

Marquette University

e-Publications@Marquette

Dissertations (1934 -)

Dissertations, Theses, and Professional
Projects

Cosmic City - Cosmic Teleology: A Reading of Metaphysics Λ 10 and Politics I 2

Brandon Henrigillis
Marquette University

Follow this and additional works at: https://epublications.marquette.edu/dissertations_mu



Part of the [Philosophy Commons](#)

Recommended Citation

Henrigillis, Brandon, "Cosmic City - Cosmic Teleology: A Reading of Metaphysics Λ 10 and Politics I 2" (2020). *Dissertations (1934 -)*. 1050.

https://epublications.marquette.edu/dissertations_mu/1050

COSMIC CITY - COSMIC TELEOLOGY: A READING OF METAPHYSICS Λ 10
AND POLITICS I 2

by

Brandon Henrigillis

A Dissertation submitted to the Faculty of the Graduate School,
Marquette University,
in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy

Milwaukee, Wisconsin

December 2020

ABSTRACT

COSMIC CITY - COSMIC TELEOLOGY: A READING OF METAPHYSICS Λ 10 AND POLITICS I 2

Brandon Henrigillis

Marquette University, 2020

The goal of my project is to provide a reading of *Metaphysics* Λ 10. Λ 10 states that there is an order in the cosmos, or a cosmic nature. The problem for the interpreter of Aristotle is how to make sense of this claim given Aristotle's arguments elsewhere regarding nature/substance and the priority of substances over the parts of a substance. To explain what Aristotle means when he states that there is a cosmic nature and arrangement, I first examine the army and household analogies offered by Aristotle in Λ 10. I contend that the household analogy in particular provides the reader with a way to explain Aristotle's concept of a cosmic nature, since it leads us to Aristotle's account of the naturalness and priority of the polis. It is then through understanding Aristotle's concept of the naturalness and priority of the polis, found in *Politics* I 2, that one can understand the naturalness and priority of the cosmic order defended in Λ 10. The naturalness of the polis is found in the fact that it is a part of the natural process of practical reasoning in which all human beings participate. The polis is prior because outside of the polis it is impossible to live the fully human life, and thus one largely ceases to exist outside of the polis. I will conclude by arguing that this reading of *Politics* I 2 allows us to see that the cosmic ordering or arrangement in Λ 10 is natural in so far as it arises out of the teleologically ordered motions of the individual entities within the cosmos, and it is prior in so far as no entity can carry out its essential functions outside of the cosmic arrangement and structure. This reading allows us to understand Λ 10 and Aristotle's conception of the cosmos in a way that does not conflict with other claims that are basic to Aristotle's conception of reality.

ACKNOWLEDGEMENTS

Brandon Henrigillis

I would like to thank first my father Joseph Henrigillis, who died in February of this year. Without his love, encouragement, support, and his unique approach to the world I would not have been able to accomplish this project nor would I have pursued philosophy at all. I wish above all that you could be here at the end of all this, and I love you.

I am thankful for the support of my wife, Dr. Jennifer Henrigillis, whose support, dedication, and sacrifice were invaluable. I love you, Jenn. I am also thankful to my siblings, Lindsay Nejedlo and Leland Nejedlo. Lindsay's encouragement is what pushed me to pursue philosophy in Grad school at the beginning. And I would like to thank my Mom, Lori Nejedlo, for being there with love and support whenever I needed it.

I am thankful for the support of my advisor and dissertation director Owen Goldin, whose patience and hard work allowed me to accomplish my goal. I would like to thank the rest of my committee Sara Brill, Darrell Dobbs, and Richard Taylor for their contributions as well.

Finally, I would like to thank above all God. *Ad maiorem Dei gloriam.*

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	i
CHAPTER	
I. INTRODUCTION.....	1
II. TWO INTERPRETIVE APPROACHES TO ARISTOTLE'S ACCOUNT OF TELEOLOGY IN PHYSICS II 8.....	12
III. THE ANALOGIES OF Λ 10.....	64
IV. THE NATURALNESS OF THE POLIS.....	111
V. THE PRIORITY OF THE POLIS.....	154
VI. COSMIC TELEOLOGY.....	192
BIBLIOGRAPHY.....	225

CHAPTER I

INTRODUCTION

In this dissertation I set out to provide an interpretation of *Metaphysics* Λ 10 and *Politics* I 2 for the purposes of providing a new reading of Aristotle's teleology, which is famously difficult to understand.¹ Does Aristotle believe that teleology in nature is solely and exclusively a matter of appealing to the purpose of a specific kind in order to explain the motion or development of an entity that belongs to this kind? Or does Aristotle hold that there is a broader teleology found somehow in the arrangement of the whole cosmos, as is seemingly expressed in Λ 10? And if it is the latter, how can this broader teleology be natural for Aristotle?

In particular, I propose to take seriously the brief hint of a broader teleology which Aristotle provides in *Metaphysics* Λ 10; and I provide a reading of this passage that understands Aristotle as arguing that there is a cosmic teleology, in the sense that there is a broader teleological ordering which arises from the teleological movements of the various natural kinds within the cosmos. In addition to proposing this reading of Λ 10, I show just how it is that we can make sense of a broader teleological ordering without thereby undermining other important claims that Aristotle makes within his corpus. To accomplish this, I argue that *Politics* I.2 actually provides us the best account for just how this broader teleological ordering can be considered natural. In analyzing *Politics* I.2, I claim that Aristotle's conception of the polis involves an entity which is natural but which is not a substance, which is prior to the individual but which does not

¹ To avoid repeating citations and ruining the flow of the presentation, all references will have a citation somewhere in the body of the dissertation rather than in the introduction itself.

make the individual merely a part of a larger teleological whole, and which is emergent from human action but which is not a product of intentional productive action. I believe that this understanding of the polis is the key to how Aristotle understands the naturalness of the cosmic teleology that Aristotle is defending in Λ 10. In other words, Aristotle's account of the polis allows us to see just how the broader teleology can be natural without thereby committing him to various inconsistencies that would inevitably arise otherwise.

The goal of this project is to provide a new reading of these two passages which is consistent with the rest of what Aristotle has to say regarding teleology, nature, and priority but which at the same time does not dismiss the overt claims of these two passages or force a reading which does not fit with what Aristotle explicitly states. This reading, I argue, provides a new way of understanding the interrelationships which exist between entities that could be the subject of further explorations in future projects in Aristotle scholarship. This latter point is especially relevant when one considers the possibility of constructing an Aristotelian view of ecosystems, biomes, and other structured orders which clearly manifest themselves between living entities. My project also provides a foundation for future research into the ontological foundations of the cosmic order mentioned in Λ 10.

I proceed as follows. The second chapter primarily lays the groundwork for arguments in following chapters, and accomplishes three goals. The first goal is focused on Aristotle's account of a natural object and natural explanation. Providing this account will supply the rest of the dissertation with the context necessary for understanding the interpretive moves and arguments that will be discussed. This part will also discuss the standard conception of Aristotle's account of a natural object and natural explanation so

that the problems with the claims that are made in *Λ 10* and *Politics I 2* become more apparent. Specifically, given Aristotle's account of what is a natural thing and how we explain something acting teleologically, how it is possible for Aristotle to claim that the cosmos as a whole possesses a nature, and that there is a good found in the arrangement of the whole.

The second goal of the second chapter is to introduce and discuss two interpretive camps which concern one's understanding of Aristotle's teleology in relation to the rather difficult passages of *Physics II 8*, *Politics I 8*, and *Metaphysics Λ 10*. The first is the internalist camp, which argues that Aristotelian teleology should be understood as restricted to the teleological actions of individual entities. This camp holds that it is wrong to interpret Aristotle as arguing that there is a broader teleology being defended in the corpus. They accordingly interpret the three passages mentioned through this lens and argue that there is nothing in these passages which argues for taking Aristotle's teleology in any other way than the restricted sense that they defend.

The second camp, the externalist camp, holds the opposing position that these passages clearly defend a broader, hierarchical and perhaps even an anthropocentric teleology. I will argue that the latter camp is correct in their interpretation of these passages, albeit in a restricted sense. I do not believe that these passages in any way support the position that Aristotle's teleology is anthropocentric, and I will argue that *Politics I 8* does not really express anything about Aristotle's conception of teleology in nature. But I do believe that *Physics II 8* and *Metaphysics Λ 10* are difficult to interpret without admitting that there is something about Aristotle's conception of teleology which holds that there is a broader teleology at work within the cosmos. I will conclude the

second chapter by arguing that one's interpretation of *Physics* II 8 depends upon one's interpretation of *Metaphysics* Λ 10. It is by understanding the claims in Λ 10 that one gains an understanding of Aristotle's conception of a cosmic nature, and thus a cosmic teleology. Once one is able to do this, then one is able to provide an interpretation of *Physics* II 8, which will be provided in the last chapter following an investigation of Λ 10.

The third chapter investigates Λ 10 itself, focusing on two goals. The first goal of the third chapter will be to establish that Aristotle does express that there is both a separate good as well as a good found in the arrangement of the whole cosmos. The separate good is, I argue, the Unmoved Mover (UMM), since it is the UMM which serves as the ultimate aim of all striving and thus of all teleological motions in the cosmos. The good in the arrangement is clearly defended by Aristotle in Λ 10 both explicitly as well as through the analogies, which are provided by Aristotle to serve as a kind of explanation of how Aristotle understands the good in the arrangement. What this entails for us, then, is that Aristotle is defending a 'nature of the whole' in Λ 10, and thus a cosmic nature.

The second goal of Chapter 3 will be to discuss how we are to understand the cosmic nature being defended in Λ 10. I will argue that understanding the 'nature of the whole' or the cosmic nature in an Aristotelian context requires us to analyze the analogies that Aristotle provides. I will then discuss the army and household analogies and show how they help us to understand the good arrangement of the cosmic nature. However, I will conclude the chapter by arguing that the specific analogies provided by Aristotle fail to fully explain what a cosmic nature might look like in an Aristotelian context, especially regarding the ontological status of the cosmic nature. I will then argue that the

clue for understanding the cosmic nature defended here is found in *Politics* I 2, in which Aristotle speaks of the nature and priority of the polis. I believe that this is the right claim precisely because Aristotle points us there in Λ 10 through the household analogy itself, since the household for Aristotle develops into the polis and is discussed in *Politics* I 2. Another reason for my claim that we should examine *Politics* I 2 is that the final statement Aristotle makes in Λ 10 hints at the idea that the cosmos is a monarchy, which is a kind of polis for Aristotle. In order to understand the cosmic nature, and especially its naturalness and priority, an examination of *Politics* I 2 is appropriate.

Having accomplished the preliminary goals of chapters two and three, chapter four begins to build upon these foundations. The fourth chapter will examine the nature of the polis. Specifically, how it is that Aristotle understands the polis to be a natural thing in an ontological sense. However, it also must be acknowledged that his arguments concerning the naturalness of the polis have been questioned to some extent. If we are to understand how the nature of the polis provides us with the material that we need to understand the nature of the cosmic order Aristotle defends in Λ 10, it is first necessary to show that his arguments concerning the nature of the polis are good ones. This will not only dispense with the idea that the polis cannot be a natural entity, but it will also shed light on how the naturalness of the polis is understood by Aristotle. I will consider the argument that the polis should be considered, even by Aristotle's own principles, to be an artifact. As Aristotle makes clear in the *Physics*, natural generation differs from artificial generation in a significant way; for Aristotle argues that a thing which is naturally generated has as an efficient cause something which is identical to it in form. But the

cause of a polis seems to be something that possesses a form other than that which is possessed by the polis. This seems to show us that the polis must be an artifact.

This contention, however, has been disputed as well, and there are those who have attempted to defend the naturalness of the polis despite the above criticism. I will consider some of these arguments and show how they specifically fail to demonstrate that the polis is natural according to Aristotle's own principles. I will argue that the polis is natural because it is a part of the very practical rationality that human beings inevitably exercise. Since human beings are defined through the possession of *logos* by Aristotle, it follows that human beings have no choice but to act according to the dictates of reason. This of course involves a discourse concerning the good and the bad, the just and the unjust, and it inevitably demands the establishment of a polis, for it is only in the polis that such aspects of human nature can be exercised to its fullest extent. And it is in and through the polis that human beings express their *logos* in a fully realized manner; since that which constitutes the expression of *logos* according to Aristotle, namely reasoning about the good and bad, the advantageous and the harmful, the just and the unjust, is fully realized in the complete political entity: the polis. This entity then emerges from the very practices of living a human life and is therefore natural precisely because it is a very part of this process of practical rationality. This view also holds that the polis is not a deliberate creation on the part of an artificer or lawgiver, but that it is rather an emergent entity which is a necessary part of the *logos*-centric and *logos*-infused activities of human beings.

The fifth chapter will then proceed to discuss the priority of the polis. Aristotle clearly states that the polis is prior to the individual, but understanding what Aristotle

means by this is important for understanding the ontology of the polis as well as the ontology of the cosmic nature of Λ 10. Aristotle states that the individual stands to the state much as a hand stands in relation to the whole body. Crucially, Aristotle considers a hand, or an eye or any other particular organ for that matter, as defined only in so far as it is a functioning part of the whole organism of which it is a part. To be a hand then is to carry out the respective functions of a hand in so far as these are defined in relation to the whole body. So, if a hand is severed, it is a hand in name only; or a hand homonymously. However, if we are to understand the hand analogy as a literal depiction of what Aristotle means when he states that an individual is posterior to the state, it would mean that the individual of a state would be ontologically posterior to the state itself, and in the same sense as a hand is posterior to the whole organism. This would imply that an individual as such would be defined wholly through the state of which it is a part, and that any individual outside of the state would be a human in name only. I will also point out that this conception of the relation between the polis and the individual seems to justify a totalitarian state.

I then argue that the priority of the polis should be understood in close relation with my understanding of the naturalness of the polis. The polis is natural for Aristotle because it is a part of the practical rationality of human beings living the human life. When human beings begin to carry out their practical rationality, a polis emerges and in turn makes possible the full realization of that practical rationality itself. The priority of the polis then should be understood as an ontological priority, but not one which is identical to the relationship which exists between a hand and the whole of which it is a part. Rather, the priority of the polis should be understood through the fact that the

practical components of the human person cannot be really exercised outside of the polis. So although it is certainly possible for a human being to survive outside of the polis, such a life would be more similar to the life of a beast than to the life of a human being. Understanding the priority of the polis then is simply to understand the close relationship which exists between the practical rationality of the human person and the polis which emerges from it and which allows for its full practice. Not only does understanding this relationship ground the naturalness of the polis, but it also shows us that outside of the polis, the human person is unable to really live the essentially human life. So although it is true that the human person can *survive* outside of the polis, and that thus the priority relationship being expressed by Aristotle here is not identical to the relationship which exists between the hand and the body, it remains true that what it is to live *the human life* is impossible outside of the polis. The polis is thus necessary for the human person to live the human life and it is therefore prior in an important sense.

I conclude the chapter by showing how it is possible, even when one acknowledges that the polis is prior to the individual, to show that Aristotle did not justify or defend a totalitarian state. The priority relationship which exists between the individual and the polis is not one which allows for the polis to control every aspect of an individual life, but rather merely shows us that Aristotle believed that the polis was essential for the human person to achieve the fully realized human life.

The sixth chapter will extrapolate upon my reading of Aristotle's account of the polis to show how this account can apply to Aristotle's view of the cosmic order. The naturalness of the polis has thus been determined to be an aspect of the logos that every human possesses. In order to actualize this faculty, particularly in the practical sense, one

must reason about the good and bad, which in turn is only possible in the context of that entity which allows for the good life to be attained: the polis. But this is not to say that the polis is natural simply because it is necessary for the actualization of the logos, but rather that the polis is a necessary manifestation that emerges from the fact that human beings practice logos. The polis is natural, then, because it is a part of the natural faculty of reasoning and emerges as a part of this faculty.

This provides what is necessary for how Aristotle understood the cosmic order that he discusses in *Λ 10*. This order is not an artifact, somehow created by a god who moves itself to create, nor is it a substance. This order rather emerges from each thing within the cosmos acting so as to achieve the best life possible for it. Given Aristotle's conception of how the polis relates to the attainment of the best life for humans, it would also seem to follow that a good order is necessary for each thing within the cosmos to attain what it desires. This ordering is natural, and prior, and represents a broader teleology than what has been normally ascribed to Aristotle. This cosmic order is natural and prior in so far as it constitutes a necessary part of each thing attempting to realize itself, and from the fact that nothing can really be whatever it is outside of this ordering.

Given this conception of the cosmic order defended in *Λ 10*, I return to *Physics II 8* and argue that *Physics II 8* does indeed defend a broader teleology, which can now be understood through the conception of a cosmic order that I have defended. This broader teleology represents the cosmic nature and is manifested in the ordering of the various entities within the cosmos which require such an ordering so that they are able not only to survive but realize their own natures.

Finally, I will argue that the best way for us to understand the cosmic order according to the comparison with the polis that I have been defending is to conceive the cosmic order as being like a perfect monarchy. What I mean by this is that the role that the UMM plays in the cosmos is much like the role that the monarch plays in Aristotle's conception of a perfect monarchy. Not only is this reading justified by Aristotle's own comparison of the cosmic order to a monarchy at the end of Λ 10, but it also best fits with my argument that the ontology of the cosmic order is comparable to the ontology of the polis. The unmoved mover is fundamentally unlike everything else within the cosmos, it is fully actualized and does not move or grow or develop in any way. In its role as final cause for the development of every single organism in the cosmos it is also fundamentally responsible for the order manifested in it. The unmoved mover is clearly beyond anything found in nature, much like the monarch is beyond anyone found in the polis in virtue, and the unmoved mover at the same time acts as the end of the actions that produce, as an emergent entity, the teleological order that the cosmos possesses.

To summarize my reading of Λ 10: The analogies that Aristotle uses in this passage clearly compel us to take more than what a minimalist may have taken them to mean, but less than the hierarchical/anthropocentric interpretation. There *is* an ordering that is teleological, which necessarily manifests itself as an emergent entity through the teleological motions of each thing within the cosmos in its attempt to achieve the divine. This ordering is *natural* in that it constitutes a necessary part of the actualization of each essence, and it is *prior* in that no entity can really exist outside of it.

In conclusion, I will have shown that there is a good of the whole, a good which is found in the order of all things, and this good is defined through both the good that is

separate as well as the good that emerges from the teleological actions of each individual kind within the cosmos. The separate good is the UMM, which causes each individual entity to be as like the UMM as possible. The good of the order is found in the teleological ordering of the cosmos, which allows each kind of thing in the cosmos to realize its end. A 10 indeed shows us that there is an Aristotelian world order which emerges from the teleological motions of the individual entities within the cosmos, much like the polis emerges from the practical rationality of human beings realizing their own natures.

CHAPTER II

TWO INTERPRETIVE APPROACHES TO ARISTOTLE'S ACCOUNT OF
TELEOLOGY IN PHYSICS II 8²**1. Introduction**

The goal of this chapter will be to explain and set up the context and the initial problems that the rest of this dissertation will attempt to resolve. This chapter will do this in two parts. The first part will simply introduce a basic account of Aristotle's theory of natural entities and natural explanation. This topic will remain relevant throughout the arguments of this dissertation as the discussion concerning natural entities and explanation will be precisely what is at issue concerning the interpretation of the passages that this dissertation will be focusing on. To be clear however, the first part of this chapter merely intends to provide the most accepted and popular interpretations of Aristotle's account of natural objects and explanation. I do not intend therefore to attempt to resolve interpretive difficulties concerning Aristotle's understanding of these topics. The relevant interpretive difficulties, if and when they are encountered, will be addressed in later chapters. Instead, I hope that by clarifying this topic, we will be allowed see just how Aristotle understands natural entities to be teleological in the most basic sense of the term.

² Parts of this chapter have already appeared in Brandon Henrigillis, "Man, God and Rain: Is Aristotelian Teleology Hierarchical?," *Akropolis* 1 (2017): 92-110. The views expressed in that paper represents an approach to interpreting *Physics* II 8 and *Metaphysics* Λ 10 earlier than that which is contained in this dissertation. Accordingly, what I will be arguing here represents my current interpretive stance on the relevant passages concerning the cosmic order that Aristotle identifies in Λ 10.

The rest of this chapter will then focus upon the interpretive approaches and difficulties concerning the argument of *Physics* II 8. This disagreement concerning the interpretation of *Physics* II 8 has for the most part been divided into two interpretive camps.³ On the one hand, there are those who argue that Aristotle held that teleological concepts are applicable when one is attempting to explain the regular motions and developments of individual organisms, elements, and celestial bodies, but that any use of teleological concepts that go beyond this specific type in one's explanation of nature is simply un-Aristotelian and that therefore *Physics* II 8 merely repeats this basic Aristotelian position.⁴ I will refer to those who hold this position concerning *Physics* II 8 and Aristotle's teleology in general as the 'internalist' camp. On the other hand, there have been a number of Aristotle scholars who have argued that Aristotle provides indications at the very least and perhaps even positively and explicitly maintains that teleological explanation involves to some degree references to a broader and interactive teleology in which particular entities and/or organisms aim at the benefit of other entities and/or organisms of a different kind.⁵ Correspondingly, these interpreters understand the

³ Margaret Scharle originally makes this distinction. For her discussion see Margaret Scharle, "The Role of Material and Efficient Causes in Aristotle's Natural Philosophy," in *Apeiron* 41, no. 3 (2008) (Special Issue: *Aristotle on Life*, J. Mouracade, ed.): 27–46. For the remainder of this dissertation, I will refer to the interpretive position which holds that Aristotle defended a broader teleology as the 'externalist' camp, due to the fact that this interpretation holds that entities for Aristotle naturally aim at the benefit of entities that are different in kind; which in turn implies that there is a teleological goal that has its origin in the nature of entities the satisfaction of which is accomplished through the benefit provided to a nature that is external to the original entity. On the other hand, I will refer to the opposing interpretive camp as the 'internalist' camp, on account of this camp holding that the teleological motion of every entity is undertaken only in order to satisfy a goal internal to the nature of that entity.

⁴ Allan Gotthelf, "Aristotle's Conception of Final Causality," in *Philosophical Issues in Aristotle's Biology*, ed. Allan Gotthelf and James Lennox (Cambridge: Cambridge University Press, 1987), 204–243; Monte Ransome Johnson, *Aristotle on Teleology* (Oxford: Oxford University Press, 2005); Lindsay Judson, "Aristotelian Teleology," in *Oxford Studies in Ancient Philosophy* XXIX, ed. David Sedley (Oxford: Oxford University Press, 2005), 341–367; Robert Wardy, "Aristotelian Rainfall or the Lore of Averages," *Phronesis* 38, no. 1 (1993): 18–30.

⁵ John M. Cooper, "Aristotle on Natural Teleology," in *Language and Logos*, ed. Malcolm Schofield and Martha Nussbaum (Cambridge: Cambridge University Press, 1982), 197–223; David Furley, "The Rainfall Example in *Physics* ii 8," in *Aristotle on Nature and Living Things*, ed. Allan Gotthelf (Bristol: Bristol

arguments of *Physics* II 8 to defend this broader and even anthropocentric teleology. I will refer to these interpreters as the ‘externalist’ camp.

The goal of these two parts of the chapter then will be to clarify the respective positions within this controversy and to demonstrate how both camps fail to adequately address the arguments of *Physics* II 8, especially since in my view any adequate interpretation of the passage requires a thorough analysis of other passages in the corpus, especially *Metaphysics* Λ 10 and *Politics* I 2. Finally, the chapter will end with a perplexity of sorts. Given the inability of either interpretive approach to adequately account for Aristotle’s claims concerning the nature of teleology in the cosmos, will it be possible to provide an alternative interpretation that can in fact do this? I believe that this will be possible, and that this can be accomplished by first analyzing more thoroughly the claims, and especially the analogies, of *Metaphysics* Λ 10 as well as other texts which imply a greater role for the unmoved mover and an account of the kind of thing that an order of the whole could be for Aristotle, given his general approach to ontology and teleology. The argument then will continue in my analysis of *Metaphysics* Λ 10 in the third chapter.

2. Natural Objects and Natural Explanations in Aristotle

a) Natural Objects⁶

Classical Press, 1985), 177-183; David Sedley, “Is Aristotle’s Teleology Anthropocentric?” *Phronesis* 36, no. 2 (1991): 179-196.

