqbal?" asks my friend, Femi. "My shoe rack - they are similar," I reply. In this scenario, my claim that Iqbal and my shoe rack are similar seems perfectly reasonable, despite their sharing very few properties. Similarly, suppose Magid and Millat have had an unfortunate run in with a girl and her catapult and now both require eye surgery. The vet calculates the right amount of anaesthetic to use based on weight and says to their mahout, "They are not

similar but dissimilar; one weighs one thousand kilograms and one weighs nine hundred and fifty". The vet seems to have said something true, despite the fact that Magid and Millat share most of their properties.

We can explain this without abandoning the definitions of similarity and dissimilarity in Part II by making a distinction between what we might think of as strict similarity and dissimilarity and looser, everyday uses, which are affected by context. Strictly speaking, for any x and any y, x is similar to y if and only if there is some property that x has and y has and for any x and any y, x is dissimilar to y if and only if there is some property that x has and y does not or that y has and x and does not. However, in some contexts, treating two things that seem to share very few properties as similar is strange and in others it is not. This is because the context affects the properties of two things that we focus on. Thus, although in many contexts, we ignore the very few properties that Iqbal and my shoe rack share and claim that they are not similar but dissimilar, when Femi and I were re-arranging my room, we concentrated on one particular property: height. In this context, my claim that Iqbal and my shoe rack are similar is perfectly legitimate.[184] Nevertheless, strictly speaking Iqbal and my shoe rack are in fact both similar and dissimilar.

Equally, in many situations, claiming that Magid and Millat are dissimilar and not similar seems false because we do not pay particular attention to the very small number of properties that one has and the other does not. However, in the context of a vet calculating the right amount of anaesthetic to administer for surgery, the vet focuses on a particular property:

[184] At *Protagoras*, 331d8- e4, Protagoras suggests that we should not *describe* things as similar if they share very few properties even if they really are. Notice that without a distinction between strict and loose uses of similarity, he could not explain why my claim that Iqbal and my shoe rack are similar is an acceptable one given the context. See Wakefield (1987) for a good discussion of similarity in this passage of the *Protagoras* in the the wider context of the dialogue.

weight. Consequently, she legitimately claims that the elephants are dissimilar and not similar.Nevertheless, strictly speaking, Magid and Millat are both similar and dissimilar, since they meet the criteria for similarity and dissimilarity. We can defend the definitions of similarity and dissimilarity we find in Part II of the *Parmenides* from this objection then.

Different Sorts of Similarity and Dissimilarity

Another reason why we might think that we cannot meet the first requirement is that there are obviously different kinds of similarity and dissimilarity, which cannot be accommodated by similarity and dissimilarity in the first and second deductions of Part II of the *Parmenides*. For example, consider:

1a. The identical twin elephants, Magid and Millat are similar because they share most of their properties.

2a. PlayStations are similar to Nintendos because they have some essential properties in common: those that are necessary for counting as games consoles.

3a. The moon is similar to a cricket ball in that they are both spherical i.e. they have the same structure.

4a. Phryne Fisher and Kira Nerys are similar because they are prettier than Quark i.e. they are both pretty with respect to Quark.

5a. Lucian Freud's self-portrait is similar to Lucian Freud because it represents him.

1b. The Eiffel Tower is dissimilar to a cheeseburger because almost all of their properties differ.

2b. PlayStations are dissimilar to MacBooks because they do not share the same essential properties.

3b. The moon is not similar to a die because they have different structures.

4b. Kira Nerys and Jabba the Hutt are dissimilar because Kira Nerys is prettier than Quark but Jabba the Hutt is uglier than Quark i.e. they have properties that are mutually exclusive with respect to the same thing.
5b. My painting of a train is dissimilar to my friend Barry because my painting does not represent him.

These all seem to be cases of similarity and dissimilarity where similarity and dissimilarity is of a different sort in each case. When we look at the Platonic corpus, we also find different kinds of similarity and dissimilarity. For example, at 215a5- b6 in the *Symposium*, Alcibiades says that he will praise Socrates in terms of likenesses (*εἰκόνων*). The plural here suggests that different *sorts* of similarity will be involved. This fits with what comes next; Alcibiades argues that Socrates is similar to Silenus and Marsyas in form (*εἶδος ὅμοιος*), which seems to be the sort of similarity in 3a. He continues to claim that, contrary to what Socrates might think, he is in fact similar to them, in 'the other ⌜ways⌝' (*τἆλλα ἔοικας*), by which he might mean that they are similar in that they share most of their properties, as in 1, that every sort of similarity holds of them, or that every relevant sort of similarity holds of them.

At *Philebus* 12e3-13a5, after Protarchus has claimed that pleasure must be most similar (*ὁμοιότατον*) to itself, Socrates suggests that the same is true of colour and shape; even if two colours are opposed and different, they are similar in that they are all of one kind. Likewise, shapes are always similar because they are all shapes, irrespective of how different or opposed they are. This fits with 2a.

We also find similarity between a representation and what it represents, as in 5a, in the context of a discussion about the correctness of names in the *Cratylus*. Socrates claims that a painting of a woman can only be assigned to (and therefore represent) a woman, not a man.

Conversely, a painting of a man can only be assigned to (and thereby represent) a man, not to a woman. This is because a painting can only be assigned to what it is of and what is like it (*ὅμοιον*).[185]

There is also good reason for thinking that Plato draws attention to different sorts of dissimilarity. At *Cratylus*, 430d5-7, Socrates suggests that if a painting is assigned to the wrong thing (and therefore fails to represent it), it is something that is dissimilar (*τοῦ ἀνομοίου*) to it. Thus, we can find the sort of dissimilarity in 5b above. In addition, it is plausible to think that there are different kinds of dissimilarity that correlate to those in the *Symposium* and the *Philebus*.

The idea there are different sorts of similarity and dissimilarity is not only plausible then, it is also one that we find when we look at a range of Platonic texts. Yet, by the definitions of similarity and dissimilarity in Part II of the *Parmenides*, things are similar if and only if there is some property that they both have and things are dissimilar if and only if there is some property that one has and the other does not. This, some might complain, indicates that there is only one kind of similarity and one kind of dissimilarity. Hence, the definitions of similarity and dissimilarity in the first and second deductions cannot meet the first requirement.

I argue that we can solve this problem to some extent. I begin by showing that we can explain why there *seem* to be many different sorts of similarity and dissimilarity without abandoning the definitions of similarity and dissimilarity in the first and second deductions, according to which there is only one sort of similarity and dissimilarity. However, I show that accounting for similarity between representations and what they represent and dissimilarity between

[185] 430c2-14

representations and what they fail to represent is on the definitions in Part II is more difficult. Consequently, although it may be possible to reconcile them, it poses a significant challenge.

Consider cases 1a and 1b above. Recall that on the Part II definition of similarity, for any x and any y, x is similar to y if and only if there is some property that x has and y has. We can appeal to the number of properties that two things are similar or dissimilar to in virtue of in order explain why we think that Magid and Millat have a particular kind of similarity. Although similarity is just having some property in common, Magid and Millat are similar in most respects. This is why they appear to have a different kind of similarity from the Eiffel Tower and a cheeseburger; whereas the latter have very few properties in common, the former have most of their properties in common. Likewise, there is only one kind of dissimilarity, since two things are dissimilar if and only if there is some property that one has and the other does not. However, we can appeal to the number of properties that one has and the other does not in order to explain why we think that there is a distinct kind of dissimilarity that is in play in 1.b. The Eiffel Tower and cheeseburger are dissimilar in almost every respect, whereas Magid and Millat are dissimilar in virtue of very few properties. Nevertheless, they are both dissimilar for exactly the same reason: there is some property that one has and the other does not.

In addition, we can locate some of the apparent differences in many of the other cases in the sorts of properties that similarity and dissimilarity *depend on*, given some context, not in similarity and dissimilarity themselves. In 1a, Magid and Millat are similar in contexts where we focus on all and any of their properties. However, in 2a, Playstations and Nintendos are similar because we focus on their shared essential properties. The moon and a cricket ball in 3a are similar because they share a structural property and Phryne Fisher and Kira Nerys in 4a are similar in some context because they have the same relative property. Likewise, in 1b,

the dissimilarity between the Eiffel Tower and a cheeseburger holds because most of their properties are different. However, in 2b-4b, dissimilarity holds because of a particular sort of property that one has and the other does not, given some context: essential properties, structural properties and relative properties. This seems to account for what appear to be numerous other sorts of similarity and dissimilarity, for example, things could be similar or dissimilar because of functional properties, non-essential properties, spatial properties etc.

However, 5a and 5b are more difficult to explain. Accounting for similarity between representations and what they represent and dissimilarity in failed representation is particularly urgent for Platonic metaphysics and epistemology more generally. For example, in the *Phaedo*, it is similarity between Simmias and his portrait that prompts us to remember Simmias when we see his portrait. Plato then relies on this kind of similarity in the argument for recollection that follows[186] In the *Cratylus*, Plato relies on an analogy between the similarity between portraits and what they are portraits of and names and what they name and dissimilarity between portraits and what they are not portraits of and names and what they fail to explain how names successfully and unsuccessfully pick things out.[187] Moreover, even if similarity and dissimilarity do not play the same pivotal role in contemporary philosophers' metaphysics and epistemology, we might think that they must be able to explain the similarity between representations and what they represent and dissimilarity between representations and what they do not represent if the first requirement is to be met.

The difficulty with accommodating representational similarity on the definition in Part II of the *Parmenides* is that it is not clear that representations are similar to what they represent

[186] 73e9-10 - for discussions that address similarity and dissimilarity in this argument in more detail than usual, see Gosling (1965) and Sedley (2003).

[187] There has been a great deal of scholarship on exactly how this argument works - see, for example, Barney (2001), Denyer (1991), ch 5, Fine (1977), Sedley (2003), ch 6.

because of shared properties. For example, Lucian Freud is not the same colour as his self-portrait; he is animate, whereas his portrait is not; his portrait is made of paint and canvas, unlike Lucian himself; the face on the painting is bigger than Lucian's etc. What exactly is it that the two things are similar in virtue of? They do have properties in common, for example, they are both extended. However, it seems that they must be similar in some particular way that explains why representation occurs - and shared properties like being extended are not fit for this purpose.

Nor it is obvious that failed representations can be explained by the properties that one has and the other does not. There are many properties that Lucian's brother has and Lucian's portrait does not; one is inanimate and the other is animate, one is made of canvas and paint and the other is not, one is yellow and grey and the other is pink. Yet, the portrait also differs from Lucian in these ways and it is difficult to explain why dissimilarity as defined in Part II in the case of the portrait and Lucian's brother is the reason why it fails to represent him, despite successfully representing Lucian.[188]

In at least some cases then, it is difficult to see how the definitions of similarity and dissimilarity in Part II of the *Parmenides* could account for representational similarity and dissimilarity. There are two strategies that we might use to try to solve this problem. The first is to attempt to find properties of a specific sort that explain why representations represent or fail to represent, given an aesthetic context. The second is to deny that

[188] I leave aside the even trickier cases of abstract and conceptual representations and representation of non-existents here, although I take it that if similarity is at work in these cases too, we might think that it must also hold between the representation and what it represents such that it explains successful representation. Likewise, if it is dissimilarity between a representation and what it fails to represent that explains failed representation in these cases too, it must be accounted for so that it captures all and only cases of unsuccessful representation.

representation and failed representations stem from similarity and dissimilarity at all. I show here that neither is unproblematic.

We might think that representation occurs because in an aesthetic context both the representation of Lucian Freud and Lucian Freud himself have a particular property that we focus on: looking like Lucian Freud. My painting of a train does not represent Barry the whale because my painting does not look like Barry the whale. There are two problems with this answer. Suppose that Lucian's brother also has the property of looking like Lucian Freud. He and the painting seem to be similar for exactly the same reason why the painting and Lucian Freud himself are similar. Yet, we want to say that Lucian's brother does not *represent* Lucian, whereas Lucian's portrait does. Likewise, if the portrait represents Lucian because they both have the property of looking like Lucian Freud, there is no good reason to suppose that Lucian does not also represent his portrait - or indeed himself. Worse still, this solution itself depends on similarity and dissimilarity; Lucian Freud and his portrait look *like* LucianFreud and my painting of a train looks *unlike* Barry. Thus, we simply postpone the problem.

We might think that we can appeal to contemporary aesthetics, where how representations represent is a central issue.[189] However, this is by no means straightforward. For example, Goodman provides an account of representation, which reminds us of the *Cratylus.* He treats representations like names: a portrait refers to a particular thing, where reference depends on having the same form and colour.[190] For Goodman then, Lucian Freud's portrait represents Freud because they share the same form and colour, so that it refers to him. In contrast,

[189] Discussion of this issue in contemporary aesthetics is by no means limited to the cases of representation I focus on here; conceptual representation and representation of non-existent objects are also addressed.

[190] Goodman (1968), (1970)

Barry's son Larry's splodges of red and blue paint fail to represent his pet starfish because the former does not depict the latter, since they do not have the same form and colour.

If this is so, we might think that we can reconcile the similarity and dissimilarity in cases of representation with Plato's definitions of similarity and dissimilarity. Strictly speaking, for any x and any y, x is similar to y if and only if there is some property that x has and y has and for any x and any y, x is dissimilar to y if and only if there is some property that x has and y does not or that y has and x does not. Nevertheless, as with what some of the sorts of similarity and dissimilarity above, context determines the properties that we focus on when reflecting on representation: colour and form.

However, Goodman's account is problematic. If we are to believe that representation lies in shared form and colour, we must be able to provide an account of how we determine whether two things share form and colour. Yet, in some cases, there are vast differences in the form and colour that representations have, despite obviously representing the same thing, for example, a black and white caricature, a bronze statue and a self-portrait of Lucian Freud. In others, as Goodman himself notes, very small changes to a piece of art could entirely change the reference, for example if a caricaturist edits his drawing of Lucian by giving it a slightly longer nose, it might represent Lucian's brother and not Lucian. Goodman is unable to give us any account of what count as relevant shared properties of form and colour. Moreover, in the case of Lucian's self-portrait, it seems that a representation can represent something even where they do not share the same colour and form. Lucian is yellow and grey in his painting, whereas he is pink; his portrait has a protruding forehead, a hollow in his nose and broad shoulders, whereas Lucian himself has none of these features. Yet, his portrait represents

him. Of course, my discussion of Goodman is hardly exhaustive[191] and does not rule out an account of representation that can be reconciled with Plato's definitions of similarity and dissimilarity. However, it shows that finding such an account is by no means easy.

Could we use the second strategy and simply deny that representation depends on similarity at all? One motivation for this is that it seems that whereas similarity is symmetric (as in Part II), representation is not; Lucian's portrait represents Lucian but Lucian does not represent his portrait. Perhaps then the reason why we think of Lucian Freud and his portrait as similar is simply because they seem to us to be and it is the appearance of similarity that yields successful representation. Failed representation occurs because what is supposed to be a representation of something seems dissimilar to what it is purported to represent.

This is also problematic. Recall case 5b. On this account, if I say, "My painting represents Barry the whale", where it seems obvious to my friend that it is a painting of a train and does not represent Barry at all, it seems that I am not entitled to disagree with her and representation becomes an entirely relative matter. Further, neither of us could give good reasons for disagreeing; I would be left merely reiterating that my painting seems to me to represent a train and Barry could only appeal to his sense that it does not.

Arguing that I am wrong in this case because it would seem to most people that my painting is dissimilar to Barry is more promising. However, it does not solve the problem either. We want to say that even if in fact, it seems to most people that Lucian Freud is dissimilar to his

[191] Goodman's account of depiction in art has received a great ideal of attention - see, for example, Abell (2009), Hopkins (1994), (1995), (1998) and Lopes (1996) for detailed discussions of Goodman's views and similar accounts.

painting and therefore the portrait fails to represent, they are just wrong. Furthermore, we still cannot give good metaphysical explanation of representation.

It is difficult to see how we could use the definitions of similarity and dissimilarity in Part II to explain how representations represent or fail to represent then. However, abandoning the idea that similarity and dissimilarity are relevant for representation is also problematic. It threatens arguments elsewhere in the Platonic corpus. It is also a real challenge for anybody hoping to adopt similarity and dissimilarity in Part II to defend strict Leibniz Law, since it would require an enormous undertaking in aesthetics: giving a good account of exactly how representations represent and what this tells us about the plausibility of the definitions of similarity and dissimilarity in Part II and defences of strict Leibniz's Law. Thus, although it may be possible to show that the first requirement can be met, it would require far more study than I can offer here. As such, it is a task that is best left to contemporary metaphysicians.

Regress?

In the last chapter, I used Argument D to show that things can be similar by sharing a single property. Here, I address a potential worry for those hoping to use the definitions of similarity and dissimilarity Part II to defend strict Leibniz's Law: the definitions of similarity and dissimilarity and Argument D together yield infinite regresses. Thus, the second requirement above cannot be met. I argue that although Argument D generates infinite series of similarity and dissimilarity properties, they are only worrying insofar as we are troubled by ontologically expense.

Recall Argument D:

Argument D	Text (147e6-148a4-6)
1. The one is non-identical to the others and the others are non-identical to the one.	1. Tacit, from 147c2-3
2. Insofar as the one is non-identical to the others and the others are non-identical to the one, in accordance with ⌜the⌝ suffering the non-identical itself, the one would not suffer anything other than the identical with respect to the others.	2. *ἦι ἄρα ἕτερον τῶν ἄλλων τὸ ἓν καὶ τἆλλα τοῦ ἑνός, κατ' αὐτὸ τὸ ἕτερον πεπονθέναι οὐκ ἄλλο ἀλλὰ τὸ αὐτὸ ἂν πεπονθὸς εἴη τὸ ἓν τοῖς ἄλλοις·*(147e6-148a3)
3. That which suffers the identical is similar.	3. *τὸ δέ που ταὐτὸν πεπονθὸς ὅμοιον· οὐχί; - ναί.* (148a3)
4. Insofar as the one suffers the non-identical with respect to the others and the others suffer the non-identical with respect to the one, in accordance with this itself, everything with respect to everything ⌜else⌝ would be similar. For everything is non-identical to everything (else).	4. *ἦι δὴ τὸ ἓν ἕτερον τῶν ἄλλων πέπονθεν εἶναι, κατ' αὐτὸ τοῦτο ἅπαν ἅπασιν ὅμοιον ἂν εἴη· ἅπαν γὰρ ἁπάντων ἕτερόν ἐστιν. - Ἔοικεν.* (148a4-6)

Recall that in the first deduction:

For any x and any y, x is similar to y if and only if there is some property that x has and y has (i.e. if and only if x suffers the identical with respect to y).

For any x and any y, x is dissimilar to y if and only if there is some property that x has and y does not have or that y has and x does not have (i.e. if and only if x suffers the non-identical with respect to y).

For any x and any y, x is non-identical to y if and only if x is dissimilar to y in at least one respect and not similar in every respect.

In the first premise of Argument D, we find that the one is non-identical to the others and the others are non-identical to the one. According to the definitions of dissimilarity and non-identity then, the one is dissimilar to the others and the others are dissimilar to the one. In 2, Parmenides argues that insofar as the one and others both suffer the non-identical in some respect (in being dissimilar to one another), they both suffer the identical in this respect and are therefore similar. Although Parmenides does not explicitly give us this argument, this generates an infinite series of similarity and dissimilarity properties: for any x and any y, if x is dissimilar to y, x is similar to y by being dissimilar to y and x is similar to y by being similar to y (by being dissimilar to y) etc. This might worry us for two reasons. The first is that it appears to constitute infinite regress. If this is so, it seems that we do not meet the second requirement. The second is that it is not parsimonious. I show that in fact, for at least some people, the second requirement can be met.

One way that we might attempt to deal with both problems is to simply show that the definitions of similarity and dissimilarity do not in fact generate an infinite series of properties at all. We might think that we can achieve this by denying that anything can ever be similar in respect of its dissimilarity. However, this is difficult to justify. Suppose I am trying to organise my sock drawer with my friend Femi's help. I decide to divide them into two piles: one of socks that are match in that they are black and one of socks that do not match at all. Femi, noticing that I have made a mistake, says, "Wait, you've put a yellow sock in the pile of

black socks but the yellow sock is dissimilar to the black socks. You should put it in the other pile with the red sock - that is also dissimilar to the black socks". I reply, "You're right," I reply, "the yellow sock is similar to the red sock because they are both dissimilar to the black sock." It seems that I am perfectly entitled to assume that the yellow and red sock are similar because of their dissimilarity.

Likewise, suppose Femi and I move on to organise my earrings. I realise that I have lost many of them and decide that for formal occasions, I will wear matching pairs and for casual occasions, I will wear two mismatched earrings. In order to quickly distinguish which earrings are suitable for formal occasions and which only for casual ones, I suggest that we divide them into two piles: pairs that match and pairs that do not. Femi notices that I have made a mistake in putting a mismatched pair in the matching pile and says, "Wait, that earring isn't similar that other one, one is pineapple shaped and the other is bird shaped." "You're right," I say, "They're similar to each other: they are mismatched and belong in the other pile". It seems that I am entitled to treat the earrings as both dissimilar and similar in virtue of their dissimilarity.

Further, claiming that things cannot be similar in virtue of their dissimilarity is incompatible with the definitions of similarity and dissimilarity in the first and second deductions of the *Parmenides*. According to these definitions, for any x and any y, x is dissimilar to y if and only if there is some property that x has and y does not or that y has and x does not and for any x and any y, x is similar to y if and only if there is some property that x has and y has. It follows from this that for any x and any y, if x and y are dissimilar, they share at least one property, dissimilarity, and are thereby similar. This defence is unsuccessful then.

We might think we can use a different strategy: agreeing that things can be similar in virtue of their dissimilarity but denying that things can be similar in virtue of their similarity. If this is successful, we would still have higher order dissimilarity and similarity properties but they would not continue ad infinitum. However, it is not obvious what grounds we would have for doing this. This argument is incompatible with the definition of similarity in the first and second deductions: for any x and any y, x is similar to y if and only if there is some property that x has and y has. If x and y are similar then, they are similar in virtue of some particular property/properties. If x and y are similar they must also share the property of being similar and are thereby similar. Since they share the third-order property of being similar, they are also similar in virtue of this third-order property and so on ad infinitum. It seems then that there is no way to block this on the definitions of similarity and dissimilarity in the first and second deductions of the *Parmenides*. Moreover, using this strategy in this way does not fit with the way that we use similarity, which threatens meeting the first requirement above. Suppose I find my missing pineapple earring. Femi says to me, "Look, those pineapple earrings have the same shape so they are similar". "You're right, they are both similar and so belong in the matching earring pile," I reply. "Yes," says Femi, "and they are also similar because they belong in the matching pile, unlike the star and strawberry earrings which are similar because they belong in the mismatched pile." This seems to be a perfectly sensible conversation.

Another, more promising but ultimately unsuccessful strategy is to maintain that dissimilarity is directional in the following way. My pineapple earring is dissimilar to my bird earring and vice versa. However, they are not similar in virtue of their dissimilarity because one is dissimilar to a pineapple earring and the other is dissimilar to a bird earring i.e. the target of their dissimilarity is different. If this is right, they are not similar in virtue of their shared property of being dissimilar; rather they each have a different property: being

dissimilar to the bird earring and being dissimilar to the pineapple earring. Hence, maintaining that the pineapple and bird earrings are similar because they are dissimilar is just a mistake.

Although this limits the number of infinite series of similarity and dissimilarity series, it does not rid of us of the problem. Grant that one of my bird earrings is dissimilar to my pineapple earring because my bird earring is dissimilar to my pineapple earring and my pineapple earring is dissimilar to my bird earring. Now suppose I find my missing bird earring. My pineapple earring is also dissimilar to this bird earring and this bird earring is also dissimilar the pineapple earring. Thus, my bird earrings are similar because they are dissimilar to the pineapple earring and they are also similar because they have the property of being similar because they are dissimilar to the pineapple earring.

Moreover, each and every thing apart from the pineapple earring will be similar to each and every thing apart from my pineapple earring because they all share the property of being non-identical to the pineapple earring. Consequently, each of these things has multiple similarity properties (similar to the Eiffel Tower, similar to Barry, similar to my front door etc.). Since each of them has every one of these similarity properties, each and every one of them is also similar to each and every one of them, which each and every one of them have with respect to each and every one of them and so on ad infinitum

It seems then that there is no good way to entirely block infinite series of similarity and dissimilarity properties. However, some might think that these series do not generate regresses, since regresses postpone *explanation* ad infinitum - this is why they are so

troubling.[192] For example, consider the first Third Man Argument in Part I of the *Parmenides*.[193] The problem there is not just that there is an infinite series of Forms. Rather, it is that Forms were first posited in order to show how many instances of properties could be one.[194] Yet, this Third Man Argument ostensibly shows that Forms cannot do this at all; in fact, they postpone explanation ad infinitum. In contrast, the definitions of similarity and dissimilarity I have extracted from the text tells us why things are similar and dissimilar: they have at least one property in common, or there is some property that one has and the other does not.[195] This, explanation is perfectly consistent with infinite series of similarity and dissimilarity properties. Thus, the infinite series do not undermine explanation and there is no regress at all.[196]

Of course, the account of similarity and dissimilarity in Part II is hardly parsimonious even if we deny that it leads to regress. However, not everyone will be troubled by this; some might think that this ontological expense is worth a good account of similarity and dissimilarity and others may not be concerned about parsimony at all. Likewise, those who deny that postponing explanation ad infinitum is a necessary condition for regress[197] may not be concerned by ontological expense.

---

[192] I am grateful to Ursula Coope for this point.

[193] I agree with Schofield (1996) that in Part I, we in fact find *two* third man arguments, not one as is often supposed.

[194] 128e5-130a2

[195] Schofield (1996) does not note that Argument D can generate infinite series of properties. However, he argues that the definitions of similarity and dissimilarity in Part II, which he takes as 'being qualified in the same way' and 'being qualified in a different way' can help us to block the second third man argument that ostensibly generates an infinite regress of Similarity and Dissimilarity Forms. This seems to be because 'being qualified in the same way' and 'being qualified in a different way' do not require Forms for explanation.

[196] I am grateful to Mary Margaret McCabe for a discussion about possible differences between an infinite regress and an infinite series in Plato and Aristotle.

[197] What the necessary and sufficient conditions for infinite regress are is in an interesting issue but not one that I have space to discuss here.

Although the concepts of similarity and dissimilarity in Part II generate infinite series of similarity and dissimilarity then, this is only troubling insofar as we are worried about parsimony. For those who are not or think this is a worthwhile cost, meeting the second requirement is unproblematic.

Not Fit for Purpose

I turn now to argue that the third requirement (the differences between identity, non-identity similarity and dissimilarity must be such that they can be used persuade the opponent of strict Leibniz's Law that we can explain why some things appear to be identical when they are not) cannot be met for two reasons.

Suppose Nemo on Monday has seven hundred and three scales but Nemo on Tuesday only has seven hundred and two. As I pointed out in the previous chapter, according to strict Leibniz's Law, Nemo on Monday is non-identical to Nemo on Tuesday, since Nemo on Monday has a property that Nemo on Tuesday does not have (seven hundred and three scales) and Nemo on Tuesday has a property that Nemo on Monday does not (seven hundred and two scales). In fact, even if Nemo on Tuesday has exactly the same number of scales as Nemo on Monday, they cannot be identical on strict Leibniz's Law, since Nemo on Tuesday has the property of existing on Tuesday, whereas Nemo on Monday does not and Nemo on Monday has the property of existing on Monday but Nemo on Tuesday does not. As I pointed out in the previous chapter, the opponent of this version of Leibniz's Law will complain that according to strict Leibniz's Law, in either case, Nemo on Monday is non-identical to Nemo on Tuesday. Yet, she will argue, this is patently false; they are obviously identical in both cases.

I suggested that the strict Leibnitian might respond by maintaining that Nemo on Monday is non-identical to Nemo on Tuesday in both cases but our sense that something is wrong with this can be explained. In both cases, Nemo on Monday and Nemo on Tuesday are non-identical. However, they *seem* identical because they are similar, where there is a clear definition of similarity,

This makes for a poor defence if we rely on Part II of the *Parmenides.* Recall the definitions of identity, non-identity, similarity and dissimilarity and the two laws of identity and non-identity:

Definition of similarity: for any x and any y, x is similar to y if and only if there is some property that x has and y has.i.e. $\forall x \forall y ((Sxy \leftrightarrow \exists F((Fx \wedge Fy))$

Definition of dissimilarity: for any x and any y, x is dissimilar to y if and only if there is some property that x has and y does not have or that y has and x does not have, i.e. $\forall x \forall y (Dxy \leftrightarrow \exists F (Fx \wedge \neg Fy) \vee (Fy \wedge \neg Fx))$.

Definition of identity: for any x and any y, x is identical to y if and only x is not dissimilar in any respect and similar to y in every respect.

Definition of non-identity for any x and any y, x is non-identical to y if and only if x is dissimilar to y in at least one respect and x is not similar to y in every respect.