⁶ It is important to note that Aristotle understands nature (ἡ φύσις) in several ways. In the philosophical lexicon of Δ 4 specifically, Aristotle identifies five senses of nature. Firstly, he calls nature the “...genesis of growing things” (1014b16; ἡ τῶν φουμένων γένεσις). This definition of nature seems to stem from Aristotle’s belief that *phusis* is the abstract noun cognate of *phuesthai*, which is a verb meaning to grow, and that therefore Aristotle sees nature as the beginning of a growth which ends in nature, or in other words which ends in the fully formed adult. Secondly, he calls nature “The primary immanent element in a thing, from which its growth proceeds” (1014b17-18; ἐξ οὗ φύεται πρώτου τὸ φυόμενον ἐνυπάρχοντος). This definition seems to refer to whatever is immanent in a thing in such a way that it provides the basis for its growth. The third definition is that nature is “the source from which the primary movement in each natural

In the second book of the *Physics*, Aristotle defines nature, and specifically a natural object, by stating that:

Some existing things are natural, while others are due to other causes. Those that are natural are animals and their parts, plants, and the simple bodies, such as earth, fire, air and water; for we say that these things and things of this sort are natural. All these things evidently differ from those that are not naturally

object is present in it in virtue of its own essence” (1014b18-20; ὅθεν ἡ κίνησις ἢ πρώτη ἐν ἐκάστῳ τῶν φύσει ὄντων ἐν αὐτῷ ἢ αὐτὸ ὑπάρχει). Generally, this definition of nature is meant to identify that which causes the growth and movement of a natural thing, and which helps to explain for Aristotle the fact that there is more than just mere contact between the various parts of an organic unity. Rather, Aristotle states that “Organic unity differs from contact; for in the latter case there need not be anything besides the contact, but in organic unities there is something identical in both parts, which makes them grow together instead of merely touching, and be one in respect of continuity and quantity, though not of quality” (1014b21-26; διαφέρει δὲ σύμφυσις ἀφῆς, ἔνθα μὲν γὰρ οὐδὲν παρὰ τὴν ἀφῆν ἕτερον ἀνάγκη εἶναι, ἐν δὲ τοῖς συμπεφυκόσιν ἔστι τι ἐν τῷ αὐτῷ ἐν ἀμφοῖν ὃ ποιεῖ ἀντὶ τοῦ ἄπτεσθαι ἀμπεφυκέναι καὶ εἶναι ἐν κατὰ τὸ συνεχὲς καὶ ποσόν, ἀλλὰ μὴ κατὰ τὸ ποιόν). Aristotle also identifies nature with matter and form respectively. Firstly, Aristotle states that “Nature is the primary matter of which any non-natural object consists” (1014b26-27; ἔτι δὲ φύσις λέγεται ἐξ οὗ πρώτου ἢ ἔστιν ἢ γίνεταί τι τῶν φύσει ὄντων). So Aristotle means that the nature of a wooden instrument for instance would be the wood out of which it is made, so that one can say that wood is the nature of the acoustic guitar. Of course, this identification of nature with matter does not just apply to non-natural objects; Aristotle also states that “In this way people call the elements of *natural* objects also their nature...” (1014b32-33; τοῦτον γὰρ τὸν τρόπον καὶ τῶν φύσει ὄντων τὰ στοιχεῖα φασὶν εἶναι φύσιν). Finally Aristotle also identifies nature with the form or substance of a thing, stating that “...as regards the things that are or come to be by nature, though that *from which* they naturally come to be or are is already present, we say they have not their nature yet, unless they have their form or shape” (1015a3-5; διὸ καὶ ὅσα φύσει ἔστιν ἢ γίνεταί, ἤδη ὑπάρχοντος ἐξ οὗ πέφυκε γίνεσθαι ἢ εἶναι, οὐπω φαμέν τὴν φύσιν ἔχειν ἐὰν μὴ ἔχη τὸ εἶδος καὶ τὴν μορφήν). Aristotle, in other places, also sometimes simply understands nature as describing the natural world as a whole, which consists of entities which possess a nature and are thus by nature as meant in one of the senses just outlined. Aristotle also states in other places that nature is for the sake of an end, stating that “Now action is for the sake of an end; therefore the nature of things also is so...” (*Physics* II 8 199a11; πράττεται δ' ἕνεκα τοῦ καὶ πέφυκεν ἄρα ἕνεκά τοῦ). The end is identified by Aristotle with the form, and thus the definitions of nature as an end and as form are sometimes conflated by Aristotle such as when he states that “...since nature is twofold, the matter and the form, of which the latter is the end, and since all the rest is for the sake of the end, the form must be the cause in the sense of that for the sake of which...” (*Physics* II 8 199a30-33; καὶ ἐπεὶ ἡ φύσις διττή, ἢ μὲν ὡς ὕλη ἢ δ' ὡς μορφή, τέλος δ' αὕτη, τοῦ τ' ἄλλου δὲ τᾶλλα, αὕτη ἂν εἴη ἢ αἰτία, ἢ οὗ ἕνεκα). In summary then, nature is primarily restricted to that which grows and which also possesses both a matter, namely what the thing is made up of and from which it grows and which is divided according to Aristotle into a proximate and general kind, as well as a form, which serves as the end of the process of becoming. Aristotle sums all of this up by saying that nature is the substance of that which possesses a principle of movement in itself. All of these definitions of nature are ultimately quite similar to how Aristotle understands the concept of nature in the *Physics*. I am going to focus upon the arguments of the *Physics* throughout this dissertation as it is my concern to discuss the status of natural objects in Aristotle as they relate to the interpretation of *Λ* 10, *Politics* I 2, and *Physics* II 8. The *Physics* account then will be sufficient to provide the necessary context for the interpretive issues that I will be focusing upon, and any alternative definition of nature, such as one of the definitions just discussed, which becomes relevant will be mentioned at that point.

constituted, since each of them has within itself a principle of motion and stability in place, in growth and decay, or in alteration.⁷

For Aristotle then, everything in the world is either a natural object in so far as the object exists φύσει or it is a non-natural object that exists for other reasons or causes as such. And, for an object to be natural, it must possess *within itself* a principle of motion and stability. And although this definition of the natural may seem a little obscure to the modern reader, what this precisely means is quite obvious and somewhat intuitive upon reflection. When one considers a living animal for instance, one immediately recognizes that the animal in question seems to have a principle of order within it which helps explain the kind of thing that it is. This ordering principle in turn helps us to see why the animal is of such a shape, why it eats the specific kind of food that it does, and why it carries out the characteristic motions that it does. In general then what we find when we observe such animals is that these animals have a principle which explains to us why the animal is what it is, and this is precisely what Aristotle is pointing to in his definition of a natural object. Moreover, when we examine this principle of a natural entity such as an animal, we find, according to Aristotle, that the principle in question is an *internal* one.⁸

⁷ Τῶν ὄντων τὰ μὲν ἐστὶ φύσει, τὰ δὲ δι' ἄλλας αἰτίας, φύσει μὲν τὰ τε ζῶα καὶ τὰ μέρη αὐτῶν καὶ τὰ φυτὰ καὶ τὰ ἀπλᾶ τῶν σωμάτων, οἷον γῆ καὶ πῦρ καὶ ἀήρ καὶ ὕδωρ (ταῦτα γὰρ εἶναι καὶ τὰ τοιαῦτα φύσει φαιμέν), πάντα δὲ ταῦτα φαίνεται διαφέροντα πρὸς τὰ μὴ φύσει συνεστῶτα. τούτων μὲν γὰρ ἕκαστον ἐν ἑαυτῷ ἀρχὴν ἔχει κινήσεως καὶ στάσεως, τὰ μὲν κατὰ τόπον τὰ δὲ κατ' αὔξησιν καὶ φθίσιν, τὰ δὲ κατ' ἀλλοίωσιν κλίνη δὲ καὶ ἰμάτιον. *Physics* II 1 192b8-16. This definition of natural things is also found in Δ 4 when Aristotle states that "...it is plain that nature in the primary and strict sense is the substance of things which have in themselves, as such, a source of movement..." (1015a13-15).

⁸ It is interesting to note however that one way that we can in fact understand Aristotle's theory of nature is that a natural thing exists *as though* it were the creation of a divine craftsman. Now, it is certainly true that Aristotle did not believe that there was such a divine craftsman. His understanding of God and the role that God plays in his theory crucially argues that God does not act, in the sense of a craftsman, upon the world. However, the natural entities of the world seem for Aristotle to exhibit those properties which would exist if there were such a divine craftsman. Evidence for this, in my view, is found in the many passages in which Aristotle ascribes to nature itself a purpose as though it were a craftsman producing a certain craft. A few instances of these passages include *Pats of Animals* 641b12, 687a7, *De Anima*. 415b16 and *Poitics*. 1253a9. For a discussion of this point see Jonathan Lear, *Aristotle: The Desire to Understand* (Cambridge: Cambridge University Press, 1988), 18-19.

And not only is it internal, but the principle itself must be understood as acting as a *dynamic* principle propelling the animal to grow into the mature adult representative of the kind in question, and which in turn produces new individuals of that respective kind.⁹ And this internal principle is not applicable to animals alone; rather Aristotle includes plants, the simple elements and the celestial bodies.¹⁰ Correspondingly, these entities are also considered to be natural for Aristotle, and they are to be considered such precisely due to the presence of an internal principle which explains the specific kind of motion and characteristic activities that each of these entities exhibit.

As an extension of Aristotle's definition of a natural object, it is also relevant to note that a natural entity's internal principle cannot simply be explained by the matter which makes up the body of a natural kind. Aristotle makes this point quite clear at the end of *Metaphysics Z* when he states that an "...[organized] composite is composed of something in such a way that the whole thing is one, not as a heap is, but as a syllable is."¹¹ To put this point as simply as possible, Aristotle believes that nature is not made up of composite bodies whose motions can be explained by the bodily parts and elements which make up a composite body, but rather all natural bodies are organized through the very principle that they possess, and thus they are explained primarily through this

⁹ By dynamic and active, I mean that the form of an entity acts as a kind of force for Aristotle. Certainly not a force understood in the Newtonian sense, but rather a principle of the very motions that the entity undergoes. The form acts as the efficient cause, the formal cause, and the final cause of an entity. It provides to an entity the reason for the growth, behaviors, and goals of the entity. The reasons for reproduction in the animal world are in my view more complex and difficult than what I have stated here, and I will discuss these reasons in the third chapter. However, at this point it is enough to simply show that a natural thing possesses within itself the reason for the production of more things of the same kind. As we will see, this is a key distinction for Aristotle between natural objects and artifacts.

¹⁰ *De Caelo*. I 2-4.

¹¹ ἐπεὶ δὲ τὸ ἕκ τινος σύνθετον οὕτως ὥστε ἐν εἶναι τὸ πᾶν, [ἄν] μὴ ὡς σωρὸς ἀλλ' ὡς ἡ συλλαβή. *Metaphysics Z* 1041b12-13.

principle. This point leads us then to Aristotle's concept of form.¹² A thing's form is that organizing principle to which we have been referring, and accordingly it is that which organizes the particular matter of something, and generally allows us to understand the characteristic motions internal to a natural thing. Returning to Aristotle's example of a syllable then, Aristotle would argue that in a way we can understand the natural world as being made up of entities that are analogous to the syllable. A syllable for Aristotle is not simply to be explained through the letters that make up that syllable, but rather there is in addition to the letters an organizing principle which allows us to make sense of the syllable and which organizes the letters in a certain and specific way. In the natural world, this principle would be the form of natural things, and crucially a natural thing's form cannot be explained by or in any way reduced to the matter or material bodies and elements that make up the body of a particular natural thing. Unlike a syllable however, the form does not simply arrange by juxtaposition the matter of an animal so that the animal can carry out its characteristic activities. Rather, the form also provides to the animal those very characteristic activities, and acts as a dynamic and active principle which provides the reason for the natural movements of the animal in question. In his commentary on the *Metaphysics Z* passage, David Bostock emphasizes Aristotle's argument here by stating that "...what Aristotle means by the form of a living thing is not literally the arrangement of its elements, but its soul, and this is not to be regarded as subject to a similar flux [as the matter of a particular thing]. On the contrary, when Aristotle is thinking of the soul as a cause, then he takes it that it itself is the cause of all growth and development, and more generally the cause of every life-manifesting

¹² See the second book of the *De Anima* for Aristotle's discussion of form as it particularly relates to plants and animals.

activity.”¹³ Simply put, Aristotle is not a reductionist, and he states as much clearly when he asserts that “...further, *matter is relative* (ἔτι τῶν πρὸς τι ἢ ὅλη); for there is one matter for one form, and another for another.”¹⁴ No doubt the body of a natural thing is an important part of understanding what it is to be a certain kind of natural entity, but it will not be its defining feature since such a feature will not be reducible in explanation or in being to the matter/elements/parts that make up a natural thing.

This concept of the form of a natural entity being the necessary feature for a thing to be a natural, and specifically Aristotle’s claim that natural entities possess their form as an *internal* principle, also allows Aristotle to significantly limit that which exists φύσει. For one, this feature bars such entities that are accidental compounds, or ‘heaps,’ from being natural. But this limit also applies to artifacts, which for Aristotle do not possess an internal principle of motion and stability.¹⁵ This does not mean that Aristotle did not

¹³ David Bostock, *Aristotle: Metaphysics Z and H* (Oxford: Oxford University Press, 1994), 247. For Aristotle’s assertion that the form of a living thing is its soul see *De Anima* II 1-3.

¹⁴ ἔτι τῶν πρὸς τι ἢ ὅλη· ἄλλω γὰρ εἶδει ἄλλη ὅλη. *Physics* 194b8-9 (My emphasis).

¹⁵ The problem of identifying the difference between artifacts and natural entities in Aristotle is complex, especially as to how Aristotle believes that artifacts are not substances but natural entities are indeed substances. If artifacts are not substances, does Aristotle simply consider them to be ‘heaps?’ But ‘heaps’ are understood by Aristotle as disorganized matter which happens to be gathered together, and artifacts are organized in such a way as to accomplish a purpose, even if the organizer is something other in form from the artifact. Errol Katayama in his book *Aristotle on Artifacts* has argued that artifacts are not substances because “...their existence is ontologically depended on other beings (God, heavenly spheres, and natural substances) that are eternal actualities” (Katayama, *Aristotle on Artifacts*, 101). Furthermore, Katayama points out that Aristotle also believes that other groups of things in the world are non-substances, and he does not have a name for these kinds of non-substances, so the question of what artifacts are if they are not substances is answered by Katayama when he states that “Unfortunately, except for elements (which are said to be like heaps), Aristotle does not have names for all the subgroups of nonsubstantial *pragmata*. I can, therefore, only specify that artifacts belong to a group of nonsubstantial *pragmata* – that is, artifacts are simply *things*...” (Ibid, 108). I generally agree with Katayama’s conclusion here, but I do not have the room in this dissertation to investigate this complex and interesting topic sufficiently. All that I wish to point out here is that it is enough for the purposes of my argument to emphasize that one of the key differences that Aristotle makes in distinguishing between artifacts and natural entities is the fact that artifacts are created from artificers who have a different form than that which the artifact possesses and artifacts lack an active *dynamis* internal to them which can explain and which gives rise to their motions. This will be an important point to discuss when I consider the claim that the *polis* is a natural entity in the fourth chapter. For Katayama’s discussion of Aristotle’s theory of artifacts see Errol G Katayama, *Aristotle on Artifacts: A Metaphysical Puzzle* (New York: State University of New York Press, 1999).

believe that artifacts possess a form however. On the contrary, Aristotle recognizes that artifacts have a particular organization and motion, and correspondingly a form.

However, the form of an artifact is not a principle internal to the artifact. Rather the specific organization and therefore the form of a particular artifact is imposed upon it by an ‘alien’ craftsman, someone who possesses a different form than the artifact.¹⁶

Aristotle provides an example of this distinction when he states that “if you planted a bed and the rotting wood acquired the power of sending up a shoot, it would not be a bed that would come up, but *wood* which shows that the arrangement in accordance with the rules of art is merely an accidental attribute...”¹⁷ Aristotle is arguing here that if there is anything *natural* concerning the bed, it would be the wood which makes up the bed. And this would be the case here precisely because *nature* is an internal principle of motion, and the bed as an organized body is not the result of an internal force propelling the given material to form a bed. Rather the bed is the result of a craftsman imposing a certain organization, and therefore a certain form, on the relevant materials. The wood of the bed on the other hand is in fact the result of an internal principle, and it would be that which grows if the bed were planted (if anything were to grow at all). So the point here is not to say that natural bodies are the only kind of organized bodies, but rather that natural entities possess their principle of organization and motion, and therefore their form, *internally*. Aristotle explicitly states this when he argues that “art is a principle and form of what is generated, but in another; but natural change is located in the thing

¹⁶ ‘Alien’ is here meant simply to illustrate the difference in the form of the artifact that is being produced and the form of the craftsman who is producing the artifact. Natural production for Aristotle does not have this difference, and thus the generation of a new individual of a natural kind is the result of something which possesses the same form as the individual who has been produced by it.

¹⁷ εἴ τις κατορύξειε κλίνην καὶ λάβοι δύναμιν ἢ σηπεδὸν ὥστε ἀνεῖναι βλαστὸν, οὐκ ἂν γενέσθαι κλίνην ἀλλὰ ξύλον, ὡς τὸ μὲν κατὰ συμβεβηκὸς ὑπάρχον... *Physics* II 1 193a13-15.

itself.”¹⁸ Clearly, for Aristotle artifacts have their form and principle imposed upon them through the productive activity of a craftsman.¹⁹ The form of an artifact also lacks the active *dynamis* which natural entities possess and is given to the artifact through the activity of an artificer whose form is other than the form possessed by the artifact. These facts ground Aristotle’s distinction between artifacts and natural entities.

In general then, Aristotle believes that the world as we experience it is made up of entities which exist φύσει and entities which exist for other reasons. Those that exist φύσει possess an internal principle which not only allows us to understand the characteristic features and motions that that entity possesses, but also in part allows us to distinguish that entity from artifacts. Artifacts on the other hand do not possess such a principle internally *qua* artifact, and, if they possess any internal principle at all, they do so on account of the material that they are made from. Finally, the form of a natural entity cannot be reduced to the material which makes up that entity, but rather the material is relativized by Aristotle to the specific form of a natural entity. And it is this feature of Aristotle’s concept of nature that leads him to declare that the form is “...the nature more (μᾶλλον) than the matter is.”²⁰ Crucially, this is not to say that the matter of a natural body is to be ignored altogether when considering natural entities, but it is indeed to say that the matter of a natural entity is relativized according to the form of that entity. And it is this point that leads Aristotle to claim that nature is to be equated with the form of a natural entity more so than the matter which makes it up.

¹⁸ *Generation of Animals*. II 1 735a2-3.

¹⁹ By productive activity, I mean only that branch of activity which is identified by Aristotle as involving artistic production. This is generally taken by him to mean knowledge of crafts, and more generally the knowledge and action involved in producing or making some artifact. For example, agriculture is considered to be productive and thus an artistic endeavor for Aristotle. I will be discussing this distinction between the sciences briefly. For Aristotle’s discussion of this see *Nicomachean Ethics* VI 1140a.

²⁰ καὶ μᾶλλον αὐτῆ φύσις τῆς ὕλης· *Physics* 193b6-7.

A natural entity then defined as possessing a form which is actualized in the matter and which is an internal principle of motion forms the heart of Aristotle's doctrine of substance (οὐσία).²¹ Regarding substance Aristotle states that "Among substances are by general consent reckoned bodies and especially natural bodies; for they are the principles of all other bodies. Of natural bodies some have life in them, others not; by life we mean self-nutrition and growth and decay. It follows that every natural body which has life in it is a substance in the sense of a composite."²² Natural entities therefore are the basic ontological entities for Aristotle, and it is these which he seems to call substances more than anything else.²³ This definition then of a natural entity provides the groundwork for Aristotle to show in what way the natural philosopher should go about studying nature, and importantly how one should approach natural explanation.

b) Natural Explanation and the Four Causes²⁴

²¹ I will discuss this issue in more detail in the third and fourth chapter of this dissertation. It is enough at this point for my purposes to simply point out what a substance is in its most basic sense for Aristotle.

²² οὐσίαι δὲ μάλιστα εἶναι δοκοῦσι τὰ σώματα, καὶ τούτων τὰ φυσικά· ταῦτα γὰρ τῶν ἄλλων ἀρχαί. τῶν δὲ φυσικῶν τὰ μὲν ἔχει ζωὴν, τὰ δ' οὐκ ἔχει· ζωὴν δὲ λέγομεν τὴν δι' αὐτοῦ τροφήν τε καὶ αὔξησιν καὶ φθίσιν. ὥστε πᾶν σῶμα φυσικὸν μετέχον ζωῆς οὐσία ἂν εἴη, οὐσία δ' οὕτως ὡς συνθέτη. *De Anima* II 1 412a11-16.

²³ Aristotle certainly believes that the term substance applies to more than just natural composite entities. In this same passage he lists matter, form, and the composite as substances. He eventually takes the form of the natural entity to be the soul of that entity, and thus states that the soul is a substance in a sense. Be that as it may, it is still safe to say at this point that Aristotle takes as fundamental that natural entities as such are substances.

²⁴ The concept of natural explanation, and how Aristotle understands the nature of explanation as well as its goal, truly requires more clarification and discussion than I have room to fully explore within this dissertation. Generally, one of the overriding issues concerning explanation in Aristotle is the relationship between the theory of the syllogism as it is laid out in the *Organon* and explanation as it is practiced by Aristotle in the natural and biological works. Briefly, Aristotle seems to argue in the *Posterior Analytics* that scientific knowledge consists in an organized body of systematically arranged information. This organized information is attained through systematic deductions which explain the 'why' something is the case, rather than just merely the 'what.' Details aside, if one were to take Aristotle at his word in the *Posterior Analytics*, one would expect to find a series of Euclidean-like demonstrations in his scientific works or at least something close to such a series. And yet, one fails to find even one syllogistic deduction in those works. What is to be made of this is at the heart of the controversy regarding scientific explanation in Aristotle. On the one hand, there are those who argue that there is indeed a unity here. Lennox for instance argues that the kind of unqualified understanding demanded of scientific explanation in the *Organon* is exemplified at the least in *Parts of Animals*. G. E. R. Lloyd, on the other hand, argues that it is

At this point, we have a good understanding of what Aristotle means when he is discussing that which exists φύσει and correspondingly that which the natural philosopher studies. The question now seems to be how to understand the goal of explanation within natural science, and specifically how a natural explanation proceeds and what questions it attempts to answer. To start, it is relevant to note that Aristotle argues that natural science, since it studies those entities which have an internal principle, is a theoretical science, as opposed to a productive or practical science. Aristotle explains this by stating that:

...since natural science (ἡ φυσικὴ ἐπιστήμη), like other sciences, confines itself to one class of beings, i.e. to that sort of substance (οὐσίαν) which has the principle (ἡ ἀρχή) of its motion and stability present in itself, evidently [natural science] is neither practical (πρακτική) nor productive (ποιητική). For the principle of production is in the producer – it is either reason or art or some capacity, while the principle of action is in the doer – viz. choice, for that which is done and that which is chosen are the same. Therefore, if all thought (διάνοια) is either practical or productive or theoretical, natural science must be theoretical, but it will theorize about such being as admits of being moved, and only about that kind of substance (οὐσίαν) which in respect of its formula (κατὰ τὸν λόγον) is for the most part (ἐπὶ τὸ πολὺ) not separable from matter.²⁵

a mistake, one which is common among those who wish to over-systematize Aristotle, to assume that Aristotle simply had one theory of demonstration. Rather if one were to examine just how Aristotle uses ἀπόδειξις in his writings as a whole, one will find that its meaning varies somewhat. This in turn leads one, according to Lloyd, to recognize that there are several different kinds of demonstrations for Aristotle, which in turn are determined by the specific subject matter under consideration and the nature of the inquiry undertaken. Given this, Lloyd argues that one should not look to the *Organon* for a theory of demonstration that is universally applicable for all subject matters, even the scientific works. Whichever way one takes the applicability of Aristotle's theory of demonstration then will influence how one understands the goal of natural explanation in the natural works of Aristotle. Having said this however, it is not my intention to defend a particular position in this matter for this dissertation. I simply intend to focus on how Aristotle understands teleological explanation in the context of the passages I am considering in this dissertation. However natural explanation is to be connected with the theory of demonstration then is not relevant to the goal of this chapter and dissertation. I will therefore leave aside this important issue in order to accomplish the task that I am taking on for this dissertation. See James Lennox, "Form, Essence, and Explanation in Aristotle's Biology," in *A Companion to Aristotle*, ed. Georgios Anagnostopoulos (Sussex: Blackwell, 2009), 348-368; G. E. R. Lloyd, *Aristotelian Explorations* (Cambridge: Cambridge University Press, 1996), 7-38.