Law of Identity: For any x and any y, x is identical to y if and only if for any property that x has, y has it and for any property that y has, x has it, i.e. $\forall x \forall y ((x=y \leftrightarrow \forall F (Fx \leftrightarrow Fy))$.

Law of Non-Identity: For any x and any y, x is non-identical to y if and only if there is some property that x has and y does not or that y has and x does not i.e $\forall x \forall y (x \neq y \leftrightarrow \exists F((Fx \wedge \neg Fy) \vee (Fy \wedge \neg Fx))$.

According to the definition of similarity, for any x and any y, x is similar to y if and only if there is some property that x has and y has. Notice that each and every thing that is non-identical to me will have the property of being non-identical to Saloni. Likewise, each and every thing that is non-identical to Iqbal (including me) will have a property in common: being non-identical to Iqbal. Thus, given the law of non-identity, it seems that for any x and any y, x is non-identical to y if and only if x is similar to y, since everything has properties in common with every other thing.[198] This should worry the strict Leibnitian; if it turns out that *any* two non-identical things are similar, irrespective of whether or not they appear identical, it seems that similarity is not sufficient for explaining those cases where things appear identical but are in fact non-identical.

Moreover, according to these definitions, for any x and any y, x is dissimilar to y if and only if there is at some property that x has and y does not have or that y has and x does not have and for any x and any y, x is non-identical to y if and only if there is some property that x has and y does not have or that y has and x does not have. Therefore, Nemo on Monday and Nemo on Tuesday will be dissimilar; in fact, for any x and any y, x is dissimilar to y if and only if x is non-identical to y. Whilst Nemo on Monday and Nemo on Tuesday are similar then, they are also dissimilar. This will not persuade the opponent of strict Leibniz's Law.

On its own, this is not enough to make this defence unsalvageable; a strict Leibnitian might attempt to distinguish between relevant and irrelevant similarity and dissimilarity somehow. However, they would face two problems that are not easy to solve. Firstly, they must provide strict criteria for relevant similarity and dissimilarity - if not, their account will be just as

[198] Cf. Argument D.

unconvincing as I argued Douven's and Decock's is in the previous chapter. Secondly, they must avoid making similarity and dissimilarity hopelessly vague.

Moreover, there is further problem that is devastating. Nemo on Monday is identical to himself *and* similar to himself. The only difference in terms of similarity between Nemo on Monday with respect to Nemo on Monday and Nemo on Monday with respect to Nemo on Tuesday is that the former is *slightly more* similar. In light of this an opponent of strict Leibniz's Law will simply argue that there is not a substantive difference between cases of identity and supposed cases of non-identity that merely appear to be identical. Furthermore, the idea that cases of identity are just particular instances of identity is at odds with the way that we think about the relationships between identity and similarity; I am not *similar* to myself at all, I am *identical* to myself. As such, the strict Leibnitian will be confronted with a new complaint: she cannot accommodate our intuitions about identity and similarity.

*

I have examined four arguments that supposedly showed that we cannot use the definitions of similarity and dissimilarity to meet the requirements for a good defence of strict Leibniz's Law of the kind I pointed to in the previous chapter. I argued that the first argument, which purported to demonstrate that the first requirement could not be met because similarity and dissimilarity are too inclusive, was unpersuasive.

The second argument I discussed seemed to show that the first requirement could not be fulfilled because the definitions of similarity and dissimilarity in Part II of the *Parmenides* cannot accommodate different kinds of similarity and dissimilarity. I argued that in fact, we can largely explain why there appear to be different kinds of similarity and dissimilarity

without abandoning the Part II definitions by making distinctions between kinds of properties, numbers of properties and taking context into account. However, explaining similarity and dissimilarity in the case of representations and failed representations proved to be very difficult. Thus, although meeting the second requirement may be possible, it would require a thorough investigation of how representations represent.

I then tackled an argument that supposedly demonstrated that the definitions of similarity and dissimilarity allow us to generate infinite regresses and thus, the second requirement cannot be met. However, I argued that even if these are regresses (which we might think they are not), they are only worrying if we are troubled by ontological expense. Thus, for some, the second requirement can be met.

The final objection was devastating and showed that we cannot meet the third requirement using Part II of the *Parmenides* because the differences between identity are not sharp enough and the idea that cases of identity are just particular instances of similarity seems false. As such, the strict Leibnitian faces a different objection from intuition.

Nevertheless, reflection on the connection between that Plato makes between identity, non-identity, similarity and dissimilarity yields questions and problems with answering them that contemporary metaphysicians should consider in constructing a defence of strict Leibniz's Law by appealing to strict criteria for similarity and dissimilarity: how could we avoid cases of identity just being instances of similarity? What difference does context make to similarity and dissimilarity? At what order do similarity and dissimilarity properties occur? How should we think about the role of similarity and dissimilarity in aesthetics in the context of strict Leibniz's Law? Moreover, even if turns out that there are no convincing defences of strict Leibniz's Law that can be constructed using the strategy that I have discussed in the

context of Part II of the *Parmenides* itself, I take it that even a new defence of a philosophical position that fails is important for the debate.

Plato's Law Defeated?

In the last chapter, I argued that we find a strategy that opponents of strict Leibniz's Law might be able use similarity and dissimilarity to bolster their position in Aristotle, who is not a strict Leibnitian. This approach involves showing that a strict Leibnitian defence based on similarity and dissimilarity is unsatisfactory and providing a good account of similarity and dissimilarity or showing that a better account of similarity and dissimilarity is available to the opponent of strict Leibniz's Law. We have seen that the definitions of similarity and dissimilarity in the first and second deductions of Part II of the *Parmenides* cannot be adopted to support a persuasive defence of strict Leibniz's Law. Here, I explore whether or not opponents of strict Leibniz's Law could use Aristotle's account of similarity and dissimilarity in *Metaphysics*, Iota 3 in order to strengthen their position. I argue that although Aristotle fails to provide a good account of similarity and dissimilarity, we can uncover lessons for contemporary metaphysicians here too.

Recall the definitions of identity, non-identity, similarity and dissimilarity that I extracted from *Metaphysics*, Iota 3:

For any x and any y, x is identical to y if and only if:

1. x and y are one in number (since x and y are in fact a single accidental unity)

Or (exclusive)

2. x and y are one in both number and account (since x and y are in fact a single an individual or universal)

Or (exclusive)

3. x and y are one in mathematical properties (since x and y are in fact one abstract geometrical object of a particular size and shape).

For any x and any y, x is non-identical to y if and only if:

1. x is one in number (since x is an accidental unity).

Or (exclusive)

2. x is one in number and account (since x is an individual or universal).

Or (exclusive)

3. x is an abstract geometrical object of a particular shape and size.

For any x and any y are similar if and only if:

1. x and y are unequal particular non-congruent geometrical objects, which are one in form.

Or (inclusive)

2. x and y are individuals which could have some property to a greater or lesser extent but in fact have it to an equal extent.

Or (inclusive)

3. x and y are individuals or accidental unities and undergo one kind of change to any degree.

Or (inclusive)

4. the number of properties that x and y both have exceeds the number of properties that x has and y does not or y has and x does not or the number of prominent properties that x and y both have exceeds the number of prominent properties that x has and y does not or y has and x does not.

For any x and any y, x and y are dissimilar if and only if:

1. x and y are I. what we might think of as nearly non-identical II. do not differ in substance III. not one in form i.e. they are particular, abstract geometrical objects that are different sorts of shape.

Or (inclusive)

2. x and y are things which are one in form (individuals of a particular form) and in which a property might arise to a greater or lesser degree and does.

Or (inclusive)

3. x and y are accidental unities or individuals and undergo different changes to any degree.

Or (inclusive)

4. the number of properties that x has and y does not or y has and x does not is greater than the number of properties that x and y both have or the number of prominent properties that x has and y does not or y has and x does not exceeds the number of prominent properties that both x and y have.

I stipulate three requirements for a good argument in favour of the non-Leibnitian based on Aristotle's account of similarity and dissimilarity here. Firstly, his account must be able to accommodate the way we ordinarily think of similarity and dissimilarity, since the purported advantage of an account that is not a strict Leibnitian one like Aristotle's is that it can be used to better justify the way we tend to think of identity and non-identity. Secondly, it must be genuinely explanatory. Thirdly, we must be able to make a distinction between identity and similarity such that the non-Leibnitian can provide an intuitive account of the difference between identity and non-identity and similarity and dissimilarity.

Intuitive Similarity

As I suggested above, it seems that there are different kinds of similarity and dissimilarity, for example:

1a. The identical twin elephants, Magid and Millat are similar because they share most of their properties.
2a. PlayStations are similar to Nintendos because they have some essential property in common: those that are necessary for counting as games consoles.
3a. The moon is similar to a cricket ball in that they are both spherical i.e. they have the same structure.
4a. Phryne Fisher and Kira Nerys are similar because they are prettier than Quark i.e. they are both pretty with respect to Quark.
5a. Lucian Freud's self-portrait is similar to Lucian Freud because it represents him.

Equally, it seems that there are different kinds of dissimilarity, for example:
1b. The Eiffel Tower is dissimilar to a cheeseburger because almost all of their properties differ.
2b. PlayStations are dissimilar to MacBooks because they do not share the same essential properties.
3b. The moon is not similar to a die because they have different structures.
4b. Kira Nerys and Jabba the Hut are dissimilar because Kira is prettier than Quark but Jabba the Hut is not i.e. they have opposed properties with respect to the same thing.
5b. My painting of a train is dissimilar to my friend Barry because my painting does not represent him.

Unlike Plato in the first and second deductions of the *Parmenides*, Aristotle offers us different ways of being similar and dissimilar in *Metaphysics*, Iota 3. Hence, we might expect his account to better accommodate what we take to be different sorts of similarity and dissimilarity, thereby meeting the first requirement; there appear to be different sorts of similarity and dissimilarity because there *are* different sorts of similarity and dissimilarity. However, when we look closely at the ways of being similar and dissimilar, we see that serious problems arise with the second and fourth ways of being similar and dissimilar.

Recall that things that are similar in the second way are individuals which could have some property to a greater or lesser extent but in fact have it to the same extent. We might disagree that these are distinct kinds of similarity and dissimilarity. However, even if we grant that they are, there seems to be no good reason to think that these kinds of similarity and dissimilarity can only hold of individuals. For example, it seems just as plausible to think that drunk Barry and drunk Harry are similar because one might have been more drunk than the other but they are in fact just as drunk as each other as it is to think that Barry and Harry are similar because one of them could have been heavier or lighter but they are the same weight. Likewise, it seems just as plausible to think that drunk Iqbal and drunk Femi are dissimilar because one could have been drunker than the other and Iqbal is drunker than Femi as it is to think that Iqbal might have been greedier or less greedy than Femi and is in fact greedier.

The fourth ways of being similar and dissimilar are also difficult to square with the way in which we ordinarily think about similarity and dissimilarity. Aristotle gives us two sets of criteria for the fourth way of being similar: for any x and any y, x and y are similar if the number of properties that both x and y have exceeds the number of properties that x has and y does not or y has and x does not; for any x and any y, x and y are similar if the number of

prominent properties that both x and y have exceeds the number of prominent properties that x has and y does not or y has and x does not. There are also two sets of criteria for the fourth way of being dissimilar: for any x and any y, x and y are dissimilar if the number of properties that x has and y does not or y has and x does not exceeds the number of properties that both x and y have; for any x and any y, x and y are dissimilar if the number of prominent properties that x has and y does not or y has and x does not exceeds the number of prominent properties that both x and y have.

That there is a distinct kind of being similar and dissimilar that stems from the total number of properties that two things share or do not share is plausible enough. After all, in cases 1a and 1b above, Magid and Millat are similar because they share most of their properties and the Eiffel Tower and a cheeseburger are dissimilar because they share very few of their properties.Yet, some might argue, it is not obvious that two things are similar just because of the number of properties that they both have *outnumbers* the number of properties that the first has and the second does not and the second has that the first does. For example, two things might have two thousand and two properties in common, whereas the first has five hundred that the second does not and the second has five hundred properties that the first does not. It is not obvious that this is sufficient for similarity. Likewise, it is not clear that two things are dissimilar because the number of properties that one has and the other does not and vice versa is higher than the number of properties that they have in common, for example if the first has five hundred and one properties that the second does not and the second has five hundred and one properties that the first does not but they share one thousand properties. Thus, focusing solely on whether or not the number of properties that two things share is greater than the number that one has and the other does not and vice versa will include some things as similar and dissimilar that it is hard to believe really are, making the first requirement difficult to meet.

Recall the strategy that I used in defending Plato's definitions above: context is relevant for the way that we think about similarity and dissimilarity. Could we defend Aristotle here by appealing to context too? I suggest that we can. We can maintain that in cases like 1a and 1b above, we calculate considering all of Magid and Millat's properties, whereas in other cases, we restrict the number of properties that we consider relevant. For example, consider Iqbal and my shoe rack again. Strictly speaking, they meet the first set of criteria for being dissimilar in the fourth way. However, when I am lining things up in my room in order of height, we focus on only those properties that are relevant: height. Thus, we think of Iqbal and my shoe rack as similar and not dissimilar. This is a good solution, although it is not one that Aristotle himself gives.

Consider the second sets of criteria for being similar and dissimilar in these ways: for any x and any y, x and y are similar if the number of prominent properties that both x and y have exceeds the number of prominent properties that x has and y does not or y has and x does not; for any x and any y, x and y are dissimilar if the number of prominent properties that x has and y does not or y has and x does not exceeds the number of prominent properties that both x and y have. We might complain that these second sets of criteria should not combined with the first to constitute the fourth way. Rather, they should be different ways of similarity and dissimilarity altogether; after all, many things that meet the first sets criteria will not meet the second.

Again, Aristotle himself does not explain why he chooses to combine the first and second sets of criteria - and the text does not help us to provide an account on his behalf. However, I suggest two possible explanations here, neither of which is satisfying. The first is that Aristotle lumps them together because he characterises them both as having more properties

(albeit properties of a different kind) in common than properties that one has and the other does not and vice versa (*τὰ δὲ ἐὰν πλείω ἔχῃ ταὐτὰ ἢ ἕτερα*).[199] In fact, though, they count as separate ways of being similar and dissimilar. However, if this were so, Aristotle would be not only a careless writer, which I argued he is not in my first chapter, but a misleading one.

We might instead think that Aristotle thinks that things meet the second set of criteria for similarity and dissimilarity just because they meet the criteria for any other sorts of similarity and dissimilarity. For example, Barry and Harry to have more shared prominent properties than prominent properties that Barry has and Harry does not and vice versa because they are gaining weight at the same rate - they meet the second set of criteria because they are similar in Aristotle's third way. Conversely, Barry and Hector meet the second set of criteria for the fourth way of being dissimilar because they are dissimilar in the third way: they are undergoing different changes. The second sets of criteria for similarity and dissimilarity then are criteria for higher order similarity and dissimilarity. Consequently, Aristotle does not allocate them fifth ways of being similar and dissimilarity.

Again, this would make Aristotle a careless writer. In addition, it is not obvious that things that meet the second sets of criteria will be similar and dissimilar in any other way. For example, the accidental unities, drunk Barry and drunk Harry, might have more properties that stand out to me in common than those that Barry has and Harry does not or Harry has and Barry does not but not meet any of the criteria for being similar in the supposed fundamental ways. Likewise, the number of prominent properties that drunk Iqbal has and drunk Femi does not and that drunk Femi has and drunk Iqbal does might exceed those that

[199] 1054b11-12

they both have, despite their not meeting the criteria for dissimilarity in the purported fundamental ways. Things that are similar and dissimilar because they meet the second sets of criteria for the fourth ways of being similar and dissimilar need not meet them because they are similar and dissimilar in more fundamental ways. As such, this defence is not a good one either.

There is a further problem with Aristotle's ways of being similar and dissimilar. He offers us only four ways of being similar and dissimilar. Yet, we might well think that there are others. For example, there are no ways of being similar and dissimilar in *Metaphysics*, Iota 3 that correlate with the kinds of similarity and dissimilarity in 2a- 5a and and 2b-5b above. In fact, on Aristotle's account, many cases of what seem to be specific kinds of similarity and dissimilarity will all either fall into the fourth ways of being similar and dissimilar by being meeting the second set of criteria or not count as similar and dissimilar at all. For example, things in 2a-5a and 2b-5b do not meet the criteria for the first, second or third ways of being similar or dissimilar. Nor do they meet the first sets of criteria for the fourth ways of being similar or dissimilar. Thus, they must all be similar or dissimilar in the same way and for the very same reason (they meet the second sets of criteria for the fourth way of being similar and dissimilar) or not at all. This does not fit with the way in which we tend to think about similarity and dissimilarity.

It seems then that the ways of being similar and dissimilar that Aristotle offers us are not easily reconcilable with the way that we ordinarily think of similarity and dissimilarity. He excludes accidental unities from being similar and dissimilar in the second ways. In addition, he offers us two sets of criteria for the fourth ways of being similar and dissimilar, where we might think they really amount to separate ways of being similar and dissimilar. Finally,

Aristotle only offers us four kinds of similarity and dissimilarity. However, it seems that there are more. Consequently, Aristotle cannot meet the first requirement.

Explanation

Unlike the first and second deductions of the *Parmenides*, in *Metaphysics*, Iota 3, there are no infinite series of similarity and dissimilarity properties generated from the definitions of similarity and dissimilarity. However, there are a number of other problems with Aristotle's account that render him unable to meet the second requirement.

The first problem is that Aristotle gives us no argument for why we should accept the sorts of similarity and dissimilarity that he offers us or why he excludes accidental unities from being similar or dissimilar in the second ways. Nor does he explain why many cases of what seem to us to be distinct kinds of similarity and dissimilarity are assimilated into the fourth ways of being similar or dissimilar - if, indeed, they even count as instances of similarity and dissimilarity for Aristotle at all. Yet, all this is in desperate need of justification.

The second problem concerns the second sets of criteria for the fourth ways of being similar and dissimilar. Suppose Kira, Julian and Quark are on an exploratory mission in the Gamma Quadrant, when they encounter an alien of a species that they have never met before. Julian says, "Well, it has more prominent properties in common with me than prominent properties that it has and I do not and vice versa; so we are similar". Conversely, suppose another unknown alien arrives and Kira says, "Julian and this second alien are dissimilar; the number of prominent properties that Julian has and the alien does not and vice versa is greater than the number of prominent properties that they both have". What is it that determines which properties are prominent? I have already shown that they cannot be essential properties,

visible properties or perceptible properties on Aristotle's account. Instead, they are those properties that are stand out somehow.

However, which properties stand out can differ from person to person in the very same context. Suppose Julian says, "The first alien is similar to me because we share all our striking properties; we both have a head, two ears and four limbs . Quark says, "No, Julian, that's not right. You do share those important properties but the alien also has striking properties that you don't have - and more of them: antennae, six toes, a tail and hooves. So, you aren't similar, you're dissimilar". Since all that seems to determine which properties are prominent is what *seems* striking, Julian and Quark can both be right. Consequently, similarity and dissimilarity turn out to be entirely relative. Moreover, the only resource Julian and Quark have to express their disagreement is to appeal to what seems to them to be the case.

We cannot solve this by appealing to the number of people who agree and disagree. Suppose that in fact Kira agrees with Quark. Claiming that Julian is wrong because Kira and Quark are in the majority turns out deeply problematic, as the following scenarios illustrate. Suppose Ben Sisko decides he wants to meet the first alien too and flies out to join them. When he arrives, he agrees with Julian. Now, it seems that Kira, Quark, Ben and Julian are just as right (or wrong) as each other. Suppose Jadzia now also joins them and agrees with Ben and Julian. Now, Jadzia, Ben and Julian are in the majority and therefore right. Thus, the alien and Julian have gone from being dissimilar to both similar and dissimilar/neither similar nor dissimilar to similar. Julian has gone from being wrong to right and wrong/neither right nor wrong to right again. However, nothing in the changes in the number of people who agree with Julian or who agree with Quark has required Julian to do or think any differently or for Julian and the alien to change. Thus, this kind of similarity and dissimilarity is not stable and change in correctness does not require any change on the

part of the epistemic agent or in the objects which are similar or dissimilar. As such, this is not a good solution.

I have argued that Aristotle fails to meet the second requirement for three reasons. Firstly, he gives us no argument for why we should accept the kinds of similarity and dissimilarity that he offers us or why he excludes accidental unities from being similar or dissimilar in the second ways of being similar and dissimilar. Secondly, he does not explain why many cases of what seem to us to be distinct kinds of similarity and dissimilarity are assimilated into the fourth ways of being similar or dissimilar. Finally, he has no good explanation for why things are similar or dissimilar because they meet the second sets of criteria for the fourth ways of being similar and dissimilar.

Identity and Similarity

Earlier, I argued that the definitions or similarity and dissimilarity in Part II could not provide a good defence of Leibniz's Law because cases of identity turned out to be cases of similarity too. Can Aristotle make a better distinction between identity and similarity?

We might think that the fourth ways of being similar and dissimilar suggest that we cannot. Aristotle tells us that things are similar if they share more properties than they do not overall. Yet, things that are identical obviously share more properties than they do not, since they share *all* their properties. In addition, many of the things that meet the second set of criteria for the fourth way of being similar will be identical; Julian seems to be similar to himself to Kira because he shares with himself *all* of the properties predicated of him that seem prominent to Kira. Fortunately, this is easily solved: we simply take similarity and dissimilarity to hold between multiple things. That Aristotle would approve of this strategy

is supported by his claim at the beginning of his description of the ways of being similar, where he states that things that are similar in the first way cannot be identical *entirely* (ἁπλῶς),[200] which suggests that he is anxious to separate identity and similarity. Thus, cases of identity are never also cases of similarity.

Aristotle's account has failed to meet the first and second requirements for a good argument in favour of a non-Leibnitian account of identity and non-identity. Thus, it will not suffice for a persuasive argument against the strict Leibnitian. However, my discussion has provided some useful starting points for a non-Leibnitian hoping to construct an argument against strict Leibniz's Law based on similarity and dissimilarity. For example, aiming to provide different sorts of similarity and dissimilarity and giving a good account of why, showing that identity always holds of one thing whereas similarity only ever holds between multiple things could strengthen their case for a more intuitive account of identity. Moreover, even if the strategy we find in Aristotle ultimately fails, I take it that exploring it is worthwhile.

*

I have argued that neither the definitions of similarity and dissimilarity that we find in Part II of the *Parmenides* nor those in *Metaphysics*, Iota support persuasive defences of strict Leibniz's Law or arguments against it. However, my discussion has revealed important lessons for contemporary metaphysicians hoping to explore whether or not similarity and dissimilarity can be used to persuasively support certain positions on the criteria for numerical identity. This will be fruitful even if it turns out that they cannot.

[200] 1054b3

Chapter Four: Unbreakable Laws Broken?

It seems that there are three laws of identity and non-identity that are uncontroversial.[201] Firstly, necessarily, it is not the case that there that there is some x and some y such that x is both identical and non-identical to y, i.e. $\Box\neg\exists x\exists y\ (x=y \wedge x\neq y)$. Call this Restrictiveness. Secondly, necessarily, it is not the case that there is some x and some y such that x is neither identical nor non-identical to y, i.e. $\Box\neg\exists x\exists y\ (\neg x=y \wedge \neg x\neq y)$. Call this Exhaustivity. Thirdly, necessarily, for any x and any y, x is not identical to y if and only if x is non-identical to y and x is not non-identical to y if and only if x is identical to y, i.e. $\Box\forall x\forall y\ ((\neg x=y \leftrightarrow x\neq y) \wedge (\neg x\neq y \leftrightarrow x=y))$. Call this Exclusivity.

In this chapter, I focus on 146b2-5 of the *Parmenides* and *Metaphysics*, Iota 3, 1054b15-25. I claim that we might think that in the former, Parmenides rejects Exhaustivity and Exclusivity because there are some things that are neither identical nor non-identical to one another. Yet, this seems manifestly false. In the latter, I suggest that some might think that Aristotle inherits this idea from 146b2-5 of the *Parmenides* and commits to it, despite its obvious falsity.

I argue that we can explain both *Parmenides*, 146b2-5 and *Metaphysics*, 1054b15-25 so that neither Plato nor Aristotle are presenting us with something patently false and both tell us

[201] I do not take these laws to be exhaustive, for example, there is also what I call 'Oneness': identity must only ever hold between something and itself and non-identity must only ever hold between something and something else. Notice that Oneness, Restrictiveness, Exhaustivity and Exclusivity together entail that every thing is always and only identical to itself and always and only non-identical to something else.

interesting things about Exhaustivity and Exclusivity. I show that in the *Parmenides*, the construction of 146b2-5 indicates not that there *are* things that are neither identical nor non-identical to something but that there *might* be. We can make sense of this suggestion by reflecting on Part I of the dialogue, which reveals that there may be some things that are genuinely difficult to square with Exhaustivity and Exclusivity: a Form with respect to one of its instantiations and vice versa and a property of something with respect to the property itself and vice versa. In contrast, it turns out that far from denying Exhaustivity and Exclusivity in *Metaphysics*, Iota 3, Aristotle points to a need to refine them in light of his view that there are different ways of being identical and non-identical.

Plato: Guilty as Charged?

A Peculiar Premise

The laws of Exhaustivity and Exclusivity are in part what make the conclusions of the identity and non-identity arguments in the first deduction worrying. Exhaustivity and Exclusivity are vital for each and every thing being self-identical and non-identical to every other thing and never identical to something else or non-identical to itself, which are necessary conditions for each and every thing being one and a thing at all. Yet, in the first deduction, the conclusions of the identity and non-identity arguments tell us that if the one is, *οὐδὲ μὴν ταὐτόν γε οὔτε ἑτέρῳ οὔτε ἑαυτῷ ἔσται, οὐδ᾽ αὖ ἕτερον οὔτε αὑτοῦ οὔτε ἑτέρου*

ἂν εἴη[202] (it would be neither identical to itself nor non-identical to itself and neither identical nor non-identical to another).[203] If the one is then, it seems that Exhaustivity is false.

Moreover, according to Exclusivity, necessarily, for any x and any y, x is not identical to y if and only if x is non-identical to y and x is not non-identical to y if and only if x is identical to y. Yet, according to the conclusions of the identity and non-identity arguments in the first deduction, the one is not identical *and* not non-identical to itself and not identical *and* not non-identical to the others. After the first deduction then, the reader suspects that something has gone wrong, partly because the conclusion of the identity and non-identity arguments is incompatible with Exhaustivity and Exclusivity.

Given this, what we find at 146b2-5 is particularly surprising. Consider the following argument:

Argument F	Text (146b2-c4)
1. Every thing with respect to every thing[204] is like this: either identical or non-identical, or, if ⌜there were something⌝ neither identical nor non-identical, then ⌜it⌝ would be a part to that which it is so related or as a whole to its part.	1. *πᾶν που πρὸς ἅπαν ὧδε ἔχει, ἢ ταὐτόν ἐστιν ἢ ἕτερον· ἢ ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον, μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη* -Φαίνεται. (146b2-5)

[202] 139b4-5

[203] I take *ἑτέρου* to be any of *τα ἄλλα*, although what *τα ἄλλα* are more precisely (Forms and particulars, other wholes and parts etc.) will differ depending on how we read the subjects of the deduction, as I argued in Chapter One.

[204] *πᾶν…ἅπαν* is usually translated 'Everything…everything' (Allen (1997), p.31, Harte (2002), p.118, Hermann (2010), p. 141, Scolnicov (2003), p. 112, Turnbull (1998), p. 88). I have opted for my translation because it makes it clearer that Plato is not restricting it to the sum of things with respect to the some of things (which I think these translators would have no quarrel with in any case).

2. The one is not itself a part of itself.	2. *ἆρ' οὖν τὸ ἓν αὐτὸ αὑτοῦ μέρος ἐστίν; - οὐδαμῶς.* (146b5-6)
3. So, since it is not a part of itself, it would not be related to itself as a whole of which it itself is a part.	3. *οὐδ' ἄρα ὡς πρὸς μέρος αὐτὸ αὑτοῦ ὅλον ἂν εἴη, πρὸς ἑαυτὸ μέρος ὄν. - οὐ γὰρ οἷόν τε.* (146b7-c1)
4. But the one is not non-identical to the one.	4. *αλλ' ἆρα ἕτερόν ἐστιν ἑνὸς τὸ ἕν; οὐ δῆτα.* (146c1)
5. So, the one would not be non-identical to itself.	5. *οὐδ' ἄρα ἑαυτοῦ γε ἕτερον ἂν εἴη. - οὐ μέντοι.* (146c1-2)
6. So, if the one is not non-identical to itself, nor related to itself as a a part or a whole, it must be identical to itself.	6. *εἰ οὖν μήτε ἕτερον μήτε ὅλον μήτε μέρος αὐτὸ πρὸς ἑαυτό ἐστιν, οὐκ ἀνάγκη ἤδη ταὐτὸν εἶναι αὐτὸ ἑαυτῷ; - Ἀνάγκη.* (146c3-4)

The arguments in the first and second deductions usually begin with premises that we can divide into two sorts. The first are those that are problematic premises or conclusions that are taken from previous arguments in the same deduction. For example, the contact argument in the second deduction starts with Parmenides stating that the one is in the whole of itself, which he acknowledges was established earlier.[205] The second are premises that are independent of previous argument. These are almost always conceivable or plausible on at least some repetitions of Part II. For example, the first premise of the motion and rest

[205] 148d6-7

argument at 138b8-c1 is *κινούμενόν γε ἢ φέροιτο ἢ ἀλλοιοῖτο ἄν: αὗται γὰρ μόναι κινήσεις* (if it were in motion, it would be either be doing so in place or it by changing (place), for those are the only kinds of [spatial] motion).

The opening premise of Argument E is not one of the first kind, since it is not inferred or taken from anywhere else in the second deduction. However, if 1 is true, it seems to break Exhaustivity and Exclusivity.

Moreover, the cases of things that are purportedly exempt from identity seem quite obviously to be non-identical to one another. The first case of things that are exempt from identity and non-identity is 'a part to that which it is so related'. Notice that in the rest of the argument, Parmenides rules out the one being a part of itself or related as a part to the whole it is part of, concluding that it must be identical to itself – the only option in 146b2-5 left. By proceeding in this way, Parmenides shows us that he means that it is its whole that a part is neither identical nor non-identical to in 146b2-5. The second case of something that seems to be exempt from identity and non-identity then is a whole with respect to one of its parts.

Yet, we might think that the claim that a part with respect to the whole it is part of or a whole with respect to one of its parts is neither identical nor non-identical does not seem even remotely plausible. Recall the law of non-identity that is in play in the first and second deductions of Part II of the *Parmenides:* for any x and any y, x is non-identical to y if and only if there is at least one property that x has and y does not or that y has and x does not. Barry the whale is a whole of which his fin is a part. Barry must be non-identical to his fin and his fin must be non-identical to him according to the law of non-identity in the first and second deductions; after all, Barry's fin has properties that he does not, for example he is ten metres

wide, whereas his fin only measures half a metre. Thus, we might think that 1 cannot be a premise of the second kind either.

Notice also that Parmenides could arrive at the very same conclusion without abandoning Exhaustivity and Exclusivity:

1. Every thing with respect to every thing is either identical or non-identical and not both (from Restrictiveness and Exhaustivity).
2. The one is not non-identical to itself (self-evident).
3. Since the one is not non-identical to itself, it is identical to itself (compatible with Restrictiveness, Exhaustivity and Exclusivity).

This argument is sound and valid; 3 follows from 1 and 2, both of which are undeniable. The first premise of Argument E is not only one that seems to break the pattern of the first premises of arguments in the first and second deductions, it is not even one that a good argument requires. Why then does Plato use it?

Wholly Unpeculiar

This premise has received little attention in existing scholarship. Harte is a notable exception. I show here that on her analysis of 146b2-5, Exhaustivity and Exclusivity are not threatened so that if we accept her reading, the worry above is misguided. Nevertheless, I argue, we ought to reject her interpretation of 146b2-5.

Harte claims that in 146b2-5, we find something markedly different from anything Parmenides has said so far. She argues very persuasively that in the first deduction, we are confronted with absurdities that follow if we take a whole to be just the sum of its parts i.e. if

the relation between a whole and its parts is one of identity.[206] In 146b2-5, she argues, we find a new suggestion: the whole-part relation should be distanced from identity and distinctness.[207]

Harte translates 146b2-5 as follows:

> *Everything, I take it, is related to everything*[208] *as follows: it is either the same (ταὐτὸν) or other (ἕτερον), or, if it is neither the same nor other, it would either be a part of that to which it is thus related or be related as whole to part.*[209]

She takes it to offer us four kinds of exhaustive and exclusive relations: for any (putative) pair, a and b, the options are:

1. a is related to b as *ταὐτό*.
2. a is related to b as *ἕτερον*.
3. a is related to b as a part to the whole it is part of.
4. a is related to b as a whole to one of its parts.

She argues that since these relations are exhaustive and exclusive and it is obvious that a part must be non-identical to its whole and vice versa, *ἕτερον* here cannot mean 'non-identical'. Instead, she reads it as 'distinct', where 'distinct' covers both overlap and disjointedness.

[206] Harte (2002), ch 2

[207] Harte (2002), p. 118

[208] Although she translates 'Everything…everything', that she takes it to mean 'any (putative) pair' indicates that she assumes that Plato means something like 'each and every thing with respect to each and every thing'.

[209] Harte (2002) p. 118

Thus, whatever the relations between a part and its whole and a whole and one of its parts are, 146b2-5 tells us, they cannot be ones of distinctness.

Nor can they be some kind of identity relation. Recall the law of identity that I claimed was in play in the first and second deductions in Chapter Two: for any x and any y, x is identical to y if and only if for any property x has, y has it and for any property that y has, x has it. On this law of identity, Barry the whale is not identical to his fin, since he does not do not have all and only those properties that his fin has; Barry enjoys eating krill, whereas his fin does not. Although Harte acknowledges that the relation between a part and its whole and vice versa cannot be one of identity, her explanation of why is rather more complex. She would, I take it, agree that the relation between a part and its whole and vice versa cannot be an identity relation. However, she argues that taking the relation between a part and the whole it is part of or vice versa to be one of partial identity is also problematic, as the first deduction implies. It is this kind of identity that is ruled out here so that a part with respect to the whole it is part of or a whole with respect to one of its parts cannot be an identity relation, partial or otherwise. Thus, she argues, there is no such thing as partial identity on 146b2-5.

The exhaustive and exclusive relations that Harte takes 146b2-5 to present us with then can be made more precise: for any (putative) pair, a and b, there are four exclusive options:

1. a is identical to b.
2. a is distinct from b.
3. a is a part of the whole it is part of, b.
4. a is a whole of which b is a part.

As I have indicated, Harte suggests that this marks an interesting and plausible move away from the arguments in the first deduction. There, treating wholes as the sum of their parts led to absurdity. In 146b2-5, Parmenides distances the identity relation from the whole-part and part-whole relation. According to Harte, 2 yields another interesting and plausible mereological lesson: a whole is not entirely distinct from one of its parts either. This is sensible enough; after all, if Barry swims to the shore, his fin goes with him.[210]

On Harte's reading, many of the oddities I noted above are simply not at issue. Firstly, 146b2-5 does not break the pattern of premises that begin arguments in Part II; it is independent of previous argument and plausible. Thus, on her interpretation,146b2-5 is a premise of the second kind above. Secondly, Exhaustivity and Exclusivity are not threatened at all. Recall the four kinds of exclusive and exhaustive relations that Harte outlines: for any (putative) pair, a and b, a stands to b in one and only one of the following ways:

1. a is identical to b.
2. a is distinct from b.
3. a is a part of the whole it is part of, b.
4. a is a whole of which b is a part.

In 1, a and b are identical. In 2-4, a and b are non-identical. Thus, every thing is identical to itself and non-identical to anything else and Exclusivity and Exhaustivity remain intact.

Despite these advantages, I suggest that we reject Harte's reading. On her interpretation, the first deduction has led to all sorts of absurdities because wholes were treated as just the sums

[210] ibid.

of (i.e. identical to) their parts. 146b2-5 marks progress in that it distances the part-whole relation from identity, as well as distinctness. However, in the first deduction, Parmenides never suggested a *single* part with respect to its whole or vice versa are identical; rather, it seemed that wholes were treated as identical to their part*s*. As such, we would expect Parmenides to talk of the relationship between wholes and their part*s* and vice versa in 146b2-5, not between a whole and *one* of its parts and vice versa, as he does. Harte explains this by suggesting that if a whole is just the sum of its parts, we might think that it follows that a part must be partially identical to the whole it is part of and vice versa. As such, partial identity was at issue in the first deduction.[211] However, if this is true, it is surprising that Plato, who, as I have shown, is so careful with his use of *ταὐτό*, does not change his language to indicate a difference between identity and partial identity.

In addition, for Harte, either *ἕτερον* means 'distinct' throughout the first and second deductions, which I showed was implausible in Chapters One and Two, or the meaning of *ἕτερον* in 146b2-5 shifts from non-identity to distinctness, without any indication that this has occurred.[212] Yet, as I have shown, Plato is very careful and consistent in his use of language in the identity, non-identity, similarity and dissimilarity arguments.

Nor does Harte's reading fit well with the careful construction of the premise. Consider the premise divided into four below:

> a) *πᾶν που πρὸς ἅπαν ὧδε ἔχει, ἢ ταὐτόν ἐστιν ἢ ἕτερον* b) *ἢ* c) *ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον*, d) *μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη.*

[211] ibid.

[212] It is not entirely obvious which of these Harte would subscribe to, although I suspect she would opt for the latter.

On Harte's reading, Plato suggests here that for any x and any y, a is related to y in exactly one of the following four ways: identity, distinctness, part- whole and whole-part. However, notice that when using the conditional, Plato chooses c) as the antecedent and d) as the consequent. As a result, as the premise stands, it still allows for cases of parts with respect to their wholes or vice versa that *are* related as *ταὐτό* or *ἕτερον*. Yet, if Harte's is right, we would expect the conditional to be the other way around i.e. if related as a part to the whole is part of or a whole to one of its parts, then they would be neither *ταὐτό* nor *ἕτερον*. Without this, the text does not support the four exhaustive, exclusive relations she claims it does.

The conditional is problematic for another reason on Harte's reading. As it stands, *ἢ* on its own might be exclusive or inclusive. If c) is not to be redundant, it seems that it serves to indicate that we should take the *ἢ* as exclusive, as Harte does. However, if Harte's interpretation is right, why do we not find similar locutions to indicate that the other disjunctives are also exclusive? A good answer would be that the other disjunctives are so obviously exclusive that it is unnecessary. However, whilst it is true that the reader does not require any linguistic signal to recognise that it is not the case that a can be both a part of the whole b and a whole of which b is a part, it is not obvious that being identical[213] and being distinct[214] are exclusive. Suppose Barry and his fin are partially identical. I can still distinguish Barry's fin from Barry and we might think that this is sufficient for distinctness. Likewise, suppose unknown to everybody else, Mohammed is in fact the anonymous 'Banksy'. There are all sorts of true beliefs that we might have of Banksy that nobody has of Mohammed and vice versa; Banksy is a rebel and a gifted graffiti artist, Mohammed has a stable income and does not like art etc. This might be sufficient for distinctness, even though they are in

[213] Harte's option 1

[214] Harte's option 2

fact identical. Again then, the construction of the premise does not sit comfortably with the four exclusive, exhaustive relations Harte claims it offers us.

Harte will also struggle to explain why Plato uses the subjunctive in 146b2-5 (*ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον*). This implies some hesitation about this antecedent. Yet, on Harte's reading, Parmenides has said something perfectly sensible. Why then does Plato use the subjunctive? Perhaps Harte would argue that 146b2-5 is not intended to be presented as a certainty. After all, on her interpretation it only points towards a new model of composition, it does not offer us one.[215] Moreover, *που* in a) might be translated 'perhaps' rather than 'I take it', indicating uncertainty about everything following a). However, if this is so, we are still left wondering why Plato chooses to further emphasise uncertainty in d) but not in a), since on Harte's interpretation, it is all four relations taken together that introduce new ideas about composition.

In addition, Harte will struggle to explain a further feature of d): *μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη*. Harte takes the first of these options to be a relation that holds between a part and the whole it is part of. Notice, however, that Plato does not explicitly tell us this here. We must wait until the third premise of the argument at 146b6-7 to find out. This is surprising if 146b2-5 has the significance that Harte takes it to.

It seems then that although Harte's interpretation of 146b2-5 has interesting philosophical lessons, it involves reading *ἕτερον* as 'distinct', not 'non-identical'. In addition, it does not fit with the careful construction of the premise. As such, we should look for a different interpretation.

[215] See Harte (2002), chs 3-5

Partly Peculiar

I turn now to outline my alternative interpretation. Reconsider the premise in four parts:

> a) *πᾶν που πρὸς ἅπαν ὧδε ἔχει, ἢ ταὐτόν ἐστιν ἢ ἕτερον* b) *ἢ* c) *ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον*, d) *μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη.*

Given my objection to Harte above and my understanding of *ταὐτό* and *ἕτερον*, I read *ταὐτὸν* and *ἕτερον* as indicating identity and non-identity in 146b2-5, hence my translation:

> *a) Every thing with respect to every thing is surely like this: either identical or non-identical b) or c) if ⌈there were something that is⌉ neither identical nor non-identical, d) then ⌈it⌉ would be a part to that of which ⌈it⌉ is so related or as a whole to one of its parts.*

On this interpretation, a) gives us the first part of the premise: every thing with respect to every thing is surely like this: either identical or non-identical. As it stands, this tells us that for any x and any y, x is either identical or non-identical to y: ∀x∀y *(*x=y ∨ x≠ y). Nothing at this point in this text, even in the first deduction, has suggested that Restrictiveness (□¬∃x∃y (x=y ∧ x≠y)) is false. Hence, I take it that this disjunctive is exclusive: ∀x∀y ((x=y ∨ x≠y) ∧ (¬(x=y ∧ ¬x≠y))). In addition, given that, as I argued above, the conclusions of the identity and non-identity in the first deduction were troubling because they violated Exhaustivity and Exclusivity, the reader will recognise that this is not simply contingently true. Hence, we can understand a) to offer us: □∀x∀y((x=y ∨ x≠y)∧ (¬(x=y ∧ x≠y))). This is compatible with Exhaustivity and Exclusivity and seems obviously true.[216]

[216] This fits with my translation of που.

Following b), which consists of a disjunctive ἢ (or), we find the conditional and antecedent in c): *ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον*, (if ⌈something⌉ were neither identical nor non-identical) and then the consequent in d): *μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη* (then ⌈it⌉ would be related as a part to that of which ⌈it⌉ so holds) or a whole to one of its parts).

Consider c) and d). I take it that the subjunctive indicates possibility. In addition, as I have argued, the argument that begins with 146b2-5 indicates that the two relations at issue here hold between a part and the whole it is part of and a whole with respect to one of its parts. It is also obvious that no two things can be both a part of and a whole of each other. Thus, we can refine the option that we are presented with in c) and d) as follows:

It is possible that there is some x and some y, such that x is related to y either as a part of a whole or as a whole to one of its parts: $\Diamond\ \exists x \exists y\ (Pxy\ \vee\ Wxy) \wedge (\neg\ (Pxy \wedge\ Wxy))$, where P is the relation of a part to the whole it is part of and W is the relation of a whole to one of its parts.

I maintain that b) is an exclusive disjunctive, so that 146b2-5 offers us what can be thought of as two main, exclusive disjuncts with two internal, exclusive disjuncts:

Either:

1. For any x and any y, x must be either identical or non-identical to y and not both: $\Box\forall x\forall y\ ((x = y \vee\ x \neq y) \wedge (x = y \wedge x \neq y)$. Given this, it is not possible for there to be some x and some y such that x is neither identical nor non-identical to y: $\neg\Diamond \exists x \exists y$ $(\neg x = y \wedge\ \neg x \neq y)$.

Or:

2. It is possible that there is some x and some y such that x is not identical and not non-identical to y such that x and y are related either as a part with respect to its whole or a whole with respect to one of its parts: $\Diamond \exists x \exists y ((\neg x=y \wedge \neg x\neq y) \wedge ((Pxy \vee Wxy) \wedge \neg (Pxy \wedge Wxy)))$, where P is the relation of a part to the whole it is part of and W is the relation of a whole to one of its parts. Given this, it is not impossible that for any x and any y, x is either identical or non-identical to y and not both identical and non-identical to y: $\neg \Box \forall x \forall y((x=y \vee x\neq y) \wedge (\neg(x=y \wedge x\neq y)))$.

Consequently, if 1 is true, 2 is false and if 2 is true, 1 is false. We can then understand *μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη* as something of a controversial afterthought, as the punctuation in the following translation implies:

> *Every thing with respect to every thing is like this: either identical or non-identical – or, if [there were something] neither identical nor non-identical, then [it] would be a part to that which it is so related or as a whole to its part.*

This reading has a number of advantages. I have shown that c) is essential. However, unlike Harte, I can also explain why we do not find any similar locution to indicate that the other disjunctives are also exclusive: since it is obvious that nothing can be both identical and non-identical to anything or related as a part to something, where that thing is also a whole of which it is part, this is just unnecessary.

Suppose that, as a matter of fact, d) is true, so that there are at least two things that are neither identical nor non-identical to each other. It does not follow from this that *nothing* is identical or non-identical to anything, only that it is not true that *every* thing is either identical or non-

identical to *every* thing. Nor does it entail that *all* cases of a part with respect to its whole or vice versa are neither identical nor non-identical; only that at least one part with respect to its whole or vice versa is neither identical nor non-identical. This makes sense of why Plato chooses to use *μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη* as the consequent rather than the antecedent; he has particular wholes and parts in mind and leaves the option of some parts and wholes that are non-identical open.

We can also explain why Plato uses the subjunctive on this reading (*ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον*). As I argued above, the reader will assume that 'Every thing with respect to every thing is either identical or non-identical' is not a contingent truth but a necessary, self-evident one. Hence, there is no subjunctive in a). In contrast, the subjunctive in d) indicates doubt because Plato recognises that suggesting that anything at all is exempt from identity and non-identity seems so unlikely and is conveying this to his reader.

My interpretation of 146b2-5 is preferable then, since it takes *ταὐτό* and *ἕτερον* to indicate identity and non-identity and fits with the careful construction of the premise. Nevertheless, although I have shown that my reading makes good sense of some of the details of the premise, some might complain that it is incompatible with others. Recall the premise with my divisions and translation:

> a) *πᾶν που πρὸς ἅπαν ὧδε ἔχει, ἢ ταὐτόν ἐστιν ἢ ἕτερον* b) ἢ c) *ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον*, d) *μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη*.

> *a)Every thing with respect to every thing is surely like this: either identical or non-identical b) – or, c) if [there were something that were] neither identical nor non-identical, d)then [it] would be related to that of which [it] so holds or a whole to one of its parts.*

Compare a different translation:

> *Every thing with respect to every thing is surely like this: either identical or non-identical or if they were neither identical nor non-identical, then they would be related as a part to that of which it so holds or as a whole to one of its parts.*

If the second translation is correct, my interpretation is implausible; rather, we are simply offered four kinds of exclusive and exhaustive relations that apply to everything. The tension between these two translations depends on what the subject of *ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον* is. On my translation, we require an implicit additional subject, *τι*, whereas the other takes *πᾶν που πρὸς ἅπαν* from the first clause to be the subject.

However, there is support for my reading in the text. The alternative presents us with something that is not only obviously false but also inexplicable: either every thing with respect to every thing is identical or non-identical, or if every thing with respect to every thing were neither identical nor non-identical, then they would be related as a part to that of which they so hold or as a whole to one of its parts. In contrast, as I argue below, we can make good sense of 146b2-5 on my reading.

Further, consider this part of d): *μέρος ἂν εἴη τούτου* ***πρὸς ὃ οὕτως ἔχει*** (it would be a part **to that which it is so related**. Notice that *ὃ οὕτως ἔχει* is not explicitly picking out the part-whole relation; rather it points to whatever it is neither identical nor non-identical to. This

implies that Plato is introducing something new that is not captured by *πᾶν που πρὸς ἅπαν ὧδε ἔχει*[217] and which is *μὴ ταὐτὸν ἢ μηδ' ἕτερον*. Thus, my translation is plausible.

A second linguistic problem for my reading also concerns *μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει*. When arguing against Harte, I claimed that it is difficult to understand why, on her reading, Plato does not explicitly tell us that the *ταὐτό* or *ἕτερον* relation cannot hold between a part and the whole it is part of. Some might object that I am no better able to explain this; after all, that a part with respect to its whole could be neither identical nor non-identical is of central importance. However, as I show in detail below, on my interpretation, the most important feature of 146b2-5 is that it suggests that anything at all is exempt from identity and non-identity. That we must wait to find out that it is not only a whole with respect to one of its parts but also a part with respect to the whole it is part of that are candidates for this is not especially surprising. In addition, as I have argued, it plays an important linguistic role, signaling the introduction of a new subject.

Exhaustivity and Exclusivity Challenged.

I have shown that my reading fits with the construction of the premise. However, there is a grave philosophical objection to my interpretation. Although Parmenides does not commit to abandoning Exclusivity and Exhaustivity, the mere suggestion that they might be false seems utterly unacceptable; as we learnt from the first deduction, if there were something that were neither identical nor identical to itself or something else, it would not be a thing at all. In fact, we might think we cannot even grasp something that supposedly violates these laws. If I am unable to explain why Plato includes something that is so obviously false, my

[217] I am grateful to Robert Crellin for this suggestion.

interpretation is sorely lacking. Here, I argue that reflecting on 146b2-5 in the wider context of the dialogue can give us a good explanation of why Plato chose to include it. I begin with a possible explanation based on the opening moves of the second deduction that I find unsatisfactory before turning to another that is preferable: a Form with respect to one of its parts and a part of a Form with respect to the Form it is part of itself are difficult to reconcile with Exhaustivity and Exclusivity.

The relationship between one and being and not-being is unquestionably a central issue in Part II; they both feature in the hypotheses, 'if one is' and 'if one is not'. The second deduction begins with a short discussion of how the first hypothesis, 'if one is' ought to be understood here. Parmenides focuses on the 'is', arguing that 'if the one is' means 'if the one shares in being':

> ἆρα οὖν ἄλλο ἢ ὅτι οὐσίας μετέχει τὸ ἕν, τοῦτ' ἂν εἴη τὸ λεγόμενον, ἐπειδάν τις συλλήβδην εἴπῃ ὅτι ἓν ἔστιν;
>
> *Therefore, whenever someone says in short that (the) one is, do they mean anything other than that the one shares in being?*
>
> 142c5-7

We then find a lengthy argument, which supposedly shows that if the one shares in being, it is infinitely many. Consider the first part of this argument, which establishes that the one is a whole, of which being and one are parts:

Argument F (Part I)	Text (142d1-8)
1. The one shares in being.	1. Tacit, from 142b6-7

2. If x is said of y, y shares in x.	2. Tacit, from 142c5-7
3. If being is said of the one that exists and one is said of being, which is one, but being and the one are not the very same thing, rather each of them belongs to (lit. is of) the very thing which we have hypothesised, the one that is, then the existent one must be a whole of which both the one and being come to be parts.	3. *εἰ τὸ <ἔστι> τοῦ ἑνὸς ὄντος λέγεται καὶ τὸ <ἓν> τοῦ ὄντος ἑνός, ἔστι δὲ οὐ τὸ αὐτὸ ᾗ τε οὐσία καὶ τὸ ἕν, τοῦ αὐτοῦ δὲ ἐκείνου οὗ ὑπεθέμεθα, τοῦ ἑνὸς ὄντος, ἆρα οὐκ ἀνάγκη τὸ μὲν ὅλον ἓν ὂν εἶναι αὐτό, τούτου δὲ γίγνεσθαι μόρια τό τε ἓν καὶ τὸ εἶναι; - ἀνάγκη.* (142d1-4)
4. Being is said of the one that exists and one is said of being, which is one, but being and the one are not the very same thing, rather each of them is of that which we have hypothesised, the one that is.	4. Tacit
5. So. the existent one comes to be a whole of which both the one and being are parts	5. Tacit
6. Each of these parts is not addressed only as a part; rather, it is, as a part, addressed as a part of a whole.	8. *πότερον οὖν ἑκάτερον τῶν μορίων τούτων μόριον μόνον προσεροῦμεν, ἢ τοῦ ὅλου μόριον τό γε μόριον προσρητέον; - τοῦ ὅλου* (142d6-8)
Therefore, there is a whole – the one- and it has parts.	9. *καὶ ὅλον ἄρα ἐστί, ὃ ἂν ἓν ᾖ, καὶ μόρια*[218] *ἔχει. - πάνυ γε.* (142d7-8)

[218] I adopt Heindorf's emendation here, replacing the *μόριον* of the original manuscripts with *μόρια* since after *πάνυ γε*, we find *τῶν **μορίων** ἑκάτερον τούτων τοῦ ἑνὸς ὄντος* (each of the part*s* of the one that is).

Here, Parmenides effectively argues that being is predicated of the one that is (since the one is) and one is predicated of being (because being must itself be one). Since being and one are not identical and if x is predicated of y, y shares in x, the one must be a whole of which being and one are parts.[219]

We have been told that the one is a whole of which being is a part and being has one as a part. Consider the one with respect to one of its parts, being. Recall the law of non-identity that I argued was in play in the first and second deductions: for any x and any y, x is non-identical to y if and only if there is some property that x has and y does not or that y has and x does not. Being has the property of being part of the one, whereas the one does not. Thus, they are non-identical. Consider the one with respect to its one of its other parts, one. The one-part has the property of being part of the one, unlike the one itself. Therefore, they are non-identical. Hence, nothing in the argument so far threatens Exhaustivity and Exclusivity.

However, we might think that the remainder of the argument does pose a threat to Exhaustivity and Exclusivity:

Argument F (Part II)	
1. Regarding each of these parts of the one that is, namely, one and being, one would	1. *τῶν μορίων ἑκάτερον τούτων τοῦ ἑνὸς ὄντος, τό τε ἓν καὶ τὸ ὄν, ἆρα ἀπολείπεσθον ἢ τὸ ἓν τοῦ εἶναι μορίου ἢ τὸ*

[219] This portion of the argument is lengthy and complex and there are many issues with interpretation and validity that I do not have space to address here, although my outline fits with the general consensus in the literature - see Allen (1997), pp.247-250, Rickless (2007), pp.139-143, Scolnicov (2003), pp. 96-98 for more detail.

never lack its being-part and being would never lack its one-part.	*ὂν τοῦ ἑνὸς μορίου; - οὐκ ἂν εἴη.* (142d9-e2)
2. Again, each of these parts must have the one and being (as parts).	2. *πάλιν ἄρα καὶ τῶν μορίων ἑκάτερον τό τε ἓν ἴσχει καὶ τὸ ὄν, καὶ γίγνεται τὸ ἐλάχιστον ἐκ δυοῖν αὖ μορίοιν τὸ μόριον* (142e3-5)
3. By the same reasoning, whatever comes to be a part must be composed of at least two parts and according to the same reasoning, it is always like this, whatever part comes to be would always have these parts, for the one always has being and being always has one.	3. *καὶ κατὰ τὸν αὐτὸν λόγον οὕτως ἀεί, ὅτιπερ ἂν μόριον γένηται, τούτω τὼ μορίω ἀεὶ ἴσχει· τό τε γὰρ ἓν τὸ ὂν ἀεὶ ἴσχει καὶ τὸ ὂν τὸ ἕν* (142e5-7)
4. Thus, it is necessary that in always coming to be two, it would never be one.	4. *ὥστε ἀνάγκη δύ' ἀεὶ γιγνόμενον μηδέποτε ἓν εἶναι - παντάπασι μὲν οὖν.* (142e7-e8)
5. Therefore, the one would be unlimited in multitude.	5. *οὐκοῦν ἄπειρον ἂν τὸ πλῆθος οὕτω τὸ ἓν ὂν εἴη; - Ἔοικεν.* (142e8-9)

Here, Parmenides argues that one and being are inseparable, by which he presumably means that since, if the one is, being must be predicated of it and if being is one, one must be predicated of it, whatever is one must be and whatever is must be one. As we learnt from the previous argument, if x is predicated of y, y shares in x so that y has x as a part. Thus, each

one-part must also be and therefore have a being-part and each being-part must also have a one-part and a being-part and so on ad infinitum. The one then is always coming to be two and is infinitely many.

We might think this part of the argument can cast light on 146b2-5. There are two reasons why we might think that the one is unlimited according to Argument E, Part II. The first is just that it has infinitely many parts. If each part of the one is a whole of two parts, each of which is a whole of two parts etc., it seems that each part has just as many parts as each of the two parts it is the whole of. According to the laws of identity and non-identity in the first and second deductions of the *Parmenides*, for any x and any y, is identical to y if and only if for any property that x has y has it and for any property that y has x has it and for any x and any y, x is non-identical to y if and only if there is at least one property that x has and y does not or that y has and x does not. Consider a one-part with respect to its one-part. On the one hand, it seems that any part with respect to its whole or a whole with respect to one of its parts must be non-identical. However, if each one-part has just as many being- and one-parts as the whole it is part of or vice versa, it is difficult to see how there could be some property that one has and the other does not. On the other hand, they do not seem to be identical either; after all, it seems that we can distinguish between the being-part of the one and the one-part of the being-part of the one; one comes further down than the other. Likewise, on the one hand, if a being-part has as many parts as its being-part, it is difficult to see how there could be any discrepancy in properties and therefore how they could be non-identical. On the other hand, it seems that they cannot be identical either, since one being-part comes further down than the other.

The second reason why we might think the one turns out to be unlimited stems from Parmenides' claim that the one is always 'coming to be'. If we take this to mean that the one

is always dividing into two rather than that it is infinitely divided, we might think that the one is not stable enough to be either identical or non-identical to one of its parts or vice versa. After all, if some x is to be either identical or non-identical to some y, x must have all and only those properties that y has and vice versa or there must be at least one property that x has and y does not or vice versa. If there is no time at which x and y meet the criteria for identity and non-identity, it is difficult to see them as either identical or non-identical.