²⁵ ἐπεὶ δὲ καὶ ἡ φυσικὴ ἐπιστήμη τυγχάνει οὕσα περὶ γένους τι τοῦ ὄντος (περὶ γὰρ τὴν τοιαύτην ἐστὶν οὐσίαν ἐν ἣ ἡ ἀρχὴ τῆς κινήσεως καὶ στάσεως ἐν αὐτῇ), δῆλον ὅτι οὔτε πρακτικὴ ἐστὶν οὔτε ποιητικὴ (τῶν μὲν γὰρ ποιητῶν ἐν τῷ ποιῶντι ἡ ἀρχή, ἢ νοῦς ἢ τέχνη ἢ δύναμις τις, τῶν δὲ πρακτῶν ἐν τῷ πράττοντι, ἢ

By identifying natural science as a theoretical science, Aristotle is arguing that natural science possesses a few essential characteristics which are common among all of the theoretical sciences, but which marks such sciences off from other forms of knowing.

One of these characteristics is that a theoretical science is first and foremost any branch of knowledge which is capable of attaining necessary and demonstrative knowledge.²⁶

The goal therefore of natural science would presumably be to attain certainty regarding those entities which he considers to be natural. A second characteristic of any theoretical

προαίρεσις· τὸ αὐτὸ γὰρ τὸ πρακτὸν καὶ τὸ προαιρετὸν), ὥστε εἰ πᾶσα δῖανοια ἢ πρακτικὴ ἢ ποιητικὴ ἢ θεωρητικὴ, ἢ φυσικὴ θεωρητικὴ τις ἂν εἴη, ἀλλὰ θεωρητικὴ περὶ τοιοῦτον ὃν ὃ ἐστὶ δυνατὸν κινεῖσθαι, καὶ περὶ οὐσίαν τὴν κατὰ τὸν λόγον ὡς ἐπὶ τὸ πολὺ, οὐ χωριστὴν μόνον. *Metaphysics* E 1 1025b18-28. The topic of substance in Aristotle is an enormously difficult task in itself, particularly when one considers the sheer number of mutually inconsistent interpretations of *Metaphysics Z*. At this point though, it is enough to simply point out that Aristotle understands substances as the fundamental beings inhabiting the world. Natural entities which possess their corresponding internal principles then are the paradigmatic substances for Aristotle. I will explore this concept of natural substances more both in this chapter as well as in the fourth chapter. However, it needs to be said that Aristotle's theory of substances is of such importance that it will be referred to throughout this dissertation.

²⁶ The fact that necessity attained through syllogistic deductions is a defining feature of theoretical science for Aristotle poses a bit of a problem for him, one which he seems to explicitly recognize. In short, the issue with understanding natural science as theoretical becomes problematic due to the obvious fact of experience that nature changes and sometimes natural entities fail to actualize themselves in accordance with their nature and thus fail to achieve their τέλος. The fact that natural entities fail to invariably achieve their τέλος, and that sometimes deformities can result, seems to speak against the claim that absolute certainty can be achieved in natural science since the very objects of natural science do not necessarily and always act and produce the same things. As W. K. C. Guthrie states, the science of nature "may sometimes seem to be admitted only on sufferance to the inner sanctum of the theoretical sciences. It is theoretical...but concerned with what admits of change, whereas in the strict logic of *Posterior Analytics* (71b9-12, 73a21) the object of knowledge in the full sense cannot be otherwise than it is" (W. K. C. Guthrie, *Aristotle: An Encounter*, 131). Aristotle recognizes this however and first provides a thorough and interesting explanation of the 'accidental' (κατὰ συμβεβηκός), which Aristotle associates with matter, and which is the reason behind the rare and spontaneous events that interrupt the regularity of nature. Crucially, that which is accidental cannot be known through a science. Closely connected moreover to Aristotle's concept of the accidental is how Aristotle understands lucky (τύχη) and/or spontaneous (αὐτόματον) events, which in themselves are also barred from being the study of science due to their being unknowable except in a very qualified sense. Secondly, Aristotle also seems to allow knowledge to be attainable even of events which occur 'for the most part' (ἐπὶ τὸ πολὺ). In general, natural science is able to attain certain knowledge then primarily due to Aristotle's emphasis on the general patterns of nature, rather than any particular exceptions, and also argues that exceptions are such precisely because of these knowable patterns. As a final point, Aristotle's distinction between a spontaneous event and an ordered one is crucially made through Aristotle's understanding of how natural events are teleological. For Guthrie's discussion of Aristotle's account of the theoretical sciences and the science of nature see W. K. C. Guthrie, *Aristotle: An Encounter* (Cambridge: Cambridge University Press, 1981).

science, and therefore of natural science, is that they do not concern themselves with human activity. It is this characteristic especially then that Aristotle uses to distinguish theoretical sciences from the practical and productive sciences. To clarify, practical sciences, which Aristotle identifies with Politics and its subordinate branch Ethics, are indeed concerned with knowledge of a certain sort as defined by the first principles of the science as such, but in addition they are also concerned with *using* that knowledge, by making one's own life and the life of the community better through certain actions of the right sort. And since such sciences are concerned with particular actions, and thus with a potentially infinite amount of situations that the practical knower must take into consideration, Aristotle argues that absolutely *certain* knowledge cannot be the goal of the practical knower since it is impossible for her to achieve.²⁷ The theoretical sciences on the other hand are not concerned with particular actions, but are rather aimed at the attainment of knowledge regarding independent truth, and correspondingly the theoretical sciences' final aim is to *know*, not to act. In addition to natural science then, Aristotle also picks out both mathematics (μαθηματική) as well as first philosophy/theology (φιλοσοφία πρώτη, θεολογική) as theoretical sciences.²⁸ And that which distinguishes, according to Aristotle, the three theoretical sciences does not consist in the goal of these sciences as such, which is simply to attain knowledge of reality in one form or another, nor in their goal to attain certainty in their respective subject areas, but instead in what it is precisely that they study. On the one hand, first philosophy/theology studies being in itself, which might, depending on one's interpretation of Aristotle's *Metaphysics*, consist

²⁷ *Nicomachean Ethics* I 3 1094b15-1095a

²⁸ *Metaphysics* K 7 1064b1-2.

in the study of that being which is pure act: namely the unmoved mover.²⁹ The subject matter of mathematics on the other hand is, perhaps surprisingly, closely associated for Aristotle with the subject of natural science. Regarding what it is that mathematics studies, Aristotle states that:

The next point to consider is how the mathematician differs from the student of nature; for natural bodies contain surfaces, volumes, lines and points, and these are the subject-matter of mathematics... Now the mathematician, though he too treats of these things does not treat them as the limits of a natural body; nor does he consider the attributes indicated as the attributes of such bodies. That is why he separates them, for in thought they are separable from change and it makes no difference nor does any falsity result if they are separated.³⁰

The difference then between mathematics and natural science is found in the fact that the natural philosopher must focus on natural things which must be embodied in matter and

²⁹ The actual nature of first philosophy/theology according Aristotle is far from clear, and it has demanded a great deal of attention from the vast majority of Aristotle's commentators. Regarding what it is that first philosophy/theology studies, Jonathan Barnes claims that Aristotle actually provides at least three answers. At *Metaphysics* A 2 982b 8 Aristotle states that "Judged by all the tests we have mentioned, then, the name in question falls to the same science; this must be a science that investigates the first principles and causes..." (ἐξ ἀπάντων ὄντων τῶν εἰρημένων ἐπὶ τὴν θύτην ἐπιστήμην πίπτει τὸ ζητούμενον ὄνομα· δεῖ γὰρ αὐτὴν τῶν πρώτων ἀρχῶν καὶ αἰτιῶν εἶναι θεωρητικὴν...). At *Metaphysics* Γ 1 1003a21-22 he states that "There is a science which investigates being as being and the attributes which belong to this in virtue of its own nature" (Ἔστιν ἐπιστήμη τις ἣ θεωρεῖ τὸ ὄν ἢ ὄν καὶ τὰ τούτῳ ὑπάρχοντα καθ'αὐτό). And at *Metaphysics* E 1 1026a29-30 he states that "We answer that if there is no substance other than those which are formed by nature, natural science will be the first science; but if there is an immovable substance, the science of this must be prior and must be first philosophy, and universal in this way, because it is first. And it will belong to this to consider being *qua* being – both what it is and the attributes which belong to it *qua* being" (εἰ μὲν ὄν μὴ ἔστι τις ἕτέρα οὐσία παρὰ τὰς φύσει συνσηκῆς, ἢ φυσικὴ ἂν εἴη πρώτη ἐπιστήμη· εἰ δ' ἔστι τις οὐσία ἀκίνητος, αὕτη προτέρα καὶ φιλοσοφία πρώτη, καὶ καθόλου οὕτως ὅτι πρώτη· καὶ περὶ τοῦ ὄντος ἢ ὄν ταύτης ἂν εἴη θεωρῆσαι, καὶ τί ἔστι καὶ τί ἔστι καὶ τὰ ὑπάρχοντα ἢ ὄν.) Which one of these descriptions of the science is the appropriate one then, or whether they all are appropriate, is not made entirely clear by Aristotle. Finally, it is also important to point out that Aristotle does not remain consistent on what he actually calls this science. Many of the references to this science simply call it φιλοσοφία πρώτη, however at *Metaphysics* K 7 1064b1-2 Aristotle calls it θεολογική when he states that "Evidently, then, there are three kinds of theoretical sciences – natural science, mathematics, theology" (δῆλον τοίνυν ὅτι τρία γένη τῶν θεωρητικῶν ἐπιστημῶν ἔστι, φυσικὴ, μαθηματικὴ, θεολογική). I am going to use both terms interchangeably throughout the dissertation. For Barnes' discussion of the nature of *Metaphysics* for Aristotle see Jonathan Barnes, "Metaphysics," in *The Cambridge Companion to Aristotle*, ed. Jonathan Barnes (Cambridge: Cambridge University Press, 1995), 66-109.

³⁰ μετὰ τοῦτο θεωρητέον τίνι διαφέρει ὁ μαθηματικὸς τοῦ φυσικοῦ (καὶ γὰρ ἐπίπεδα καὶ στερεὰ ἔχει τὰ φυσικὰ σώματα καὶ μήκη καὶ στιγμάς, περὶ ὧν σκοπεῖ ὁ μαθηματικὸς... περὶ τούτων μὲν ὄντων πραγματεύεται καὶ ὁ μαθηματικὸς, ἀλλ' οὐχ ἢ φυσικοῦ σώματος θέρας ἕκαστον· οὐδὲ τὰ συμβεβηκότα θεωρεῖ ἢ τοιοῦτοις οὐσι συμβέβηκεν· διὸ καὶ χωρίζεται· χωριστὰ γὰρ τῇ νοήσει κινήσεώς ἐστι, καὶ οὐδὲν διαφέρει, οὐδὲ γίνεταί ψευδὸς χωριζόντων. *Physics* II 2 193b23-35 (Lear Translation).

thus must be studied in so far as they have a body.³¹ The mathematician on the other hand studies the quantitative properties of physical bodies, but studies them as separable and in no sense as attached to a specific body. Both of these subjects however are capable of attaining certain knowledge and their goal is solely to attain the knowledge of what they are studying. The difference is just that mathematics studies the properties of natural bodies in so far as the properties are separable, and the other studies the properties of natural bodies in so far as they are embodied.

One final point that needs to be mentioned at this stage regarding the nature of Aristotle's philosophy of science is his claim that each science must be independent of every other one. What this means is that for Aristotle each branch of knowledge must possess its own first principles which thereby serve as the starting point of the series of demonstrations that each theoretical science seeks to attain. Regarding this point, Aristotle states that "...you cannot prove anything by crossing from another kind...(Nor can you prove by any other science what pertains to a different science, except when they are so related to one another that the one falls under the other – as e.g. optics is related to geometry and harmonics to arithmetic)."³² The point that Aristotle is making here is that, though there certainly are sub-sciences of other sciences (Ethics::Politics,

³¹ This point is not inconsistent with the earlier claim that matter is relative to form. Although it is true that for Aristotle the matter of a thing is knowable precisely through the form, it nevertheless remains true that a natural form must be embodied. In order to be clear on this, it is important to keep in mind that the form of a living thing for Aristotle is also an active *dynamis* which provides an individual entity its developmental and characteristic activity. But these activities require a certain kind of body to be actualized, and thus a natural explanation must refer to the body and its parts in order to understand the kind of activities for which a natural entity's form is responsible. This insight is at the heart of Aristotle's claim that the soul, with perhaps one exception, does not survive the death of the body. For Aristotle's discussion of this see *De Anima* II 2 413b9-414a4.

³² Οὐκ ἄρα ἔστιν ἐξ ἄλλου γένους μεταβάντα δεῖξαι... οὐδ' ἄλλη ἐπιστήμη τὸ ἐτέρας, ἀλλ' ἢ ὅσα οὕτως ἔχει πρὸς ἄλληλα ὥστ' εἶναι θάτερον ὑπὸ θάτερον, οἷον τὰ ὀπτικά πρὸς γεωμετρίαν καὶ τὰ ἁρμονικά πρὸς ἀριθμητικήν. *Posterior Analytics* I 7 75a38-75b17.

Optics::Geometry) and thus an interrelation that occurs among some of the sciences, there is a strict independence to be sought after for each of the architectonic sciences. This move is made by Aristotle so as to avoid Plato's claim that there is a theory of everything that is in turn derivable from the same set of first principles and which leads to the reality of a unified super-science.³³ Aristotle does not believe that this sort of thing is possible, and instead argues for a kind of autonomy of the sciences. What this implies for the natural scientist then is that a complete explanation of a natural entity must be done in accordance with the principles exclusive to natural science as such. Thus, in order to attain knowledge of the natural world and thus possess a complete explanation which answers the why of something, one must do so within the principles and thus limitations of natural science alone.

It is now possible for us to examine how it is that the natural scientist actually goes about attaining a complete explanation of a natural entity. A complete explanation in natural science then aims to grasp the why of those things that are studied by the natural scientist. And to explain the why of something in turn is to explain the primary cause (*αἴτιον*) of something, which for Aristotle is finally to provide an answer to four distinct ways in which the natural scientist actually explains the primary cause of some natural entity.³⁴ These four ways in which one provides an explanation of something

³³ *Posterior Analytics* I 7, I 32.

³⁴ In Greek usage, the term *αἴτιον* is related to the adjective *αἴτιος*, which describes an object as being responsible or blameworthy for something. This is a key point to understanding Aristotle's conception of causality. A cause for Aristotle is not what modern scientists and philosophers generally take it to be. Rather, it is best to understand *αἴτιον* as representing something that is responsible for the thing that is being explained. Understanding *αἴτιον* in this way then helps one to see more clearly how it is that Aristotle seeks to answer the why of something. If one were to ask why the rabbit has teeth shaped in such and such a way, one is more than likely not asking for a set of previous causes which lead to the shape of the rabbits teeth, but rather is searching for an answer that refers to the purpose of the rabbit possessing the kind of teeth that it does. Of course, for Aristotle the purpose or end of something is part of a complete explanation, and thus a valid answer, although perhaps not a complete one, in natural explanation.

have been subsequently identified as the ‘Four Causes,’ and Aristotle defines each cause by asserting that “...some are cause as *substratum* (e.g. the parts), others as *essence* (the whole, the synthesis, and the form). The semen, the physician, the man who has deliberated, and in general the agent, are all *sources of change* or of rest. The remainder are causes as the *end* and the good of the other things; or that for the sake of which other things are, is naturally the best and the end of the other things...”³⁵ The four causes here identified by Aristotle then are vital for one to attain a complete explanation within natural science.

The first of these causes would refer to the matter (ὕλη) of which a thing is composed. This is what Aristotle calls the substratum (ὕποκειμενον), which is that underlying matter which makes up a thing and which serves as the subject of change. Broadly speaking then, the material cause of something is for Aristotle the cause out of which (τὸ ἐξ οὗ αἰτία), which includes letters, parts of wholes, and arguments from which the conclusion is derived.³⁶ Thus, to refer to an earlier example, the matter of a syllable would be the letters out of which the syllable is formed. Aristotle also states that it would be the bronze of a statue which would be the statue’s substratum and its matter.³⁷ For living things, it would be the parts which make up the body of a living thing; namely its organs and, further down the scale, the homogeneous material that make up these organs.³⁸ Accordingly, to explain something in terms of what makes up that thing would

³⁵ ἅπαντα δὲ τὰ νῦν εἰρημένα αἰτία εἰς τέτταρας τρόπους πίπτει τοὺς φανερωτάτους...τούτων δὲ τὰ μὲν ὡς τὸ ὑποκείμενον, οἷον τὰ μέρη, τὰ δὲ ὡς τὸ τί ἦν εἶναι, τό τε ὅλον καὶ ἡ σύνθεσις καὶ τὸ εἶδος, τὸ δὲ σπέρμα καὶ ὁ ἰατρὸς καὶ ὁ βουλευσας καὶ ὄλως τὸ ποιῶν, πάντα ὅθεν ἡ ἀρχὴ τῆς μεταβολῆς ἢ στάσεως. τὰ δ’ ὡς τὸ τέλος καὶ τὰ γαθὸν τῶν ἄλλων· τὸ γὰρ οὗ ἕνεκα βέλτιστον καὶ τέλος τῶν ἄλλων ἐθέλει εἶναι...
Metaphysics Δ 2 1013b17-26.

³⁶ *Physics* II 3 195a16-21.

³⁷ *Physics* II 3 194b24-26.

³⁸ Aristotle calls matter which when divided is divided into more of the same, such as flesh or water, homogeneous. When one divides water for instance, one gets more water and therefore water is

be to explain it according to its matter (letters, premises, physical materials such as bronze, simple organic parts, organs etc...) and thus one would be providing the material cause of a thing. But, as we have already seen, Aristotle does not believe that the material cause by itself needs no further explanation. Rather, the matter of a thing, at least for living things, is relative to the kind of thing that it is.³⁹ Jonathan Lear makes this point by saying that "...while human lungs, liver, hands, etc., are the matter of a human being, a human is not a mere heap of liver and lungs. He is liver, lungs, etc., organized in such a way: there is thus required...a principle responsible for organizing human organs and limbs into human form."⁴⁰ And this principle of organizing the matter of something is not only, as we have already seen, the basis for Aristotle's claim that a natural entity cannot be explained through reducing it to the matter of which it is composed, but it also, in order to provide a complete explanation of a certain natural kind, crucially points us in the direction of that which accounts for a thing's motions and its particular arrangement.⁴¹ In the most general sense then, matter represents a substratum. And specifically, the matter of something can refer to a variety of things which make up a certain something. The material cause then represents a part of a complete natural explanation, and points to that out of which a thing is composed. In the natural world, this would be to point to the body and parts of a natural kind.

homogeneous. On the other hand, matter which when divided does not make more of the thing which is divided, is called by him heterogeneous. Heterogeneous parts would include hands or arms. For Aristotle's discussion of this see *GC. I 1 314a20*.

³⁹ See the discussion on natural explanation provided earlier.

⁴⁰ Lear, *Aristotle: The Desire to Understand*, 21.

⁴¹ As we have also briefly discussed, this points us to the form of a thing. It is correspondingly the form of an entity which must be the focus of natural explanation for the natural scientist. The matter of something accordingly will not provide a complete explanation of the entity as such.

But, as we have already seen, the body and parts of a natural kind are to be understood in light of their organizing inner principle since it is this principle which specifically determines and organizes the relevant matter of a natural entity. The necessity to explain the organization of something then leads Aristotle to identify the second of the four causes, the formal cause (τὸ τί ἦν εἶναι). Aristotle describes this cause by stating that “According to another [manner of speaking], the form or model is a cause; this is the formula of what it is to be some thing, and its kinds – for example, the cause of the octave is the ratio of two to one, and more generally number – and the parts which come into the account.”⁴² The formal cause then points to the nature of a thing, and more so than its matter, for it is precisely because of the form of something that we can see why it has the matter that it does. It is, correspondingly, the form of some such thing which makes something knowable, and which makes sense of the activities that that thing is carrying out. To give the formal cause of something then would be to account for its essence, which is its form. This form in turn is the inner principle of motion and stability which distinguishes natural entities from artificial entities. And once one has identified this, one can then proceed to understand the bodily parts of a particular kind, and thus the matter of that kind, since it is precisely the form of a thing which gives it its intelligibility.

The third cause mentioned by Aristotle in the above passage would be what has been commonly called the efficient cause; that which is the principle of change (ὄθεν ἢ ἀρχὴ τῆς κινήσεως). This αἴτιον is understood by Aristotle as being that which

⁴²ἄλλον δὲ τὸ εἶδος καὶ τὸ παράδειγμα, τοῦτο δ' ἐστὶν ὁ λόγος ὁ τοῦ τί ἦν εἶναι καὶ τὰ τούτου γένη (οἷον τοῦ διὰ πασσῶν τὰ δύο πρὸς ἓν, καὶ ὅλως ὁ ἀριθμὸς) καὶ τὰ μέρη τὰ ἐν τῷ λόγῳ. *Physics* II 3 194b26-29. (translation Monte Ransom Johnson).

serves to explain an actualizing of a potentiality in a thing that is being changed.⁴³ To use one of Aristotle's favorite examples, namely a house being built, the builder who is building the house would constitute the efficient cause of the activity in so far as she is the source of the change that is currently underway. The change that is occurring within the patient is moreover an actualization of a potentiality, namely the actualizing of a house which is potentially there within the materials that are being operated upon. What is being actualized in this process is importantly not just any thing whatsoever, but that which the thing that is being acted upon possesses potentially. Aristotle states then that the moving cause must be understood as that which possesses a form which is being actualized within the thing being acted upon, and even more specifically the form itself. Aristotle makes this claim in the third book of the *Physics* by arguing that "The mover will always transmit a form, either a 'this' or such or so much, which, when it moves, will be the principle and cause of the motion, e.g. the actual man begets man from what is potentially man."⁴⁴ Regarding the production of a house, the form that is being actualized in the material, and thus the organization and structure that is coming to be in the wood that will make up the house, is found within the craftsman who is in the process of building the house, and in an important sense the form of the house within the craftsman is the actual efficient cause of the house itself.⁴⁵ And as far as natural kinds are concerned, the thing which produces a new individual through reproduction possesses the same form as the new thing. In other words, the parent is the same in kind and thus in

⁴³ The actualizing of a potentiality is how Aristotle defines change. See *Physics* III 1.

⁴⁴ εἶδος δὲ αἰεὶ οἴσεται τι τὸ κινουῦν, ἥτοι τόδε ἢ τοσόνδε, ὃ ἔσται ἀρχὴ καὶ αἴτιον τῆς κινήσεως, ὅταν κινή, οἷον ὁ ἐντελεχεῖα ἄνθρωπος ποιεῖ ἐκ τοῦ δυνάμει ὄντος ἀνθρώπου ἄνθρωπον. *Physics* III 2 202a9-11.

⁴⁵ Jonathan Lear has a good discussion of how the form, acting as a force for its own realization, is responsible for the production of artifacts. For his discussion of this see Lear, *Aristotle: The Desire to Understand*, 29-35.

form as the offspring, and the change that takes place is explained through the same form. Thus, the motion which is underway in reproduction is an internal motion in so far as the moving cause possesses the same form as that which is being produced. Essentially, Aristotle believes that the fully actualized form in the parent is responsible for the production of the offspring, and thus the form of the kind under consideration is ultimately responsible for the production of the new individual of the same kind.