In light of this, we might think that Plato suggests that there might be some parts with respect to their wholes or wholes with respect to one of their parts in 146b2-5 because of the difficulty with seeing being-parts with respect to one of their being-parts, one-parts with respect to one of their one-parts or the one with respect to any of its parts in an earlier argument as either identical or non-identical.

However, this is unpersuasive. On this interpretation, we would expect Plato to include some parts and wholes with respect to *themselves* among the things that may be neither identical nor non-identical in 146b2-5. If some one- or being-part is neither identical nor non-identical to one of its one- or being-parts and vice versa, there are at least some wholes with respect to one of their parts or parts with respect to the whole they are part of that are exempt from identity and non-identity. However, if this is so, one-parts and being-parts cannot be individuated at all. Yet, it seems unacceptable to say that anything is non-identical to itself. Given this, it is difficult to see how they could be either identical or non-identical to themselves, as parts or as wholes. Furthermore, if the one is always dividing so that it is too unstable to be either identical or non-identical to one of its parts, it cannot be properly individuated. Thus, it seems that the one cannot be either identical or non-identical to itself.

One way that some might attempt to deal with this is to argue that Plato deliberately avoids specifying what it is that a part might be neither identical nor identical to in 146b2-5 (*μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει*) to allow for a part that is neither identical nor non-identical to itself as well as a part that is neither identical nor non-identical to the whole is part of. He does not include a whole with respect to itself because it would make the argument invalid:

1. Every thing with respect to every thing is like this: either identical or non-identical, or, if there were something that were neither identical nor non-identical, then it would be so related as a part to that of which it so holds (the whole it is part of) or as a part to itself or as a whole to one of its parts or a whole with respect to itself.
2. The one is not itself part of itself.
3. So, the one is could not be related to itself as a part with respect the whole it is part of or as a part of itself.
4. Nor is the one is not non-identical to one.
5. So, the one would not be non-identical to itself.
6. So, since (lit. if) the one is neither non-identical nor a part nor a whole in relation to itself, it must be identical to itself.

If we amend 1 to allow for some wholes with respect to themselves being exempt from identity and non-identity as above, the one could be one of these wholes, in which case 4-6 would not follow.

However, 2 of this argument is at odds with Argument E, Part II. Whereas the former suggested that the one must somehow be part of itself, here Parmenides suggests that it cannot be. Moreover, recall that I suggested that Plato deliberately constructs 146b2-5 in a way that suggests it is tentative because the idea that anything could be exempt from identity

and non-identity is so dubious. Yet, Parmenides expresses no hesitation about the the one's being infinitely many, which seemed just as objectionable; indeed, Parmenides is not in the habit of hesitating about the consequences of previous arguments the same deduction later on.

Happily, there is another explanation. One of Socrates' claims in the first part of the dialogue is that he would be amazed if Forms turned out to be many.[220] Yet, the arguments that follow suggest that it turns out that Forms are many after all. A recurring reason for this is that Forms have parts.[221] Consider the following exchange between Socrates and Parmenides:

> *"Well then, does it seem to you that whole Form is in each of them, being one in many or how else?'"*
>
> *"Yes, Parmenides- what could prevent it from being in each?" said Socrates.*
>
> *"Then, being one and identical, the whole would be in many, separate things at the same time and thus, it would itself be separate from itself."*
>
> *"No, it wouldn't," he said. "If it were like the day, single and one, being in many places at the same time, it would very much not be itself separate from itself and if it were like this, then each of the Forms would be in many at the same time while being one and identical."*

[220] 129b6-c1

[221] See Harte (2002) for extensive discussion of mereology in the first part of the dialogue.

> *"Nice one, Socrates." he said. "You make one, identical thing in many at the same time, just as if you should spread a sail over many people, one whole being over many. Or is that not the sort of thing you mean?"*
>
> *"Perhaps," he said.*
>
> *"Then would the whole sail be over each of them or a part of it, different in one another."*
>
> *"A part of it.'"*
>
> *"Then," he said, "the Forms themselves, Socrates, are divided into parts, and those that share in them would share a part of them."*
>
> (131e4–131c)

If Parmenides is right, it seems that a Form, Fness, has a part, which is also a part of anything that is F. Thus, if I am small, the Form, Smallness, has a part, smallness, which is in me. One of my parts, smallness, is also a part of the Form, Smallness.

Recall that in the first and second deductions of Part II of the dialogue, properties are parts and vice versa. Notice that this fits with what we find here: I have the property of smallness in that one of my *parts* is smallness. Consider the part of the Form that is in me, smallness. If properties are parts, we might think that this part itself has two property-parts, 'smallness' and 'in me'.

Parthood is transitive; for any x and any y, if x is a part of y and y is a part of z, x is a part of z. Hence, since my toe is part of my foot and my foot is part of me, my toe is part of me.

Thus, since 'smallness' is a part of 'smallness in me', which is a part of the Form, Smallness, 'smallness' (and 'in me) is a part of the Form, Smallness. On the one hand, it seems the part 'smallness' with respect to its whole, the Form, Smallness, and vice versa do not meet the criteria for non-identity but for identity in Part II; they both have only the property of being small. On the other hand, it seems that any part with respect to the whole it is part of or whole with respect to one of its parts *must* be non-identical and not identical.

Alternatively, we might think that the 'in me' is one of *my* parts, not a part of the smallness-in me part of the Form, Smallness. Again, on the one hand, it seems that the part, smallness with respect to the Form, Smallness does not meet the criteria for non-identity, since they both have a single property: being small. On the other hand, it seems that any part with respect to the whole it is part of or whole with respect to one of its parts *must* be non-identical and not identical. Thus, I suggest that in 146b2-5, Plato is hinting that there some things that are difficult to reconcile with Exhaustivity and Exclusivity: a Form with respect to one of its instantiations and vice versa.

Some might object that taking Parmenides seriously in the passage above is just a mistake; after all, he relies on an illegitimate move from Socrates' day analogy to his own sail analogy for his argument.[222] This is not troubling. Firstly, even if we are supposed to notice that Parmenides cheats, his point is not a trivial one. Secondly, that Plato invites us to reflect on the consequences of an earlier problematic argument is hardly surprising. Thirdly, a similar problem is in play when we consider properties independently of Forms. I am small, so I have the property of smallness. Are properties of individuals identical or non-identical to the

[222] There is a longstanding debate about whether or not or not this is the case. Arguing that it is is the more common view – see, for example, Cherniss (1932), p.132, Miller (1986), pp. 49-50, Peck (1953), p. 132, Sayre (1996), p. 76, Sprague (1967). However, there are those who disagree, for example, Panagiotou (1987), Rickless (2007), p. 58.

properties themselves? The answer is not obvious. Moreover, I do not mean to imply that these cases demonstrate that we should abandon Exhaustivity and Exclusivity or that we are unable to reconcile them with Exhaustivity; indeed; as I have argued, the suggestion that Exhaustivity and Exclusivity might be false in 146b2-5 is a tentative one. My claim is rather that 146b2-5 forces us to reflect on certain kinds of wholes with respect to one of their parts and vice versa that are difficult to see as either identical or non-identical. As such, it points to an interesting problem.[223]

I have shown that there is good reason why Plato chose to include such a peculiar premise with 146b2-5 then. It prompts us to reflect on certain parts with respect to their wholes and wholes with respect to one of their parts that are difficult to reconcile with Exhaustivity and Exclusivity: a Form with respect to its instantiation and vice versa and a property of something with respect to the property itself.

Aristotle: Guilty as Charged?

I turn now to Aristotle and show that he does not reject Exhaustivity and Exclusivity either. As I claimed in Chapter One, the best evidence for taking Aristotle to be actively engaging with Part II of the *Parmenides* in *Metaphysics*, Iota occurs at 1054b, where Aristotle makes three explicit references to 146b2-5. Compare:

[223] There is a contemporary case that we might anticipate a similar struggle with: if a set has a single member, it is not obvious that it is either identical or non-identical to its member – I am grateful to Lindsay Judson for this point.

πᾶν που πρὸς ἅπαν ὧδε ἔχει, ἢ ταὐτόν ἐστιν ἢ ἕτερον ἢ ἐὰν μὴ ταὐτὸν ᾖ μηδ' ἕτερον, μέρος ἂν εἴη τούτου πρὸς ὃ οὕτως ἔχει, ἢ ὡς πρὸς μέρος ὅλον ἂν εἴη.

Parmenides, 146b2-5

τὸ μὲν ἄλλο ἀντικειμένως καὶ τὸ ταὐτό, διὸ **ἅπαν πρὸς ἅπαν ἢ ταὐτὸ ἢ ἄλλο**·*...τὸ μὲν οὖν* **ἕτερον ἢ ταὐτὸ διὰ τοῦτο πᾶν πρὸς πᾶν** *λέγεται, ὅσα λέγεται ἓν καὶ ὄν...* **πᾶν γὰρ ἢ ἕτερον ἢ ταὐτὸ** *ὅ τι ἂν ᾖ ὄν·*

Metaphysics, 1054b13-25

One oddity of 146b2-5 is that it tells us that every thing with respect to every thing is either identical or non-identical, rather than that every thing is identical to itself and non-identical to every other thing. This is likely because the latter makes the argument in Part II obviously circular; the conclusion is that the one is identical to itself Notice that Aristotle uses the very same locution not once but twice, despite there being no danger of circularity if he were to use the more precise version. Even when he later drops the *πᾶν πρὸς πᾶν*, we are not told that every thing is identical to *itself* and non-identical to *every other thing*. Given this, I take Aristotle to be referring to 146b2-5. Some might object that in the first case of what I have suggested is a deliberate reference to 146b2-5, Aristotle does not use *ἕτερον* but *ἄλλο*. Since Plato only uses *ἕτερον* in 146b2-5, some might think that the claim that Aristotle is referring to it here is implausible. However, this is unpersuasive; as I argued in Chapter One, Aristotle switches to *ἕτερον* in the second and third instances, where he obviously means to for us to think back to the first instance; he uses them interchangeably. Aristotle is explicitly and pointedly referring to 146b15-21 then.

When we examine these locutions in the context of the whole passage, we find that Aristotle's engagement with 146b2-5 is complex. Consider 1054b13-27:

> *ὥστε δῆλον ὅτι καὶ τὸ ἕτερον καὶ τὸ ἀνόμοιον πολλαχῶς λέγεται. καὶ τὸ μὲν ἄλλο ἀντικειμένως καὶ τὸ ταὐτό, διὸ ἅπαν πρὸς ἅπαν ἢ ταὐτὸ ἢ ἄλλο· τὸ δ' ἐὰν μὴ καὶ ἡ ὕλη καὶ ὁ λόγος εἷς, διὸ σὺ καὶ ὁ πλησίον ἕτερος· τὸ δὲ τρίτον ὡς τὰ ἐν τοῖς μαθηματικοῖς. τὸ μὲν οὖν ἕτερον ἢ ταὐτὸ διὰ τοῦτο πᾶν πρὸς πᾶν λέγεται, ὅσα λέγεται ἓν καὶ ὄν· οὐ γὰρ ἀντίφασίς ἐστι τοῦ ταὐτοῦ, διὸ οὐ λέγεται ἐπὶ τῶν μὴ ὄντων (τὸ δὲ μὴ ταὐτὸ λέγεται), ἐπὶ δὲ τῶν ὄντων πάντων· ἢ γὰρ ἓν ἢ οὐχ ἓν πέφυχ' ὅσα ὂν καὶ ἕν. τὸ μὲν οὖν ἕτερον καὶ ταὐτὸν οὕτως ἀντίκειται, διαφορὰ δὲ καὶ ἑτερότης ἄλλο. τὸ μὲν γὰρ ἕτερον καὶ οὗ ἕτερον οὐκ ἀνάγκη εἶναι τινὶ ἕτερον· πᾶν γὰρ ἢ ἕτερον ἢ ταὐτὸ ὅ τι ἂν ᾖ ὄν· τὸ δὲ διάφορον τινὸς τινὶ διάφορον, ὥστε ἀνάγκη ταὐτό τι εἶναι ᾧ διαφέρουσιν.*

Thus, it is clear that non-identity and dissimilarity are also said in many ways. And non-identity and identity are opposed to one another, thus every thing with respect to every thing is either identical or non-identical. And non-identity is said of things in another way: if both their matter and account are not one, thus you are non-identical to the person next to you. The third way is as in the case of mathematical objects. Thus, every thing with respect to every thing is either identical or non-identical, for as many things as are and are one: for it is not the contradictory of identity and therefore non-identity is not said of things that are not (they are said to be not identical), but it is said of all things that are. For, for as many things that are and are one, are by nature either one or not one. Non-identity and identity, then, are opposed in this way. But difference and non-identity are non-identical. For that which is non-identical and that which it is non-identical are not necessarily non-identical in a certain respect; indeed,

> *every thing is identical or non-identical which exists, and is some thing. On the other hand, that which is different is different from something with respect to something, so that there must be some identical thing through which they are different.*
>
> 1054b13-27

Aristotle makes no mention of parts and wholes here. This might lead us to believe that Aristotle has only adopted the uncontentious part of 146b2-5: every thing with respect to every thing is identical or non-identical. However, notice that although Aristotle initially claims that every thing with respect to every thing is identical or non-identical, he then qualifies this:

> τὸ μὲν οὖν ἕτερον ἢ ταὐτὸ διὰ τοῦτο πᾶν πρὸς πᾶν λέγεται, **ὅσα λέγεται ἓν καὶ ὄν**
>
> *Thus, every thing with respect to every thing is said to be either identical or non-identical,* ***for as many things as are and are one.***
>
> 1054b19

This suggests that there are some things that are neither identical nor non-identical: those that are not and/or are not one. If this is so, Aristotle also rejects Exclusivity and Exhaustivity. I turn now to examine this possibility by examining 1054b19-21 more closely.

Recall 1054b19-21:

> τὸ μὲν οὖν ἕτερον ἢ ταὐτὸ διὰ τοῦτο πᾶν πρὸς πᾶν λέγεται, ὅσα λέγεται ἓν καὶ **ὄν**:

> *οὐ γὰρ ἀντίφασίς ἐστι τοῦ ταὐτοῦ, διὸ οὐ λέγεται ἐπὶτῶν μὴ* ***ὄντων*** *τὸ δὲ μὴ ταὐτὸ λέγεται ἐπὶ δὲ* ***τῶν ὄντων*** *πάντων: ἢ γὰρ ἓν ἢ οὐχ ἓν πέφυχ᾽ ὅσα* ***ὂν*** *καὶ ἕν.*
>
> *Thus, every thing with respect to every thing is either identical or non-identical – for as many things as* ***are*** *and are one, for it is not the contradictory of 'identical', since it is not said of things that* ***are*** *not (they are said to be 'not identical'), but (it is said) of every thing that* ***is****, for, for as many things that* ***are*** *and are one, are by nature either one or not one.*

What sense of *εἶναι* is Aristotle is using with *ὄν* and *ὄντων*, predicational or existential? If using them predicationally, Aristotle has told us that identity and non-identity are restricted to things of which something and one is predicated. Since the latter entails the former, *ὄν* is redundant. In contrast, if we read *ὄν* and *ὄντων* existentially, the things that Aristotle is limiting identity and non-identity to those that exist and are one, so that *ὄν* is crucial. Thus, we should take *ὄν* and *ὄντων* existentially, as in the following amended translation:

> *Thus, every thing with respect to every thing is either identical or non-identical, for as many things as* ***exist*** *and are one, for it is not the contradictory of 'identical', since it is not said of things that do not* ***exist*** *(they are said to be 'not identical'), but (it is said) of every thing that* ***exists*** *for, for as many things that* ***exist*** *and are one, are by nature either one or not one.*

There are other features of the text that require explanation. Notice that the subjects of *οὐ ἐστι* and *οὐ λέγεται*, and the tacit *λέγεται* are not explicit:

> *τὸ μὲν οὖν ἕτερον ἢ ταὐτὸ διὰ τοῦτο πᾶν πρὸς πᾶν λέγεται, ὅσα λέγεται ἓν καὶ ὄν:* ***οὐ*** *γὰρ ἀντίφασίς* ***ἐστι*** *τοῦ ταὐτοῦ, διὸ* ***οὐ λέγεται*** *ἐπὶτῶν μὴ ὄντων τὸ δὲ μὴ ταὐτὸ λέγεται, ἐπὶ δὲ τῶνὄντων πάντων* **[λέγεται]** *ἢ γὰρ ἓν ἢ οὐχ ἓν πέφυχ᾽ ὅσα ὂν καὶ ἕν.*

> *Thus, every thing with respect to every thing is either identical or non-identical, for as many things as exist and are one, for* ***it*** *is not the contradictory of 'identical', since* ***it*** *is not said of things that do not exist (they are said to be 'not identical'), but (****it*** *is said) of every thing that exists for, for as many things that exist and are one, are by nature either one or not one.*

As it stands, the subjects could be a tacit ἕτερον (non-identical), ταὐτὸ (identical), πᾶν πρὸς πᾶν (every thing with respect to every thing), or λέγεται ἓν καὶ ὄν (that which is said to be one and to exist), although I take it that Aristotle has the same subject in mind throughout the passage. We can eliminate ταὐτὸ, since that identity is not the contradictory of itself is so obvious that it is hardly worth stating. We can also set aside πᾶν πρὸς πᾶν or λέγεται ἓν καὶ ὄν; contradictories are properties, not things. Thus, I take the subject to be ἕτερον (non-identical):

> *Thus, every thing with respect to every thing is either identical or non-identical, for as many things as are said to exist and be one, for 'non-identical' is not the contradictory of 'identical', since 'non-identical' is not said of things that do not exist (they are said to be 'not identical'), but 'non-identical' (is said of) every thing that exists for, for as many things that exist and are one, are by nature either one or not one.*

We are now in a position to better understand what Aristotle is claiming here. We know from Aristotle's definitions of the ways of being identical and non-identical that anything that is one in some way is identical to itself in exactly one way and non-identical to anything else in exactly one, correlate way. As we saw, nothing can be both identical and non-identical to itself or anything else. This fits with 'every thing with respect to every thing is either identical or non-identical' and is compatible with Exhaustivity and Exclusivity. However,

Aristotle then claims that this is only true if we qualify 'every thing' to mean those things that exist and are one and that 'non-identical' and 'identical' are not contradictories. His justification for this is that things that do not exist are not non-identical, but rather not identical i.e. they are neither non-identical nor identical.

This poses a problem: it seems to commit him to abandoning Exhaustivity and Exclusivity. Yet, this is utterly unacceptable. There are two ways we might attempt to deal with this problem. The first is by showing that Aristotle can justify rejecting Exhaustivity and Exclusivity. The second is by arguing that Aristotle does not in fact abandon Exhaustivity and Exclusivity. I attempt the first and find it unsuccessful, before turning to the second and arguing that Aristotle is not rejecting Exhaustivity and Exclusivity. Moreover, I claim, he has something interesting to tell us about them.

What's So Wonderful About Wonderwoman?

Why would Aristotle reject Exclusivity and Exhaustivity, which seem to be so obviously true? I begin by considering the things that we might think Aristotle is exempting from identity and non-identity: those of which it is not true that they both exist and are one. As it stands, 1054b allows for three options:

1. Things that are one but do not exist.
2. Things that exist but are not one.
3. Things that neither exist nor are one.

Consider 1. It is plausible enough that there are some things that are one, but do not exist - non-existent objects. There are three candidates for non-existent objects: those that cannot

exist, for example square triangles, those like Kurt Cobain that once existed but do not any longer and fictional objects, for example, Wonderwoman.[224]

There is no evidence that Aristotle would have subscribed to objects like square triangles - existent or not. However, we might think that Aristotle would have accepted non-existent objects of the second kind; when Socrates stands up, Socrates sitting ceases to exist. However, since we can still speak meaningfully of Socrates sitting, Socrates sitting must still somehow be one. In addition, Aristotle talks elsewhere of fictional objects like 'goat-stag' and 'sphinx', which are not.[225] Is there any good reason to think that it is because he has these sorts of objects in mind that Aristotle denies that identity and non-identity of things that do not exist but are one in *Metaphysics* Iota 3?

We might think that this implied by Aristotle's third reference to 146b2-5, where he tells us that every thing that exists is identical and non-identical but does not add that they must be one. However, this reading is problematic. Firstly, even if we grant that Socrates sitting does not exist but is one, which is controversial, it seems that Socrates sitting and Socrates standing must each be self-identical and non-identical to each other – if not, we could not distinguish them at all. Secondly, on Aristotle's account of identity and non-identity, if something is one, it is self-identical and non-identical to anything else. Socrates sitting is accidentally one, so he must be self-identical and non-identical to anything else. Similarly, Wonderwoman does not exist but she is one and, since we can individuate her, she must be self-identical and non-identical to anything else (existent or otherwise). By Aristotle's criteria for identity and non-identity, since she is one, she must be self-identical and non-identical to

[224] Whether or not we should subscribe to fictional non-existent objects is a thorny issue in contemporary philosophy – see Parsons (1980) for an extensive discussion of the problem.

[225] *De Interpretatione*, I, 16a16, *Physics* IV.1, 208a30-31, *Prior Analytics* I.38, 49a24, *Posterior Analytics* II.7, 92b4-6

anything else. That Aristotle means that things that do not exist but are one are exempt from identity and non-identity is unpersuasive. Thus, I discard option 1 above.

Nor is option 2 plausible. Consider the following passage from Iota 2:

> *εἰ τὰ ὄντα ἦν χρώματα, ἦν ἂν ἀριθμός τις τὰ ὄντα, ἀλλὰ τίνων; δῆλον δὴ ὅτι χρωμάτων, καὶ τὸ ἓν ἦν ἄν τι ἕν, οἷον τὸ λευκόν. ὁμοίως δὲ καὶ εἰ μέλη τὰ ὄντα ἦν, ἀριθμὸς ἂν ἦν, διέσεων μέντοι, ἀλλ'οὐκ ἀριθμὸς ἡ οὐσία αὐτῶν· καὶ τὸ ἓν ἦν ἄν τι οὗ ἡ οὐσία οὐ τὸ ἓν ἀλλὰ δίεσις. ὁμοίως δὲ καὶ ἐπὶ τῶν φθόγγων στοιχείων ἂν ἦν τὰ ὄντα ἀριθμός, καὶ τὸ ἓν στοιχεῖον φωνῆεν. καὶ εἰ σχήματα εὐθύγραμμα, σχημάτων ἂν ἦν ἀριθμός, καὶ τὸ ἓν τὸ τρίγωνον.*
>
> *Therefore, if all existent things were colours, existent things would be a certain number but of what? It is clear that they would be a certain number of colours and that the one would be a one of a certain kind, for example, the white. Similarly, if all existing things were tunes, they would be a number, but a number of semi-tones but their substance would not be number and the one would be something whose substance is would not be one but a semi-tone. Likewise, in the case of articulate sounds too, the things that exist would be a number of vocal elements and the one would be a sounding vocal element. And if beings were rectilinear figures, they would be a number of figures and the one would be the triangle.*
>
> 1053b32-1054a4, trans. Castelli ((2018), p. 5), minor modifications

Here, Aristotle argues that every thing that exists of some particular kind has number when taken together. Number is a collection of ones and each existent thing must be one - hence,

counting is possible. Thus, there is no object that can exist but not be one. Option 2 is ruled out then.

What about option 3? It is not incompatible with Aristotle's definitions of identity, according to which if something is one, it must be self-identical. Nor does it conflict with maintaining that there is no object that can exist but not be one. Choosing 3 would allow us to avoid the objections to 1 and 2 above then. However, it is difficult to see what sort of thing Aristotle could possibly be denying identity and non-identity of; if there is something that does not exist, is not one and is exempt from identity and non-identity, it seems that it cannot be a thing at all - and the idea that Aristotle endorses some kind of non-things is hard to justify.

Goat-stags and Sphinxes

None of the options above are without problems then. As such, we cannot justify a rejection of Exhaustivity and Exclusivity based on things that do not exist and/or are not one. Here I discuss a number of possible interpretations that do not involve attempting to defend Aristotle's denial of Exhaustivity and Exclusivity; rather, they allow us to maintain that Aristotle is not rejecting them at all. I reject three such interpretations before outlining a persuasive alternative, according to which Aristotle challenges Exhaustivity and Exclusivity but only in the sense that they require refinement in the context of his account of identity and non-identity.

Some might think that in 1054b, Aristotle's qualification, 'for as many things that exist and are one' is not intended to restrict the domain of 'every thing with respect to every thing'. Rather, it serves to emphasise that there is nothing at all that could not exist and/or not be one. This has two advantages. It provides us with an explanation that is compatible with

rejecting all three of the problematic options I discussed above. It also allows us to see that Aristotle is not rejecting Exhaustivity and Exclusivity at all. This is unconvincing. Aristotle claims that non-identity is not the contradictory of identity in 1054b. However, on this interpretation, this is simply false. He ought to have argued that identity and non-identity *are* contradictories; indeed, in not doing so, he suggests that Exhaustivity and Exclusivity are false after all.

There is another unpersuasive interpretation that stems from 1053b32-1054a4. There, Aristotle tells us that every thing that exists of some particular kind has number, when taken together, for example, colour, quarter-tones, sounds, rectilinear figures. One in these cases is one individual; a colour, a quarter-tone, a vowel, a rectilinear figure, which we use as a unit to count. Thus, there is no object that can exist but not be one. In light of this, it seems that collections of ones are not properly existent or one. Perhaps then by 'things' that do not exist and/or are one, Aristotle means collections of ones i.e. a number of things. For example, a pile of eight apples is a number (eight) of single apples. However, eight-apples does not exist and is not one in a fundamental way and is not a proper object, unlike me. Consequently, it is not self-identical or non-identical from anything else. If this is so, Aristotle does not violate Exhaustivity and Exclusivity.

Again, this is very problematic. Firstly, if this is what Aristotle means, 1054b14-25 is very unclear, especially since he has not spoken about number at all in his definitions of identity, non-identity, similarity and dissimilarity. Secondly, he gives no account of how we could distinguish between numbers of things. For example, we can distinguish between eight-apples and nine-apples or eight-apples and nine-bananas or the eight-apples in the fruit bowl and the eight-apples in my shopping bag or eight-apples and me. Yet, if numbers of things are exempt from identity and non-identity, it is not obvious how this is possible.

I turn now to examine a more promising interpretation but argue that it is still problematic. I suggested earlier that there are two kinds of non-existent objects that Aristotle might accept: things that once existed but do not any longer, like Kurt Cobain and fictional objects, like Wonderwoman. I argued there that denying identity and non-identity of these things was problematic. However, we might think that by reflecting on how Aristotle might account for non-existent objects we can explain his apparent rejection of Exhaustivity and Exclusivity.

One way to think of non-existent objects is to maintain that we think of goat-stags and sphinxes, we mentally combine parts of things that do exist in reality: goats and stags and lions and women. In a sense of course, they must be one and identical and non-identical; I can distinguish between a sphinx and a goat-stag and speak meaningfully about them, so I must be able to individuate them somehow. However, they are not proper things; goat-stags and sphinxes cannot exist in reality, only in thought. Since they do not count as proper things, they do not have proper oneness and proper identity and non-identity. Likewise, even though Socrates sitting ceases to exist and be one when Socrates stands up, we can combine 'Socrates' and 'sitting' in thought and form a pseudo-thing that does not properly exist, is not properly one and therefore is not properly self- identical and non-identical to anything else.

If Aristotle construes non-existent 'objects' in this way, in 1054b15-21, he may simply be noting that these sorts of things that are composed of parts of existing things in thought must be exempt from identity and non-identity proper because they are not proper objects that do not properly exist or are one. If so, he does not reject Exhaustivity and Exclusivity after all.

Although this is more promising, it is not without its problems. Firstly, there is no indication that these sorts of 'objects' are at issue anywhere else in *Metaphysics*, Iota. Thus, the textual grounds are weak. Secondly, it seems that there are some fictional objects that Aristotle might want to account for that do not merely amount to an amalgamation of parts of other things in thought. Achilles is not simply a collection of leg parts, eye parts etc. of people who actually exist. We might argue that 'parts' here include properties. However, Achilles has the property of being half god. Yet, nothing in reality has the property 'half god'. Thirdly, we can meaningfully pick out these kinds of 'things'. Thus, we require some kind of account of what kind of pseudo-identity and non-identity allows us to do this. This is particularly urgent, given that this account could make all the difference as to whether Exclusivity and Exhaustivity are in fact compatible with goat-stags and sphinxes. Finally, although we can explain why Aristotle might have said that non-identity is not the contradictory of identity - proper non-identity is not the contradictory of pseudo-identity and pseudo non-identity is not the contradictory of proper identity – it requires taking Aristotle to be sliding between two meanings of *ἕτερον* and *ταὐτο*. This is surprising, given the importance of this distinction on this interpretation.

The final and most compelling explanation stems from Aristotle's definitions of identity and non-identity. Recall that, as I argued in Chapter Two, in *Metaphysics*, Iota 3, there are three ways of being identical: by being one in number, one in number and account and one as an abstract, geometrical object of a particular shape and size. There are also three ways of being non-identical: by being not-one with something in number, number and account or as an abstract geometrical object of a particular shape and size. I have argued that each thing is self-identical in exactly one way; I am one and identical in number and account but I am neither one nor identical in just number or as a particular abstract geometrical object. Each thing is also non-identical to anything else in exactly one way; I am non-identical to Barry

the whale in number and account but not in number or as a geometrical object. Thus, I am exempt from the first and third ways of being identical and non-identical.

I suggest that Aristotle has this in mind in 1054b15-21. Identity in *any* way is not the contradictory of non-identity in *any* way because it is just false that 'Barry is non- identical to Harry in number and account' entails 'Barry is identical to Harry as a geometrical object' or vice versa. However, identity in number and account is the contradictory of non-identity in number and account, since 'Barry is non-identical to Harry in number and account' entails 'Barry is not identical to Harry in number and account'. Aristotle is not claiming that non - identity is not the contradictory of identity because there are some things that are exempt from identity then. Rather, he means that only correlative ways of being identical and non-identical are contradictories. As such, each thing with respect to each thing will either be exempt from two ways of being identical and all ways of being non-identical or from two ways of being non-identical and three ways of being identical.

Far from rejecting Exhaustivity and Exclusivity in 105b14-25 then, Aristotle points to a need to refine them:

Exhaustivity: for any x and any y, x is either identical in exactly one way or non-identical in exactly one way.

Exclusivity:

1. For any x and any y, if x is identical to y in way z, x is not non-identical to y in any way and not identical to y in any other way.
2. For any x and any y, if x is non-identical to y in way z, x is not non-identical to y in any other way and not identical to y in any way.

3. For any x and any y, if x is not identical to y in way z, x is either a) identical to y in exactly one other way and not non-identical to y in any way or b) non-identical to y in exactly one way and not identical to y in any way.
4. For any x and any y, if x is not non-identical to y in way z, it is either a) non-identical to y in exactly one other way and not identical to y in any way or b) identical to y in exactly one way and not non-identical to y in any way.

This fits well with the with the text. Notice that Aristotle first references 146b2-5 after having outlined the ways of being identical, similar and dissimilar. At this point, after claiming that non-identical and identical are opposed, he only commits to the uncontentious part of the premise without qualification: *ἅπαν πρὸς ἅπαν ἢ ταὐτὸ ἢ ἄλλο*. We can explain why on this interpretation. Without having established that there are also three ways of being non-identical, we might still think that identity and non-identity are contradictories. It is only after he outlines three ways of being non-identical that he qualifies this. This suggests that it is because we have learnt that there are also three ways of being non-identical that we can see that identity and non-identity are not contradictories.

In addition, Aristotle reiterates that every thing that exists must be identical and non-identical when distinguishing between non-identity and difference.[226] There follows a discussion about difference and contrariety.[227] If Aristotle is interested in contraries, we can understand this link as more than a segue way, as it might initially appear. If identity and non-identity are not contradictories and non-identity is different from difference, we are prompted to reflect on how identity and non-identity are opposed more precisely.

[226] 1054b25

[227] 105427-1055b29

The best way to reconcile *Metaphysics*, Iota 3 with Exhaustivity and Exclusivity then is to interpret Aristotle as drawing out consequences of his account of identity and non-identity: they are not contradictories in all ways but only in correlative ways. In light of this, we must refine, not reject, Exhaustivity and Exclusivity on his definitions of identity and non-identity.

*

In this chapter, I suggested that there are two laws of identity and non-identity that seem to be obviously and necessarily true, Exhaustivity and Exclusivity. I examined 146b2-5, where I argued that we find a premise which we expect to be plausible but which appears to deny Exhaustivity and Exclusivity. I discarded Harte's reading of the premise, on which Exhaustivity and Exclusivity were not violated in favour of one that suggested that Exhaustivity and Exclusivity might be false. I argued that we can make sense of why Plato would even suggest such a thing, which seems so obviously unacceptable. He prompts us to reflect on the very remote possibility that Exhaustivity and Exclusivity are false because they are genuinely difficult to reconcile with some parts with respect to the whole they are part of and wholes with respect to one of their parts: Forms with respect to one of their instantiations and an instantiation with respect to its correlate Form or properties themselves with respect to an instance of that property and vice versa.

I then turned to *Metaphysics*, Iota 3 and argued that 1054b15-21, we find Aristotle explicitly referring to 146b2-5. I argued that taking Aristotle to be rejecting Exhaustivity and Exclusivity because only those things that exist and/or are one are identical to themselves and non-identical to other things is not justifiable. I then outlined three ways to interpret Aristotle, neither of which would force Aristotle to abandon Exhaustivity and Exclusivity, all

of which I suggested we reject. The first was that Aristotle is simply emphasising that there is nothing that could not exist and/or be one so that there is nothing that could be exempt from identity and non-identity. The second was that Aristotle is thinking of a number of things, which, not being fundamentally one or existent, cannot be self-identical or non-identical to anything. The third was that Aristotle has in mind what we might think of as non-existent objects. Since these are merely collections of parts of reality in thought, they are not proper objects that are properly one or exist. Thus, they only have a kind of pseudo-identity and non-identity.

Finally, I outlined a more convincing interpretation, according to which Aristotle is not abandoning Exhaustivity and Exclusivity in *Metaphysics*, Iota at all. Instead, he is pointing to a need to refine them in light of his definitions of identity and non-identity and noting that although being identical and non-identical in certain ways are contradictories, being identical and non-identical in any way are not.

Chapter Five: Relatives

Relatives like larger, smaller, knowledge, master feature in many places in both the Platonic and the Aristotelian corpuses. The literature on the metaphysics and logic of relative terms in Plato and Aristotle covers a wide range of interrelated issues, for example, to what extent Plato and Aristotle had developed and coherent concepts of relatives,[228] the role of relatives in certain arguments,[229] and what relatives there are and how they behave.[230]

In this chapter, I will be concerned with relativity in Part II of the *Parmenides* and Aristotle's *Metaphysics*, Iota 3. I focus on whether or not identity and non-identity are relatives.[231] I begin in the first section by outlining the Owenian view that relatives for Plato are incomplete predicates and incomplete predicates are relatives, arguing that this fits with the way that relatives are often treated in Part II of the *Parmenides*. In light of this, I suggest, we might expect identity and non-identity, which are incomplete predicates, to be relatives in Part II. I then explore two of the identity and non-identity arguments in the first deduction of Part II. I point to shifts in language that might lead us to believe that Plato presents his reader with an entirely implausible idea: identity and non-identity are both relatives and non-

[228] Those who argue that Plato did not (a view that has subsequently fallen out of favour) include Cornford (1939), p. 78, Cross and Woozley (1966), pp.156-8, Hackforth (1955), p.155, Moravcsik (1962), p. 54. Those who hold that he did include Castañeda (1972), (1978), (1982), Kirwan (1974), McPherran (1983), Scaltsas (2013). For discussion of whether or not Aristotle's concept of relatives is coherent, see Morales (1994).

[229] See, for example, Duncombe (2015), Baltzly (1997), Fine (1993) McCabe (1994), Owen (1957), Owen (1968)

[230] For example, Owen (1957), Owen (1968)

[231] Where possible, I restrict my discussion to the *Parmenides* only, rather than a number of dialogues, for the methodological reasons outlined in Chapter One, contra e.g. Owen (1957) or Duncombe (2015), who take the similarities in the treatment of relatives in various dialogues to indicate a cross-dialogic, coherent view of relative terms.

relatives. I argue that in fact, Plato's use of language serves to draw his reader's attention to difficulties with justifying identity and non-identity as either relative or non-relative.

I then turn to Aristotle. I outline two versions of a widespread view: for Aristotle, firstly, relatives are incomplete predicates, whereas non-relatives are complete predicates and secondly, relatives correspond to incomplete predicates, whereas non-relatives correspond to complete predicates. I show that neither is compatible with *Metaphysics*, Iota, since it is clear that non-identity meets the criteria for a relative but identity does not, despite the incompleteness of identity. I then argue that Aristotle avoids the obstacles to seeing identity and non-identity are either relative or non-relative that I pointed to in my discussion of Part II of the *Parmenides*, although his view is not without its problems. Finally, I tackle an objection to my discussion of Aristotle: it does not tell us anything new about Aristotle.

Plato On Relatives

In his highly influential 'A Proof in the Peri Ideon',[232] Owen suggests that relative terms are incomplete predicates for Plato.[233] [234]

Consider the following, which feature the relative terms 'drunker' 'friend', 'same pattern':

[232] Owen (1957)

[233] In fact, he does much more than this, arguing that that the distinction between incomplete predication and relatives and complete predication and non-relatives features and plays an important role various Platonic texts (*Parmenides*, *Hippias Major*, *Symposium*, *Republic*, *Phaedrus*, *Philebus*) and is crucial for understanding the difference between Forms and instantiations.

[234] I do not discuss another, less popular rival view here, the 'conjunctive' interpretation - see Duncombe (2013) for a conjunctive interpretation and Denyer ((1991) pp.142-146) for possible problems.

Barry is drunker than

Quark is a friend of

Hector's shell has the same pattern as

These are clearly not syntactically complete. Nor, for Owen, are they semantically complete because we are left asking, "Drunker than whom? The friend of whom? The same pattern as what?". For syntactic and semantic completion, we must add a complement - Barry is drunker than Iqbal; Quark is a friend of Odo; Hector's shell has the same pattern as Femi's.

Consider the following:

Barry is drunker.

Quark is a friend.

Hector's shell has the same pattern.

These are syntactically complete sentences. However, we are also left asking, 'Drunker than whom?, The friend of whom? The same pattern as what?". For semantic completion, we must also add a complement.

The same seems true of descriptions. Consider:

Barry, the drunker whale

Odo, the friend

Hector's shell with the same pattern

Again, a complement is required for the semantics of these descriptions. Owen argues that for Plato, relatives are 'incomplete predicates', by which he means that they are predicates

that require a genitive complement for semantic completion. He also claims that it is the mark of relativity in Plato that genitive complements occur with *πρὸς*.

There are numerous passages in the Platonic corpus that we might think support Owen's analysis.[235] However, as it stands, his account requires some refinement. We might think that it is simply false that a complement is always necessary for the semantics of relative claims. Suppose Liv wanders into a pub for a birthday lunch with her extended family. "Who is the father?" asks the waiter. The reply, "David is the father", seems both syntactically and semantically complete in this case. Nevertheless, father is a relative. Likewise, suppose I am having a drink in the pub. I overhear somebody asking, "Who is the captain?". Their friend replies, "Sarah is the captain". I turn and see a group of women, who are talking to the woman at the bar. They are muddy, and one of them is holding a silver cup. "Sarah is the captain" seems to me to be perfectly semantically complete without a complement, although captain is a relative term. At times, Plato also omits complement when using what seem to be relative terms, where his sentences still seem to be semantically complete. Thus, we might think, he must allow for relative terms that are not incomplete predicates.

However, in the first case, "David is the father" is only semantically complete because the context has already established the complement - of Liv. This simply indicates that sentences using relative terms require complements for semantics, although this complement may be established before the sentence is uttered. Similarly, in the second case, "Sarah is the captain" is only semantically complete because the context establishes the complement: of the team.

[235] For example, *Charmides*, 168b2-3, *Gorgias*, 503e1, *Sophist*, 257e3, *Symposium*, 199d1-e8, *Statesman*, 283d4-e3, *Theaetetus*, 160b9-10.

Likewise, while Plato does not provide an explicit complement for what seem to be incomplete predicates in many cases, this is because the complement has already established or because context gives it to us. This is particularly evident in passages where Plato explicitly connects syntactically complete sentences with further completion. For instance:

> *"A beautiful* (καλὸν) *pot also is beautiful, is it not? Tell me."*

> *"Well, Socrates, it is like this, I think. This vessel, when well crafted, is beautiful* (καλὸν) *but considered as a whole, it does not deserve to be distinguished as beautiful in comparison with a horse* (καλὸν πρὸς ἵππον) *and a maiden* (καλὸν πρὸς…παρθένον)"[236]

Hippias Major, 288e6-9

I take it then that although in some relative claims, Plato does not explicitly give us the complement, this is because the complement is evident from the context or has already been established. Thus, we ought to add to Owen's account that the complement need not be explicit where it has already been established or is evident from the context.

Another refinement of Owen's account concerns the cases of complements in relative claims. Owen takes the complements to be exclusively genitive in Plato. However, Duncombe points out that, although rare, there are some instances of an accusative complement. For example,[237] consider the *Republic*, 438b4-d1:

[236] In cases like these, we find '*πρὸς* +complement', which is usually taken to mark out what relatives are in and of themselves. Since a literal translation of *πρὸς* is 'towards', some have argued that relativity can be charcterised as 'towardness' - see Cornford (1935), p. 283 and Duncombe (2013), p.22.

[237] Some of Duncombe's other examples: *Sophist* 257e3, *Gorgias* 503e1, *Meno* 89d1, *Theaetetus* 160b9-10, *Philebus* 51c-d and *Parmenides* 154e1.

οὐκ ἔμαθες, ἔφην, ὅτι **τὸ μεῖζον τοιοῦτόν** ἐστιν οἷον **τινὸς εἶναι μεῖζον**;

πάνυ γε.

οὐκοῦν **τοῦ ἐλάττονος**

ναί.

τὸ δέ γε πολὺ **μεῖζον** πολὺ **ἐλάττονος**. ἦ γάρ;

ναί.

ἆρ' οὖν καὶ τὸ ποτὲ **μεῖζον** ποτὲ **ἐλάττονος**, καὶ τὸ ἐσόμενον **μεῖζον** ἐσομένου **ἐλάττονος**;

ἀλλὰ τί μήν;

ἦ δ' ὅς.

καὶ **τὰ πλείω** δὴ **πρὸς τὰ ἐλάττω** καὶ **τὰ διπλάσια πρὸς τὰ ἡμίσεα** καὶ **πάντα τὰ τοιαῦτα**, καὶ αὖ **βαρύτερα πρὸς κουφότερα** καὶ **θάττω πρὸς τὰ βραδύτερα**, καὶ ἔτι γε τὰ **θερμὰπρὸς πρὸς τὰ ψυχρὰ** καὶ πάντα τὰ τούτοις ὅμοια ἆρ' οὐχ οὕτως ἔχει;

πάνυ μὲν οὖν.

τί δὲ τὰ περὶ τὰς ἐπιστήμας; οὐχ ὁ αὐτὸς τρόπος; **ἐπιστήμη** μὲν **αὐτὴ μαθήματος αὐτοῦ ἐπιστήμη** ἐστὶν ἢ **ὅτου** δὴ δεῖ θεῖναι τὴν **ἐπιστήμην**

Republic, 438b4-d1

Notice that Plato moves from using *μεῖζον* + genitive to using other predicates with *πρὸς* + genitive and *πρὸς* + accusative and then to *ἐπιστήμη* + genitive, where this does not seem to indicate a philosophical difference and where a complement is necessary for semantic completeness. Thus, complements can be accusative. In addition, neither Owen nor Duncombe notice that there are passages in Part II of the *Parmenides* in which the complement takes the dative for example, *ἡλικίαν μὲν τὴν αὐτὴν ἔχον ἢ αὑτῷ ἢ ἄλλῳ* (it has the same age as itself or anything else).[238]

[238] 140e4

There is a further issue that we must address. There are two ways that we might take the view that relatives are incomplete predicates: if F is a relative, F is an incomplete predicate or F is a relative if and only if F is an incomplete predicate.[239] If we opt for the first, all relatives are incomplete predicates but there may be some incomplete predicates that are not relatives. If we choose the second, there is no relative that is not also an incomplete predicate and no incomplete predicate that is not also a relative. However, Owen does not explicitly tell us which of these he subscribes to.

The best reason for the Owenian to maintain that if F is a relative, it is an incomplete predicate but deny that if F is an incomplete predicate, F is a relative stems from reflection on semantic completion in the context of kinds or sortals. Consider the following sentences:

1a. Barry is good.

2a. All swimming whales are good.

1b. Barry is good for a whale.

2b. All swimming whales are good at being whales.

1a and 1b require semantic completion; Barry and all swimming whales cannot be good simpliciter. However, some might argue that 1b- 2b are not instances of relativity because nothing can be relative to its kind or sortal or to itself as falling under a kind and or sortal or because nothing can be relative to something with a different ontological status. Thus, all relatives are incomplete predicates but there are some incomplete predicates that are not relatives.

I do not have space to discuss the problems posed by these sorts of sentences for seeing incomplete predication as a sufficient condition for relativity in detail. However, there are

[239] I am grateful to Lindsay Judson for pointing this out to me.

two good reasons to suppose that an Owenian ought to maintain that F is a relative if and only if F is an incomplete predicate. Firstly, it is hard to find evidence that Plato would find the idea that something can be good relative to its kind, its sortal or itself as something that falls under a sortal worrying. Nor is there solid textual basis for the claim that nothing can be relative to something with a different ontological status. Secondly, it seems that the Owenian is committed to maintaining that F is a relative if and only if F is an incomplete predicate, since on her account, for Plato, an incomplete predicate just is a *relational* predicate and relatives are relational predicates.[240]

On the refined Owenian reading then, for Plato, relative terms are incomplete predicates and incomplete predicates are relatives, where the complement yields semantic completeness. The complement can take the genitive, accusative or dative and can be implicit, having been established earlier or by context.

Relatives or Not?

This analysis of relative terms fits with the way that Plato treats many relatives in the first and second deductions of the Part II. For example:

> Ισον μὲν ἄρα οὔτ'ἂν ἑαυτῷ οὔτε ἄλλῳ
>
> *Therefore, it would not be* ***equal to itself*** *or* ***something else***
>
> *Parmenides,* 140b6-7

[240] I am grateful to Matthew Duncombe for this point.

> ἆρ᾽ οὖν καὶ ὅμοιόν τε καὶ ἀνόμοιον ἑαυτῷ τε καὶ τοῖς ἄλλοις;
>
> *And it will be both* ***like*** *and* ***unlike itself*** *and* ***the others****?*
>
> *Parmenides*, 147c1-2

In the first and second deductions, Plato often uses *ἕτερον* and *ταὐτό* with a complement. For example:

> οὐδὲ μὴν ***ταὐτόν*** γε οὔτε ***ἑτέρῳ*** οὔτε ***ἑαυτῷ*** ἔσται, οὐδ αὖ ***ἕτερον*** οὔτε ***αὐτοῦ*** οὔτε ***ἑτέρου*** ἂν εἴη.
>
> *Nor will it be* ***identical to itself*** *or* ***to something non-identical****, and likewise, it would not be either* ***non-identical to itself or to something non-identical****.*
>
> *Parmenides*, 139b4-5
>
> ἀλλὰ μὴν ἔφαμεν τὰ μήτε μόρια μήτε ὅλα μήτε ***ἕτερα ἀλλήλων ταὐτὰ*** ἔσεσθαι ***ἀλλήλοις***.
>
> *But we said that those things that are neither part nor whole nor* ***non-identical to one another*** *were* ***identical to one another****.*
>
> *Parmenides*, 147b3-4

We might think then that since identity and non-identity are incomplete predicates and vice versa, they are quite clearly relatives in Part II. However, reflection on two arguments of the first deductions reveals that this is far from clear. Consider Argument G:

Argument G	Text (139d2-e4)
1. The one cannot be many or have parts.	1. Tacit, from 137d1-3
2. The nature of the one is not the nature of the identical because when something comes to be identical, it does not thereby come to be one because if something comes to be identical to many, it must come to be many, not one.	2. *οὐχ ἥπερ τοῦ ἑνὸς φύσις, αὐτὴ δήπου καὶ τοῦ ταὐτοῦ. -τί δή; -Ὅτι οὐκ, ἐπειδὰν ταὐτὸν γένηταί τῷ τι, ἓν γίγνεται. ἀλλὰ τί μήν; - τοῖς πολλοῖς ταὐτὸν γενόμενον πολλὰ ἀνάγκη γίγνεσθαι ἀλλ' οὐχ ἕν. - ἀληθῆ.* (139d2-5)
3. But if the one and the identical do not come apart at all, whenever something comes to be one, it would come to be identical and whenever it comes to be identical, it would come to be one.	3. *ἀλλ' εἰ τὸ ἓν καὶ τὸ ταὐτὸν μηδαμῇ διαφέρει, ὁπότε τι ταὐτὸν ἐγίγνετο, ἀεὶ ἂν ἓν ἐγίγνετο, καὶ ὁπότε ἕν, ταὐτόν - πάνυ γε.* (139d6-e1)
6. So, if the one is identical to itself, it will not be one with respect to itself.	6. *εἰ ἄρα τὸ ἓν ἑαυτῷ ταὐτὸν ἔσται, οὐχ ἓν ἑαυτῷ ἔσται·*[241] (139e1-2)

[241] Schofield (1974) suggests that we excise the second ἓν. He points out that the *οὐχ ἓν ἑαυτῷ ἔσται* is usually translated as 'it will not be one with itself'. He maintains that using *εἴη* in this relational way is unusual either prior to Plato or around the same time. As such, we should be sceptical about the ἓν. He also argues that on the received text, Parmenides' move from *εἰ ἄρα τὸ ἓν ἑαυτῷ ταὐτὸν ἔσται* to *οὐχ ἓν ἑαυτῷ ἔσται* renders the argument 'blatantly implausible'. Schofield suggests one of two ways that we might understand Parmenides argument at 139d2-e4. The first is that since you cannot substitute 'one' for 'identical' (from 3-4), then if the one is identical to itself, it is not thereby one with itself. However, he rightly notes that if this is Parmenides' point, 7 and 8 seem redundant. The second is that if to be one is not to be identical then if the one is identical to itself, it cannot be one. The *οὐχ ἓν ἑαυτῷ ἔσται* then means, 'it will not be one *even* with itself' so that 7 and 8 do not amount to further inference but a clarification of a previous inference. Schofield's primary objection to this is that this does not explain why Plato does not include a locution to convey the 'even'. However, as Schofield himself acknowledges, using *εἴη* in the relational way that the received text requires is not unheard of in Plato or elsewhere; in fact, one of the places that Schofield finds Aristotle using it in just such a way – and with ἓν is in Iota 3, at 1054a35. Moreover, on my interpretation, there is no need for an 'even' and none of the premises are redundant; Plato chooses to use both 6 ,7 and 8 because in 6, ἓν is incomplete and in 7, it is complete.

7. In being like this, it is one and not-one.	*καὶ οὕτω ἓν ὂν οὐχ ἓν ἔσται.* (139e2)
8. But this is impossible.	*ἀλλὰ μὴν τοῦτό γε ἀδύνατον*[242] (139e2-3)
9. Therefore, it is also impossible for the one to be identical to itself or non-identical to something non-identical.	9. *ἀδύνατον ἄρα καὶ τῷ ἑνὶ ἢ ἑτέρου ἕτερον εἶναι ἢ ἑαυτῷ ταὐτόν. – ἀδύνατον.* (139e3-4)

The first problem in interpreting this argument is understanding what 'the nature of the one' and 'the nature of the identical' are; Parmenides suddenly introduces talk of natures with no explanation of why. How we should understand these depends on what sort of one we have chosen for the subject of the first deduction; the nature of a Form, Oneness, might be different from the nature of one particular or the property of one. Equally, 'the nature of the identical' might mean different things; the nature of the Form, Identity, the nature of some identical thing insofar as it is identical, the property of identity or what it is for something to be identical. Since, on my interpretation, we are entitled to read these in different ways on different readings, I leave this issue aside but take it that 'the nature of the identical' indicates something different from 'identical'.

I turn now to examine the way that Plato treats *ταὐτό* in this argument. Notice that he shifts between semantically incomplete and completed uses of *ταὐτό*; *ταὐτό* is incomplete in 3 and 5 but complete in 4, 6 and the conclusion. In doing so, we might worry that he is suggesting that identity is both a relative and a non-relative to his reader, which seems obviously false.

[242] There is some debate as to whether this ought to be attributed to Parmenides or Aristotle – see Brumbaugh (1961) p. 270 and especially Schofield (1974) for discussion of this.

How might we defend Plato? We might maintain that where Plato does not himself supply it, a complement is implied by the context. Recall the law of identity in Part II of the *Parmenides*: for any x and any y, x is identical to y if and only if, for all properties, if x has it, y has it and if y has it, x has it. This, we might think, suggests that one thing is always identical *to* something (itself) and that Plato must recognise and be keen to impress upon his reader that identity is a relative.

However, this is difficult to square with what we find in Argument G. There, we find a shift between supplying and failing to supply a complement in the use of another predicate: one. In 1-5, one is treated just as we would any non-relative: as a complete predicate, which requires no complement for semantics. In 6 there is a striking change. By adding a dative complement to ἓν (ἓν ἑαυτῷ ἔσται), Plato treats one as he treats relative terms on an Owenian view. We cannot read a complement as simply implied in the uses of ἓν in premises 3-5; after all, nothing in the argument so far or even prior to it indicated that we ought to. Further, the idea that the one is a predicate that requires semantic completion or is a relative is not obvious; the claim that since Barry is just one thing, 'Barry is one' is perfectly complete is not an implausible one.[243]

In addition, notice that Argument G hangs on the relationship between being or becoming one and being or becoming identical. Effectively Parmenides argues in 1-4 that if one and identity are separable, something cannot by being identical come to be one and if something comes to be identical to many, it could not become one. In 5, he claims that even if identity and one were in fact co-extensive, if something came to be identical it would come to be one and vice versa. In the remainder of the argument, he argues that in either case, the one would

[243] Of course, further reflection might lead us to maintain that one is in fact incomplete – more on this below.

not be one with respect to itself and therefore it would be one and not-one. Since this is prohibited for the one (by 1), the one cannot be identical to itself or anything else. Notice that in this argument, the shifts between uses of *ταὐτό* with and without a complement largely mirror those between uses of one. Given the argument, in which identity and one are so closely related, and the sudden, striking move from the one as a complete to an incomplete predicate in premise 6, I suggest that this is not merely coincidental.

One complaint about this interpretation stems from a case where Plato uses identity with a complement but does not do the same for one. This occurs in 3, where Parmenides argues that if something comes to be identical to the many (with a complement) it does not thereby come to be one (without a complement). As such, we might think that we have no reason to think that what goes for *ἓν* also goes for *ταὐτό*. However, my claim is not that Plato treats identity and one in exactly the same ways throughout the argument. Rather, I maintain that given the shift in the use of one with and without a complement, which cannot be written off as insignificant, and the content of the argument, we are not entitled to assume that similar shifts in the use of *ταὐτό* are insignificant. Consequently, it is sensible enough to worry that Plato is treating identity as both a relative and a non-relative.

I turn now to another argument that occurs in the first deduction, in which I show that Plato also slides between incomplete and complete uses of *ἕτερον*. Again, this might leave us worrying that Plato senselessly presents his reader with the obviously false idea that non-identity is also relative and non-relative.

This argument supposedly shows that the one is not non-identical to something non-identical for as long as it is one:

Argument H	Text (139c3-139d1)
1. The one is only one and not many.	1. Tacit, from 137d1-2
2. It is not appropriate for the one to be non-identical to something but only for that which is non-identical to something non-identical, not for anything else.	2. *οὐ γὰρ ἑνὶ προσήκει ἑτέρῳ τινὸς εἶναι, ἀλλὰ μόνῳ ἑτέρῳ ἑτέρου, ἄλλῳ δὲ οὐδενί.* – *Ὀρθῶς.* (139c4-5)
3. Therefore, it will not be non-identical by being one.	3. *τῷ μὲν ἄρα ἓν εἶναι οὐκ ἔσται ἕτερον· ἢ οἴει;* - *οὐ δῆτα.* (139c6-7)
4. But if not by this, not by being itself.	4. *ἀλλὰ μὴν εἰ μὴ τούτῳ, οὐχ ἑαυτῷ ἔσται* (139c8)
5. But if not by being itself, then it itself would not be ⌜non-identical⌝.[244]	5. *εἰ δὲ μὴ αὑτῷ, οὐδὲ αὐτό* (139c8-9)
6. But in not being non-identical in any way, it would not be non-identical to anything.	6. *αὐτὸ δὲ μηδαμῇ ὂν ἕτερον οὐδενὸς ἔσται ἕτερον.* - *Ὀρθῶς.* (139c9-d1)
7. Therefore, the one would not be non-identical to something non-identical for as long as it is one.	7. *ἕτερον δέ γε ἑτέρου οὐκ ἔσται, ἕως ἂν ᾖ ἕν* (1393-4)

[244] *οὐδὲ αὐτό* here is difficult translate. Allen translates 'not as itself' ((1997), p.21). Since I can see no good reason to import 'as', I have not adopted his translation. Scolnicov ((2003), p.86) and Turnbull ((1998), p.54) translate it 'not itself'. On this translation, the point that Parmenides is making in 5 is seems to be that if the one is not non-identical by being itself, it would not be the very thing that it is, namely one. However, if this is so, 6 is redundant. In addition, if this were what Plato meant, we would expect something less compressed than *οὐδὲ αὐτό*. As such, I have opted for a modification of Hermann et. al's 'it will itself not be ⌜different⌝' (Hermann, Hedley and Chrysakopoulou (2010), p.115). Although we might think that 6 is also redundant on this translation, I show later that this is in fact not the case.