The actual development of the newly produced offspring into a fully-fledged adult in its own right, as well as the characteristic activities of an adult member of a natural kind, also demands an additional explanation which is other than the one's provided by the previous three causes. For although the previous causes do explain the characteristic activities of the entity in question, there is still a need to explain the end toward which these activities aim. In other words, Aristotle believes that it is necessary to provide an explanation of the goal of the activities, what the entity is attempting to achieve when carrying out its characteristic motions. Aristotle recognizes this need and identifies the fourth cause in part as a way of explaining this sort of development. This is what has been called the final cause (τὸ οὐ ἔνεκα). This cause in its simplest version points to the 'purpose' or 'end' towards which a movement is directed. So, if we take a juvenile offspring of a particular animal, Aristotle believes that we must explain why it is that it grows the way that it does. And this is explained by him in turn through the idea that the form of that thing in a sense exercises a kind of active *dynamis* which directs the movements and growth of the young individual in such a way so as to ensure, given the right external conditions, that it attains the full realization of the form that it possesses. But this cause does not simply explain the genetic development of juvenile organisms in

nature, it also explains the motions of adult members of a kind as well. For since the form of an individual thing provides it with its nature, the motions of that thing will be directed in such a way as to actualize the nature of the form that it possesses. And this in turn implies that the motions of an individual organism are purposeful and thus end-directed in a very important sense; namely they are attempts to fully attain the nature that they possess as a form. It follows from this then that, much like the efficient cause, the final cause seems to be reducible to the formal cause. However, the goal-directed movements that are necessarily a part of nature in turn allow us to recognize the form and thus the ‘nature’ of a natural entity. Thus in the *Meteorology*, Aristotle makes it quite clear that the end or function of a thing is the first principle of explaining a thing: “What a thing is is always determined by its function: a thing really is itself when it can perform its function; an eye, for instance, when it can see. When a thing cannot do so it is that thing only in name, like a dead eye or one made of stone, just as a wooden saw is no more a saw than one in a picture.”⁴⁶ So in an important sense the ‘for the sake of which’ allows one to identify the form and subsequently the cause which brought a particular individual of that kind about.

The fact that the characteristic activities of a natural entity define what they truly are also leads us to an important consideration when discussing Aristotelian teleology, namely that goal directed activities are ontologically real for Aristotle. Thus Aristotle would deny the modern tendency to view teleological explanations as merely an unnecessary addition placed upon mechanistic explanations.⁴⁷ This happens it is said

⁴⁶ τὰ μὲν γὰρ δυνάμενα ποιεῖν τὸ αὐτῶν ἔργον ἀληθῶς ἐστὶν ἕκαστον, οἷον ὀφθαλμὸς εἰ ὄρᾳ, τὸ δὲ μὴ δυνάμενον ὁμωνύμως, οἷον ὁ τεθνεὼς ἢ ὁ λίθινος· οὐδὲ γὰρ πρίων ὁ ξύλινος, ἀλλ’ ἢ ὡς εἰκῶν. οὕτω τοίνυν καὶ σάρξ· *Meteorology* IV 12 390a10-14.

⁴⁷ Monte Ransom Johnson, *Aristotle on Teleology* (Oxford: Clarendon Press, 2005), 182-188.

either necessarily, as a heuristic that cannot be avoided by the human mind, or as simply a tendency to anthropomorphize nature.⁴⁸ However, Aristotle does not see teleological explanation in this way. Rather, Aristotle believes that it is necessary to first understand the goal or end towards which a specific natural motion is striving, before one can account for the motion itself. Nature for Aristotle is fundamentally goal oriented, and this serves as a starting point for attaining any explanation whatsoever.⁴⁹ Aristotle states this quite clearly in *Parts of Animals* when he argues that:

⁴⁸ An example of teleological explanations being a necessary heuristic for interpreting nature as human beings experience it, but not actually a description of real causes, is clearly found in Kant. According to Johnson, Kant argued that “Final causes are held to be merely regulative concepts of judgment, and are not constitutive of the entities being explained...since it is a limitation of human knowledge that we cannot explain organisms on the basis of mechanism alone, we are forced to invoke final causes and teleological explanations” (Johnson, 182). An example of the argument which holds that teleological explanation merely anthropomorphize nature would be Lucretius, who states in his *On the Nature of the Universe* that “Indeed the earth is now and has been always devoid entirely of any kind of feeling. The reason why it brings forth many things in many ways into the light of sun is that it holds a multitude of atoms. If anyone decides to call the sea Neptune, and corn Ceres, and misuse the name of Bacchus rather than give grape juice its proper title, let us agree that he can call the earth mother of the gods, on this condition – that he refuses to pollute his mind with the foul poison of religion” (Lucretius, *On the Nature of the Universe*, 54). For the views of the atomists such as Lucretius see Lucretius, *On the Nature of the Universe*, trans. Ronald Melville (Oxford: Oxford University Press, 1999).

⁴⁹ The claim that for Aristotle nature is fundamentally goal oriented, and that an explanation of a thing involves the explanation of what a thing is striving to achieve, and that it is impossible to conceive of purely mechanistic explanation that could explain all of the motions of natural entities, is for the most part the common and overwhelmingly agreed upon interpretation of Aristotle’s account of nature and natural explanation. There are however exceptions to this interpretation of Aristotle’s account of explanation. Martha Nussbaum for instance argues that the elements do not have a teleological explanation for their motions, but merely a (presumably) mechanical one. Nussbaum states that “...the idea that [Aristotle thinks] natural phenomena...are best explained teleologically is a misconception that [Aristotle tries] frequently to avoid...To explain the downward motion of a stone, we need mention only its own matter or an external source of change that constrains it; changes of natural bodies...are regularly explained with reference to underlying matter alone...” (Nussbaum, *Aristotle’s De Motu Animalium*, 94). And David Charles argues that “...there is no reason to accept that Aristotle thought that it was irrational to believe that a complete physical account of the relevant kind could be given: i.e. an account stated in *independent* physical terms of conditions sufficient for the occurrence of an organism of kind K...” (Charles, “Aristotle on Hypothetical Necessity and Irreducibility,” 5). A slightly different approach to teleological explanation in Aristotle is to hold the position that Aristotle’s use of teleological explanations is due to his recognition that natural explanations cannot be complete when one reduces the natural objects to the mere elements which make up the object in question. Allan Gotthelf holds this position and even goes so far as to state that “There is nothing in the fundamentals of Aristotle’s philosophy, and nothing in his philosophical or scientific method, which would prohibit the adoption of a reducibility thesis, should the scientific evidence be judged to warrant it” (Gotthelf, “Aristotle’s Conception of Final Causality,” 229). My view on the matter is that it is incomprehensible to state that Aristotle believed that a materialistic reductionist theory was possible in *principle*, or that certain natural entities like the elements and other natural bodies are not to be explained in teleological terms. For Aristotle, the final cause was basic, and one would not know what

Since we see multiple causes in natural generation...one must determine concerning these, which naturally comes first, and which second. But evidently first is that which we call 'for the sake of something' (φαίνεται δὲ πρώτη, ἣν λέγομεν ἔνεκα τινος). For this is an account, and the account is the starting point in the same way both in the things composed in accordance with art, and in the natural things. For it is when (either in thought or perception) the doctor has defined health, or the architect the house, that they retail the accounts and the causes of that which they do, and give the reason why one must do it in this way. But that for the sake of which and the good exist more in nature's works than in the things of art.⁵⁰

Aristotle's claim here that that for the sake of which and the good exist more in nature than in art is his way of emphasizing the importance of recognizing the final cause of natural motion, and thus the teleological attributes inherent in nature, before one can provide an explanation of any natural entity whatsoever.

3. The Externalist and Internalist Interpretations of Aristotle's Teleology

a) The Externalist Interpretation

As we have seen then, Aristotle's concept of natural entities and natural explanation is a complex and dense topic. The upshot that I have tried to show however is that all natural things are defined as such through their respective forms, which represent an

to explain at all concerning anything without first understanding what the thing being explained is aiming at or what it is for, and that this is a part of explaining the form of an entity or class of entities as well. However, I will not be considering this dispute in any real depth in this dissertation as the question as to precisely how Aristotle saw teleological explanations as fitting in with modern reductionist theories is beyond the purview of this project. It is enough for my purposes to simply state that Aristotle certainly believed that teleological explanations were a fundamental part of explaining natural entities. For a sample of the debate concerning the place of teleological explanation in Aristotle see David Charles, "Aristotle on Hypothetical Necessity and Irreducibility," *Pacific Philosophical Quarterly* 69, no. 1 (1988): 1-53; Allan Gotthelf, "Aristotle's Conception of Final Causality," in *Philosophical Issues in Aristotle's Biology*, ed. Allan Gotthelf and James G. Lennox (Cambridge: Cambridge University Press, 1987), 204-242; Martha Nussbaum, *Aristotle's De Motu Animalium* (Princeton: Princeton University Press, 1978).

⁵⁰ πρὸς δὲ τούτοις, ἐπεὶ πλείους ὀρῶμεν αἰτίας περὶ τὴν γένεσιν τὴν φυσικὴν... φαίνεται δὲ πρώτη ἣν λέγομεν ἔνεκά τινος· λόγος γὰρ οὗτος, ἀρχὴ δ' ὁ λόγος ὁμοίως ἔν τε τοῖς δατὰ τέχνην καὶ ἐν τοῖς φύσει συνεστηκόσιν. ἢ γὰρ τῆ διανοίᾳ ἢ τῆ αἰσθήσει ὀρισάμενος ὁ μὲν ἰατρὸς τὴν ὑγίειαν ὁ δ' οἰκοδόμος τὴν οἰκίαν, ἀποδίδασσι τοὺς λόγους καὶ τὰς αἰτίας οὗ ποιοῦσιν ἐκάστου, καὶ διότι ποιητέον οὕτως. *Parts of Animals* I 1 639b11-21 (Johnson translation).

inner principle of motion and stability. The motions that such a principle produces then would be those motions characteristic of the kind that it is. A natural explanation accordingly would seek to explain the form of a natural entity, and through its form one would be able to explain the material, efficient, and final causes. Providing an account of these four causes would moreover allow one to answer the why of something, and thus complete one's natural explanation. In addition, we have also seen that Aristotle's definition of a natural entity implies that a natural form, as internal principle, is an active principle which propels an entity to actualize those properties that are characteristic of the entity that it is. This process of actualization then produces motions that Aristotle would take to be inherently teleological, in so far as they would represent the realization of the form which the entity possesses as an internal principle. Thus the characteristic motions of a life form would be explained for Aristotle solely through the form of that thing. Aristotle seems to explicitly make this point by asserting that "We must explain the why in every way, namely, that from this necessarily that ('from this' either without qualification or for the most part); that this must be so if that is to be so (as the conclusion from the premises); that this was the essence; and because it is better thus – not without qualification, but with reference to the essence of each thing."⁵¹ So, at this point, we seem to have a tidy and limited sense of how far Aristotle sees nature to be teleological, namely through the realization of the form of natural entities. There would be no room accordingly to ascribe a natural teleology that is broad or hierarchical and which covers the order or arrangement of all the entities within the natural world. However, as I have

⁵¹ καὶ ταύτην εἰδέναι δεῖ, καὶ πάντως ἀποδοτέον τὸ διὰ τί, οἷον ὅτι ἐκ τοῦδε ἀνάγκη τόδε (τὸ δὲ ἐκ τοῦδε ἢ ἀπλῶς ἢ ὡς ἐπὶ τὸ πολὺ), καὶ εἰ μέλλει τοδὶ ἔσσεσθαι (ὥσπερ ἐκ τῶν προτάσεων τὸ συμπέρασμα), καὶ ὅτι τοῦτ' ἦν τὸ τί ἦν εἶναι, καὶ διότι βέλτιον οὕτως, οὐχ ἀπλῶς, ἀλλὰ τὸ πρὸς τὴν ἐκάστου οὐσίαν. *Physics* II 7 198b4-9.

already mentioned in the introduction to this chapter, there are passages within the Aristotelian corpus which seem to contradict this tidy interpretation of natural teleology in Aristotle's works. Of these passages, there are three in particular that have directly caused some to interpret Aristotle as defending a natural teleology which includes the interaction and benefits provided by certain natural entities and phenomena with/to other entities and phenomena and thus a teleology which is fundamentally hierarchical.

The first of the controversial passages on natural teleology within Aristotle is of course *Metaphysics* Λ 10.⁵² The second of the three controversial passages we will be discussing comes from the *Politics*, and provides the most explicit and at first sight best case for the view that Aristotelian teleology is hierarchical. In this passage, which is worth quoting in full, Aristotle states that:

In like manner we may infer that, after the birth of animals, plants exist for their sake, and that the other animals exist for the sake of man, the tame for use and food, the wild, if not all, at least the greater part of them, for food, and for the provision of clothing and various instruments. Now if nature makes nothing incomplete, and nothing in vain, the inference must be that she has made all animals for the sake of man.⁵³

There are two rather striking implications that can be derived from this passage. Firstly, contrary to the description of teleology that I have just provided in the first part of this chapter, Aristotle seems to be asserting here a teleology which is hierarchically structured and which involves the end of each kind of thing, except perhaps man, as being directed in some sense outside of itself. Thus an explanation of the teleology of the various kinds

⁵² I analyze in detail Λ 10 in the third chapter of this dissertation. These two sections in particular will focus for the most part on *Physics* II 8.

⁵³ ὥστε ὁμοίως δῆλον ὅτι καὶ γενομένοις οἰητέον τὰ τε φυτὰ τῶν ζῴων ἕνεκεν εἶναι καὶ τὰ ἄλλα ζῶα τῶν ἀνθρώπων χάριν, τὰ μὲν ἡμερα καὶ διὰ τὴν χρῆσιν καὶ διὰ τὴν τροφήν, τῶν δ' ἀγρίων, εἰ μὴ πάντα, ἀλλὰ τὰ γε πλεῖστα τῆς τροφῆς καὶ ἄλλης βοηθείας ἕνεκεν, ἵνα καὶ ἐσθῆς καὶ ἄλλα ὄργανα γίνηται ἐξ αὐτῶν. εἰ οὖν ἡ φύσις μηθὲν μῆτε ἀτελεῆς ποιεῖ μῆτε μάτην, ἀναγκαῖον τῶν ἀνθρώπων ἕνεκεν αὐτὰ πάντα πεποιηκέναι τὴν φύσιν. *Politics* I 8 1256b15-22.

of things extends beyond merely focusing on the internal process of actualizing certain capacities that are inherent in the thing itself and rather seems to include the contribution of an entity that is other than the entity being explained. And, secondly, not only is Aristotle's teleology hierarchical if we are to take this passage seriously, but it also asserts that at least some things are for the benefit of man. This latter point tells us that human beings play an important and even essential part of the cosmic hierarchy, in so far as they seem to be placed at the top of such a hierarchy. And if plants and animals exist for the sake of human beings, then Aristotle's teleology would have to be considered as fundamentally anthropocentric. Of course, given what I have just discussed concerning nature and natural teleology in relation to the final cause, this passage and its implications seem to be inconsistent with Aristotle's general take on natural teleology as it is generally understood.

The third passage comes from the *Physics*, and is made in the context of Aristotle's attempt to defend the necessity of final causes existing in nature. In this passage, Aristotle states that:

A difficulty presents itself: why should not nature work, not for the sake of something, nor because it is better so, but just as the sky rains, not in order to make the corn grow, but of necessity? (What is drawn up must cool, and what has been cooled must become water and descend, the result of this being that the corn grows.) Similarly if a man's crop is spoiled on the threshing-floor, the rain did not fall for the sake of this - in order that the crop might be spoiled - but that result just followed. Why then should it not be the same with the parts in nature, e.g. that our teeth should come up of necessity - the front teeth sharp, fitted for tearing, the molars broad and useful for grinding down the food - since they did not arise for this end, but it was merely a coincident result; and so with all other parts in which we suppose that there is purpose... Yet it is impossible that this should be the true view. For these things and all other natural things either invariably or for the most part come about in a given way; but of not one of the results of chance or spontaneity is this true. We do not ascribe to chance or mere coincidence the frequency of rain in winter, but frequent rain in summer we do; nor heat in summer but only if we have it in winter. If then, it is agreed that

things are either the result of coincidence or for the sake of something, and these cannot be the result of coincidence or spontaneity, it follows that they must be for the sake of something; and that such things are all due to nature even the champions of the theory which is before us would agree. Therefore action for an end is present in things which come to be and are by nature.⁵⁴

This latter passage is an extremely important one for understanding Aristotle's teleology, and why it is that there are some who argue that Aristotle defended a broader teleology.

To begin then, the argument of *Physics* II 8 is not entirely clear. It seems, upon one's initial reading of the argument, to take rain as an event which works through necessity rather than for a purpose; for if one were to say that it rains in order for the crops to grow, one would also be compelled to claim that it rains in order for one's crops to rot on the threshing floor, an effect which one would be inclined to say is not a result of some purpose. And there have been a notable number of scholars who have taken this passage to be arguing for exactly this conception of rain. Martha Nussbaum for instance simply sees nothing controversial here whatsoever, stating that "The very opening of [Aristotle's] account of teleology in *Ph.* II.8 cites the example of rain as an *illegitimate* case of teleological explanation..."⁵⁵ According to Nussbaum then, all that Aristotle is

⁵⁴ ἔχει δ' ἀπορίαν τί κωλύει τὴν φύσιν μὴ ἕνεκά του ποιεῖν μὴ δ' ὅτι βέλτιον, ἀλλ' ὥσπερ ὕει ὁ Ζεὺς οὐχ ὅπως τὸν σῖτον αὐξήσει, ἀλλ' ἐξ ἀνάγκης (τὸ γὰρ ἀναχθὲν ψυχθῆναι δεῖ, καὶ τὸ ψυχθὲν ὕδωρ γενόμενον κατελθεῖν· τὸ δ' αὐξάνεσθαι τούτου γενομένου τὸν σῖτον συμβαίνει), ὁμοίως δὲ καὶ εἴ τῳ ἀπόλλυται ὁ σῖτος ἐν τῇ ἄλῳ, οὐ τούτου ἕνεκα ὕει ὅπως ἀπόληται, ἀλλὰ τοῦτο συμβέβηκεν — ὥστε τί κωλύει οὕτω καὶ τὰ μέρη ἔχειν ἐν τῇ φύσει, οἷον τοὺς ὀδόντας ἐξ ἀνάγκης ἀνατεῖλαι τοὺς μὲν ἐμπροσθίους ὀξεῖς, ἐπιτηδείους πρὸς τὸ διαρεῖν, τοὺς δὲ γομφίους πλατεῖς καὶ χρησίμους πρὸς τὸ λεαίνειν τὴν τροφήν, ἐπεὶ οὐ τούτου ἕνεκα γενέσθαι, ἀλλὰ συμπεσεῖν· ὁμοίως δὲ καὶ περὶ τῶν ἄλλων μερῶν, ἐν ὅσοις δοκεῖ ὑπάρχειν τὸ ἕνεκά του. ὅπου μὲν οὖν ἅπαντα συνέβη ὥσπερ κἂν εἰ ἕνεκά του ἐγίγνετο, ταῦτα μὲν ἐσώθη ἀπὸ τοῦ αὐτομάτου συστάνα ἐπιτηδείως· ὅσα δὲ μὴ οὕτως, ἀπόλετο καὶ ἀπόλλυται, καθάπερ Ἐμπεδοκλῆς λέγει τὰ βουγενῆ ἀνδρόπρωρα. ὁ μὲν οὖν λόγος, ὃ ἂν τις ἀπορήσειεν, οὗτος, καὶ εἴ τις ἄλλος τοιοῦτός ἐστιν· ἀδύνατον δὲ τοῦτον ἔχειν τὸν τρόπον. ταῦτα μὲν γὰρ καὶ πάντα τὰ φύσει ἢ αἰεὶ οὕτω γίγνεται ἢ ὡς ἐπὶ τὸ πολὺ, τῶν δ' ἀπὸ τύχης καὶ ἰτοῦ αὐτομάτου οὐδέν. οὐ γὰρ ἀπὸ τύχης οὐδ' ἀπὸ συμπτώματος δοκεῖ ὕειν πολλάκις τοῦ χειμῶνος, ἀλλ' ἐὰν ὑπὸ κύνα· οὐδὲ καύματα ὑπὸ κύνα, ἀλλ' ἂν χειμῶνος. εἰ οὖν ἢ ἀπὸ συμπτώματος δοκεῖ ἢ ἕνεκά του εἶναι, εἰ μὴ οἷόν τε ταῦτ' εἶναι μήτε ἀπὸ συμπτώματος μήτ' ἀπὸ ταυτομάτου, ἕνεκά του ἂν εἴη. ἀλλὰ μὴν φύσει γ' ἐστὶ τὰ τοιαῦτα πάντα, ὡς κἂν αὐτοὶ φαίεν οἱ ταῦτα λέγοντες. ἔστιν ἄρα τὸ ἕνεκά του ἐν τοῖς φύσει γιγνομένοις καὶ οὔσιν. *Physics* II 8 198b16-199a8. (My modification of the oxford translation).

⁵⁵ M. Nussbaum, *Aristotle's De Motu Animalium*, 94.

arguing here is that from the fact that animals and plants regularly and for the most part grow, develop, and function in the same way according to their respective species we must acknowledge that there is an internal teleology at work within the individual members of these various species. However, there is no implication here, according to Nussbaum, that rain should be understood as a teleological event. Rather, rain is to be explained through the mechanistic account provided by Aristotle at the beginning of the passage; namely that what goes up gets cold and must come back down as water.

The matter is not as simple as Nussbaum would have one believe however. John Cooper for instance argues that Nussbaum is simply mistaken, and claims that there is no doubt that Aristotle held the view that some meteorological events were teleological.⁵⁶ Specifically Cooper argues that Aristotle defends the claim that heavy rains in winter and warmth in summer and fall are teleological events. He states that "...Aristotle unequivocally endorses the teleological explanation of these meteorological regularities...Nussbaum is therefore wrong to cite 198b 18-21 as evidence that Aristotle rejected such arguments as illegitimate."⁵⁷ David Furley moreover has presented a well-known and convincing case for showing that this passage does argue that there is a teleological aspect to rain, and specifically to winter rain.⁵⁸ Furley points out that Aristotle is clearly offering an exclusive disjunction between something either happening by chance and something happening for a purpose. In the case of the argument that Aristotle seems to be presenting then, Aristotle is seemingly making the claim that that

⁵⁶ John Cooper, "Aristotle on Natural Teleology," in *Language and Logos*, ed. Malcolm Schofield and Martha Nussbaum (Cambridge: Cambridge University Press, 1982), 197-223.

⁵⁷ Cooper, "Aristotle on Natural Teleology," 217.

⁵⁸ David Furley, "The Rainfall Example in *Physics* ii.8," in *Aristotle on Nature and Living Things*, ed. Allan Gotthelf (Bristol: Bristol Classical Press, 1985), 177-183.

which works for the benefit of something either does so spontaneously or it does so because of the benefits that it provides. And since that which occurs spontaneously is necessarily rare, anything that occurs for the benefit of something regularly, does so for the sake of the benefit that it provides.⁵⁹ And when one keeps in mind that, in Attica, summer rain was an unexpected event and thus one which failed to occur regularly and that winter rain was a regular and expected event which also provided a benefit, one cannot understand Aristotle to be saying anything other than winter rain is in fact for the sake of something.

David Sedley, moreover, has even argued that the distinction between the regularity of winter rainfall and the irregularity of summer rainfall actually tells us that Aristotle's teleology is hierarchical and anthropocentric.⁶⁰ Sedley argues that Aristotle is not only asserting in this passage that rain has a purpose, but that its purpose is to provide for the growth of crops. But Aristotle would then have argued that the crops too have an end external to their own internal growth and development, and that this end could be nothing other than the benefit and nutrition of human beings. Sedley defends this point by considering what Aristotle has to say soon after the passage that we have been considering, in which Aristotle states that "...generally art in some cases completes what

⁵⁹ This analysis of the argument of *Physics* II 8 is close to that which Judson provides. For Judson's discussion of the argument see Lindsay Judson, "Aristotelian Teleology," in *Oxford Studies in Ancient Philosophy* 29, ed. David Sedley (Oxford: Oxford University Press, 2005), 342-343.

⁶⁰ Both Furley and Cooper argue that *Physics* II 8 imply a broader teleology as well. However, neither one of them explicitly defends a hierarchical teleology as such. Cooper for his part argues that regular and beneficial natural processes occur for the sake of life. Sedley, on the other hand, explicitly endorses an anthropocentric interpretation of Aristotle's natural teleology. Sedley's anthropocentric view is primarily defended by him in David Sedley, "Is Aristotle's Teleology Anthropocentric?," *Phronesis* 36 (1991): 179-196 and David Sedley, "Metaphysics Λ 10," in *Aristotle's Metaphysics Lambda: Symposium Aristotelicum*, ed. Michael Frede and David Charles (Oxford: Clarendon Press, 2000), 327-351. I will be focusing on the first of these works by Sedley in this chapter, as it primarily deals with Sedley's interpretation of *Physics* II 8. I will discuss Sedley's arguments in the second of these sources in the next chapter where I will be examining Λ 10 in greater detail.

nature cannot bring to a finish, and in others imitates nature.”⁶¹ Sedley uses this passage to argue that since art perfects the nature of certain things, we can say that the agricultural art perfects the plants that are involved in agricultural processes in so far as the purpose of these plants would be to benefit human beings. Sedley further provides evidence for this view by citing *Phys. II 2* where Aristotle states that “...the arts too make their material: some of it they make *simpliciter*, some of it they make workable. And we use it *on the ground that everything exists for our sake*. For we ourselves too are, in one sense, an end.”⁶² And the crops in question, who are benefited through the purposeful activity of winter rainfall, are in turn perfected through the agricultural art, which thereby allows the natural end of crops to be fulfilled; namely to provide nutrition for human beings. All of this would indicate that the purposeful activity of winter rain has as its apex the benefits provided to human beings, especially through the intermediary of the plants and animals that are benefitted by the winter rain.