Notice that Plato moves between incomplete and complete uses of ἕτερον. In 2, the two instances of ἕτερον are complete. In 3, ἕτερον is incomplete. Since 4 and 5 follow from 3, I take it that the implied ἕτερον in both is incomplete. In 6, we find a shift between an incomplete and a complete use and in 7, ἕτερον is complete. In light of this, we might worry that Plato pointlessly presents his reader with the idea that something is both relative and non-relative which is obviously false.

As with the identity argument above, we might attempt to defend Plato by arguing that complements are implied throughout, even when they are not explicitly stated. However, consider the argument with supplied sensible complements:

1. The one must be only one and not many (tacit).
2. It is not appropriate for the one to be non-identical to something, rather only for that which is non-identical to something non-identical, not for anything else.
3. Therefore, it will not be non-identical to something by being one.
4. But if it is not non-identical to something by being this, it would not be non-identical to something by being itself.
5. But if it is not non-identical to something by being itself, it would not itself be non-identical to something.
6. But if it is not non-identical to something in any way, it will not be non-identical to anything.
7. So, it would not be non-identical to something non-identical for as long as it is one.[245]

[245] I take it that although 7 is stated first in the text, this is one of the many cases where Parmenides states the conclusion before giving the argument.

On this interpretation of the argument, 6 is redundant; we already know from 5 there is nothing in virtue of which the one could be non-identical to and that it cannot be non-identical to something. Taking different, plausible complements is just as problematic:

1. The one must be only one and not many (tacit).
2. It is not appropriate for the one to be non-identical to something, rather only for that which is non-identical to something non-identical, not for anything else.
3. Therefore, it will not be non-identical to something non-identical by being one.
4. But if it is not non-identical to something by being this, it would not be non-identical to something by being itself.
5. But if it is not non-identical to something non-identical by being itself, it would not itself be non-identical to something non-identical.
6. But if it is not non-identical to something non-identical in any way, it will not be non-identical to anything.
7. So, it would not be non-identical to something non-identical for as long as it is one.

6 is now problematic for another reason. 'It will not be non-identical to anything' does not follow from 'it is not non-identical to something non-identical in any way'; rather, it follows from 2. In addition, 6 does not tell us anything new and is therefore redundant.

In contrast, if we take only those complements that are explicitly stated to be at work, we can explain every part of the argument:

1. The one must be only one and not many (tacit).
2. It is not appropriate for the one to be non-identical to something, rather only for that which is non-identical to something non-identical, not for anything else.

3. Therefore, it will not be non-identical by being one.
4. But if not by being this, not by being itself.
5. But if not by being itself, it would not itself be non-identical.
6. But if it is not non-identical in any way, it will not be non-identical to anything.
7. So, it would not be non-identical to something non-identical for as long as it is one.

1 is an underlying assumption that is in play throughout the first deduction. 2 tells us that the one cannot be non-identical to anything and only things that are non-identical to something non-identical can be non-identical to something. Parmenides then infers 3 from 1 and 2. In light of the shift from a complete to an incomplete *ἕτερον*, in 3, he is denying that the one has the non-relative property, non-identity, in virtue of being one, since it would pluralise the one. In 4, which follows from 3, he denies that the one has the non-relative property, 'non-identity' in virtue of being itself, since this would pluralise it. He then argues that since the one cannot have the property of one by being itself either without pluralising the one, which is prohibited, it cannot have the non-relative property of non-identity at all. In 6, he argues that since there is nothing in virtue of which it can have the non-relative property of non-identity, the one cannot be non-identical to anything. Thus, its oneness precludes its being non-identical to something non-identical, hence 7.

In this argument, Plato seems to be making a distinction between having the property of non-identity and being non-identical to something in virtue of this property. Thus, the best way to make sense of Argument H is to take the shifts between incomplete and complete uses of *ἕτερον* as indicating that non-identity is both relative and non-relative, albeit at different orders.

Complete or Incomplete?

We might think that this leaves us with a serious problem. It seems obviously false that there could be anything that is both relative and non-relative. Yet, as I have shown, the shifts between incomplete and complete uses of *ταὐτό* and *ἕτερον* in Arguments G and H suggest that identity and non-identity are relative and non-relative. Must we then accept that Plato senseslessly presents us with the idea that identity and non-identity are both relative and non-relative? Here, I argue that we cannot satisfactorily solve this problem simply by rejecting the Owenian account of relatives. I then turn to explore a more promising solution but argue that it is not persuasive. Finally, I point to two good reasons for Plato's moves between incomplete and complete uses of *ταὐτό* and *ἕτερον*. Firstly, it reveals a difficulty with fitting identity and non-identity with the other kinds of opposites, relative or non-relative. Secondly, it prompts us to reflect on the relationship between one and identity in the context of relativity.

One way that we might attempt to deal with this is to simply deny that incomplete predicates are relatives for Plato from the outset. We might appeal to Duncombe's constitutive account of how things relate for various ancient philosophers for an alternative. On his account, for all x and some y, Rxy iff Rxy *constitutes* y. Broadly speaking, Rxy constitutes x where Rxy just is what it is to be x. Thus, a double just is a number double of some number.[246]

Consider the following sentences:

1. Barry is drunker than Harry.

2. Quark is a friend of Odo.

3. Hector's shell has the same pattern as Henrietta's.

[246] Duncombe (2015), Introduction

The incomplete predication view requires that being drunker, being a friend and having the shell pattern are relatives. However, it is never true that being drunker than someone, a friend of someone or having a shell of the same pattern as someone just *are* Barry, Quark or Hector's shell. Hence, Duncombe would deny that F is a relative if and only if F is an incomplete predicate.

I do not have space to discuss Duncombe's argument for a constitutive interpretation of Plato in detail, since it is lengthy, complex and relies on analysis of a wide array of passages from a number of different dialogues. However, I briefly give some reasons to discard his reading here. Firstly, suppose we grant that the correlative of a relative must constitute it and that 1 and 2 above are true. We might argue that being a thing that is drunker than Harry *partly* constitutes Barry, since it is one of his properties. Alternatively, we might argue that being drunker than Harry just is and so constitutes Barry's drunkenness. On either of these views, even if relatives are not incomplete predicates, they will always correlate with them. As such, it does not solve our problem; we are still left asking why Plato would suggest that identity and non-identity are both relative and non-relative in this sense. Of course, Duncombe might argue that neither of these arguments is persuasive or that it is incompatible with the texts he uses to justify his interpretation. However, he will find it difficult to reconcile any argument for restricting relativity to the level of generics with the spatial, directional sense characteristic of relativity that is a feature of 1-3 above.

Secondly, we should be wary of assuming that the constitutive view is the one that Plato commits to in Part II of the *Parmenides*. Duncombe's justification of his constitutive interpretation lies in a number of metaphysical and ontological arguments in a wide array of passages from a number of different dialogues; he argues that the view of relatives as

incomplete predicates can not explain these as well as his can. However, I am not convinced that we are entitled to look for full-blown theories of this sort across dialogues - and this is especially dangerous where the Part II of the *Parmenides* is concerned, which, as I argued in Chapter One, does not commit us to many metaphysical or ontological commitments.

In contrast, the idea that relatives are incomplete predicates requires few metaphysical or ontological commitments of this sort. In addition, it is largely plausible in the context of the *Parmenides*. On the whole, incomplete predication and relatives are aligned in the *Parmenides*; the way that identity and non-identity are treated in the arguments in the first and second deductions are very much the exception, not the rule. Moreover, the shifts between complete and incomplete uses of ἓν are striking, not least because using a dative with ἓν is unusual, both in the *Parmenides* and in Plato more generally. Given that as I have argued, there are associated shifts between complete and incomplete uses of ταὐτό, I take it that these shifts are philosophically significant. An advantage of the incomplete predication view, as I argue in full below, is that they must be.

In light of this, I use a different strategy: attempting to explain why Plato might shift between complete and incomplete uses of ταὐτό and ἕτερον, despite this suggestion that they are both relative and non-relative.

Redundancy

One way that some might use this strategy and attempt to defend Plato that ultimately fails is by arguing that he is in fact alerting us to the fact that identity and non-identity do not behave like other relatives syntactically and semantically. It is this which explains his moves between what seem to be semantically complete and incomplete uses of ταὐτό and ἕτερον.

Consider the following sentences:

Barry the whale is drunker.

Quark is a friend.

Hector's shell has the same pattern.

As I pointed out above, these are syntactically complete but require further completion for semantics. However, we might think that identity and non-identity sentences work rather differently. Consider the following sentences:

1. I am identical.
2. I am non-identical.

The reader will approach the identity and non-identity arguments in the first deduction with the assumption that everything must be identical and not non-identical to itself and non-identical and not identical anything else. The idea this is false is troubling, since if there were something that were non-identical and not identical to itself or non-identical or identical to something else, its oneness would collapse and it could not constitute a thing at all. However, it is also worrying for another reason: we cannot even make sense of such a thing. If "I" has any meaning whatsoever then, in saying it or even thinking about it, we already know that there is exactly one thing that I could and must be identical to: myself. As such, if somebody says, "I am identical", we need not ask, 'To whom?'. There is only one complement that it could and must have: myself (or something synonymous). Likewise, we might think that if I say, "I am non-identical", we need not ask, "To what?". If "I" has any meaning at all, the only complement that it could and must have is "everything else" (or something synonymous). This, some might argue, explains why Plato moves between using *ταὐτό* and *ἕτερον* with and without complements. In doing so, he points out that if *ταὐτό* and *ἕτερον* are incomplete

predicates, they behave very oddly indeed. As such, he prompts the reader to worry about what sort of relatives they could be.

There is good reason to reject this explanation. It is true that 'I am non-identical' entails 'I am non-identical to everything else and not myself'. However, it is not true that the only complement that "I am non-identical" could and must have is everything else or something synonymous. For example, 'I am non-identical to Barry' does not mean the same thing as 'I am non-identical to Hector' or 'I am non-identical to everything else'. The complement tells us which specific cases of non-identity I have in mind. As such, it not dissimilar from the way that some other relatives work. It is true that 'I am smaller' always entails 'I am smaller than something larger'. However, 'I am smaller than the larger person' or 'I am smaller than the larger whale' are not semantically equivalent. Like other relatives then, the semantics of non-identity claims depend on what the specific relata are and we require a complement to convey these differences. This defence does not justify the way that Plato uses *ἕτερον* then.

That we do not require a complement in identity claims is also unpersuasive. On this account, Plato is alerting us to this oddity of 'identical', which stems from the idea that in identifying or thinking about a subject, we already know that there can and must be only one thing that it is identical to - itself. However, we might argue that in making identity claims, we must know that any subject we choose is identical to itself but maintain that the complement we use is still semantically very significant. For example, 'I am identical to myself', 'I am identical to Saloni', 'I am identical to the person wearing a pink tie' are all true and feature complements that are not synonymous. Thus, complements are necessary for semantics in identity claims.

Some might attempt defend Plato by looking at the context of the *Parmenides*. In the first deduction, the one must be only one. However, we find that even *treating* the one as if it were

two imports properties and pluralises it. As I pointed out in Chapters One and Two, this is partly why belief is denied of the one. It is not simply that the one has no properties that precludes belief; the one is also exempt from belief because it would also involve treating the one as if it does have properties i.e. as many. Notice that in using different, non-synonymous complements, 'I am identical to Saloni', 'I am identical to the person wearing a pink tie', we treat one thing (me) as it were two. At least for the one then, this objection is not persuasive.

There are two compelling reasons to reject this defence. Firstly, the very first occurrence of *ταὐτό* without a complement in Argument G is a general claim: 'if something comes to be identical, it does not thereby come to be one'. Even if we accept that we cannot meaningfully use non-synonymous complements in the case of the one, there is no reason to suppose that we cannot do so whatever the subject of the sentence. Secondly, if treating the one as two is illegitimate, it seems that making any identity claim with *any* complement is prohibited; 'I am identical to myself' involves claiming that identity holds *between* something and itself or of something *with respect to* itself. Yet, Plato does just this.

Opposites

I turn now to a better defence that stems from the idea of opposites. In the second deduction of the *Parmenides*, Parmenides explicitly states that identity and non-identity are opposed.[247] However, we do not find any clear criteria for opposites in either the first or second deduction. Moreover, in the first deduction, the conclusions often deny what we might think of as pairs of opposites of the one: straight and round, in motion and at rest, in a place and not in a place etc. In the second deduction, pairs of properties that are plausibly opposed are attributed to

[247] *ἐναντία* (146d6)

the one. Given this, I take it that in this context, identity and non-identity are opposed and intuitively plausible candidates for opposed relative and non-relative properties and their features in the context of the first and second deductions in the discussion that follows.

There are two sorts of what are plausibly opposed relatives in the first and second deductions. The first are those that can only ever hold of some x with respect to some y, where x and y are non-identical, for example, older and younger.[248] These seem to fall into the same category as beautiful and ugly, larger and smaller etc. The second kind are those where one of the pair holds between something and itself and may hold between one thing and something else and the other must only hold between one thing and something else, for example, equal and unequal.[249] Same size and different size, same colour and different colour etc. seem to be opposed relatives of this sort.

Identity and non-identity are obviously not opposed relatives of the first kind, since identity always and only holds of some x with respect to some y where x and y are identical. Nor are they opposed as those of the second kind. It is only possible for some x to be unequal to some y, where x and y are non-identical, just as it is only possible for some x to be non-identical to some y if x and y are non-identical. It is possible for some x to be equal to y, where x and y are identical. However, it is also possible for some x to be equal to some y where x and y are non-identical. In contrast, some x is identical to some y if and only if x is identical to y.

We might think that there is a third category of opposed pairs of relatives, where some x is related to y if and only if x and y are identical and x is related to y in the opposed way if and only x is non-identical to y. Identity and non-identity are opposed relatives of this third kind.

[248] 140e1-141a4, 152d4-e3

[249] 140b6-d8, 149d8-150e5

This would be compatible with seeing relative terms as incomplete predicates. However, thinking of identity and non-identity as opposed in this way is not easy to justify. It is difficult to think of any other opposed relatives that would fall into this category. As such, we require a particularly strong argument for why we should think of identity and non-identity as relatives at all. Yet, if these are the only instances of relatives of this sort, the definition of these relative pairs looks circular: identity and non-identity are opposed relatives because for some x and some y, x is non-identical to y if and only if x is non-identical to y and x is identical to y if and only if x is identical to y.

We can also find two sorts of what are plausibly opposed non- relatives in the text that are akin to many other instances. The first are exhaustive and exclusive pairs, for example, limited and unlimited.[250] Similar pairs include extended and unextended, temporal and atemporal etc. These are exhaustive and exclusive because everything must be one or the other but not both. The second are exclusive but not exhaustive, for example, straight and curved.[251] This is because if something is extended, it must be either straight or curved but not both but if it is unextended, it is neither. However, identity and non-identity do not seem to fall into either category; they are exclusive and exhaustive but also seem to require completion, unlike these predicates.

This allows us to see one reason why Plato moves between complete and incomplete uses of *ταὐτό* and *ἕτερον*: it reveals a difficulty with fitting identity and non-identity with the other kinds of opposites, relative or non-relative.

[250] 137d6-8, 144a5-145a4

[251] 137d8-138a2, 145b1-5

One-to and Identical-to

The shifts in using and failing to use a complement have further significance. I pointed out earlier that in Argument G Plato also uses ἓν with and without a complement. This suggested that he is shifting between treating one as a relative and as a non-relative. I argued that given the similar shifts in his use of identity and the close relationship between one and identity, we should take his use of *ταὐτό* with and without a complement to be significant too. Here, I argue that there are two puzzles that Plato confronts us with in shifting between incomplete and complete uses of *ταὐτό* and ἓν in the same argument.

Consider Argument G again:

Argument G	Text (139d2-e4)
1. The one cannot be many or have parts.	1. Tacit, from 137d1-3
2. The nature of the one is not the nature of the identical because when something comes to be identical with the same thing, it does not thereby come to be one because if something comes to be identical many, it must come to be many, not one.	2. *οὐχ ἥπερ τοῦ ἑνὸς φύσις, αὐτὴ δήπου καὶ τοῦ ταὐτοῦ. -τί δή; -Ὅτι οὐκ, ἐπειδὰν ταὐτὸν γένηταί τῳ τι, ἓν γίγνεται. ἀλλὰ τί μήν; - τοῖς πολλοῖς ταὐτὸν γενόμενον πολλὰ ἀνάγκη γίγνεσθαι ἀλλ' οὐχ ἕν. - ἀληθῆ.* (139d2-5)
3. But if the one and the identical do not come apart at all, whenever something comes to be one, it would come to be identical and whenever it comes to be identical, it would come to be one.	3. *ἀλλ' εἰ τὸ ἓν καὶ τὸ ταὐτὸν μηδαμῇ διαφέρει, ὁπότε τι ταὐτὸν ἐγίγνετο, ἀεὶ ἂν ἓν ἐγίγνετο, καὶ ὁπότε ἕν, ταὐτόν - πάνυ γε.* (139d6-e1)

6. So, if the one is identical to itself, it will not be one with respect to itself.	6. *εἰ ἄρα τὸ ἓν ἑαυτῷ ταὐτὸν ἔσται, οὐχ ἓν ἑαυτῷ ἔσται* (139e1-2)
7. In being like this, it is one and not-one.	*καὶ οὕτω ἓν ὂν οὐχ ἓν ἔσται.* (139e2)
8. But this is impossible.	*ἀλλὰ μὴν τοῦτό γε ἀδύνατον*[252] (139e2-3)
9. Therefore, it is also impossible for the one to be identical to itself or non-identical to something non-identical.	9. *ἀδύνατον ἄρα καὶ τῷ ἑνὶ ἢ ἑτέρου ἕτερον εἶναι ἢ ἑαυτῷ ταὐτόν. – ἀδύνατον.* (139e3-4)

As I pointed out, in 1-4, Parmenides assumes that identity and one do not entirely overlap, so that it is not true that when something comes to be identical to something, it thereby comes to be one. In 5, he effectively argues that co-extensivity of one and identity is a consequence of the one and identity being inseparable:

1. But if that which is one and that which is identical do not overlap at all, whenever something comes to be one, it would come to be identical and whenever it comes to be one, it would come to be identical.
2. So, if the one is identical to itself, it will not be one with respect to itself.

As I suggested earlier, we might think that treating one as an incomplete predicate is linguistically odd and philosophically suspect; after all, Barry is not one with respect to something, he is just one thing, hence 'Barry is one' does not need a complement for semantics.

[252] There is some debate as to whether this ought to be attributed to Parmenides or Aristotle – see Brumbaugh (1961) p. 270 and especially Schofield (1974) for discussion of this.

One then, we might suppose, is not relative. In contrast, since 'Barry is identical' is incomplete, identity is relative. If this is correct, we are left with a puzzle. On the one hand, if one and identity are co-extensive and identity is a relative, we might think that one ought to be too. On the other hand, if one and identity are co-extensive and one is not a relative, identity we might think that one cannot be a relative either.

One good reason for thinking that these are the only two choices available stems from thinking about other properties and relations. Anything that is extended (non-relative) is the same size (relative) as something and anything that is the same size (relative) as something is extended (non-relative). It seems that anything that is extended is the same size as itself, hence extended and same size are predicated of the very same *things*. However, same size can also hold between two, non-identical extended things, contra extended. Thus, being extended and being the same size do not map onto each other exactly and it does not seem problematic to treat one as a non-relative and the other as a relative. In contrast, one and identity are predicated of exactly the same things and neither can concern anything else. In light of this, it is not obvious how we could argue that the one is non-relative but identity is relative if one and identity are co-extensive.

The second puzzle stems from another reaction we might have to Plato's shift in language when using ἕν. We might maintain that 'Barry is one' is in fact incomplete; we can ask, "One what?" where we are trying to find out what *sort* of single thing Barry is. As such, there are many semantically distinct ways to complete "Barry is one": Barry is one whale, Barry is one mammal, Barry is one animal, hence, one a relative.

As I pointed out above, it is difficult to find evidence either for or against the claim that Plato has the relationship between relativity and these sorts of sentences in mind. However, if we

do approach the text with this view in mind, we discover another interesting puzzle. On the one hand, one seems to be an incomplete predicate. On the other hand, it seems to behave rather differently from other incomplete predicates. Drunker is incomplete because some x must always be drunker than some y. Likewise, friend is incomplete because some x must always be a friend of some y. In these sorts of cases, x and y must be things that are non-identical; nothing can be drunker than or of a friend on its own. Cases like same pattern and equal are incomplete predicates because some x must always be the same pattern as some y and some x must always be equal to y. In these cases, x and y will sometimes be things that are identical and sometimes things that are non-identical. However, if some x is one with respect to some y, the relationship between x and y is different: a thing and the sortal it falls under. Thus, there is an obvious ontological difference between a thing and a sortal that is not obviously at issue in the examples above.

In the context of Argument G, this has significance for identity. We might think that identity never holds between two things with different ontological statuses, since things are always identical to themselves. As such, if we think one is an incomplete predicate, we might worry that this is incompatible with the co-extensivity of one and identity; after all Barry is not *identical* to a whale or a mammal although he is one whale and one mammal. Nevertheless, it seems that anything that is one must also be identical to itself and vice versa. As such, it is difficult to see how we could deny that one and identity are co-extensive. This prompts us to reflect on the relationship between one and identity in the context of relativity.

Incomplete Predication Revisited

I have claimed that we can justify what initially seemed to be illegitimate moves between treating identity and non-identity as complete and incomplete predicates. It is not that Plato

is conveying to his reader that identity and non-identity are both relative and non-relative without good reason. Rather, these shifts prompt us to discover and reflect on three puzzles. The first is that identity and non-identity do not fit neatly with either other opposed relatives or other non-relatives.

The second and third stem from the way that Plato shifts between complete and incomplete uses of *ἕν* while doing the same with *ταὐτό* in the context of an argument about the co-extensivity of identity and one. On the one hand, we might think that since *ἕν* is in fact complete and *ταὐτό* is in fact incomplete, *ἕν* is non-relative and *ταὐτό* is relative. However, if *ἕν* and *ταὐτό* are co-extensive, it seems that if one is not a relative, identity cannot be a relative and if identity is a relative, one must be a relative too. Yet, since anything that is one must also be identical to itself, the idea that one and identity are co-extensive is an attractive one.

On the other hand, we might think that *ἕν* is incomplete. If so, it behaves very differently from other incomplete predicates in that the complement is a sortal so that one is predicated of one thing with respect to another, where they have different ontological statuses. If *ἕν* and *ταὐτό* are co-extensive, which seems plausible, we are left wondering *ταὐτό* does not behave like *ἕν*.

Plato leaves us to solve these puzzles for ourselves. One such solution might involve rejecting the Owenian analysis of relatives and arguing that it is simply not the case that F is a relative if and only if F is an incomplete predicate. I argue below that Aristotle does just that.

Aristotle and Opposition

In this section, I show that Aristotle responds to the puzzles above. I begin by considering two versions of a view of what relatives are for Aristotle: firstly, relatives are incomplete predicates and vice versa and secondly, relatives are marked out by incomplete predicates and vice versa. I argue that for Aristotle, although non-identity is an incomplete predicates and a relative, identity is an incomplete predicate but not a relative. This gives us good reason to abandon both versions. I then show that we can find Aristotle responding to the puzzles I argued we find about identity and non-identity in the context of relativity in Part II of the *Parmenides*. I proceed to argue that Aristotle fails to point out that identity and non-identity are linguistically different from other relatives. Finally, I defend myself from the objection that I have not uncovered anything new in my discussion of Aristotle.

The way that Aristotle is generally taken to characterise relatives are those that are *πρός τι* (contra non-relatives). Consider *Categories* 7,[253] where we find the most extensive discussion of relatives:

> We call relatives (*πρός τι*) all such things as are said to be just what they are (*αὐτὰ ἅπερ ἐστίν*) of or than other things (*ἑτέρων*) or in some other way in relation to something else. For example, what is called larger is called what it is than something else (it is called larger than something) (*οἷον τὸ μεῖζον τοῦθ' ὅπερ ἐστὶν ἑτέρου λέγεται, τινὸς γὰρ μεῖζον λέγεται*); and what is double is called what it is of something else - it is called double of something.
>
> *Categories* 7, 6a36-b14

[253] Another passage that is frequently cited in support of this view is *Sophistical Refutations*, 181.

The Owenian view has often been taken to be the best way to analyse this passage.[254] Here, I consider two versions of this view. On the first, all relatives are incomplete predicates and all incomplete predicates are relatives, where incomplete predicates are those predicates which require a complement (implicit or explicit) for semantic completion. I call this Equivalence. We might also argue that Aristotle does not mean that all relatives *are* incomplete predicates and all incomplete predicates *are* relatives, only that they correlate with them. On this version of the incomplete predication view, larger is an incomplete predicate that is truly predicated of Barry with respect to Iqbal. Thus, there is some relation, larger, that holds between Barry and Iqbal. Likewise, since there is some relation, smaller, that holds of Iqbal with respect to Hector, the incomplete predicate smaller is predicated of Iqbal with respect to Hector.[255] Call this Correspondence.

In *Metaphysics*, Iota, Aristotle gives us a similar but briefer definition of relatives, in the context of explaining how one and many are opposed:

> ἀντίκειται δὴ τὸ ἓν καὶ τὰ πολλὰ τὰ ἐν ἀριθμοῖς ὡς μέτρον μετρη τῷ· ταῦτα δὲ ὡς τὰ πρός τι, ὅσα μὴ καθ' αὑτὰ τῶν πρός τι. διῄρηται δ'ἡμῖν ἐν ἄλλοις ὅτι διχῶς λέγεται τὰ πρός τι, τὰ μὲν ὡς ἐναντία, τὰ δ' ὡς ἐπιστήμη πρὸς ἐπιστητόν, τῷ λέγεσθαί τι ἄλλο πρὸς αὐτό.
>
> *In fact, the one is opposed to the many as measure to measurable: and these are as (opposed) as those which are with respect to something but which are not with respect to something in their own right. We have distinguished elsewhere between two ways that things are said to be with*

[254] Ackrill (1963), Morales (1994)

[255] This need not indicate that relatives are relations; they might be relational entities like Barry or Iqbal. See Hood ((2004), ch. 4) for an extensive discussion of the relationship between relatives and relations in Aristotle.

> *respect to something; as contraries, some as knowledge to the knowable, and as that which is said to be itself with respect to something else.*
>
> 1056b33-1057a1, trans. Castelli ((2018), p. 13), minor modifications

Aristotle tells us here that there are two ways that things are said to be *πρός τι*: by being contraries and as that which is itself *πρός τι*. One and many i.e. measure with respect to measurable are *πρός τι* in the first way. Knowledge is *πρός τι* in the second way. I take it that supporters of Equivalence and Correspondence would maintain that their view is compatible with this passage too. Firstly, Aristotle uses *πρός τι* in this passage, a phrase he consistently uses when discussing relatives elsewhere.[256] He also uses knowledge as an example of a relative in other places, notably in *Categories* 7. This suggests that 1056b33-1057a1 does not mark a huge shift in Iota from his concept of relatives in other texts.

Secondly, although this is rather more speculative, proponents of Equivalence and Correspondence might argue that the reference itself supports this interpretation. Aristotle tells us that elsewhere (*ἄλλοις*), we distinguished between two ways that things are said to be with respect to something. It is difficult to know where exactly Aristotle is pointing us to with this reference. Some might suggest that Aristotle is referring to Delta because they maintain that we should read Iota and Delta together. However, this is implausible, since Aristotle claims in Iota that they distinguished between two ways of being elsewhere, which we do not find in Delta. There is better reason to look to the *Categories*, 7, since we do find this distinction there and it is the clearest definition of relatives in the Aristotelian corpus. This is the place in which proponents of Equivalence and Correspondence find significant support. It seems plausible enough to think that they will claim that Aristotle is committed

[256] For example, *Categories* 6, 3b36 and 6a36-8a12, *Sophistical Refutations*, 181b25-34, *Topics*, 142a28-31.

to Equivalence or Correspondence in *Metaphysics*, Iota too then.

Thirdly, the examples that Aristotle uses in this passage, measure and knowledge, are incomplete predicates; if someone says, "A metre is a measure", we are left asking "Of what?". Likewise, if I say, "Geometry is knowledge", we are left asking, Of what?" In both cases, we require a complement (implicit or explicit) for semantic completeness.

Do identity and non-identity fit with Equivalence and Correspondence? As I argued in my discussion of Plato above, non-identical is obviously an incomplete predicate that requires completion for semantics; if someone says, "I am non-identical", we are left asking "To whom?". It is the complement that gives us semantics and allows for non-identity claims that have different meanings, for example, Barry is non-identical to Harry, Barry is non-identical to the person in the pink tie. In addition, non-identity meets the criteria for a relative in *Metaphysics*, Iota: it is itself with respect to something non-identical.

Some might maintain that there is a problem with this. The definition of relatives here is that which is with respect to something non-identical. However, this is incompatible with taking non-identity to be a relative. On the one hand, if non-identity is a relative, it must be itself with respect to that which is non-identical. On the other hand, that which is non-identical *is* that which is non-identical. Consequently, the correlative of non-identity is non-identity and it turns out that non-identity is with respect to itself. Non-identity cannot be a relative for Aristotle then.

This need not trouble proponents of Equivalence and Correspondence. Suppose we grant Equivalence, according to which incomplete predicates are relatives. As we have seen, non-identity is an incomplete predicate which is truly predicated of any x with respect to any y, where x and y are non-identical. This does not entail that the incomplete predicate itself,

non-identical, is truly predicated of the incomplete predicate, non-identical, with respect to the incomplete predicate, non-identical; rather they are identical. Suppose we grant Correspondence. On this view, wherever non-identical is truly predicated of some x with respect to some y, where x and y are non-identical, there is some corresponding relation, non-identity, that holds between x and y. Nothing in this entails that non-identical is truly predicated of the predicate, non-identity, with respect to itself. Consequently, there need be no relation, non-identity, that holds between non-identity and itself.

However, reflection on identity shows us that Equivalence and Correspondence are false. Identity does not meet the criteria for a relative in *Metaphysics*, Iota. Identity is not the contrary of the identical, unlike measure and the measured. Moreover, identity is never truly predicated of some x with respect to some y, where x and y are non-identical. Identity then cannot count as a relative, which Aristotle explicitly says must be *πρός τι ἄλλο*. Yet, as we have seen, identity is an incomplete predicate. Thus, relatives and incomplete predication come apart after all and Equivalence and Correspondence are unpersuasive.

However, there are a number of ways that proponents of Equivalence and Correspondence might attempt to defend themselves. I turn now to show that none of these are persuasive. Consider the following passage from *Metaphysics* Iota 3:

> τὸ μὲν οὖν ἕτερον ἢ ταὐτὸ διὰτοῦτο **πᾶν πρὸς πᾶν** λέγεται, ὅσα λέγεται ἓν καὶ ὄν:
>
> *Every thing* ***with respect to every thing*** *is said to be non-identical or identical, for as many things as are said to be and be one.*
>
> 1054a18-19

As it stands, 'Every thing with respect to every thing is said to be non-identical or identical'

allows for the possibility of some things that are identical to something else. In light of this, Correspondence supporters might refine their position, arguing that it is not that wherever an incomplete predicate is truly predicated of some x with respect to some y, there is some relation that x stands to with respect to y, whereas if some complete predicate is predicated of some thing, no relativity is involved. Instead, Aristotle's definition is a general one: if there is some incomplete predicate that is predicated of at least *some* x with respect to *some* y, where x is non-identical to y, some correlative relation exists. In contrast, if some predicate (complete or incomplete) never holds of something with respect to something non-identical, there is no corresponding relation. Thus, we might think identity works like same colour. There is some relation, same colour, because there is at least one case where an incomplete predicate is predicated of one thing with respect to some non-identical thing. However, the relation same colour can also hold between one thing and itself. In contrast, blue can never hold of one thing with respect to itself or anything else. Thus, a Correspondence proponent might claim, identity is a relative and a relation after all, even if it does not always hold between one thing and something else.

This is not persuasive. Firstly, it attributes something to Aristotle that seems patently false: there are some things that are identical to something else. Secondly, as I argued in Chapter Four, the ways of being identical do not allow for anything to be identical to something else. Aristotle's definitions of identity and non-identity are incompatible with this defence then. Instead, I maintain, although 1054b18-19 on its own allows for things to be identical to something non-identical, Aristotle only includes this because as I argued in the previous chapter, he is referring to 146b2-5 of the *Parmenides*, where we find a similar locution. Aristotle does not allow for anything to be identical to something else.

I turn now to tackle another defence. Notice that apart from 1054b18-19, which can be explained by Aristotle's reference to 146b1-5 of the *Parmenides*, Aristotle is quite consistent

in using *ταὐτό* without a complement. Proponents of Equivalence or Correspondence might attempt to exploit this to defend themselves as follows. Identity is neither an incomplete predicate, as indicated by Aristotle's limited use of complements, nor a relative. This is unpersuasive. There is nothing in Aristotle's definitions of identity that prohibits us from making identity claims between one and the same thing under different descriptions. If this is permissible, 'identical' is an incomplete predicate after all. I can be described in different, non-synonymous ways: Saloni, the only daughter of Jim, the eldest grandchild of Maria. Consequently, if somebody says, "Saloni is identical", we can still ask, "To whom?". As such, we need a complement for semantics after all. Moreover, we saw in my discussion of Plato, taking identity to be a complete predicate led to all sorts of problems. As such, I take it that any charitable reader ought to assume that Aristotle allows for these sorts of identity claims.

I consider one final defence that Equivalence and Correspondence supporters might appeal to. Aristotle does not say that things are themselves with respect to something *ἕτερον*: but to something *ἄλλο*. Proponents of Equivalence and Correspondence might argue that *ἄλλο* here does not mean 'non-identical' but 'distinguishable'. Suppose on my daily stroll along the beach, I often see a whale swimming in the shallows, Harry, and what I take to be a different whale swimming far out to sea in the distance, Barry. I can distinguish Harry from Barry because they do not have the same sense. When I say, "Barry is identical to Harry", "identical" is a completed predicate, which is truly predicated of one thing with respect to some distinguishable thing. Thus, identity is both an incomplete predicate and a relative. If this defence is successful, Equivalence and Correspondence need not be abandoned.

This is also unconvincing. As I have argued elsewhere, Aristotle uses *ἕτερον* and *ἄλλο* interchangeably. Given the likely reference to the *Categories*, where Aristotle uses *ἕτερον*, that Aristotle means for us to understand 'distinguishable' by *ἄλλο* here is implausible. In light of this, we ought to abandon Equivalence and Correspondence, since identity is an

incomplete predicate but not a relative.

Prepared for Puzzles

I turn now to show that we can find Aristotle responding to the puzzles I suggested we find in Part II of the *Parmenides* above. Recall that in my discussion of Part II of the *Parmenides* earlier, I argued that Plato was pointing to a particular problem with reconciling identity and non-identity with other pairs of opposites: they do not quite fit either with other opposed relatives or other opposed non-relatives. Yet, giving an account of how they could be opposed if identity is non-relative but non-identity is relative is not straightforward; after all, it is difficult to think of similar cases of opposites.

This is a problem that Aristotle solves. Recall that I suggested in Chapter Four that we could understand why Aristotle says that non-identity is not the contradictory of identity by reflecting on the ways of being identical and non-identical. I argued that in 105b14-25, Aristotle points to a need to refine Exhaustivity and Exclusivity as follows:

Exhaustivity: for any x and any y, x is either identical to y in exactly one way or non-identical to y in exactly one way.

Exclusivity: for any x and any y

1. If x is identical to y in way z, x is not non-identical to y in any way and not identical to y in any other way.

   (exclusive) or

2. If x is non-identical to y in way z, x is not non-identical to y in any other way and not identical to y in any way.

   (exclusive) or

3. If x is not identical to y in way z, x is either a) identical to y in exactly one other way and not non-identical to y in any way or b) non-identical to y in exactly one way and not identical to y in any way.

   (exclusive) or

4. If x is not non-identical to y in way z, it is either a) non-identical to y in exactly one other way and not identical to y in any way or b) identical to y in exactly one way and not non-identical to y in any way.

Given this, I claimed, identity and non-identity are not per se contradictories. Rather, only specific ways of being identical and non-identical are. This gives us a way to defend Aristotle from the objection that he cannot think of identity as a non-relative and non-identity as a relative and simultaneously maintain that they are opposed. Identity and non-identity are not opposed either as pairs of non-relative or as pairs of relatives are because identity is not a relative but non-identity is. Nevertheless, they are opposed in a different way: they are contradictories in a special way.

There is an objection that some might have to this solution. Things are identical in exactly one of the following ways: as one in number, as one in number and account and as geometrical objects. They are non-identical if they are not one in exactly one of the following ways: in number, in number and account, as geometrical objects. It seems then that identity is parasitic on one and non-identity is parasitic on not-one. Yet, as we have seen, one and many are opposed as relatives. Thus, identity and non-identity ought to correlate as opposed relatives.

This is unconvincing. One and many are opposed as measure to the measured. As Aristotle has made abundantly clear in Iota 1 and 2, manies are groups of units (ones). However, a whale and two aardvarks are not opposed as a measure and that which is measured, since we

cannot count aardvarks by using a whale as a unit. Nevertheless, a whale and two aardvarks are not one, since they are not one in any of the four ways outlined by Aristotle. Consequently, they are not identical but non-identical. This is likely why Aristotle makes it clear that one and many are opposed as *πρός τι*, which are not *καθ'αὑτὰ πρός τι*; it is only where we consider one and many as a unit and a group of units that they are opposed in this way. Thus, we have no good reason to suppose that identity and non-identity ought to correlate with one and many as measure and measured and relatives.

I claimed earlier that Plato's shifts between incomplete and complete uses of *ταὐτό* and *ἓν* yield two further interesting puzzles. Firstly, if one is complete and a non-relative and identity is incomplete and relative, it seems that one and identity cannot be co-extensive. Yet, it seems that one and identity *must* be co-extensive, since anything that is one is self-identical and vice versa. Secondly, if both one and identity are incomplete and relative, one seems to hold between things of different ontological statuses, whereas identity does not. Again, the plausible idea that one and identity are co-extensive is challenged.

For Aristotle, as I argued in Chapter Two, identity is parasitic on one; things are identical if they are one in number, one in number or if the account of their primary substance is one. In addition, anything that is one must also be identical to itself; after all, the ways of being identical cover things that are undivided like accidental unities, those that are indivisible like individuals and universals and abstract geometrical objects of a particular size i.e. everything that is countable. Thus, one and identity are co-extensive for Aristotle. However, neither one nor identical are relative, since nothing can be one with or identical to something that it is non-identical to. Since one and identity are both non-relative for Aristotle, he can deal respond to the puzzles that stemmed from Plato's treatment of *ταὐτό* and *ἓν* in Part II of the *Parmenides*.

Some Objections

So far, I have argued that reflection on identity and non-identity show us that Equivalence and Correspondence ought to be abandoned. In doing so, we were able to see that Aristotle responds to the puzzles that I argued were at issue in Part II of the *Parmenides*.

However, there is a troubling linguistic objection to Aristotle. Even if we reject Equivalence and Correspondence, incomplete predication is not unimportant for identity and non-identity claims. Consider the following sentences:

1. I am identical.

2. I am non-identical.

As I have argued, both of these sentences are semantically incomplete, although for Aristotle, this does not entail relativity. Nor do they have truth value. As they stand, we might think that all they require for semantic completion and truth value is a single complement for example, the person with the pink tie or Barry'.

However, matters are more complicated for Aristotle. He gives us different ways of being identical and non-identical. As such, we need more than a single complement for semantic completion and truth value in identity and non-identity claims. For Aristotle, "I am identical to the person in the pink tie" is not complete because we are left asking, "In which way?". Likewise, "I am non-identical to Barry" is not semantically complete because we are left asking, "In which way?". Thus, on Aristotle's account of identity and non-identity, we require a specification of the way particular way of being identical or non-identical that is at issue for semantically complete identity and non-identity sentences. This is also essential for truth

value. However, Aristotle does not explicitly include these qualifications when he tells us that everything with respect to everything is either identical or non-identical, despite qualifying it in other ways.[257]

In light of this, we might think that he has failed to notice that for him, semantics in identity and non-identity claims demands not only a complement but also a specification of the way of being identical and non-identical. I am inclined towards taking Aristotle to have assumed that we should infer that qualifying the way of being identical and non-identical is essential for the semantics of claims about identity and non-identity from his definitions of identity d non-identity. Nevertheless, this is an important feature of identity and non-identity and one that Aristotle would have done better to have included explicitly, not least because it affects the truth value of identity and non-identity sentences.

Fruitful?

I turn now to address an objection that is directed towards me. Duncombe, in a discussion of *Categories 7*, notes that equal is an incomplete predicate.[258] However, 'Five is equal to five' is perfectly true and does not concern two different things. Yet, in the *Categories* (and *Metaphysics*, Iota), Aristotle explicitly says that relatives hold of something with respect to something non-identical. Thus, incomplete predicates are not always relatives because there are some cases where incomplete predicates hold of one thing with respect to itself, not something non-identical. We can add that incomplete predicates cannot correspond to identity and non-identity for the very same reason. Thus, some might complain, there is

[257] 1054b19

[258] Duncombe, (2015), ch 1, p. 8

nothing all that novel in my claim that incomplete predicates and relatives and complete predicates and non-relatives do not correlate in the way that they have often been taken to.

I have four responses to this. Firstly, examining identity in the context yields a particularly strong case against Equivalence and Correspondence. Consider the predicate, equal. As Duncombe rightly points out, in 'Iqbal is equal to Iqbal', 'equal' is a predicate that requires completion but cannot count as a relative for Aristotle in this instance because 'Iqbal' and 'Iqbal' are identical. However, there are many cases where 'equal' is both incomplete and a relative, for example, 'I am equal to Barry'. This seems to be the case with many other predicates of the kind Duncombe draws attention to, for example, same colour, same weight, same size etc. In light of this, we might think that these are problem cases for Aristotle, rather than definitive evidence that incomplete predicates neither are nor correspond to relatives for him. In contrast, Aristotle is very clear in Iota that identity and non-identity are mutually exclusive. Thus, there is no overlap whatsoever between identity and relativity, since nothing can ever be identical to something else. We cannot simply write this off as a problem case.

Secondly, Correspondence can be amended so as to avoid Duncombe's objection. As I suggested above, a supporter of Correspondence might argue that equality is a relative because equal is sometimes truly predicated of one thing with respect to something non-identical. Thus, equality is always a relative and corresponds to incomplete predication at a general level. Consideration of identity has allowed us to block this move, since identical is an incomplete predicate that never holds of one thing with respect to something non-identical.

Thirdly, I have discussed a problem for proponents of Equivalence and Correspondence that Duncombe does not raise: whether seeing non-identity as a relative is incompatible with the definition of relatives, despite the fact that it is an incomplete predicate. This is not one that he addresses.

Finally, my discussion has yielded interesting lessons. We have found that Aristotle is responding to the puzzles that Plato prompts us to reflect on in Part II of the *Parmenides*. In addition, we have seen that for Aristotle, identity and non-identity claims require not only a complement for semantic completeness and truth functionality but also a specification of the way of being identical or non-identical.

*

In this chapter, I have examined the syntax and semantics of claims about identity and non-identity in the context of relatives. I began by outlining an Owenian view of relatives in Plato, according to which incomplete predicates are relatives and relatives are incomplete predicates. I proceeded to examine two arguments in the first deduction of Part II of the *Parmenides*, where shifts between complete and incomplete uses of *ταὐτό* and *ἕτερον* prompted a worry: Plato is presenting his reader with an idea that seems obviously false, suggesting that identity and non-identity are both relatives and non-relatives.

I argued that this worry is misguided; in fact, Plato is confronting us with a problem: identity and non-identity do not fit neatly with other opposed relative terms or opposed non-relatives. In addition, we tend to think of one as non-relative and a complete predicate that does not require a complement in sentences for semantics. However, Plato's suggestion that one and identity might be co-extensive prompts us to reflect on whether we ought to abandon this

idea and consequently, whether we ought also to abandon the idea that relative terms are incomplete predicates.

I then turned to examine *Metaphysics* Iota, where I claimed that identity cannot count as a relative, despite being an incomplete predicate. This gives us good reason to reject two versions of a widespread view: for Aristotle, relatives are incomplete predicates or that they are relations that correspond to incomplete predicates. I also showed that Aristotle responds to the problems regarding identity and non-identity in the first and second deductions of the *Parmenides* by holding that identity is non-relative and non-identity is relative whilst accounting for the opposition between identity and non-identity. In addition, I drew attention to an interesting consequence of Aristotle's treatment of identity and non-identity in the context of relativity: although we tend to think of one and not-one as complete and non-relative, in fact, for Aristotle, they are both incomplete and not-one is a relative. Nevertheless, I argued, in light of Aristotle's definitions of identity and non-identity and the difficulty in interpreting 1054b15-21, which I discussed in the previous chapter, Aristotle ought to have explicitly told us that identity and non-identity claims demand not only a complement for semantic completeness but also a specification of the way of being identical or non-identical that is at issue.

Conclusion

At the beginning of this thesis, I outlined three overarching aims. One was to challenge the longstanding characterisation of Aristotle as at war with Plato by showing that in *Metaphysics*, Iota, Aristotle makes for a far more sophisticated and nuanced reader of Plato than this suggests. Another was to unearth important lessons for contemporary metaphysicians by discussing Plato and Aristotle's treatment of identity and non-identity in Part II of the *Parmenides* and *Metaphysics*, Iota. The last was to generate ideas and arguments that would have significance for the study of Part II of the *Parmenides* and *Metaphysics*, Iota and Plato and Aristotle more generally. Here, I show that I meet all three of these aims, taking each chapter in turn.

Chapter One: Limbering Up

Although my first chapter was largely introductory, we might think that the points I made there can go some way to furthering my first aim. I pointed out that in Part II of the *Parmenides* Plato presents us with a series of puzzles aimed at challenging the reader rather than providing us with arguments for definitive views. Thus, where Aristotle engages with Part II of the *Parmenides*, we would expect it to be by responding to puzzles that he takes seriously, rather than by rejecting Platonic ideas. In addition, one of the reasons I gave for opting to examine *Metaphysics*, Iota 3 in conjunction with the first and second deductions of Part II was that we find three explicit references to 146b2-5 there. It is notable that Aristotle does not make this reference in the context of an explicit rejection of anything we find in Part

II of the *Parmenides*, which supports my suggestion that Aristotle is not always at war with Plato.

However, on its own, this is not enough to persuade somebody who is committed to the view that Aristotle's relationship with Plato is combative. After all, she might argue that we should expect Aristotle to engage with Plato's puzzles only in order to show that they are easily solved or not to be taken seriously. Likewise, she might maintain that Aristotle need not discuss Plato explicitly to reject a Platonic idea - he might do so implicitly. Thus, making a strong case for rejecting the characterisation of Aristotle as a philosopher at war with Plato depends on what I claimed in later chapters.

There is good evidence for my third aim being met in this chapter. As noted above, I drew attention to three explicit references to 146b2-5 of the *Parmenides* in *Metaphysics*, Iota 3. Yet, I can find no recognition of this in existing scholarship, even in Castelli's lengthy and detailed commentary.[259] I take it that most scholars of Aristotle, whether concerned with *Metaphysics*, Iota or related passages and ideas in Aristotle more generally would take this to be an important feature of the text that is worth reflecting on.

In addition, I pointed out that there has been a great deal of controversy around issues of interpretation regarding the Part II of the *Parmenides*. Particularly fierce debate has concerned how we should view the subjects, nature and purpose of Part II of the *Parmenides*. I outlined a new interpretation, arguing that it can better explain certain features of the text than other readings. On this interpretation, Plato meant for us to read Part II over and over again, substituting referents each time as a means of uncovering first principles. This is

[259] Castelli (2018)

significant for Platonic scholarship in a number of respects. Firstly, it obviously has a role to play in the debate about what sort of demonstration Parmenides offers us in Part II of the *Parmenides*.

Secondly, it casts light on the role of the reader in Platonic dialogues. It is not uncommon for scholars to hold (explicitly or implicitly) that Plato does not mean for the reader to amount to a silent, passive spectator. Rather, she should be engaged and reflective in such a way that she too is doing philosophy. However, my interpretation of Part II of the *Parmenides* suggests that the reader ought to be far more actively involved than is commonly supposed;[260] we are supposed to repeat the exercise and uncover first principles ourselves. In light of this, we might think that the *Parmenides* is important because the role of the reader is unusually involved. Alternatively, we might argue that it gives us extra reason to think of Plato as a writer of dialogues who demands a great deal from his reader more generally.[261] It also lends support to the idea that dialogues are texts that ought to be read more than once.

Thirdly, my interpretation has a role to play in discussions of characterisation in Plato. Plato presents us with a wide variety of characters in his dialogues: interlocutors and spectators, young and old, unflappable and frequently embarrassed, disinterested and engaged. In many cases, these characters are developed as the dialogue progresses; previously silent spectators

[260] Gill (2012) also sees the role of the reader in Part II as particularly demanding. However, my interpretation of the nature and purpose of the demonstration in Part II is more radical than hers since she characterises it as a set of exercises that will help the reader to gain the skills to solve philosophical problems rather than to uncover first principles. As such, on my interpretation, Plato demands even more of his reader.

[261] Gill makes (2012) makes a similar move, arguing that studying Part II prepares us for solving puzzles in the *Theaetetus*, *Sophist* and *Statesman*, where we should also be very actively involved. Hence, she argues, Plato never wrote the dialogue on the philosopher; he means for his readers to make themselves into philosophers by doing this work.

burst into applause in the *Euthydemus*,[262] the initially engaged Callicles bows out of his conversation with Socrates despite his initial impassioned outburst.[263] We might think that all this is mere literary embellishment. Alternatively, we might think that characterisation serves an important philosophical purpose.

Blondell has made a very persuasive case for choosing the latter based largely on close readings of the *Hippias Minor*, *Republic*, *Theaetetus*, *Sophist* and *Statesman*.[264] However, as I pointed out in my first chapter, Parmenides and Aristotle make for two-dimensional characters in Part II of the *Parmenides*. In light of this, we might argue that there at least, characterisation is so minimal that it cannot have any philosophical significance whatsoever. However, on my interpretation, it does, albeit a rather unusual one. The demonstration is different to the sort of philosophical conversation that readers of Plato will be familiar with because it is designed to help the reader to uncover first principles. This explains why characterisation is so minimal; the character who ought to be most philosophically active is a silent one: the reader. Thus, my reading of Part II of the *Parmenides* strengthens the case for seeing characterisation as philosophically relevant.

Finally, my reading can contribute to disagreements about whether or not we are able to extract and examine arguments from Platonic dialogues without any philosophical loss. This view is not unattractive; indeed, we might think that the so-called 'analytic' approach to Plato is impossible without it. This may be the motivation behind Barnes' view that this is always possible.[265]

---

[262] 276b7-c1

[263] 522e7-8

[264] Blondell (2002)

[265] Barnes (2003), pp. 27-28. For a similar view, see Livingstone (1938), p. 73.

If there is any text that supports Barnes' view, it is Part II of the *Parmenides*; after all, as I pointed out in my first chapter, Aristotle is a character who is unique in the Platonic corpus in that he seems to many to add nothing at all of any philosophical use. Yet, on my interpretation, Aristotle's replies *do* serve a philosophical purpose, albeit an unusual one. In addition to contributing to his characterisation, which I showed was important above, I argued in my first chapter that with each re-reading, Aristotle's replies will have different implications. This will play a role in our evaluation of the arguments, ultimately helping us to discover first principles. Thus, my interpretation of Part II gives us particularly good reason to reject Barnes' view; even in Part II of the *Parmenides*, conversational context is philosophically significant. We might, of course, think that this merely strengthens a more plausible position: that we cannot *always* extract arguments from Platonic dialogues without philosophical loss, only sometimes.[266] Alternatively, we might think that it indicates we should go further and hold that this is *never* possible.

Whilst my first chapter did provide us with some reasons to think that Aristotle's engagement with Part II of the *Parmenides* in *Metaphysics*, Iota is not combative then, it will not be enough to convince an opponent. Nor is anything in this chapter directly relevant for my second aim. As such, fully achieving my overall goals hangs on the rest of the thesis.

Chapter Two: Plato's Law and Aristotle's Ways

In my second chapter, I dealt with definitions of numerical identity and non-identity, similarity and dissimilarity in Part II of the *Parmenides*. I argued that in the first and second deductions of the *Parmenides*, we can uncover definitions of similarity, dissimilarity, identity

[266] Castagnoli ((2010, pp. 31-67)) gives a good argument for this view, although he does not rely on Part II of the *Parmenides*.

and non-identity. I suggested that Plato's definitions of identity and non-identity entail what I termed 'strict Leibniz's Law', familiar to us from discussions in contemporary metaphysics. However, unlike contemporary metaphysicians, Plato connects identity and non-identity very closely with similarity and dissimilarity and gives us definitions of all four. I argued that this points to a possible strategy that contemporary metaphysicians might use to defend strict Leibniz's Law from the objection that it forces us to treat what seem to be some obvious cases of identity as instances of non-identity.

I then turned to *Metaphysics*, Iota 3, where Aristotle gives us definitions of identity, non-identity, similarity and dissimilarity. I argued that Aristotle, who gives us three ways of being identical and three ways of being non-identical, does not offer us a strict Leibnitian account of identity. However, like Plato, Aristotle tightly connects identity and non-identity with similarity and dissimilarity and gives us clear definitions of all four. I argued that this points to a strategy that contemporary opponents of strict Leibniz's Law's might adopt to strengthen their position.

I met all three of my overall objectives with my second chapter. Although Plato and Aristotle offer very different definitions of identity and non-identity, it is evident that Aristotle also has concepts of numerical identity and non-identity and inherits the idea that identity and non-identity are very closely connected to similarity and dissimilarity from Plato. Hence, I achieve my first goal. In addition, I have demonstrated that by noticing that we find closely connected definitions of identity and non-identity in Part II of the *Parmenides* and *Metaphysics*, Iota, we can see an area that has not yet been thoroughly explored in contemporary metaphysics: what significance definitions of similarity and dissimilarity might have for arguments about strict Leibniz's Law. Hence, I meet my second aim.

There are numerous ways in which I am able to achieve my third goal with this chapter. As I pointed out, scholars have either posited definitions of identity and non-identity in the first and second deductions with very brief reference to the text, or simply assumed them. In contrast, I have shown that my definitions are well-supported by the text. Furthermore, some scholars have relied on Leibniz's Law to analyse arguments in other Platonic dialogues.[267] My case for extracting definitions entail strict Leibniz's Law can provide justification for this approach, since it suggests that Plato was well-aware of what term Leibniz's Law.

My discussion also has a role to play in our understanding of Plato more generally. Plato has sometimes been supposed to have very woolly concepts of identity, non-identity, similarity and dissimilarity - if indeed he has them at all. This seems to be because he is seen as having failed to properly distinguish between identity, sameness, similarity, non-identity, difference and dissimilarity or as having not given us any clear criteria for them.[268] However, my analysis of the first and second deductions shows that there at least, there is good reason to think that Plato recognises the difference between them and offers us definitions of identity, non-identity, similarity and dissimilarity.

In addition, *ταὐτό* and *ἕτερον* are most often discussed in the secondary literature in the context of the Greatest Kinds in the *Sophist* and the construction of the world soul in *Timaeus*. However, in both dialogues, Plato distances *ταὐτό* and *ἕτερον* from similarity and dissimilarity; *ταὐτό* and *ἕτερον* are Greatest Kinds but *ὅμοιον* and *ἀνόμοιον* are not, *ταὐτό* and *ἕτερον* are mixed but *ὅμοιον* and *ἀνόμοιον* are not. My discussion of the first and second deductions revealed that, in the *Parmenides* they are very closely connected. I take it that this

[267] For example, Friedman (1982).

[268] Notably, by Lloyd (2004)

will be important for scholars who primarily rely on the *Sophist* and *Timaeus* in order to uncover Plato's ideas about *ταὐτό* and *ἕτερον* in late Plato.

As I pointed out in this chapter, the role of similarity (and dissimilarity, albeit to a lesser extent) in Platonic metaphysics has been widely recognised and discussed, notably in the context of the relationship between Forms and their instantiations in the *Phaedo*, nouns and what they pick out in the *Cratylus* and the role of poetry in the *Republic*. However, we rarely find precise definitions of similarity and dissimilarity of the sort that I have extracted from the first and second deductions of Part II attributed to Plato in these discussions, although they are obviously relevant. The definitions I have uncovered in Part II can surely play an important role in these discussions.

This chapter also furthers my third aim regarding Aristotle. I claimed, contra others, that in *Metaphysics*, Iota 3, the ways of being *ταὐτό* are ways of being identical. Rightly or wrongly, *ταὐτό* has often been taken to be wider than identity in other Aristotelian texts too.[269] I take it then that my interpretation of *ταὐτό* will have consequences for discussions about the way that we ought to view the relationship between *ταὐτό* and identity both in Iota and other Aristotelian texts.

I also argued that in *Metaphysics*, Iota, we find particular kinds of identity and non-identity: identity and non-identity in abstract, geometrical objects of a particular size and shape. Aristotle is not generally taken to have espoused these kinds of identity and non-identity either in the study of *Metaphysics*, Iota or in Aristotle more generally. Of course, many

[269] For example, Crivelli (2002), Mignucci (1985)

scholars may find this analysis of ways of being identical and non-identical objectionable in either context. Nevertheless, I take it that it is at least worth some consideration.