If this interpretation is correct, then Aristotle’s teleology must be deeply anthropocentric. When one combines this interpretation of *Physics II.8* with *Politics I.8*, it is easy to see Aristotle as arguing that plants and beasts are in a teleological subordination to human beings. This is especially apparent when one considers Sedley’s point that Aristotle saw the arts as perfecting the nature of things (e.g. domestic animals, agricultural crops) in order that they may naturally provide their benefits to man. Of course, Sedley is aware that it would seem strange to argue that it is in the nature of the plant or the animal to be eaten and thereby to benefit man; for we would then have to

⁶¹ὅλως δὲ ἡ τέχνη τὰ μὲν ἐπιτελεῖ ἃ ἡ φύσις ἀδυνατεῖ ἀπεργάσασθαι, τὰ δὲ μιμεῖται. *Physics II.8* 199a15-17.

⁶²ἐπεὶ καὶ ποιοῦσιν αἱ τέχναι τὴν ὕλην αἱ μὲν ἀπλῶς αἱ δὲ εὐεργόν, καὶ χρώμεθα ὡς ἡμῶν ἕνεκα πάντων ὑπαρχόντων (ἐσμὲν γάρπως καὶ ἡμεῖς τέλος· *Physics II 2* 194a33-35. (translation and italics by Sedley).

understand Aristotle as arguing that a rabbit is directed by its nature to both develop and mature into a healthy and fully realized rabbit as well as to be eaten by something else. And we have also seen that when considering Aristotle's account of natural objects and natural explanation, Aristotle does not seem to believe that one must take into consideration the kinds of benefits that one kind may provide to another kind in order to attain knowledge of the kind in question.⁶³ Rather, the process of explaining natural kinds for Aristotle refers to the form of that natural kind, its essence so to speak, which in turn is signified and allows us to attain certainty of the teleological motions of that kind in so far as they are the actualizations of an internal principle of motion and stability. The fact that such explanations, attained through providing an account of the four causes of a thing, always refers to the nature/form of that kind seems to bar us from including the nature of other kinds of things in our explanation. It is true that the organs of an animal require for their explanation a reference outside of itself, and that thus there are teleological explanations in Aristotle which extend beyond the entity being explained. However, Aristotle recognizes that there are basic substances in the natural world, and which possess a form which organizes the body of the substance in question. The point then is that nowhere, with an important exception, does Aristotle seem to believe that the complete explanation of a natural entity or substance require entities different in kind to the entity being explained. And in general, the biological works of Aristotle seem to perfectly follow this demand for explanation.

However, Sedley, could argue that there is evidence for his view even in the biological works. An exception to the general Aristotelian position that an explanation of

⁶³ See my discussion of this point in the first part of this chapter.

something does not involve explaining entities other in kind than the entity being explained is in *Parts of Animals*. At one point, Aristotle claims in his discussion concerning the eating habits of dolphins and sharks that:

Fishes also present diversities as regards the mouth. For in some this is placed in front, at the very extremity of the body, while in others as the dolphin and the Selachia, it is placed on the under surface; so that these fishes turn on the back in order to take their food. The *purpose of nature* in this was apparently not merely to provide a means of salvation for other animals (φαίνεται δ' ἡ φύσις οὐ μόνον σωτηρίας ἔνεκεν ποιῆσαι τοῦτο τῶν ἄλλων ζώων), by allowing them opportunity of escape during the time lost in the act of turning – for all the fishes with this kind of mouth prey on living animals – but also to prevent these fishes from giving way too much to their gluttonous ravening after food. For had they been able to seize their prey more easily than they do, they would soon have perished from over-repletion. An additional reason is that their snout is round and small, and therefore cannot admit of a wide opening.⁶⁴

This passage, at the very least, does provide Sedley with textual support from the biological works for the thesis that there is a broader teleology for Aristotle. For Aristotle seems here to be presenting a teleological explanation of a natural feature exemplified in dolphins and sharks, namely the location of their mouths, which he explains by referencing the benefits that a wide range of species distinct from dolphins and sharks receive. Nonetheless, Aristotle does not here nor anywhere else in the biological works show how a natural explanation through solely referencing the nature/form of a natural entity, can incorporate the regular benefits provided to certain other entities higher up on the teleological hierarchy that Sedley's interpretation

⁶⁴ ἔχει δὲ καὶ περὶ τὸ στόμα διαφορὰς. τὰ μὲν γὰρ κατ' ἀντικρὺ ἔχει τὸ στόμα καὶ εἰς τὸ πρόσθεν, τὰ δ' ἐν τοῖς ὑπίοις, οἷον οἱ τε δελφίνες καὶ τὰ σελαχώδη· καὶ ὕπτια στρεφόμενα λαμβάνει τὴν τροφήν. φαίνεται δ' ἡ φύσις οὐ μόνον σωτηρίας ἔνεκεν ποιῆσαι τοῦτο τῶν ἄλλων ζώων (ἐν γὰρ τῇ στρέψει σῶζεται τὰλλα βραδυπόντων· πάντα γὰρ τὰ τοιαῦτα ζωοφάγα ἐστίν), ἀλλὰ δαί πρὸς τὸ μὴ ἀκολουθεῖν τῇ λαίμαργίᾳ τῇ περὶ τὴν τροφήν· ῥᾶον γὰρ λαμβάνοντα διεφθείρετ' ἂν διὰ τὴν πλήρωσιν ταχέως. πρὸς δὲ τοῦτοις περιφερῆ καὶ λεπτὴν ἔχοντα τὴν τοῦ ῥύγχους φύσιν οὐχ οἷόν τ' εὐδαιάρετον ἔχειν. (My italics) An alternative translation of φαίνεται δ' ἡ φύσις οὐ μόνον σωτηρίας ἔνεκεν ποιῆσαι τοῦτο τῶν ἄλλων ζώων would be “And nature appears to do this not only for the sake of the preservation of the other animals.” Either translation however implies that the purpose of the part of the animal is in part understood through the benefit it provides to other animals. *Parts of Animals* IV 13 696a24-34

demands. Regarding the sharks passage just mentioned, as Lindsay Judson puts it “...there is no suggestion here of any *subordination* of the *τέλος*, or end, of the sharks or dolphins to that of the smaller fish – still less of any connection with the *τέλος* of human beings.”⁶⁵ What Sedley needs to account for then is to show whose nature is being explained and thereby exhibited through the regular benefits provided by individual entities to other entities higher up on the teleological hierarchy since it seems to be the case for Aristotle that it is not the individual natures of the various entities within the cosmos that is being exhibited.

Sedley’s solution to this issue is his claim that Aristotle thought that the nature of the cosmos as a whole is what is exhibited through the purposeful activity of the plants and animals being consumed for the benefit of human beings, and that therefore it is not in the nature of the animals and plants themselves to be consumed.⁶⁶ But this is not to say, according to Sedley, that Aristotle believed that the cosmos as a whole was a living organism whose purpose was being realized through the anthropocentric hierarchy. Rather, Sedley argues that, through analyzing *Metaphysics* Λ 10, the universe for Aristotle possesses a good in the same sense that the household and the polis possesses a good, asserting that “the good orderly arrangement which he associates with ‘the nature of the whole’ can, in attenuated form, be traced all the way down into the sublunary world...”⁶⁷ All things in the universe would be comparable to that of the household and

⁶⁵ Judson, “Aristotelian Teleology,” 363.

⁶⁶ Sedley, “Is Aristotle’s Teleology Anthropocentric,” 192.

⁶⁷ Sedley, 193. I will end up arguing something similar in my interpretation of *Metaphysics* Λ 10 in this dissertation. The difference between my interpretation and Sedley’s view is that I do not for one believe that Aristotle’s teleology is anthropocentric, nor is it hierarchical in the same sense that Sedley believes that Aristotle defended. Secondly, I also believe that Sedley’s view of the nature of the cosmic order which he and I defend is mistaken, since one must account for the ontological status of the nature of the cosmic order and how Aristotle understood its relationship to the individual entities within the cosmos. I believe that the only method available for us is to take what Aristotle has to say regarding the nature of the polis, and to

polis in which the specific arrangement would contribute to the good of the whole. So the slaves and beasts found at the bottom of the household hierarchy would be represented in the cosmos by the plants and animals that find themselves at the bottom of the cosmic hierarchy and are therefore in part there for the benefit of that which is higher on that hierarchy, namely man.

However, Sedley's interpretation of Aristotle's teleology does not seem to sufficiently prove the point that he is defending. The only text of the four that I have mentioned in defense of Sedley's anthropocentric view that explicitly describes the kind of teleological relationship that Sedley is asserting would be *Politics* I 8. The other three texts, although they certainly seem to indicate a broader view of teleology than what has been ascribed to Aristotle at times, do not explicitly defend a teleological hierarchy which puts human beings at the top in the sublunary realm. What Sedley must show then is not that these passages merely present to us a view of Aristotelian teleology that is broader, and therefore at odds with how Aristotle seemingly construed natural teleology according to the interpretation that I provided in the first part of this dissertation, but that these texts specifically defend a teleological hierarchy of subordination in which human beings are placed at the apex and all other sublunary natural entities are somehow to be construed according to their teleological relationship with those things higher up in the hierarchy. This claim is not explicitly defended in any of the passages we have discussed excepting *Politics* I 8. Accordingly, in order to come to terms with the anthropocentric interpretation of Aristotelian teleology, it is necessary to first consider what Aristotle might intend in the argument of *Politics* I 8.

understand the nature of the cosmic order in same sense. I will therefore return to Sedley's view of the cosmic order in the following chapters.

Firstly, although, as I will argue in later chapters, there are certain claims within the *Politics* that are clearly important when one wants to get a clear picture of Aristotle's metaphysics, it is important to keep in mind that the work as a whole is not meant to be a metaphysical treatise concerning nature nor is it meant to be a discussion of teleology *simpliciter*. Rather the work is a description of how human beings necessarily live, and how this involves the polis as a necessary component of human nature. None of this entails that we should take such claims as we find in *Politics* I 8 as indicative of Aristotle's view of *nature* as such. Rather, it seems more likely that Aristotle intends us to take such claims as involving how human beings within a polis view the world. And as far as human beings are concerned, animals are for their benefit. Admittedly, this observation does not show us that we shouldn't take *Politics* I 8 as defending an anthropocentric natural teleology, but it at the least should give us pause before taking it as such. What we should find if indeed Aristotle intended this passage to describe natural teleology is an application of its claims in the works which actually seek to provide natural explanation. And as I have already indicated, there is just no explicit evidence of such an approach on the part of Aristotle.

But then, given the fact that Aristotle does not seem to use an anthropocentric view of teleological explanation in his natural works and theory of natural explanation as provided in the early chapters of *Physics* II, how specifically should we understand the claim that nature has "made all animals for the sake of man?" I would argue that this claim of Aristotle's is perfectly in line with the claims concerning nature and natural science discussed earlier. In order to see how Aristotle understands animals as being for the sake of man however, it is first necessary to point out that Aristotle clearly recognizes

two senses of final causality. In just one of the passages in which Aristotle explicitly makes this distinction, Aristotle states “But ‘that for the sake of which’ is twofold, both the ‘of which’ and the ‘for which’ (διττῶς δὲ τὸ οὐ ἔνεκα, τό τε οὐ καὶ τὸ ᾧ).”⁶⁸ The distinction here then is between an end of a motion understood as the aim of (οὐ ἔνεκα-οὐ) something, and the end in the sense of the beneficiary (οὐ ἔνεκα-ᾧ). So something can strive toward an end for Aristotle in the sense that it is attempting to achieve that end, which would fall under the first of the two senses of final causality, whereas something can benefit, in either a non-accidental sense or in an accidental sense, from the motions of a particular thing, which would be the second sense of final causality. In terms of the soul then, Johnson describes the distinction that Aristotle is making here by saying that “The body exists for the aim of the soul’s functioning, and the soul’s functions exist for the benefit of the individual organism that lives through the soul and with the body.”⁶⁹ This distinction is vital for correctly understanding *Politics* I 8, as it certainly seems that Aristotle is there invoking the second of the two senses of final causality he has distinguished.

I think that a correct interpretation of *Politics* I 8 can be had once one keeps in mind the distinction that I have discussed between natural science and the practical sciences. As we have seen, natural science is understood by Aristotle to be a theoretical science. And as a theoretical science its goal as such is to attain knowledge of the objects that fall under its purview. This attainment of knowledge, which for the natural scientist is achieved through the study of the form of natural entities, is the sole goal of natural science. It is not the goal then to show how it is that human beings can use natural

⁶⁸ *De Anima* II 4 415b21 (Translation Monte Ransom Johnson).

⁶⁹ Johnson, *Aristotle on Teleology*, 75.

entities for their own benefit. To see how natural entities can be used for the benefit of humans would be the goal of the various practical sciences that concern themselves with those natural entities, such as agriculture. But crucially the fact that practical sciences concern themselves with the human good and thus how to use various things for the good of human beings bears no indication concerning the actual nature of the thing being used. So it is reasonable to infer that when Aristotle states that nature has made “all animals for the sake of man,” what he means to say is that animals can be used as food through the practical and productive arts for the benefit of man. But there is nothing here that implies that it is in the nature of those animals to be consumed for the benefit of man, nor that it fulfills some cosmic nature for such animals to be consumed. Rather, the sciences which concern themselves with the use of animals and plants do not focus upon the good and the teleological aim of the plants and animals themselves, which they possess through their form, but rather they focus upon the human good. We can therefore see that *Politics* I 8 is perfectly consistent with the classification of the sciences that Aristotle provides.

Finally, we can also see that Aristotle’s understanding of οὐ ἕνεκα- ᾧ involves the fact that this type of final causality does not strictly apply to the nature of that thing which provides a benefit to something else. Rather this second type of final causality is brought about by the human arts, i.e. the practical and productive sciences. Kullmann states that “Plants and beasts contain the cause of their existence in themselves but can secondarily be made subservient to the end of procuring food, clothing, and so on, for man. The expediency of plants and beasts is secondary.”⁷⁰ And all of this seems to be

⁷⁰ Wolfgang Kullmann, “Different Concepts of the Final Cause in Aristotle,” in *Aristotle on Nature and Living Things*, ed. Allan Gotthelf (Bristol: Bristol Classical Press, 1985), 173.

perfectly consistent with the biological works and how Aristotle seeks to attain knowledge of natural entities theoretically.

However, one may question this point regarding the fact that οὐ ἔνεκα- ὥ causality is not reflected in the benefits provided by certain animals and plants to other animals and plants by referring to *Physics* II 2, mentioned earlier, in which Aristotle states that "...the arts too make their material: some of it they make *simpliciter*, some of it they make workable. And we use it *on the ground that everything exists for our sake*. For we ourselves too are, in one sense, an end."⁷¹ Is it not true that Aristotle is here arguing that everything exists for our sake? I would argue that this is not what Aristotle is asserting here. Firstly, the ὥς plus participle construction that Aristotle uses here is generally understood to imply a counterfactual. Thus the passage is more commonly thought to be asserting that we use things *as though* they are for our sake. This translation would perfectly fit with my argument that Aristotle does not mean to describe the nature of things when he states that we use them for our sake, but rather is merely implying that the practical and productive arts, whose goal is the attainment of the human good, aims at using things for our sake. Sedley's translation of this passage is defended by him through his observation that the ὥς plus participle construction is not always used as a counter-factual assertion. And I grant that this is true, but since either translation works and the counter-factual translation of the passage best fits with how Aristotle explicitly understands the goal of the practical and productive sciences as well as the method used by Aristotle in the biological works, it seems far more preferable to take this statement as a counter-factual and not as a defense of anthropocentrism.

⁷¹ *Physics* II 2 194a33-35. (Translation and italics by Sedley).

At this point then, the anthropocentric interpretation of Sedley's does not have much to rely on. The only text which explicitly seems to support such a view is *Politics* I 8, and it can be easily read as an expression of the second type of final causality in which the benefits provided by various animals and plants to human beings are not found in the nature of those animals and plants but are rather procured by the practical and productive arts whose aim is the good for human beings. This distinction between the practical and the theoretical for Aristotle in relation to my interpretation of *Politics* I 8 is further supplemented by the fact that the *Politics* is a text which by Aristotle's own classification concerns that science which has as its main concern the human good and how to achieve it. However, the precise interpretation of *Physics* II 8 and *Metaphysics* Λ 10 and the implication such an interpretation has on understanding how teleology applies to nature for Aristotle is still an open question. Be that as it may, at this point I have shown that the anthropocentric interpretation fails to accord with Aristotle's general take on natural teleology. Since *Politics* I 8 is the *only* text which explicitly defends the kind of teleological arrangement that Sedley is defending, it does not seem conceivable that Aristotle held an anthropocentric teleology, especially in light of how it is that Aristotle understood the second type of final causality I have outlined as well as how we are to understand natural entities as it is exhibited by him in the biological works.

Yet, the precise nature of Aristotle's account of natural teleology is still not clear at this point. And it is worthwhile to note here that all that has been accomplished thus far concerning the debate that I am considering is that an anthropocentric teleology in Aristotle is not explicitly defended by him anywhere in the corpus. What I have not shown as of yet is that Aristotle did not have a conception of a broader teleology in

nature. And specifically, the precise claims of *Physics* II 8 have not been adequately addressed. And of course at this point Sedley could respond that his interpretation of *Politics* I 8 is informed by how he understands Aristotle's claims in *Physics* II 8, and I certainly admit that Sedley has a point here. However, I have shown that there is nothing in Aristotle's texts whatsoever that even suggest in an explicit fashion an anthropocentric view of Aristotle's account of natural teleology. I do believe though that Sedley, as well as the other scholars who have defended a broader teleology in Aristotle, is right to suggest that there are suggestions in Aristotle's writings that imply that Aristotle did defend a broader teleology; just not an anthropocentric one. In order to defend this position however, it is first necessary to examine the arguments of those who have interpreted Aristotle as defending a strictly internal teleology.

b) The Internalist Interpretation

At this point I have shown that it seems likely that Aristotle meant for us to take *Politics* I 8 as expressing the fact that οὐκ ἕνεκα- ἕ causality operates in the human arts as though animals existed for the sake of man, and thus that the benefits provided by animals and plants to human beings are not an expression of the nature of the animals or plants. Doing this has allowed us thus far to see that Aristotle has nowhere in the text explicitly defended an anthropocentric teleology. But it remains true that *Physics* II 8 implies on the surface that regular winter rain is a teleological event, and that summer rain is not a teleological event due to its rarity. And if Aristotle is expressing such in this text, one would have to admit that there is a broader teleology at work here. For the fact that winter rain, and not summer rain, is teleological would imply that there is an end to winter rain as such that it is attempting to achieve which summer rain is not attempting to

achieve. And this end of winter rain would have to be more than just the end that water is attempting to achieve, since summer rain is just as much water as winter rain. Whatever end winter rain is aiming at then would correspondingly imply a broader teleology.

Recognizing this difficulty, there have been many scholars who have in their own way attempted to provide an alternate reading of this passage in order to escape the implication that there is a broader teleology at work here. According to Johnson, Aristotle's account of rain elsewhere clearly shows that he did not conceive it as naturally aiming at the benefit of other natural entities.⁷² In the *Meteorology* Aristotle states that "The earth is at rest, and the water around it is carried up by the sun's rays and the other heat from above. But when the heat which made it rise departs, some being scattered in the upper region, some extinguished by rising so far into the air above the earth, the vapor is cooled and condensed again by the departure of the heat and the height, and water comes to be out of air. Having become water, it is carried back to earth."⁷³ Johnson thus argues that "The point of the rainfall example is to show how there can be a coincidental result that is beneficial... The reason why rain regularly helps farmers grow crops, then, is neither luck, nor nature, but art, to wit, the art of agriculture."⁷⁴ The claim then that winter rain provides a benefit is for Johnson merely incidental to the regularity of winter rain itself. Rather, winter rain provides the benefit that it does, not on account of its own nature, but rather on account of the art of agriculture which uses the regularity of winter rain in order to obtain the benefits that ultimately lead to benefitting human beings. And

⁷² Johnson, *Aristotle on Teleology*, 157.

⁷³ μενούσης δὲ τῆς γῆς, τὸ περὶ αὐτὴν ὑγρὸν ὑπὸ τῶν ἀκτίνων καὶ ὑπὸ τῆς ἄλλης τῆς ἄνωθεν θερμότητος ἀτμιδοῦμενον φέρεται ἄνω· τῆς δὲ θερμότητος ἀπολιπούσης τῆς ἀναγούσης αὐτό, καὶ τῆς μὲν διασκεδαννυμένης πρὸς τὸν ἄνω τόπον, τῆς δὲ καὶ σβεννυμένης διὰ τὸ μετεωρίζεσθαι πορρώτερον εἰς τὸν ὑπὲρ τῆς γῆς ἀέρα, συνίσταται πάλιν ἢ ἀτμὶς ψυχομένη διὰ τε τὴν ἀπόλειψιν τοῦ θερμοῦ καὶ τὸν τόπον, καὶ γίγνεται ὕδωρ ἐξ ἀέρος· γενόμενον δὲ πάλιν φέρεται πρὸς τὴν γῆν. *Meteorology* I 9 346b23-31.

⁷⁴ Johnson, *Aristotle on Teleology*, 152.

we have already seen that Aristotle does not hold that such benefits must be seen through the fulfillment of the nature of that entity which is providing the benefit, but rather it must be understood through the goal of the practical and productive sciences as such, namely the human good.

Johnson further expands his account of *Physics* II 8 by denying altogether that rain is the kind of entity that could possess a nature and thus a teleological aim. Johnson states that "...rainfall is not a substance. Water is a substance, and so it can be teleologically explained. But it would be bad science to explain the existence of water or the phenomenon of rainfall with reference to how it relates to animals or other beings... There is no 'being in a state of completion (*ἐντελέχεια*) for rainfall as rainfall..."⁷⁵ As we have seen, a natural entity is one which possesses an internal principle of motion. This internal principle is identified by Aristotle with the nature and form of a thing. It is this nature and form of a thing that the natural scientist studies when he attempts to provide an explanation of a natural thing through the four causes. The final cause moreover represents the natural form of a thing in action so to speak as it allows us to understand the characteristic motions of that thing. But rainfall as such is not such an entity. Rather it is merely an event or product of the teleological motions of the celestial bodies and the elements including water, both of which are natural entities and thus have a form and move according to an end.

Robert Wardy has also produced an interpretation of this passage which further helps us understand it in the sense defended by Johnson. According to Wardy, the primary problem with *Physics* II 8 is the distinction between the regularity of winter rain

⁷⁵ Ibid, 156-157.

and the irregularity of summer rain. Wardy has argued that we should take Aristotle to be asserting that it is the circumstances surrounding the event of summer rain which are accidental. But, and this is the crucial point, this is not to say that summer rain itself fails to have a teleological aspect to it. In fact, it has the same teleological characteristics as winter rain. The key to interpreting Aristotle in this sense is to understand Aristotle as arguing that regularity is a sufficient condition for an event being purposeful, but that it is not the irregularity of summer rain which makes it non-purposeful. Rather summer rain is an event which regularly occurs given the sufficient conditions necessary for producing rain. It is these conditions, namely the position of the sun and the amount of potential water in the air, that are irregular during the summer months. In other words, the conditions which are necessary for producing summer rain are accidental, because they are not regular, but once those conditions are in fact present then rain will in fact be produced regularly. Thus there is in a sense regularity to summer rain, but it is not the fact that summer rain actually occurs often or regularly. Rather, it is simply the fact that when those conditions necessary for rain to be produced are satisfied, then it will *regularly* follow that it will in fact rain. And rain, whether it occurs in the summer or winter, is a teleological event because it occurs regularly given the conditions necessary to produce it. As Wardy states, the fact that “the rain fell *in August* is chance; but that the rain fell in August, *given these, admittedly freak, circumstances*, is not.”⁷⁶ And when one understand *Physics* II 8 to be expressing this point, then it is not controversial to claim that summer rain does not occur regularly. Once again, this is not because there is some

⁷⁶ Robert Wardy, “Aristotelian Rainfall or the Lore of Averages,” *Phronesis* 38, no. 1 (1993): 22.

teleological aspect to winter rain in itself that summer rain does not have, but rather the conditions required to produce rain are not regular occurrences during the summer.

At this point, one may argue that this solution to the distinction between the regularity of winter rain and the irregularity of summer rain only pushes the problem we are attempting to solve one step back. An opponent may claim that it is fine and good to argue that the irregularity that Aristotle seems to be distinguishing in relation to summer rain is actually referring to the conditions that produce summer rain, and not summer rain itself, but that this still seems to imply that there is some teleological aspect concerning those conditions which produce winter rain regularly and which do not produce summer rain regularly. And that moreover, this teleological aspect still seems to imply that there is some purpose ultimately directed at the benefit of man involved in the conditions which regularly produce winter rain.

However, Wardy may argue that this is not the case at all. Wardy might respond by stating that the difference for Aristotle between claiming that summer rain is non-teleological and claiming that the conditions producing summer rain are irregular is quite important. For claiming that summer rain itself is non-teleological is to claim that a specific event is non-teleological, which, when considering that winter rain is teleological, thus leads some interpreters into the anthropocentric interpretation. However, to claim that the conditions necessary for the production of rain are irregular indicates nothing about the specific events involved in the production of rain. What Wardy might mean by this is that there is nothing inconsistent in claiming that water has a teleology internal to it and that the movement of the celestial bodies which leads to the production of rain also has an internal teleological explanation associated with it but that

at the same time these conditions are irregular during the summer months. For these conditions are not an event, which would correspondingly require a teleological explanation to account for such an event. Rather, the conditions are a group of events each of which does have a teleological explanation to it. It is in fact due to the teleological nature of water and the celestial bodies that the conditions necessary for the production of rain are accidental and irregular during the summer months. Therefore, Wardy might argue that far from pushing the problem back one step, Wardy's solution allows us to preserve the teleological aspects associated with water and the heavenly bodies according to what Aristotle states about these things within his corpus, but which also allows us to see why in fact summer rain is irregular without thereby claiming that summer rain is non-teleological.

However, such an interpretation still does not seem to correctly correspond with what it is that Aristotle explicitly states in *Physics* II 8. Aristotle does not just mention winter and summer rain as teleological events on equal level, but rather seems to explicitly state that winter rain is an example of a regularity that occurs 'for the sake of something,' and that summer rain is not. And although we can offer a positive reading of *Physics* II 8 which understands Aristotle as saying that that which produces rain is teleological, and that this leads to the regularity of winter rain and the irregularity of summer rain, we don't seem to be actually taking Aristotle's claims as he has literally put them. For Aristotle states that "If then, it is agreed that things are either the result of coincidence or for the sake of something, and these cannot be the result of coincidence or spontaneity [including winter rain], it follows that they must be for the sake of

something...”⁷⁷ The question for correctly interpreting this passage then seems to truly revolve around how we are going to take the ταῦτα (*these*) here. According to the Oxford translation of the text, the ταῦτα refers to teeth, whereas Judson argues that the ταῦτα “...refers precisely to the restricted range of things (natural substances, their parts, generation, etc.) and not to *everything* that happens by nature.”⁷⁸ And it certainly seems natural to translate ταῦτα in this way given the generally accepted view of Aristotle’s teleology which I have already given in the first part of the chapter. However, Aristotle proceeds to use as his example of natural regularity winter rain as opposed to summer rain. This then seems to force us to take 199a 3-5 as *including* winter rain. And if it is natural to take Aristotle to be including winter rain among those things which are by nature and thus are to be explained teleologically, then there is no doubt whatsoever that the context of *Physics* II 8 is explicitly making a contrast between winter rain and summer rain in such a way as to imply that the former is a teleological event and the latter is not. So although Wardy’s argument is perfectly consistent with what Aristotle has to say regarding rain elsewhere, and regarding natural entities and explanation as I have explained earlier, it does not seem to take the text in the sense that seems most natural, literal and explicit.

All of this leads to the problems inherent with the internalist position. The various scholars who wish to take Aristotle as simply defending the kind of teleology that is for the most part exhibited in the biological works do not seem to know what to do with *Physics* II 8. Although Johnson and Wardy present interpretations that are perfectly

⁷⁷εἰ οὖν ἢ ἀπὸ συμπτώματος δοκεῖ ἢ ἔνεκά του εἶναι, εἰ μὴ οἷόν τε ταῦτ’ εἶναι μήτε ἀπὸ συμπτώματος μήτ’ ἀπὸ ταῦτομάτου, ἔνεκά του ἂν εἴη. *Physics* 199a3-5.

⁷⁸ Judson, “Aristotelian Teleology,” 349.

compatible with those things that Aristotle states about rain in his other texts, the fact of the matter is that they ignore what the text seems to be saying regarding natural teleology and winter rain. It is clear that *Physics* II 8 cannot be easily interpreted through simply holding that Aristotle is referring to the teleological nature of water and the celestial bodies, and that summer rain and winter rain are on the same level regarding their teleology. There is no doubt that Aristotle certainly held the view that the water involved in both summer rain as well as winter rain should be understood in teleological terms, but *Physics* II 8 also seems to be explicitly saying that winter rain is also a teleological event, and that summer rain is not. This claim simply cannot be reduced to the motions of water. One could argue that this text simply represents a slip on the part of Aristotle. And I admit that this is a move that one could make, and that given this fact along with the other claims that Aristotle makes concerning the nature of water and the celestial bodies, one could say that *Physics* II 8 is simply a defense of the restricted and internal teleology that Wardy's reading seems to imply. However, the fact that this text is so commonly interpreted in such a way is I contend precisely in order to avoid the claim that there is a broader teleology at work in Aristotle.⁷⁹ But it simply fails to account for the textual difficulties of *Physics* II 8. How we are to understand *Physics* II 8 then seems to me to involve the arrangement of things that seems to be behind the expression that

⁷⁹ But this is not to say, as I intend to show in the next chapter, that the text necessarily implies an anthropocentric teleology. Rather, *Physics* II 8 needs to be understood in light of *Metaphysics* Λ 10, which in turn needs itself to be understood in light of *Politics* I 2. Doing this will show that *Physics* II 8 is merely another expression of a broader teleology. I also admit that Sedley makes the same move, and I agree with him on this point. However, Sedley's interpretation of *Metaphysics* Λ 10 already assumes an anthropocentric teleology in Aristotle, an interpretation which in turn is possible only through a rather eccentric interpretation of *Politics* I 8. As I will be discussing, there is nothing in the claims of *Metaphysics* Λ 10 which necessitates an anthropocentric interpretation. Given this point, it is incumbent upon us therefore to attempt to understand precisely what Aristotle is attempting to say in *Physics* II 8 without assuming an anthropocentrism. Accomplishing this will in part be the goal of this project and will finally see a resolution in the final chapter of the dissertation.

winter rain is a teleological event and summer rain is not. For if winter rain is teleological, it must be for an end and this end must seemingly involve more than just the end that water is attempting to attain. But we have also seen that the anthropocentric interpretation has very little textual support as such. So, contrary to Sedley, it seems pertinent to assume that Aristotle did not intend to convey an anthropocentric teleology when he states that winter rain is a teleological phenomenon. The key then to the correct interpretation of this passage seems to be found in the only text that we have in which Aristotle speaks of a natural arrangement, namely *Metaphysics* Λ 10.

The problem of failing to take into account Aristotle's explicit assertions of a broader teleology is also I contend exhibited by the internalist camp in their interpretations of *Metaphysics* Λ 10. Λ 10 seems to explicitly state that there is an arrangement of the whole and that the good is found both as a separate entity as well as in this arrangement. The nature of this arrangement is not explicitly stated by Aristotle here, but it seems correct to assume that whatever it may be it is closely connected to that which Aristotle is stating in *Physics* II 8. However, an analysis of the claims of *Metaphysics* Λ 10 is a daunting task, one which I intend to take up in the next chapter.

4. Conclusion

Before moving on to the claims of *Metaphysics* Λ 10, it is pertinent to raise a few issues that in my mind has kept those who have defended the internalist interpretation from accepting a broader view. I have discussed in the first part of this chapter Aristotle's account of nature and of natural explanation. We have seen that Aristotle believes that a natural entity possesses a form which is what we come to know when provided with an explanation of that thing through the four causes. I also pointed out that

the matter of a natural entity is to be understood as relative to the form. This is not to say that the form of a natural thing can simply realize itself in any matter whatsoever, but rather that the various parts of a natural thing are only understood and thus knowable as a part of the whole natural thing as it is actualized by its form. This account of a natural thing then is taken as basic by those who have defended the internalist interpretation of Aristotle's natural teleology. Accordingly, the claim that there is an arrangement of the whole would indicate, following from Aristotle's account of nature, that the whole must have its own form and its own good. This would seemingly make the whole a substance. It follows from this then that in order for there to be a cosmic teleology, there must be a cosmic substance whose teleological end is being realized. But, if this were actually the case, then it would also imply that each individual thing that must be taken as part of the cosmos cannot in itself be a substance, just as the parts of an individual entity are not substances for Aristotle. This would mean that human beings, as well as every other sublunary life form, would be merely parts of a substance and not substances themselves. This position however flies in the face of much of what Aristotle holds true throughout his corpus, and Wardy states that "...anyone would balk at the idea that people too are not substances..."⁸⁰ The argument then is that taking $\Lambda 10$ in the cosmic teleological sense would force us to understand Aristotle as defending a position that is explicitly at odds with a prominent feature of his general ontology; namely that individual people, plants and animals are substances that possess a nature in their own right and not merely in relation to a cosmic substance.

⁸⁰ Wardy, "Aristotelian Rainfall or the Lore of Averages," 25.

A related issue to this would be what it would entail regarding the doctrine of the autonomy of the sciences. For if Aristotle is indeed arguing that there is a cosmic substance, this would also imply that the natural scientist would have to know the good of the whole in order to truly attain knowledge of any natural entity whatsoever. For if there is truly a good of the whole, then each individual entity would necessarily be understood in light of its supposed contribution to the whole. Much as the individual parts of a living body are understood through the whole, each entity would be seen as contributing to the whole and therefore must be known through the whole. But this is just not what Aristotle seems to do or state regarding natural science.

These problems concerning the interpretation of *Metaphysics* Λ 10 have been the true reason behind the internalists' desire to interpret these texts so as to avoid any claim regarding a broader teleology. And it is these issues then, as well as the interpretation of *Physics* II 8, that will limit and provide the focus of my interpretation of *Metaphysics* Λ 10. The goal then will be to attempt to show how we can see that there is an arrangement of the whole without on the one hand violating the basic dictums of Aristotelian science and theory of substances, and without on the other hand forcing us to simply ignore what is explicitly stated in those few texts in which a broader teleology is defended; texts which crucially include *Metaphysics* Λ 10.

CHAPTER III

THE ANALOGIES OF Λ 10⁸¹

⁸¹ My interpretive arguments in this dissertation exclusively come from and arise out of a consideration of modern scholarship regarding Aristotle. However, I have been made aware in the course of the defense that the view concerning the UMM defended in this chapter is remarkably similar to what is found in Averroes' (Ibn Rushd) commentaries on Aristotle. Averroes argues that the UMM is the final cause of every entity within the cosmos and through being the final cause accounts for the order of the cosmos. Richard Taylor in "Providence in Averroes" states that Averroes' view "...is one of final causality alone on the part of the Creator, a final causality that draws things into a unity and organization of the entire universe by causing all the kinds of things to imitate to the fulness of their ability the complete perfection of finality and being found in the Creator" (Taylor, "Providence in Averroes," 460). Specifically, in the *Incoherence of the Incoherence* and the *Long Commentary on the Metaphysics of Aristotle*, Averroes makes a series of arguments concerning Aristotle's conception of God and his relationship with the rest of the cosmos with which my account in this chapter as well as in part of the last chapter, an account which is itself in response to modern scholarship on Aristotle, happens to be in agreement. In summary Averroes argues that creation must be understood as the UMM or God drawing things into actuality in so far as everything depends for its realization on the first cause which is God. The movement of the heavenly bodies is on account of and caused by the UMM, and the realization of all sublunary entities is ultimately explained by their desire for God. Averroes uses the army analogy found in Λ 10 to explain his view of how Aristotle believed that the good and order are found most especially in the leader as prior and greater, and the leader, through being the good and final cause of all things in the cosmos, causes the order in the rest of the cosmos. Taylor states regarding Averroes' view of a cosmic order in Aristotle that "...in the course of an upward looking imitation at the various levels of the entities of the universe for lower entities, being, order and unity are brought about in corresponding levels. This ordering of the entirety of the universe through a relation to the divine is the presence of divine creative power throughout the universe" (Ibid, 468). So the desire for God, according to Averroes, manifests itself in the desire for perfection within the limits of the respective natures of each kind of entity within the cosmos. This desire will then explain the actualization of the various individuals within the cosmos. This also explains the human desire for actuality and cashes out in the life of happiness and theoretical knowledge for human beings, the latter of which constitutes the most noble kind of worship that human beings can offer to God. In this chapter, as well as in part of the last chapter of this dissertation, I will be arguing explicitly in consideration of and in response to present day scholarship what happens to be a similar interpretation of *Metaphysics* Λ as that which Averroes defends. I will be defending the view that the UMM must be considered a separate good, and that as a separate good it explains the actualization of all entities within the cosmos, including the celestial bodies, humans, animals, and the elements. This actualization occurs due the desire for the entities to possess, in so far as their natures allow, the actuality of the UMM and cashes out in the realization of the respective natures of the various entities within the cosmos. I will also argue in this chapter that Aristotle believes that there is a nature of the whole, and a good in the arrangement of things within the cosmos which I believe is also due to the desire for the UMM. All of this has been argued by Averroes in his commentaries on Aristotle. Just to be clear, the scholarship which I have considered in this dissertation did not involve the work of Averroes, and thus my interpretation, although similar to Averroes', arose out of an examination of the modern readings of Λ 10. I was subsequently made aware of Averroes' position in the process of defending the dissertation. Fundamentally then, I agree with Averroes' conception of the UMM as final cause of the cosmos, and as the cause of the ordering of the entities within the cosmos. Having said this, I believe that my account here is relevant in response to contemporary scholarship, and have confidence that my emphasis on the necessity of providing an explanation of the nature of this order contributes something new to the field of modern scholarship regarding Aristotle's metaphysics and ontology. For a good summary of Averroes' account of the role of the UMM in providing order, existence, and unity to the rest of the cosmos see Richard Taylor, "Providence in Averroes," in *Fate, Providence and Moral Responsibility in Ancient, Medieval and Early Modern Thought*, eds. Peiter d'Hoine and Gerd Van Riel (Leuven: Leuven University Press, 2014), 455-473. For Averroes' account of this argument see C. Genequand, *Ibn Rushd's Metaphysics. A Translation with Introduction of Ibn Rushd's Commentary on Aristotle's Metaphysics*,

1. Introduction

In the last chapter, I have shown that the current debate concerning the interpretation of Aristotelian teleology, especially regarding the controversy in interpreting *Physics II 8*, is not resolvable without analyzing in some detail the claims that Aristotle makes in $\Lambda 10$. We have seen that a major strand in the recent interpretations of Aristotelian teleology defends a hierarchical and even an anthropocentric teleology. But we have also seen that the passages which support such a position are at best unclear, and do not themselves explicitly defend anthropocentrism. Now the passage that we have yet to discuss in any significant detail is $\Lambda 10$, and as I concluded in the last chapter, it is vital to provide such an interpretation for understanding *Physics II 8* and for constructing a fuller interpretation of Aristotelian teleology. What is clear even in a brief examination of $\Lambda 10$ is that Aristotle is here providing us with a view of his teleology as it relates to a world order, or a ‘nature of the whole,’ as such, and not just how teleology relates to the individual natural motions of the various entities which serve as the subject matter for biology, which I briefly discussed in the first part of the last chapter. The purpose of this chapter will be therefore to examine what Aristotle precisely means by a ‘nature of the whole,’ and how this relates both to the claims that Aristotle makes in the rest of the passage as well as how this relates to understanding Aristotle’s teleology as it is expressed elsewhere. I will argue then that, contrary to the view of some recent commentators, Aristotle is indeed

Book Lam (Leiden: Brill, 1986); S. Van Den Bergh trans., *Averroes’ Tahafut al-Tahafut (The Incoherence of the Incoherence)* (London: Luzac and Co., 1954).

indicating in Λ 10 that there is a ‘nature of the whole’ being defended in Λ 10. Once I have established this to be true, I will then discuss firstly how this indicates for us that Aristotle is indeed defending a cosmic teleology, in which things are arranged in a teleological fashion which thereby allows us to explain the good ordering of each entity with the other entities in the cosmos. Finally, I will also show that the ‘nature’ which Aristotle is pointing out here fails to correspond with the account of nature that has been understood as basically Aristotelian and which I have discussed in the second chapter. Demonstrating this point will then encourage us to look elsewhere for an account of nature that can satisfactorily explain the use of ‘nature’ in Λ 10, which I will argue points us to Aristotle’s use of ‘nature’ in *Politics* I 2.

2. Λ 10 and the Minimalist Interpretation

Divided in parts relevant to the claims that Aristotle is making in the passage then, Λ 10 states that:

(a) We must consider also in which way the nature of the whole possesses the good and the best – whether as something separated and by itself, or as its arrangement. (b) Or is it in both ways, like an army? For an army’s goodness is in its ordering, and is also the general. And more the general, since he is not due to the arrangement, but the arrangement is due to him. (c) All things are in some joint-arrangement, but not in the same way – even creatures which swim, creatures which fly, and plants. (d) And the arrangement is not such that one thing has no relation to another. They do have a relation: for all things are jointly arranged in relation to one thing. (e) But it is as in a household, where the free have least license to act as they chance to, but all or most of what they do is arranged, while the slaves and beasts can do a little towards what is communal, but act mostly as they chance to. (f) For that is the kind of principle that nature is of each of them. (g) I mean, for example, that at least each of them must necessarily come to be dissolved; and there are likewise other things in which all share towards the whole.⁸²

⁸² Ἐπισκεπτόν δὲ καὶ ποτέρως ἔχει ἢ τοῦ ὅλου φύσις τὸ ἀγαθὸν καὶ τὸ ἄριστον, πότερον κεχωρισμένον τι καὶ αὐτὸ καθ’ αὐτό, ἢ τὴν τάξιν. ἢ ἀμφοτέρως ὥσπερ στρατεύμα; καὶ γὰρ ἐν τῇ τάξει τὸ εὖ καὶ ὁ στρατηγός, καὶ μᾶλλον οὗτος· οὐ γὰρ οὗτος διὰ τὴν τάξιν ἀλλ’ ἐκείνη διὰ τοῦτόν ἐστιν. πάντα δὲ συντέτακται πως, ἀλλ’ οὐχ ὁμοίως, καὶ πλωτὰ καὶ πτηνὰ καὶ φυτὰ· καὶ οὐχ οὕτως ἔχει ὥστε μὴ εἶναι

Λ 10 seems on the surface to be expressing a positive claim. In [a], Aristotle mentions a ‘nature of the whole’ as the subject for the subsequent claims. This at the very least seems to imply that there is an overall nature above every individual nature that may exist and might have to be accounted for. Aristotle proceeds to ask whether the good that is possessed by this ‘nature of the whole’ is something separate or rather is found in the arrangement of things within the cosmos. In [b] he seems to answer this question by stating that the good is found in both the arrangement of the things within the whole as well as something separate. In [b] through [f] he then uses an army and its general as well as a household and its head as analogies for the good as it relates to the cosmos as a whole. Now it would seem easy at this point to take Aristotle seriously in his claims here and attempt to understand what he might mean by stating firstly that there is a ‘nature of the whole’ to begin with, and secondly that the good that this nature possesses is found both as a separate thing as well as in the arrangement of things within the cosmos. However, there have been some scholars who have dismissed this reading of this passage and have rather taken a minimalist approach to interpreting this passage and thereby find in it nothing other than what Aristotle has already stated in the *Physics* and in the philosophical lexicon of the *Metaphysics*.⁸³

θατέρω πρὸς θάτερον μηδέν, ἀλλ’ ἔστι τι. πρὸς μὲν γὰρ ἐν ἅπαντα συντέτακται, ἀλλ’ ὥσπερ ἐν οἰκίᾳ τοῖς ἐλευθέροις ἥκιστα ἕξεσθιν ὅ τι ἔτυχε ποιεῖν, ἀλλὰ πάντα ἢ τὰ πλεῖστα τέτακται, τοῖς δὲ ἀνδραπόδοις καὶ τοῖς θηρίοις μικρὸν τὸ εἰς τὸ κοινόν, τὸ δὲ πολὺ ὅ τι ἔτυχεν· τοιαύτη γὰρ ἐκάστου ἀρχὴ αὐτῶν ἢ φύσις ἐστίν. λέγω δ’ οἷον εἰς γε τὸ διακριθῆναι ἀνάγκη ἅπασιν ἐλθεῖν, καὶ ἄλλα οὕτως ἔστιν ὧν κοινωνεῖ ἅπαντα εἰς τὸ ὅλον. *Metaphysics* Λ 10 1075a11-25 (Sedley’s Translation).

⁸³Namely that nature is nothing other than an internal principle of motion and stationariness which applies only to individual entities who possess a nature and whose motions are accounted for through the nature that it possesses. Of course an implication of this view is that there is no separate nature of the whole at all, and that Aristotle is simply speaking loosely in this passage. This position of Aristotle’s has been discussed in some detail in the second chapter, and for the most part those who defend the internalist interpretation of Aristotelian teleology also approach Λ 10 from a minimalistic perspective. Given this fact, there is some significant overlap between these two interpretive camps. Keeping this in mind then see Wardy, Kullmann, Johnson, and Judson, all of whom were discussed in the second chapter.

As an example of this interpretive position, Monte Johnson argues that Aristotle is in this passage not arguing for either a separate principle of the good, or a good in the arrangement of things. Rather, Johnson believes that Λ 10 “turns out to be more useful in indicating ways that Aristotle *does not* want us to think about nature possessing the good, than it does in expressing a positive doctrine.”⁸⁴ Johnson argues that Aristotle is at best simply repeating the claim found in his other works on nature that all things are arranged only in so far as they can attain the good that is defined through their respective forms or natures.

The minimalist position represented by commentators such as Johnson, is best understood through a desire to make the apparent claims in Λ 10 consistent with the rest of the Aristotelian corpus.⁸⁵ Firstly, concerning a separate principle of the good, one could argue that such a principle would be inconsistent with what Aristotle has to say in passages such as *Eudemian Ethics* I 8 in which Aristotle expresses his distaste for the Platonic notion of a Form or Idea of the Good which seemingly unifies and makes real the various goods found in the world.⁸⁶ What would follow, according to Aristotle, from

⁸⁴ Johnson, *Aristotle on Teleology*, 272.

⁸⁵ The following arguments are my summary of those arguments generally brought forward by the minimalist interpretive position.