Castelli is the only commentator who discusses similarity and dissimilarity in *Metaphysics*, Iota in detail. However, since the definitions of similarity and dissimilarity that I find in Iota differ from hers, I take it that scrutiny of both views would be useful in further study of similarity and dissimilarity in Iota. In addition, the metaphysics of similarity and dissimilarity and its repercussions for other areas of Aristotelian thought have been neglected. For example, despite Aristotle's connection between one and many with similarity and dissimilarity in Delta, it has not received much attention.[270] Likewise, similarity is crucial for understanding friendship in the *Nicomachean* and *Eudemian Ethics*. Yet, this is rarely connected with Aristotle's metaphysical notions of similarity and dissimilarity. My exploration of similarity and dissimilarity in *Metaphysics*, Iota provides the kind of metaphysical discussion that might be used to connect Aristotle's metaphysics with his ethics. Thus, my second chapter furthers all three of my aims.

Chapter Three: Plato, Aristotle and Leibniz's Law

In this chapter, I addressed similarity and dissimilarity in the context of an investigation into whether Plato and Aristotle's definitions of similarity, dissimilarity, identity and non-identity could be successfully used in defending or attacking against strict Leibniz's Law. I began with Plato, laying out three requirements for a good defence of strict Leibniz's Law based on the definitions of similarity and dissimilarity that I extracted from the first and second deductions. I argued that we cannot meet all three of these requirements. Nevertheless,

[270] Halper (2010)

reflection on this issue yields important lessons for contemporary proponents of strict Leibniz's Law. I then turned to Aristotle, seeking to discover whether contemporary metaphysicians could rely on the definitions of similarity and dissimilarity in *Metaphysics*, Iota for a good argument against strict Leibniz's Law. I argued that although they cannot, reflection on this issue yields important lessons for them.

This chapter provides the strongest evidence for my claim that I achieve my second goal. Although I claimed that the definitions of similarity and dissimilarity that we find in the first and second deductions of the *Parmenides* and *Metaphysics*, Iota as they stand cannot be persuasively used to support arguments either for or against strict Leibniz's Law, I argued that they can play in important role in contemporary discussions of strict Leibniz Law in two respects. Firstly, careful examination of the definitions of similarity and dissimilarity in Part II of the *Parmenides* and *Metaphysics*, Iota has at least shown that the will not suffice for a contemporary strict Leibnitian or opponent of strict Leibniz's Law hoping to use them to better support their views of identity. Showing the reasons that a promising solution to a philosophical problem is not satisfactory is not useless. Secondly, it provides contemporary metaphysicians with good starting points. For example, my discussion of Plato taught us that contemporary strict Leibnitians ought to connect their use of similarity and dissimilarity to the issue of how representations successfully or unsuccessfully fail to represent in aesthetics. Equally, that Aristotle gives us multiple ways of being similar and dissimilar and can maintain the important distinction between identity and similarity are features that an opponent of strict Leibniz's Law might adopt in creating a better account.

This chapter also furthers my third aim. I argued that the definitions of similarity and dissimilarity as they feature in Part II of the *Parmenides* cannot be reconciled with similarity and dissimilarity in the case of representation. As I pointed out, this has significance for a

passage in the *Cratylus*, where similarity and dissimilarity in the context of representation are clearly at issue. There, Socrates relies on an analogy between similarity and dissimilarity between portraits and what they do or do not represent in order to explain the way that nouns successfully and unsuccessfully pick things out. If this analogy is to be persuasive then, we need definitions of similarity and dissimilarity different to those that we find in Part II of the *Parmenides*.

My discussion of Aristotle in this chapter also furthers our understanding of his metaphysics. As I pointed out, Aristotle's definitions of similarity and dissimilarity are not given a great deal of attention in existing scholarship either on *Metaphysics*, Iota or elsewhere. As such, my investigation into whether they fit with the way that we tend to think about similarity and dissimilarity, if they are genuinely explanatory and whether they are distinct from identity and non-identity fills a gap in the analysis of Aristotelian metaphysics.

Chapter Four: Unbreakable Laws Broken?

In this chapter, I suggested that there are two laws of identity and non-identity - Exhaustivity and Exclusivity - that we might think both Plato and Aristotle break by suggesting that there are some things that are neither identical nor non-identical to one another. I argued that in fact, Parmenides does not claim that there *are* some things that are neither identical nor non-identical to one another but that there *might* be. This is because reflection on the first part of the dialogue shows us there are some things that are genuinely difficult to see as either identical or non-identical to one another: a Form with respect to its instantiation and vice versa and a property of something with respect to the property itself. In contrast, Aristotle turns out not to deny that everything is either identical or non-identical to everything but to indicate that these two uncontroversial laws of identity and non-identity require refinement.

Thus, Exhaustivity and Exclusivity are not rejected in either text; rather, Plato prompts us to reflect on cases that are difficult to reconcile with them and Aristotle refines them.

It is in this chapter that we find definitive evidence for my claim that I meet the first requirement. As I pointed out, Aristotle references Part II not just once but three times. In addition, although he does not imply that there might be some things that are neither identical nor non-identical to one another, like Parmenides in Part II, he also challenges Exhaustivity and Exclusivity in holding that they require refinement.

I also meet the third requirement with this chapter. Despite the vast scholarship on puzzles and problems concerning relationship between Forms and their instantiations in the first part of the dialogue, Harte is the only scholar who connects these with 146b2-5.[271] Since both my analysis of 146b2-5 and my interpretation of its significance differ from hers, what I claim in this chapter gives us a different reason to connect puzzles about the relationship between Forms and their instantiations in Part I of the *Parmenides* with 146b2-5 and can stimulate further discussion both about 146b2-5 itself and its significance in light of the first part of the dialogue. In addition, in failing to recognise Aristotle's reference to Part II of the *Parmenides* in *Metaphysics*, Iota 3, Aristotle's refinement of what seem to be unobjectionable laws has gone unnoticed. I take it that this is important for the study of *Metaphysics*, Iota and Aristotle's views about identity and non-identity more generally.

[271] Harte (2002)

Chapter Five: Relatives

My focus in this chapter was identity and non-identity and relativity in Part II of the *Parmenides* and *Metaphysics*, Iota. I began by outlining an Owenian view of relatives for Plato, according to which relatives are incomplete predicates and incomplete predicates are relatives, arguing that this fits with the way that relatives are usually treated in Part II of the *Parmenides*. I pointed to shifts in language in arguments in the first and second deductions and a worry that we might have about this: Plato presents his reader with the idea that identity and non-identity are both relative and non-relative, which is obviously false. I resolved this by claiming that Plato's use of language prompts us to think about difficulties that arise when we try to justify identity and non-identity as either relative or non-relative in light of their apparent opposition and the relationship between one and identity.

I then turned to Aristotle. I outlined two versions of a widespread view. The first was that for Aristotle, relatives are incomplete predicates and vice versa. The second was that for Aristotle, relatives correspond to incomplete predicates and vice versa. I showed that neither version is compatible with Iota *3*, since it is clear that there, non-identity meets the criteria for a relative but identity does not, despite both 'identical' and 'non-identical' being incomplete predicates. I then argued that Aristotle avoids the obstacles to seeing identity and non-identity as either relative or non-relative that I pointed to in my discussion of Part II, although his view is not without its problems. Finally, I tackled a potential complaint about my discussion (that it does not contribute anything new to our understanding of relativity in Aristotle) and showed that it is misguided.

By showing that Aristotle responds to puzzles about relatives that Plato presents us with in Part II of the *Parmenides*, I met my first aim. I also met my third aim by showing that in the

first and second deductions, Plato's language prompts us to reflect on a particular problem: on the one hand, it seems that identity and non-identity must be relative or non-relative and opposed. On the other hand, it is difficult to decide on whether identity and non-identity should be relative or non-relative, given their opposition. This is not a problem that has been recognised in secondary literature on the *Parmenides*.

My argument also has relevance for the longstanding debate about whether or not relatives are incomplete predicates and vice versa for Plato. There are four ways we might take identity and non-identity in the context of relativity:

1. Identity and non-identity are both relative.
2. Identity and non-identity are both non-relative.
3. Identity is relative but non-identity is non-relative.
4. Non-identity is relative but identity is non-relative.

As I argued in this chapter on relatives, 'identical' and 'non-identical' are incomplete predicates. Thus, if we believe that the best solution to the problem I argued that Plato draws our attention to in the first and second deductions involves maintaining 1, we need not abandon the view that relatives are incomplete predicates. On the other hand, if we opt for a solution that involves holding 2, 3 or 4, we ought to abandon this view.

This chapter also contributes to the study of *Metaphysics*, Iota, since there has been little attention dedicated to examining relativity concerning identity and non-identity there. It also has significance for the study of Aristotle more generally. I argued that examining Aristotle's treatment of identity and non-identity *Metaphysics*, Iota yields a particularly strong case against the both versions of the oft-discussed incompleteness view (that relatives are incomplete predicates and that relatives correspond to incomplete predicates). In addition, I

showed that for Aristotle in *Metaphysics*, Iota, identity and non-identity claims require not only a complement for semantic completeness and truth functionality but also a specification of the way of being identical or non-identical. This points to a worthwhile avenue of investigation: the relationship between semantic completeness and truth functionality in cases like this.

*

In this thesis, I have achieved all three of the goals I set out to meet. I have shown that the characterisation of Aristotle as a philosopher who was determined to reject the ideas his teacher is misguided; in fact, Aristotle's reception of Plato's *Parmenides* in *Metaphysics*, Iota 3 is far more complex than this. By reflecting on the definitions of identity, non-identity, similarity and dissimilarity that I claimed we can find in the first and second deductions of Part II of the *Parmenides* and *Metaphysics*, Iota 3, I unearthed important lessons for contemporary metaphysicians who are concerned with debates about strict Leibniz's Law. Finally, I demonstrated that my findings have an important role to play not only in the study of the *Parmenides* and *Metaphysics*, Iota, but also in the analysis and evaluation of Plato and Aristotle metaphysics more generally.

Bibliography

Abell, Catharine. 'Canny Resemblance' *Philosophical Review* 118: 2 (2005): 183-223

Ackrill, J. L. *Aristotle's Categories and De Interpretatione.* Oxford: Clarendon Press, 1963.

Adamson, Peter. 'Posterior Analytics', 2.19: a Dialogue With Plato?'. In *Aristotle and the Stoics Reading Plato* eds. Harte, McCabe and Sharples. London: Institute of Classical Studies, 2010.

Allan, Donald J. 'Aristotle and the *Parmenides*'. In *Aristotle and Plato in the Mid-Fourth Century: Papers of the Symposium Aristotelicum Held at Oxford in August, 1957.* Elanders Boktryckeri Aktiebolag, 1960.

Allen, R. E. *The Dialogues of Plato, Volume 4: Plato's Parmenides, Revised Edition.* New Haven: Yale University Press, 1997.

Bacon, Andrew, and Russell, Jeffrey. 'The Logic of Opacity'. *Philosophy and Phenomenological Research* 99:1 (2017).

Baltzly, Dirk. 'Plato, Aristotle and the λόγος ἐκ τῶν πρός τι. *Oxford Studies in Ancient Philosophy* 15 (1997): 177-206

Barney, Rachel. *Names and Nature in Plato's Cratylus.* New York/London: Routledge, 2001.

Barnes, Jonathan. 'Argument in Ancient Philosophy'. In *The Cambridge Companion to Greek and Roman Philosophy* ed. Sedley. Cambridge: Cambridge University Press, 2003.

Baxter, Donald L. M. 'Identity in the Loose and Popular Sense'. *Mind* 97 (1988): 575–82.

Beck, Maximilian. 'Plato's Problem in the Parmenides.' *Journal of the History of Ideas* 8:1 (1947): 232.

Black, M. 'The Identity of Indiscernibles'. *Mind* 60 (1952): 153-164.

Bluck, R. S, and Gordon C Neal. *Plato's Sophist.* Manchester: Manchester University Press,

1975.

Brisson, Luc. 'Is the World One? A New Interpretation of Plato's *Parmenides*. *Oxford Studies in Ancient Philosophy* 22 (2002): 1-20.

Brumbaugh, Robert S. *Plato on the One: The Hypotheses in the Parmenides*. New Haven: Yale University Press, 1961.

Caie, Michael, Goodman, Jeremy and Lederman, Harvey. 'Classical Opacity' (Manuscript), 2019.

Cameron, R. 'Parts Generate the Whole but They are Not Identical to It'. In *Composition as Identity* eds. Baxter and Cotnoir. Oxford: Oxford University Press, 2014.

Carpenter, Amber. 'What is Peculiar to Plato's and Aristotle's Psychologies'. In *Aristotle and the Stoics Reading Plato* eds. Harte, McCabe and Sharples. London: Institute of Classical Studies, 2010.

Cartwright, Richard. 'Indiscernibility Principles'. *Midwest Studies In Philosophy* 4(1) (1979): 293–306.

Castagnoli, Luca. *Ancient Self-Refutation: The Logic and History of the Self-Refutation Argument From Democritus to Augustine*. Cambridge: Cambridge University Press, 2010.

Castañeda, Héctor-Neri. 'Leibniz and Plato's 'Phaedo' Theory of Relations and Predication'. In *Leibniz Critical and Interpretative Essays*, ed. Hooker. Manchester: Manchester University Press, 2008.

———. 'Plato's 'Phaedo' Theory of Relations'. *Journal of Philosophical Logic* 1 (1972): 467–80.

———. 'Plato's Relations, Not Essences or Accidents, at 'Phaedo' 102b2-d2'. *Canadian Journal of Philosophy* 8:1 (1978): 39–53.

Castelli, Laura M. Aristotle: Metaphysics Book Iota. Oxford: Clarendon Press, 2018.

Cherniss, Harold. *Aristotle's Criticism of Plato and the Academy*. Baltimore: Johns Hopkins University Press, 1944.

———. 'Parmenides and the 'Parmenides' of Plato'. *American Journal of Philology* 53 (1932): 122-138.

Cornford, F. M. *Plato and Parmenides: Parmenides' Way of Truth and Plato's Parmenides.* London: Kegan Paul, 1939.

———. *Plato's Theory of Knowledge. The 'Theaetetus' and 'Sophist' of Plato.* New York: Macmillan, 1935.

Corrigan, Kevin. 'The Place of the "Parmenides in Plato's Thought and in the Subsequent Tradition'. In *Parmenides and Its Heritage*, Vol. 2. eds. Turner and Corrigan. Atlanta: Society of Biblical Literature, 2010.

Coxon, A. H. *The Philosophy of Forms: An Analytical and Historical Commentary on Plato's Parmenides: With a New English Translation.* Assen: Van Gorcum, 1999.

Crivelli, Paolo. 'Sameness in Aristotle's Topics'. In *Individuals, Essence and Identity: Themes of Analytic Metaphysics*, eds. Bottani, Carrara and Giaretta. Dordrecht: Springer, 2002.

Cross, Robert and Woozley, Anthony. *Plato's Republic: A Philosophical Commentary.* London: Macmillan, 1966.

Denyer, Nicholas. *Language, Thought, and Falsehood in Ancient Greek Philosophy.* London: Routledge, 1991.

Deutsch, Harry. 'Identity and General Similarity'. *Philosophical Perspectives* 12 (1998): 177–99.

Diehl, Catharine. 'The Metaphysics of Leibniz's Law' (Manuscript), 2018.

Douven, Igor, and Decock, Lieven. 'Identity and Similarity'. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 151:1 (2010): 59–78.

Dorter, Kenneth. *Form and Good in Plato's Eleatic Dialogues: The Parmenides, Theaetetus, Sophist, and Statesman.* California: California University Press, 1994.

Dummett, Michael. 'Does Quantification Involve Identity?'. In *Peter Geach: Philosophical Encounters*, ed. Lewis. Dordrecht: Kluwer Academic Publishers, 1991.

Duncombe, Matthew. *Ancient Relativity* (Manuscript). 2015.

———. *The Nature and Purpose of Relative Terms in Plato* (PhD Thesis). Cambridge: The University of Cambridge, 2013.

Edgington, Dorothy. 'Williamson on Vagueness, Identity and Leibniz's Law'. In *Individuals, Essence and Identity: Themes of Analytic Metaphysics*, eds. Bottani, Carrara and Giaretta. Dordrecht: Springer Netherlands, 2002.

Elders, Leo. *Aristotle's Theory of the One: A Commentary on Book X of the 'Metaphysics'*. Assen: Van Gorcum, 1961.

Fine, Gail. 'Plato on Naming'. *Philosophical Quarterly* 27 (1977): 289–301.

———.*On Ideas: Aristotle's Criticisms of Plato's Theory of* Forms. Oxford: Clarendon Press, 1993

———. 'Aristotle and the Aporêma of the *Meno*'. In *Aristotle and the Stoics Reading Plato* eds. Harte, McCabe and Sharples. London: Institute of Classical Studies, 2010.

Forest, Peter. 'The Identity of Indiscernibles'. In *The Stanford Encylopedia of Philosophy*. Metaphysics Research Lab, Stanford University, 2016.

Fowler, Harold N. *Plato in Twelve Volumes: Volume 9*. London: William Heinemann Ltd., 1925.

Frede, Dorothea. 'Comments on Julia Annas'. In *New Perspectives on Plato, Modern and Ancient*, eds. Annas and Rowe. Harvard: Harvard University Press, 2002.

Friedman, Joel I. 'Plato's Euthyphro and Leibniz's Law'. *Philosophia* 12:1-2 (1982): 1–20.

Frye, Prosser H. *Plato*. Lincoln: University Studies of the University of Nebraska, 1938.

Gardner, Darren. 'The Ambiguity of the "One" in Plato's Parmenides'. *Méthexis* 30:1 (2018): 36–59.

Gill, Mary Louise. 'Design of the Exercise in "Parmenides"'. *Canadian Philosophical Review: Dialogue* 53:3 (2014).

———. *Philosophos: Plato's Missing Dialogue*. Oxford: Oxford University Press, 2012.

Gill, Mary Louise, and Ryan, Paul. *Parmenides*. Indianapolis: Hackett Publishing Company,

1996.

Goodman, Nelson. *Languages of Art.* Indianapolis: Bobbs-Merrill, 1968.

———. 'Languages of Art: An Approach to a Theory of Symbols'. *Philosophy of Science* 37:3 (1970): 458–63.

Gosling, J. 'Similarity in 'Phaedo' 73b seq'. *Phronesis* 10:2 (1965): 151-161

Greenlee, Douglas. 'The Similarity of Discernibles'. *The Journal of Philosophy* 65 (1968): 753–63.

Hackforth, R. *Plato's 'Phaedo'*. Cambridge: Cambridge University Press, 1955.

Halper, Edward. *One and Many in Aristotle's 'Metaphysics': Alpha-Delta.* Las Vegas: Parmenides Publishing, 2010.

Harte, Verity. *Plato on Parts and Wholes: The Metaphysics of Structure.* Oxford: Oxford University Press, 2002.

———. 'What's a Particular, and What Makes It So? Some Thoughts, Mainly about Aristotle'. In *Particulars in Greek Philosophy: The Seventh S.V. Keeling Colloquium in Ancient Philosophy* ed. Sharples. London: Brill, 2010.

Hawthorne, John. 'Identity'. In *The Oxford Handbook of Metaphysics*, eds. Loux and Zimmerman. Oxford: Oxford University Press, 2003.

Hermann, Arnold, Hedley, Douglas and Chrysakopoulou, Sylvana. *Plato's Parmenides: Text, Translation & Introductory Essay.* Las Vegas: Parmenides Publishing, 2010.

Hood, Pamela. *Aristotle on the Category of Relation.* Lanham: University Press of America, 2004.

Hopkins, Robert. 'Resemblance and Misrepresentation'. *Mind* 103 (1994): 421-438

———.'Explaining Depiction'. *Philosophical Review* 104:3 (1995): 425-455

———. 'Depiction'. In *Routledge Encyclopedia of Philosophy*, vol. 2 ed. Craig. London: Routledge, 1998.

Kahn, Charles H. 'On Platonic Chronology'. In *New Perspectives on Plato, Modern and Ancient.* Cambridge: Harvard University Press, 2002.

———.*Plato and the Post-Socratic Dialogue: The Return to the Philosophy of Nature*. Cambridge: Cambridge University Press, 2013.

Kirwan, Christopher. 'Plato and Relativity'. *Phronesis* 19:2 (1974): 112–29.

Ledger, Gerard. *Re-Counting Plato: A Computer Analysis of Plato's Style*. Oxford: Clarendon Press, 1989.

Leigh, Fiona. 'Being and Power in Plato's Sophist'. *Apeiron* 43, no. 1 (2010): 63–85.

Lewis, David. *On the Plurality of Worlds*. Massachusetts: Blackwell Publishers, 2001.

Livingstone, Richard. *A Portrait of Socrates: Being the 'Apology', 'Crito' and 'Phaedo' of Plato*. Oxford: Clarendon Press, 1938.

Gerson, Lloyd. 'Plato on Identity, Sameness, and Difference'. *Review of Metaphysics* 58:2 (2004): 305–32.

Lopes, Dominic. *Understanding Pictures*. Oxford: Oxford University Press, 1996

Lowe, E. J. ' 'What Is a Criterion of Identity?' *The Philosophical Quarterly* 39 (1989): 1–21.

McCabe, Mary Margaret. *Plato's Individuals*. Princeton: Princeton University Press, 1994.

———. 'Unity in the Parmenides: The Unity of the Parmenides'. In *Form and Argument in Late Plato*, ed. Gill and McCabe. Oxford: Oxford University Press, 1996.

———. 'Some Conversations With Plato: Aristotle, 'Metaphysics Z.13-16'. In *Aristotle and the Stoics Reading Plato* eds. Harte, McCabe and Sharples. London: Institute of Classical Studies, 2010.

McPherran, Mark. 'Plato's Parmenides Theory of Relations'. *Canadian Journal of Philosophy* 13 (supplement 1) (1983): 149–64.

McTaggart, John. *The Nature of Existence*. Vol. 2. Cambridge: Cambridge University Press, 1900.

Meinwald, Constance.'*Plato's Parmenides*. Oxford: Oxford University Press, 1991.

Menn, Stephen. *The Aim and Argument of Aristotle's Metaphysics* Manuscript, 2017.

Mignucci, Mario. "Puzzles about Identity. Aristotle and His Greek Commentators'. In

Aristoteles Werk Und Wirkung, Erster Band. Aristoteles Und Seine Schule, ed. Wisner. Berlin: De Gruyter, 1985.

Miller, Mitchell H. *Plato's Parmenides: The Conversion of the Soul.* Pennsylvania: Pennsylvania State University Press, 1986.

Morales, Fabio. 'Relational Attributes in Aristotle'. *Phronesis* 39:3 (1994): 255–74.

Moravcsik, J. M. E. 'Being and Meaning in the Sophist'. Helsinki: *Acta Philosophica Fennica* 14 (1962).

Myro, George. 'Identity and Time'. In *Material Constitution*, ed. Rea. Lanham: Rowman & Littlefield, 1997.

Noonan, Harold. 'Relative Identity'. In *A Companion to the Philosophy of Language*, ed. Hale, White and Miller. Oxford: John Wiley & Sons, Ltd, 2017.

Owen, G. E. L. 'A Proof in the Peri Ideon'. *Journal of Hellenic Studies* 77 (1957): 103.

———. 'Dialectic and Eristic In the Forms'. In *Aristotle On Dialectic* ed. Owen. Oxford: Oxford University Press, 1968.

———. 'Notes on Ryle's Plato'. In *Logic, Science and Dialectic*, ed. Nussbaum. Ithaca: Cornell University Press, 1986.

Panagiotou, S. 'The Day and Sail Analogies in Plato's "Parmenides"'. *Phoenix* 41:1 (1987): 10–24.

Parsons, Terence. *Nonexistent Objects.* New Haven: Yale University Press, 1980.

Peck, Arthur L. 'Plato's Parmenides: Some Suggestions for Its Interpretation'. *Classical Quarterly* 3:3-4 (1953): 126–50.

Quine, W. V. 'Review: Peter Thomas Geach, Subject and Predicate'. *Journal of Symbolic Logic* 16:2 (1951): 138–138.

———. *Word and Object.* Massachusetts: MIT Press, 1960.

Rickless, Samuel C. *Plato's Forms in Transition: A Reading of the Parmenides.* Cambridge: Cambridge University Press, 2007.

———. *Plato's 'Parmenides'*. Metaphysics Research Lab, Stanford University, 2016. https://plato.stanford.edu/archives/spr2016/entries/plato-parmenides/.

Rodriguez-Pereyra, Gonzalo. *Leibniz'ss Principle of Identity of Indiscernibles*. Oxford: Oxford University Press, 2014.

Ross, W.D. *Aristotle's 'Metaphysics': A Revisted Text with Introduction and Commentary*. Oxford: Clarendon Press, 1924.

Runciman, Walter Garrison. 'Plato's Parmenides'. *Harvard Studies in Classical Philology* 64 (1959): 89–120.

Ryle, Gilbert. 'I.—Plato's Parmenides'. *Mind* 48 (1939a): 129–51.

———'II.—Plato's Parmenides'. *Mind* 48 (1939b): 302–25.

———'Cornford, F. M. - Plato and Parmenides'. *Mind* 48 (1939): 536.

———. *Plato's Progress*. Cambridge: Cambridge University Press, 1966.

Sayre, Kenneth. 'Plato's 'Parmenides': Why the Eight Hypotheses Are Not Contradictory'. *Phronesis* 23:2 (1978): 133–50.

———.'Plato's Late Ontology: A Riddle Resolved'. *Philosophical Review* 94:3 (1985): 395–99.

———.*Parmenides' Lesson: Translation and Explication of Plato's Parmenides*. Indiana: University of Notre Dame Press, 1996.

Scaltsas, Theodore. 'Relations as Plural-Predications in Plato'. *Studia Neoaristotelica* 10:1 (2013): 28–49.

Schofield, Malcolm. 'Eudoxus in the "Parmenides"'. *Museum Helveticum* 30:1 (1973): 1–19.

———. 'Plato on Unity and Sameness'. *Classical Quarterly* 24:1 (1974): 33-42.

———. 'The Antinomies of Plato's Parmenides'. *Classical Quarterly* 27:1 (1977): 139–58.

———. 'Likeness and Likenesses in the Parmenides'. In *Form and Argument in Late Plato*, eds. Gill and McCabe. Oxford: Oxford University Press, 1996.

Scolnicov, Samuel. *Plato's Parmenides*. California: University of California Press, 2003.

Scott, Dominic. 'One Virtue or Many? Aristotle's *Politics* 1.13 and the *Meno*'. In *Aristotle and*

the Stoics Reading Plato eds. Harte, McCabe and Sharples. London: Institute of Classical Studies, 2010.

Sedley, David. *Plato's Cratylus.* Cambridge: Cambridge University Press (2003)

Sheffield, Frisbee. 'Aristotle and Plato's Symposium' In *Aristotle and the Stoics Reading Plato* eds. Harte, McCabe and Sharples. London: Institute of Classical Studies, 2010.

Shorey, Paul. 'The Unity of Plato's Thought'. *Revue Philosophique de La France Et de l'Etranger* 58 (1904): 303–6.

Sider, Theodore. 'Four-Dimensionalism'. *Philosophical Review* 106:2 (1997): 197–231.

Sprague, Rosamond Kent. 'Parmenides' Sail and Dionysodorus' Ox'. *Phronesis* 12:1 (1967): 91–98.

Tabak, Mehmet. *Plato's Parmenides Reconsidered.* New York: Palgrave Macmillan, 2015.

Taylor, A. E. *Plato: The Man and His Work.* London: Metheun and Co. Limited, 1926.

———. *The 'Parmenides' of Plato: Translated into English with Introduction and Appendixes.* Oxford: Clarendon Press, 1934.

———. 'The Parmenides of Plato'. *Revue Philosophique de La France Et de l'Etranger* 123:3 (1937): 260–62.

Thesleff, Holger. *Platonic Patterns: A Collection of Studies.* Las Vegas: Parmenides Publishing, 2009.

Thomson, Judith Jarvis. 'Parthood and Identity across Time'. *Journal of Philosophy* 80:4 (1983): 201–20.

Turnbull, Robert G. *The Parmenides and Plato's Late Philosophy Translation of and Commentary on the Parmenides with Interpretative Chapters on the Timaeus, the Theaetetus, the Sophist, and the Philebus.* Toronto: Toronto University Press,1998.

Van Inwagen, Peter. *Material Beings.* Ithaca: Cornell University Press, 1990.

———. 'Temporal Parts and Identity Across Time'. *The Monist* 83, no. 3 (2000): 437–59.

Wakefield, Jerome. 'Why Justice and Holiness Are Similar: 'Protagoras' 330-331. *Phronesis*

32: 3 (1987): 267-276

Wiggins, David. *Identity and Spatio-Temporal Continuity*. Oxford: Blackwell, 1967.

———. *Sameness and Substance*. Oxford: Blackwell, 1980.

Williamson, Timothy. *Identity and Discrimination*. Oxford:Wiley-Blackwell, 1990.