⁸⁶ Aristotle’s criticism of the Form of the Good is an extension of his criticism of the Platonic Forms in general. Regarding the Forms, Aristotle presents many arguments against both their usefulness and their rationality. One of the main themes that Aristotle seems to emphasize when criticizing the forms is that they are utterly useless even if they did exist. So for example, in *Metaphysics* A 9 Aristotle states that “Above all one might discuss the question what on earth the Forms contribute to sensible things, either to those that are eternal or to those that come into being and cease to be. For they cause neither movement nor any change in them. But again they help in no way toward the *knowledge* of the other things...nor towards their being, if they are not *in* the particulars which share in them...” (991a9-14; πάντων δὲ μάλιστα διαπορήσειεν ἂν τις τί ποτε συμβάλλεται τὰ εἶδη τοῖς αἰδίοις τῶν αἰσθητῶν ἢ τοῖς γιγνομένοις καὶ φθειρομένοις· οὔτε γὰρ κινήσεως οὔτε μεταβολῆς οὐδεμιᾶς ἐστὶν αἴτια αὐτοῖς. ἀλλὰ μὴν οὔτε πρὸς τὴν ἐπιστήμην οὔθ’ ἐν βοηθεῖ τὴν τῶν ἄλλων... οὔτε εἰς τὸ εἶναι). The problem that Aristotle has with the Forms primarily revolves around the fact that the Forms cannot serve as motive causes for the entities that they apparently explain, and they do not explain the being or existence of those entities as such for they are separate from those entities and thus do not account for their existence. Aristotle’s criticism of the Form of the Good is essentially an extension of this point, in that Aristotle does not see how one can understand the good of something through an entity which is entirely separate from that good.

a Form of the Good would be a view which at its foundation would necessarily hold that the meaning of the good is the same in every instance, since it would be the Form of the Good which makes real and thus meaningful all of the other instances of the good in reality. Aristotle does not agree with this position, and rather argues that the good has different meanings or senses. He clearly expresses this point in the *Eudemian Ethics* by stating that “As then being is not one in all that we have just mentioned, so neither is good; nor is there one science either of being or of the good; not even things named good in the same category are the objects of a single science...”⁸⁷ Aristotle rather insists that the meaning of good varies among different kinds of things, and that it is simply not helpful in any way to posit a separate good such as the Platonic Form of the Good and then use the separate good to attempt to understand the various ways in which the good is actually applied.⁸⁸ Aristotle repeatedly asserts that a good of something must be inherent to a thing, connected with its nature. An overall good, much like the Platonic Forms in general, would be useless and unable to explain the cause of and the existence of the various goods sought by natural entities. So it would seem to follow from all of this that

⁸⁷ ὡςπερ οὖν οὐδὲ τὸ ὄν ἐν τί ἐστι περὶ τὰ εἰρημένα, οὕτως οὐδὲ τὸ ἀγαθόν, οὐδὲ ἐπιστήμη ἐστὶ μία οὔτε τοῦ ὄντος οὔτε τοῦ ἀγαθοῦ. ἀλλ’ οὐδὲ τὰ ὁμοιοσχημόνως... *Eudemian Ethics* I 8 1217b33-37.

⁸⁸ Stephen Menn has provided an interesting discussion of this topic. According to Menn, Aristotle does believe that there is a separate good. The problem that Aristotle is insisting upon regarding the Form of the Good is not that it is a separate good, but rather that, just like the other Forms, the Form of the Good would not contribute to the being or the knowing of the particular goods of natural entities. Thus Menn states that “[Aristotle] rejects the claim that the X-itself is the Form of X, because the Form of X would be no more X than corruptible X’s are, and because it would not contribute causally to the X-ness of other things” (Menn, “Aristotle and Plato on God as Nous and as the Good,” 570). Rather Menn seems to argue that there is a separate good according to Aristotle in so far as there is a separate *nous* which serves as an object of desire and therefore causes motion in the cosmos. As an object of desire, *nous* is identified by Menn as a separate good. I will be defending an interpretation of the UMM as a separate good which will be similar to this approach provided by Menn. The issue that I will have with Menn’s approach however is that he fails to see that all activity in so far as it is driven toward actuality is ultimately caused by the UMM. So the UMM serves as a separate good for everything within the cosmos, and not just for those things which seek to attain the practicable and attainable good of *nous* which is itself only attainable by a few entities in Aristotle’s world. For Menn’s discussion of this topic see Stephen Menn, “Aristotle and Plato on God as Nous and as the Good,” *Review of Metaphysics* 45, no. 3 (1992): 543-573.

Λ 10 must be dismissing the separate good, since such an entity would seemingly represent something like a Form of the Good.

A similar interpretive strategy holds when considering the good that is found in the arrangement of things; namely that such a claim seems inconsistent with other claims concerning the good in the Aristotelian corpus. As we have already seen, *Physics* II 1 states that natures are internal to a thing and that therefore the good of something is understood through the nature that that thing possesses. Aristotle's claim therefore that the good is found in the arrangement of things must, according to some, be understood in light of this understanding of the good as it is connected to the nature of a thing from *Physics* II 1.⁸⁹ Since it seems that the good for Aristotle is inextricably linked to the nature that a thing possesses, it would follow that if there is a good found in the arrangement of things, there would necessarily be a nature corresponding with this good. But such a nature could be nothing other than a cosmic nature. However, Aristotle does not explicitly defend a cosmic nature of any kind in any other passage, and in particular he fails to mention a concept of the good which is somehow associated with the cosmos as a whole.⁹⁰ Moreover, it would seem that this understanding of the concept of nature or

⁸⁹ I have discussed the connection that Aristotle makes between the good of something and the nature that it possesses in the second chapter.

⁹⁰ Mohan Matthen, in his article "The holistic presuppositions of Aristotle's cosmology," does argue that there is a universal nature defended by Aristotle in the *De Caelo*. In *DC* I 2, Matthen argues that Aristotle mentions a form of the cosmos, and that this is also associated with the nature of the whole which is also mentioned in this passage. From this passage, Matthen goes on to argue that the cosmos is a single substance and that this substance is a composite whole which is also to be regarded as a self-mover. Suffice it to say that I believe that Matthen is right in emphasizing this passage as yet another instance of Aristotle defending a kind of cosmic nature. In so far as Matthen takes the *De Caelo* to be stating this about the cosmos, I think that he is right. The issue with Matthen in my view is that he believes that the cosmos is a substance but does not proceed in any real sense in showing what this means precisely, especially given Aristotle's claims regarding substance in the rest of the corpus. Finally, Matthen's arguments rest upon a certain understanding and translation of the words used by Aristotle, especially concerning the opening lines of *De Caelo* I 2, which is not the only translation available to the interpreter. To actually show that there is good evidence that Aristotle held that there is a cosmic order, one must look outside of the passages that Matthen considers. We will return to the issue of a cosmic substance in the

of the good is inconsistent with the claims that Aristotle actually does make concerning nature and the good. In other words, to speak of the order of things as possessing a good in Aristotelian terms seems on the face of it to violate the Aristotelian doctrine of natural explanation as discussed in the second chapter, unless one admits that Aristotle is stating that the cosmos possesses a nature and thus a good associated with this nature. Once again, Aristotle does not seem defend such a position anywhere else in the corpus. A final problem with acknowledging that the cosmos possesses a nature is that it comes awfully close, and perhaps even necessitates the claim that the cosmos is a substance. Such a claim would however undermine the basic Aristotelian position that individual entities are substances and thus possess existential autonomy.⁹¹

What these arguments seem to imply then, according to the minimalist interpretation, is that Λ 10 is primarily a negative passage, in that Aristotle is not attempting to say something new regarding his view of the cosmos, but is rather reiterating his views that have already been expressed in other passages. This minimalist position in general is justified through either the lack of any positive claims concerning the status of a separate good or a good in the arrangement of things, or even an apparently explicit refutation of such claims. The trick for this interpretive approach then would be to attempt to understand the claims of Λ 10 without accepting that Aristotle is making a positive claim concerning the good of the cosmos and its arrangement.

final chapter when I consider what the cosmic nature that I believe Aristotle is defending in Λ 10 is, and how it is helpful in understanding Aristotle's conception of the cosmos. For Matthen's discussion of the *De Caelo* see Mohan Matthen, "The Holistic Presuppositions of Aristotle's Cosmology," In *Oxford Studies in Ancient Philosophy* vol. XX, edited by David Sedley (Oxford: Oxford University Press, 2001), 171-201.

⁹¹ Wardy, "Aristotelian Rainfall or the Lore of Averages," 25.

Johnson then, who defends a minimalist interpretation of Λ 10, argues that in general Λ 10 is truly a negative passage, in that it is an expression primarily of how not to understand Aristotle's cosmology and teleology. Concerning Aristotle's claim that the good is in the arrangement of things, Johnson argues that Aristotle is simply attempting to emphasize that all things are arranged according to one good in so far as they all seek to attain the good that is defined through their respective forms or natures. This of course extends throughout the biological realm. What this entails then is that the good is to be found fundamentally in the actualization of the potencies defined through the nature of the individual entities. However, Aristotle's claim that there is a good of the arrangement should not, according to Johnson, be confused with a defense of something like an overarching good somehow found in the cosmos and which is over and above the goods of the various species in the sense described. Rather, the good in the arrangement is understood by Johnson merely to imply that the good of each entity is not exclusive with the good sought by natural entities of a different kind. Johnson states that "...all things are jointly arranged with respect to one thing, the good. Chiefly, this means their own goods...But the arrangement of nature is such that all the different kinds can coexist: their needs are not generally mutually exclusive...This is the good in the arrangement."⁹² Johnson therefore argues that Aristotle, far from making any defense of an overall nature which possesses a good and is defined through the specific arrangement of the entities within the cosmos, is here simply asserting that there is a good in the arrangement in so far as each entity is able to seek its own good in a non-exclusive sense.⁹³

⁹² Johnson, *Aristotle on Teleology*, 283.

⁹³ Johnson does recognize that predatory behavior seems to be an example of the good of an entity being mutually exclusive with the good of another entity. However, he simply seems to dismiss this as merely being a particular instance of mutual exclusivity rather than anything which challenges his interpretation of

Johnson argues that the analogies that Aristotle uses supplement his interpretation as well. On the one hand, the Army analogy is dismissed by Johnson as not altogether helpful in defending what Johnson views as Aristotle's overall argument in the passage. The problem here is that fundamentally Aristotle's conception of the Unmoved Mover is not one of an ordering god. Rather, God is understood by Aristotle as merely the object of desire and not as a divine craftsman. So, unlike a general, the Unmoved Mover does not order the cosmos, nor does it command the cosmos and interfere with the actions of the individual entities within the cosmos. What the army analogy does show for Johnson is rather that "Aristotle wants to stress that the good is not separate from the individual things that are good, but is rather an immanent principle that accounts for the organization of the many things that are good..."⁹⁴ So, just as a general serves as a principle of organization in an army, and therefore is the cause of the good of an army, the good that Aristotle is speaking of in relation to the cosmos and the arrangement of entities within a cosmos is how each thing interacts with every other thing in an organized sense, and that these things are not 'exclusive' in regard to each other.

The household analogy, on the other hand, indicates for Johnson the fact that each of the entities within the cosmos pursues its own good, a good which is dictated by their natures, and incidentally while in the pursuit of their own good they can contribute to the good of other things. Johnson believes that it is a precarious move to take this analogy any further than this, as taking the passage further might involve a kind of justification in

Aristotle's claim that there is a good in the arrangement of things. This position is also a part of Johnson's overall argument against Sedley's anthropocentric interpretation, which was discussed and criticized in the second chapter of the dissertation.

⁹⁴ Johnson, *Aristotle on Teleology*, 275.

the cosmic sense of the questionable practice of slavery.⁹⁵ It is clear that for Aristotle slaves are a part of the household. And Johnson believes that taking the household analogy as a more literal description of the arrangement of the cosmos would involve making certain entities within the cosmos slaves to other entities. Avoiding this implication then, Johnson believes that all that Aristotle is stating here is that the motions of the various entities within the cosmos are due to the pursuit of an entity's own good, and that the benefits that they may provide to other entities are in fact incidental to this pursuit. How this is precisely shown in the household analogy then is, Johnson argues, that just as the actions of a slave happen to coincide with the good of the household, for the most part these same actions are incidentally related to the good of the slave himself. So Johnson states that "The slave who cooks [eggs] is carrying out orders, and has an interest in obeying. But the good for the slave in this case is in avoiding punishment and satisfying the master, not in enjoying the benefits of a well-cooked omelet."⁹⁶ What this implies is that the household model is meant to show us that some actions which entities undertake may have benefits for other things which would be incidental to the good that an entity is pursuing and which ultimately explains the various actions that an entity pursues in the first place.⁹⁷ And the primary claim here is that each of these entities seek their own good in the natural movements that they undergo.

So in general, Johnson's view of Λ 10 is primarily influenced by his desire to make the passage consistent with those other passages within the corpus which Johnson

⁹⁵ Ibid, 277.

⁹⁶ Ibid, 277.

⁹⁷ Johnson also provides a passage from the *De Cealo* II 12 in which Aristotle argues that every entity within the cosmos seeks its own good in the movements it undergoes, and which contains "no argument...that these various motions happen for the sake of an overall good, or for the sake of natural substances other than the ones that are in motion" (Ibid, 277-278).

takes to be the fundamental and exhaustive accounts of those crucial terms which are in question in $\Lambda 10$ itself. Firstly, the notion of a good which is separate must be understood in light of Aristotle's account of the good of something being connected and expressed through the nature of that thing. So that that which possesses a good must, in the most basic case, possess a nature which allows one to make sense of the good of that thing. And thus the good of anything is a matter of understanding the nature of that thing. What is implied here then is that if there were to be a good which is entirely and wholly separate, then we would be in danger of bringing back into the Aristotelian ontology something like the Platonic Form of the Good, which of course is explicitly denied by Aristotle as anything which could be useful or sensible.

On the other hand, the arrangement of the whole as somehow possessing a good would, given Aristotle's statements regarding the connection between the good of something and its nature, imply that there must be a nature corresponding with this good expressed by the arrangement of the whole. The question here, one which ultimately influences scholars such as Johnson, is whether then there must be a nature of the whole corresponding with the good found in the arrangement. This of course would seemingly follow from admitting that the arrangement possessed a good, which would then seemingly force one to admit that Aristotle is indeed arguing for a nature of everything; a kind of cosmic nature. But this cosmic nature would then imply something like a cosmic substance, the existence of which seems doubtful to many due to Aristotle's lack of an explicit discussion of a cosmic nature within the corpus as well as due to the inconsistency this would seemingly imply between the existential autonomy of individual

substances such as human beings, rabbits, tigers, etc... and the existence of a cosmic substance.

Keeping these considerations in mind then, I believe that we nevertheless must acknowledge that Aristotle is indeed discussing something far more positive in this passage. The interpretive position that we have just discussed denies a few crucial claims that in my view cannot coherently be denied when working through Λ 10. As we have seen, the first claim is that there is in no sense a separate principle of the good. The second claim is that there is no good found in the arrangement of things as such, other than a vague notion of a good found in the fact that entities sometimes benefit other entities and can survive and flourish in a non-exclusive sense. Furthermore, this second claim also implicitly denies that Aristotle is admitting and discussing a cosmic nature of any kind and/or that there is a defense of an external teleology which goes beyond the teleological claims found in the *Physics* and discussed in the second chapter. Each of these claims are related, and I believe that in order to establish my argument that there is indeed a defense of a cosmic nature and thus a cosmic teleology in Λ 10, I will first have to answer each of these claims separately.

The first claim is that there is no separate good being defended in Λ 10. However, I believe that this position is altogether unreasonable.⁹⁸ What seems to me clear from Aristotle's assertions regarding the relationship between the various entities within the cosmos and the UMM is that first of all the UMM provides a kind of final cause which provides an explanation of existence of motion as such in the cosmos. And

⁹⁸ The following argument follows Kahn's argument. For the argument that Kahn provides see Charles Kahn, "The Place of the Prime Mover in Aristotle's Teleology," in *Aristotle on Nature and Living Things*, edited by Allan Gotthelf (Bristol: Bristol Classical Press, 1985), 183-207.

when one considers Aristotle's discussion of the good in the *Nicomachean Ethics* and the *De Anima*, one finds that Aristotle understands the good of something as being both defined by and understood through the context of final causality.⁹⁹ So, my claim here is that the UMM both provides a final cause to everything within the cosmos and also that the UMM is considered by Aristotle as a kind of overarching good, and even a separate one, albeit separate in a different sense than how Aristotle understands the separate good of Plato.

As seems obvious, each of these claims are related and require some textual support. Let us deal with the concept of the UMM as the cause of everything first, and then deal with the concept of the UMM as being a separate good. I believe that first of all the UMM is a cause of everything in so far as it is a final cause of all the natural motions in the cosmos.¹⁰⁰ So in regard to the heavenly bodies being moved on account of the

⁹⁹ *Nicomachean Ethics* I, *Nicomachean Ethics* X, and *De Anima* II 1-5.

¹⁰⁰ There is some controversy here regarding the precise nature of the causality that the UMM provides to the rest of the cosmos. There is of course a minimalist interpretation of the UMM's causality in which the UMM is simply a final cause for the outer celestial sphere. The rest of the motions within the cosmos then are either a matter of mechanical efficiency or the final causality of the natures of individual entities. However, the passages that I will be discussing in the following paragraphs I believe sufficiently demonstrate the poverty of such a view and the explicit inconsistencies in interpretation which arises as a result of the following passages. There is also a significant controversy regarding the way that the causality of the UMM actually works. It is unclear from Aristotle's work whether the UMM operates as a Final Cause, an Efficient Cause, or as both. Now it seems clear from outset that Aristotle believes that the UMM is a Final Cause. It is described as such in Λ and is even described as an 'object of love' by Aristotle. However, even the early commentators acknowledge some controversy regarding the nature of the UMM's causation, as Simplicius, in his commentary on Aristotle's *Physics*, states that the ancient commentators disagree on whether Aristotle's Prime Mover was the efficient cause as well as the Final Cause of the Heavens (1360,24-1363,24). The way in which the UMM is understood to be the efficient cause as well as the final cause of the heavens is sometimes stated that it is through being the final cause that the UMM is the efficient cause. For this view, see W. D. Ross, *Aristotle* fifth ed. (London: Methuen, 1964), 181. Charles Kahn, on the other hand, seems to believe that the UMM is a final cause only, and at best an efficient cause in an incidental sense (Kahn, "The Place of the Prime Mover in Aristotle's Teleology," 183-207). There are those who argue that the UMM must be considered to be an efficient cause primarily, and that it moves the heavens, at the very least, through a kind of psychic force much like the soul moves the body. For this view, see Sarah Broadie, "Que fait le premier moteur d'Aristote? (Sur la théologie du livre Λ de la 'Métaphysique')," *Revue philosophique de la France et de l'Étranger* 183, no. 2 (1993): 375-411. Finally, there are those who argue that the UMM is a soul, and that it operates as both final and efficient cause in so far as it is the soul of the cosmos (Mohan Matthen, "The Holistic Presuppositions of Aristotle's Cosmology," 171-201). There is also to be considered in this debate, in my view, one's conception of

UMM, Aristotle states that “There is something, then, that is always being moved in a ceaseless motion, and this motion is circular...Hence there is also something that initiates motion. And since whatever both is moved and initiates motion is an intermediary, there is something that initiates motion without being moved, something that is everlasting and a substance and actuality.”¹⁰¹ This everlasting and purely actual substance is of course the UMM.¹⁰² The way in which this cause is understood by Aristotle is then described by

efficient and final causality, for it will be partly due to one’s understanding of these two kinds of causes that will influence one’s position regarding the kind of causality exercised by the UMM. For my view, I believe that it is best to see the UMM as both a final and efficient cause, and that this is due to the fact that I do not believe that Aristotle can successfully make sense of efficient causality without incorporating final causality. So I would argue that the UMM is primarily a final cause, but that in the end the final causality of the UMM ultimately implies that it is also an efficient cause of the cosmos due to the fact that efficient causality is dependent upon final causality. For the connection between efficient and final causality see Margarit Scharle, “Material and Efficient Causes in Aristotle’s Natural Teleology,” *Apeiron* 41, no. 3 (2008): 27-46. I do not have the room to consider the arguments in detail for this dissertation. The specific kind of causality that the UMM exhibits is not necessary to explain in order for me to demonstrate the point that there is a cosmic nature being defended in *Λ* 10 and that the best way for us to understand what this nature is for us to examine the claim that the polis is a natural entity in *Politics* I 2. The point that I am attempting to make here then does not concern the specific kind of cause that the UMM exhibits, but rather that it is at the very least a final cause which affects and operates as a cause for all natural entities within the cosmos. Whether this final causality is a matter of also being a kind of efficient cause, or even if the UMM ultimately should be considered an efficient cause primarily, is not relevant to the argument. What is clear at the very least is that Aristotle viewed the UMM as a kind of final cause, and my argument here is that as final cause it acts as a good and cause for all natural entities. The result is that all entities actualize and self-realize in their own way as defined by their natures due to the efficacy of the UMM as final cause.

¹⁰¹ καὶ ἔστι τι ἀεὶ κινούμενον κίνησιν ἄπαστον, αὐτὴ δ’ ἡ κύκλω...ἔστι τοίνυν τι καὶ ὁ κινεῖ. ἐπεὶ δὲ τὸ κινούμενον καὶ κινεῖν [καὶ] μέσον, †τοίνυν† ἔστι τι ὁ οὐ κινούμενον κινεῖ, ἀίδιον καὶ οὐσία καὶ ἐνέργεια οὐσα. *Metaphysics* *Λ* 7 1072a21-26 (Translated by Terence Irwin and Gail Fine).

¹⁰² Aristotle also seems to argue that there is a plurality of movers which account for the various motions of the celestial bodies in *Λ* 8. Aristotle had thought it necessary to suppose a plurality of prime movers primarily in order to explain the motions of each of the spheres that he calculated were necessary to fully explain the motions of the heavens. So Aristotle argues that “But it is necessary, if all the spheres combined are to explain the phenomena, that for each of the planets there should be other spheres (one fewer than those hitherto assigned) which counteract those already mentioned and bring back to the same position the first sphere of the star which in each case is situated below the star in question; for only thus can all the forces at work produce the motion of the planets. Since, then, the sphere by which the planets themselves are moved are eight and twenty-five, and of these only those by which the lowest-situated planet is moved need not be counteracted, the spheres which counteract those of the first two planets will be six in number, and the spheres which counteract those of the next four planets will be sixteen, and the number of all the spheres – those which move the planets and those which counteract these - will be fifty-five. And if one were not to add to the moon and to the sun the movements we mentioned, all the spheres will be forty-nine in number. Let this then be taken as the number of the spheres, so that the unmovable substances and principles may reasonably be taken as just so many; the assertion of *necessity* must be left to more powerful thinkers” (*Metaphysics* *Λ* 8 1074a1-17; ἀναγκαῖον δέ, εἰ μέλλουσι συντεθεῖσαι πᾶσαι τὰ φαινόμενα ἀποδώσειν, καθ’ ἕκαστον τῶν πλανωμένων ἐτέρας σφαίρας μιᾷ ἐλάττονας εἶναι τὰς ἀνελιττούσας καὶ εἰς τὸ αὐτὸ ἀποκαθιστάσας τῇ θέσει τὴν πρώτην σφαῖραν ἀεὶ τοῦ ὑποκάτω τεταγμένου

him a few sentences later when he states that “...local motion is the primary type of motion, and the primary type of local motion is circular motion [i.e. the motion of the celestial bodies] and this is the sort of motion that the primary mover initiates. Hence the primary mover exists necessarily; and insofar as it exists necessarily, its being is fine, and insofar as its being is fine, it is a principle.”¹⁰³ Aristotle then understands the circular motions of the celestial bodies as being primarily motivated through the desire for the

ἄστρου· οὕτω γὰρ μόνως ἐνδέχεται τὴν τῶν πλανήτων φορὰν ἅπαντα ποιεῖσθαι. ἐπεὶ οὖν ἐν αἷς μὲν αὐτὰ φέρεται σφαίραις αἱ μὲν ὀκτώ αἱ δὲ πέντε καὶ εἴκοσιν εἰσιν, τούτων δὲ μόνως οὐ δεῖ ἀνελιχθῆναι ἐν αἷς τὸ κατωτάτω τεταγμένον φέρεται, αἱ μὲν τὰς τῶν πρώτων δύο ἀνελιττουσαι ἐξ ἔσσονται, αἱ δὲ τὰς τῶν ὕστερον τεττάρων ἐκκαίδεκα· ὁ δὲ ἀπασῶν ἀριθμὸς τῶν τε φερουσῶν καὶ τῶν ἀνελιττουσῶν ταύτας πεντήκοντά τε καὶ πέντε. εἰ δὲ τῆ σελήνῃ τε καὶ τῷ ἡλίῳ μὴ προστιθεῖται τις ἄς εἴπομεν κινήσεις, αἱ πᾶσαι σφαῖραι ἔσσονται ἐπτά τε καὶ τεσσαράκοντα. — τὸ μὲν οὖν πλῆθος τῶν σφαιρῶν ἔστω τοσοῦτον, ὥστε καὶ τὰς οὐσίας καὶ τὰς ἀρχὰς τὰς ἀκινήτους [καὶ τὰς αἰσθητάς] τοσαύτας εὐλογον ὑπολαβεῖν ((τὸ γὰρ ἀναγκαῖον ἀφείσθω τοῖς ἰσχυροτέροις λέγειν)). This argument has caused some controversy among scholars, as it seems to come out of nowhere and even to contradict the other books of Λ. However it is that one should understand Aristotle here, I do not believe that it poses a problem for the argument that I am making in this chapter. What is certain from several passages in the corpus is that Aristotle believed that there was one UMM that could explain the motions and order of everything in the cosmos, or in other words that there is only one *arche* for the order and regularity of nature. In *Generation and Corruption* Aristotle makes it explicit that multiple motions still must have one *arche* when he states that “...if there is to be movement (as we have explained elsewhere, in an earlier work) there must be something which initiates it; if there is to be movement always, there must always be something which initiates it; if the movement is to be continuous, what initiates it must be single, unmoved, ungenerated, and incapable of alteration; and if the circular movements are more than one, they must all of them, in spite of their plurality, be in some way subordinated to a single principle” (*Generation and Corruption* II 10 337a17-22; ἐπεὶ δ’ ἀνάγκη εἶναι τι τὸ κινουῦν εἰ κινήσεις ἔσται, ὥσπερ εἴρηται πρότερον ἐν ἑτέροις, καὶ εἰ ἀεὶ, ὅτι ἀεὶ δεῖ τι εἶναι, καὶ εἰ συνεχῆς, ἐν τῷ αὐτῷ καὶ ἀκίνητον καὶ ἀγένητον καὶ ἀναλλοίωτον, καὶ εἰ πλείους αἱ ἐν κύκλῳ κινήσεις, πλείους μὲν, πάσας δὲ πῶς εἶναι ταύτας ἀνάγκη ὑπὸ μίαν ἀρχὴν). The single principle would be the first of the prime movers, which would be the UMM of which I am speaking throughout this chapter. As I will argue in subsequent chapters, Aristotle believed that the universe or cosmos was indeed hierarchical and that the best way to conceive of it was as a monarchy. This point is of course illustrated by Aristotle at the end of Λ 10 when he states, quoting Homer, that “The rule of many is not good; let there be one ruler” (*Met.* Λ 10 1076a4). Aristotle makes this assertion in response to those philosophers who he claims give different principles for different substances making the universe a series of episodes. This lack of unity in the cosmos is something that Aristotle clearly despises, and he firmly believes that ultimately there must be only one principle of explaining the order and regularity of the cosmos. The controversy regarding the other prime movers moreover especially relates to the problem of individuating the prime movers, which is especially relevant when it is recognized that they do not have a material component to their natures (Guthrie, *Aristotle: An Encounter*, 270-271). However, this specific issue with the prime movers is not especially relevant to the argument that I am presenting, since regardless of how they are individuated there would still need to be a highest UMM which represents the final cause of the entirety of the cosmos.

¹⁰³ φορὰ γὰρ ἢ πρώτη τῶν μεταβολῶν, ταύτης δὲ ἢ κύκλῳ ταύτην δὲ τοῦτο κινεῖ. ἐξ ἀνάγκης ἄρα ἐστὶν ὄν· καὶ ἢ ἀνάγκη, καλῶς, καὶ οὕτως ἀρχή. *Metaphysics* Λ 7 1072b8-11.

fine, which is ultimately manifested in the pure actuality of the UMM and which results in the eternal circular motions of the heavenly bodies.

This cause of motion on the part of the UMM is not simply restricted to the movement of the heavenly bodies however. It seems clear from various texts within the Aristotelian corpus that the UMM is also responsible for the universal tendency for actualization among all the entities within the cosmos, and thus it serves as a cause of motion for all things within the cosmos. So Aristotle states in *De Caelo* concerning the various kinds of motions exhibited within the cosmos that “To attain the end would certainly be the best for all things. But if that is impossible, the nearer a thing is to what is best the better it is. And that is why the earth does not move at all, and the bodies close to it have few motions. For they do not reach the extreme goal, but they advance as far as they are able to attain the most divine principle. The first heaven attains it directly by a single motion. The bodies in between the first and the last one do reach the goal, but they reach it through a number of motions.”¹⁰⁴ This text is a clear indication of Aristotle’s insistence on the fact that all things do whatever it is that they do as it is dictated to them through their internal principles of motion on account of their desire for the best. The result of this is that the disparate natures of these entities result in the different kinds of motions exhibited by them as they seek to imitate the divine principle. This clearly implies that there is a kind of hierarchy which is defined by both the pursuit of and the proximity to the principle which represents the best. This principle of course is the

¹⁰⁴ Μάλιστα μὲν γὰρ ἐκείνου τυχεῖν ἄριστον πᾶσι τοῦ τέλους· εἰ δὲ μή, ἀεὶ ἄμεινόν ἐστιν ὅσῳ ἂν ἐγγύτερον ἦ τοῦ ἀρίστου. Καὶ διὰ τοῦτο ἢ μὲν γῆ ὅλως οὐ κινεῖται, τὰ δ’ ἐγγὺς ὀλίγας κινήσεις· οὐ γὰρ ἀφικνεῖται πρὸς τὸ ἔσχατον, ἀλλὰ μέχρι ὅτου δύναται τυχεῖν τῆς θειοτάτης ἀρχῆς. Ὁ δὲ πρῶτος οὐρανὸς εὐθύς τυγχάνει διὰ μιᾶς κινήσεως. Τὰ δ’ ἐν μέσῳ τοῦ πρώτου καὶ τῶν ἐσχάτων ἀφικνεῖται μὲν, διὰ πλείονων δ’ ἀφικνεῖται κινήσεων. *De Caelo* II 12 292b17-25 (Translated by W. K. C. Guthrie).

UMM, which thus clearly serves as an overarching final cause extending throughout the cosmos and which causes the motion of the entities within the cosmos in their striving for, in the sense of aiming for, the UMM. The hierarchy then comes about through the proximity to pure actuality, which for Aristotle is also eternal, unmoved and best. The closer that an entity can get to this actuality, the higher it seems to be in the cosmic hierarchy.

I am not arguing however, nor do I think that Aristotle is stating, that the UMM is the reason for the specific motions exhibited. The fact that a kitten for example grows into a cat is not the result of the causality of the UMM as such, but rather it would be the result of the nature that that kitten possesses. But it is the fact that any actualization as such is a result of the universal tendency for the UMM which cashes out as a universal imitation of the UMM, and the ways in which these motions are exhibited are partly understood through the specific natures that each of the entities within the cosmos possesses, but also for Aristotle through their proximity to the UMM. It is the proximity to the UMM, understood as pure actuality, which in turn leads to a kind of cosmic hierarchy in which some entities are able to more closely resemble the eternal activity of the UMM.

I am also not arguing that entities seek to eliminate themselves and become the UMM *simpliciter*, which would involve the contradictory claim that entities seek to undergo a substantial change in which they cease to be the kind of entity that they are. What I am arguing however, is that Aristotle clearly believes that all entities seek what is eternal, purely actual, unmoved, and thus best. By seeking such a thing, they do not seek their own destruction, but rather seek actuality and do so by *imitating* the eternal actuality

of the UMM in so far as they are able, and the limits of which are dictated by the specific natures that the various entities possess.¹⁰⁵ Thus the specific natures possessed by the various entities within the cosmos implies that entities simply seek to actualize those natures that they possess, and the causality of the UMM is not to be understood as overriding the internal causality provided to an entity through its nature but rather as completing the internal causality through explaining why the entity attempts to actualize itself in the first place. And entities actualize their immanent potencies due to their imitative desire for the UMM, which in other words is an imitative desire for pure actuality. Thus, there is a striving for pure actuality which for Aristotle is strictly unattainable for any entity within the cosmos since such a goal goes beyond what the specific natures can allow for the entities which possess them, but nevertheless the pure act explains why the entities actualize in the first place. This is not to be understood then as entities seeking to be something other than what they are, but rather as a causal explanation for Aristotle for why it is that entities do what they do in the first place.

This aspect of Aristotelian teleology is supported by a few other texts as well. In regard to the elements for instance, Aristotle states that “That, too, is why all the other things – the things, I mean, which are reciprocally transformed in virtue of their qualities and their powers, e.g. the simple bodies – imitate circular motion. For when Water is transformed in Air, Air into Fire, and the Fire back into Water, we say the coming-to-be

¹⁰⁵ It must be admitted that this interpretation is not explicitly defended by Aristotle anywhere in the corpus. There are of course indications that Aristotle believed what I am defending here, and I intend to show these indications and what they mean for my reading, but ultimately my reading must be taken as merely an interpretation of the arguments that Aristotle does provide. I do not however understand how it is that Aristotle can say that entities imitate the activity of the UMM and not state that in some way they are striving to be the UMM, and that this striving does not mean that entities seek to eliminate themselves but rather actualize their inherent natures which happens precisely because of their desire to imitate the pure actuality of the UMM.

has completed the circle, because it reverts again to the beginning. Hence it is by imitating circular motion that rectilinear motion too is continuous.”¹⁰⁶ The elements then move in the way that they do on account of their internal principle of motion, but this kind of motion is ultimately explained by their desire for the best, which is a desire for actuality itself. And the unidirectional motion of the elements transforming into one another is a result of their imitation of the motion of the heavenly sphere. But, I contend, the reason that they are imitating the circular motion of the heavens is due to the ultimate desire for actuality which can be understood in Aristotelian terms as an imitation of the UMM.

This also applies to plants and animals as well. In the *De Anima* Aristotle states that for living things “...the most natural act is the production of another like itself, an animal producing an animal, a plant a plant, in order that, as far as its nature allows, it may partake in the eternal and divine. *That is the goal toward which all things strive, that for the sake of which they do whatsoever their nature renders possible.*”¹⁰⁷ Here Aristotle states clearly that there is a kind of aiming for something better, which is pure act, that occurs throughout living things, and this is to be understood in terms of the eternal and divine, which of course ultimately is to be understood as the UMM. So Aristotle seems to be here recognizing that all things desire what is best, and it is on account of what is best that living things do what they do. This is explicitly the account that Aristotle makes of reproduction, which occurs because of the inability for created

¹⁰⁶ διὸ καὶ τὰλλα ὅσα μεταβάλλει εἰς ἄλληλα κατὰ τὰ πάθη καὶ τὰς δυνάμεις, οἷον τὰ ἀπλᾶ σώματα, μιμεῖται τὴν κύκλω φοράν· ὅταν γὰρ ἐξ ὕδατος ἀήρ γένηται καὶ ἐξ ἀέρος πῦρ καὶ πάλιν ἐκ πυρὸς ὕδωρ, κύκλω φαμὲν περιελθούθηναι τὴν γένεσιν διὰ τὸ πάλιν ἀνακάμπτειν· *On Generation and Corruption* II 10 337a1-6.

¹⁰⁷ φυσικώτατον...τὸ ποιῆσαι ἕτερον οἷον αὐτό, ζῶον μὲν ζῶον, φυτὸν δὲ φυτόν, ἵνα τοῦ ἀεὶ καὶ τοῦ θεοῦ μετέχωσιν ἢ δύνανται· πάντα γὰρ ἐκείνου ὀρέγεται, καὶ ἐκείνου ἔνεκα πράττει ὅσα πράττει κατὰ φύσιν. *De Anima* II 4 415a26-415b2 (My italics).

things to be eternal. Since these things cannot be eternal, they are compelled to reach whatever it is that they can which approximates eternity as close as it is possible for them to reach. For living things then, this would be reproduction. Reproduction allows the species to be eternal, even when the individual cannot be. And crucially the explanation that Aristotle provides for reproduction is that it is due to a desire for the good or best, which of course is to be understood in Aristotle's account as a final cause. Now it is also important to recognize that Aristotle does not simply argue that living things do what they do, or that all of the various entities within the cosmos move as they move, on account of final causality. There is also a mechanical explanation for these occurrences, understood by Aristotle as an explanation through efficient causation. But this is not for Aristotle in competition with the teleological account, but rather final causality goes hand in hand with efficient causality.¹⁰⁸

Finally, when it comes to human beings, Aristotle claims that humans are in a unique position within the cosmos. As we have so far seen, the UMM is a final cause in the sense of an aim for all natural motions within the cosmos. But the various things within the cosmos can reach this aim only in an attenuated sense, and perhaps even in some cases, such as the elements, not even that. But human beings can actually achieve the activity of the divine, through contemplation which represents the end of all human activity. Regarding this end of human activity, Aristotle states that "If intellect is divine, then, in comparison with man, the life according to it is divine in comparison with human life...[we] must, so far as we can, make ourselves immortal, and strain every nerve to live

¹⁰⁸ Once again, for an interesting discussion and interpretation of the relationship between Aristotelian final and efficient causality see Margaret Scharle, "The Role of Material and Efficient Causes in Aristotelian Natural Teleology," 27–46.

in accordance with the best thing in us; for even if it be small in bulk, much more does it in power and worth surpass everything.”¹⁰⁹ Here Aristotle is explicitly defending the life of contemplation as one which not only is best, but which ultimately is understood by him to be the truly happy life. So Aristotle then states “...that which is proper to each thing is by nature best and most pleasant for each thing; for man, therefore, the life according to intellect is best and pleasantest, since intellect more than anything else *is* man.”¹¹⁰ The way in which contemplation is understood by Aristotle to be the happy life is through his belief that the activity of God is ultimately a contemplative activity, and since that activity must be considered to be the best, anything which can partake in that activity would be essentially acting as God acts. This is clearly the best kind of activity and therefore a life of contemplation is the best life. Human beings are able then to achieve this life, albeit in an attenuated and temporary sense, and therefore this kind of life is the end of all human activities. Aristotle therefore essentially identifies the happy life of human beings with the life of contemplation.¹¹¹ Aristotle asserts this point by stating that “...the whole life of the gods is blessed, and that of men too in so far as some

¹⁰⁹ εἰ δὴ θεῖον ὁ νοῦς πρὸς τὸν ἄνθρωπον, καὶ ὁ κατὰ τοῦτον βίος θεῖος πρὸς τὸν ἀνθρώπινον βίον... ἄλλ’ ἐφ’ ὅσον ἐνδέχεται ἀθανατίζειν καὶ πάντα ποιεῖν πρὸς τὸ ζῆν κατὰ τὸ κράτιστον τῶν ἐν αὐτῷ: εἰ γὰρ καὶ τῷ ὄγκῳ μικρὸν ἐστὶ, δυνάμει καὶ τιμιότητι πολὺ μᾶλλον πάντων ὑπερέχει. *Nicomachean Ethics X 7 1177b30-1178a1*.

¹¹⁰ τὸ γὰρ οἰκεῖον ἐκάστῳ τῇ φύσει κράτιστον καὶ ἥδιστόν ἐστιν ἐκάστῳ: καὶ τῷ ἀνθρώπῳ δὴ ὁ κατὰ τὸν νοῦν βίος, εἴπερ τοῦτο μάλιστα ἄνθρωπος. οὗτος ἄρα καὶ εὐδαιμονέστατος. δευτέρως δ’ ὁ κατὰ τὴν ἄλλην ἀρετὴν: αἱ γὰρ κατὰ ταύτην ἐνέργειαι ἀνθρωπικαί. *Nicomachean Ethics X 7 1178a5-10*.

¹¹¹ Admittedly, this involves a bit of controversy regarding Aristotle’s understanding of the happy human life. In the *Nicomachean Ethics*, Aristotle seemingly identifies two inconsistent accounts of happiness. In the first book, he seems to argue that happiness represents the actualization of the various faculties of human nature, and that as a result the virtuous and happy life would be the social and political life represented by what many would consider to be the life of nobility and leisure. However, in the last book of the *Nicomachean Ethics*, Aristotle states that the best life is one of contemplation, which is the life of perfect happiness. However one understands the consistency of these two claims, I take as basic that Aristotle found the good of human life to be found and defined by that which he considered to be the best in human activity, namely that which humans share with the divine. This of course is contemplation. For a discussion of this controversy see Guthrie, *Aristotle: An Encounter*, 390-396; Lear, *Aristotle: The Desire to Understand*, 293-320.

likeness of such activity belongs to them...Happiness extends, then, just so far as contemplation does, and those to whom contemplation more fully belongs are more truly happy, not accidentally, but in virtue of the contemplation; for this is in itself precious. Happiness, therefore, must be some form of contemplation.”¹¹² This statement then shows us firstly that the life of contemplation is the happy life for human beings. This is so because it is this activity which is the best activity as it is a divine activity. But happiness is what we are aiming at, and therefore it seems natural for us to understand this desire for contemplation as ultimately caused by the desire to imitate the UMM. This is what makes humans rather unique among sublunary life forms, since humans can achieve this in a way that other sublunary living things cannot. The aim for the UMM then among most living things ultimately explains the desire for reproduction, but for humans it also explains our desire to contemplate. This is just another instance of the UMM being a final cause, in the sense of an aim which leads to an imitative activity, for all natural motion.

What we have established thus far then is that all things are motivated by the UMM, in so far as all natural motions are ultimately understood through their aiming at, or desiring the UMM. Now it follows from this position that the UMM works as a kind of final cause for all natural motions within the cosmos. We have already seen in the second chapter that Aristotle himself distinguishes two senses of final causality, namely something being for the benefit of something and something aiming at something.

Clearly the final cause that is operative in this sense then is that of aiming at the UMM. I

¹¹²τοῖς μὲν γὰρ θεοῖς ἅπας ὁ βίος μακάριος, τοῖς δ' ἀνθρώποις, ἐφ' ὅσον ὁμοίωμα τι τῆς τοιαύτης ἐνεργείας ὑπάρχει...ἐφ' ὅσον δὴ διατείνει ἡ θεωρία, καὶ ἡ εὐδαιμονία, καὶ οἷς μᾶλλον ὑπάρχει τὸ θεωρεῖν, καὶ εὐδαιμονεῖν, οὐ κατὰ συμβεβηκὸς ἀλλὰ κατὰ τὴν θεωρίαν: αὕτη γὰρ καθ' αὐτὴν τιμία. ὥστ' εἴη ἂν ἡ εὐδαιμονία θεωρία τις. *Nicomachean Ethics* X 8 1178b25-32.

believe that this is the essential point to make in order to understand how Aristotle can say that the UMM represents a separate good without thereby committing his theory to defending a kind of Platonic Form of the Good. So in (a) and (b), when Aristotle is arguing that the good is separate and in the arrangement of things, I contend based partly upon the passages just discussed that the UMM serves as a separate good precisely because the UMM is the final cause, in the sense of an aim, for all natural motions. Everything seeks the divine and attempts to attain it in any way it possibly can, and this aiming ultimately pans out as an imitative activity which is defined and given order through the natures that the respective entities possess. And given these restrictions, the motions of the entities in their imitative activity are ultimately those motions defined by their form and nature. If this is correct, then the UMM as an aim would also be understood by Aristotle as a good which is aimed at by the various things within the cosmos. The end of a teleological motion for Aristotle is the good, which is clear when Aristotle states, while determining the human good, that “For just as for a flute-player, a sculptor, or any artist, and, in general, for all things that have a function or activity, the good and the ‘well’ is thought to reside in the function, so would it seem to be for man, if he has a function.”¹¹³ The good of something is found in the function of that thing and the function of that thing is determined by the nature that it possesses. And the nature determines the final cause of the actions of that thing. What it is aiming at then is the good for it.

¹¹³ ὥσπερ γὰρ ἀλλητῆ καὶ ἀγαλματοποιῶ καὶ παντὶ τεχνίτῃ, καὶ ὅλως ὃν ἔστιν ἔργον τι καὶ πράξις, ἐν τῷ ἔργῳ δοκεῖ τὰγαθὸν εἶναι καὶ τὸ εὖ, οὕτω δόξειεν ἂν καὶ ἀνθρώπῳ, εἴπερ ἔστι τι ἔργον αὐτοῦ.
Nicomachean Ethics I 7 1097b25-29.

Now the UMM is considered by Aristotle to be the final cause of motion. By being the actuality behind all realization in so far as every realization aims at an end which is an actuality and which is ultimately identified as the UMM in so far as the UMM is pure act, the UMM performs the role of being the good as final cause for all entities as such. As Lear puts it “God is the final cause: the order depends on him. The order of this well-ordered world must bear some relation to God if he is to be responsible for it.”¹¹⁴ It is my contention then that the UMM represents an overall good for every entity within the cosmos. For Aristotle, the good of something is represented as the final cause of that entity, and the UMM as ultimate final cause is at the same time a good at which all entities aim in their attempts to realize themselves according to their natures. So there is for Aristotle a kind of proximate good for entities, which of course is determined by the natures of the individual entities. But the UMM, being the final cause in a non-proximate sense, represents a good for every natural motion that occurs. Of course, this good is a separate principle of good, since Aristotle’s own definition of what is natural is that which possesses a principle of motion and stationariness in itself which of course is not something that the UMM possesses. So the UMM is a separate thing from the natural world of moving entities, and it is a good separate from the motions of this moving world of nature. This implies a deep relationship between the entities of this world and the UMM, so deep in fact that it could be reasonably claimed that for Aristotle “...the order of the world as a whole is an attempted physical realization of God’s thought.”¹¹⁵

¹¹⁴ Lear, *Aristotle: The Desire to Understand*, 295.

¹¹⁵ *Ibid*, 296.

At this point then I have shown that there is a good reason to believe that Aristotle does indeed mean to say that there is a separate principle of the good in Λ 10. But he also clearly states that the principle of the good also exists in the arrangement of things within the cosmos. As we have seen, the predominant interpretation of the passage attempts to play down the claim that there is a good of the arrangement, instead saying that all that Aristotle ultimately intends to say here is that species are able to attain their own good without thereby undermining the attempt of other species to do the same. However, this is not what Aristotle is stating here in my view. Rather, Aristotle is clearly telling us that there is a good found in the order of the cosmos, and that moreover there is a nature associated with this good.

I believe that there is a philological justification for my view. For in (a) Aristotle states that “We must consider also in which of two ways *the nature of the whole* possesses the good...” What this seems to imply right off the bat then is that the following assertions are about a nature of the whole, in the sense that it is about a cosmic nature over and above the natures of the various entities within the cosmos. However, we have seen Johnson for instance argue that there is no nature of the whole being defended in this passage. Those scholars who have taken this position then argue that Aristotle’s expression of a ‘nature of the whole’ is a mere periphrasis for ‘the whole.’¹¹⁶ But I believe that the text as we have it does not lend itself to such an interpretation without some manipulation of the word order. For in the opening passage, Aristotle states in the Greek ἐπισκεπτέον δὲ καὶ ποτέρωσ ἔχει ἢ τοῦ ὅλου φύσις τὸ ἀγαθὸν καὶ τὸ ἄριστον, πότερον κεχωρισμένον τι καὶ αὐτὸ καθ’ αὐτό, ἢ τὴν τάξιν. This can be reasonably

¹¹⁶ Johnson, *Aristotle on Teleology*, 272-274; Kullmann, “Different Concepts of the Final Cause in Aristotle,” 174; Wardy, “Aristotelian Rainfall or the Lore of Averages,” 24.

translated as “We must consider also in which of two ways the nature of the whole possesses the good and the best, whether as something separate and by itself, or as the order.” Now one can possibly understand Aristotle here to be asserting something like ‘the whole’ rather than explicitly pointing out a nature of the whole which would be over and above the several natures of the individual substances found within that whole.

However, at 1075a22 Aristotle again, according to some manuscripts, seems to refer to that nature of the whole which he has already mentioned in the opening passage of Λ 10.

According to Jaeger, this passage states in the Greek that *τοιούτη γὰρ ἀρχὴ ἐκάστου αὐτῶν ἢ φύσις ἐστίν*. When translated, this passage states that “For the nature of each of them is such a principle.” However, this specific word order is not universally agreed upon. Ross’ text gives the Greek as *τοιούτη γὰρ ἐκάστου ἀρχὴ αὐτῶν ἢ φύσις ἐστίν*.¹¹⁷

According to this word order the translation would be “For that is the kind of principle that nature is of each of them.” This second translation of this part of Λ 10 then seem to be another indication that Aristotle is speaking here of a nature of the whole, and that this specific passage is a second reference to this nature of the whole. Now one could state that this second passage might be translated along the lines of the first reading, and that the word order provided by Ross does not change the essential meaning of the passage.¹¹⁸

I think that this is possible, but it does seem to me that the meaning of this passage is better taken to be speaking of a nature of the whole given the context of the passage overall and the possibility of translating the above phrase according to the Ross word order of the Greek which would make the passage contain a second reference to an

¹¹⁷ Jaeger moved the *arche* to better accord with what he thought that Aristotle was attempting to say, namely that ‘the nature of each of them is such a principle.’

¹¹⁸ István Bodnár, “Teleology Across Natures,” *Rhizai* 2, no. 1 (2005): 19.

overall nature. If this is the case then, we can see that the entire passage is indeed a discussion of a nature of the whole, or a cosmic nature.

Of course, this philological argument has come under question as well. Bodnár for instance argues that if we are to accept Ross' word order, there would result a kind of circular argument being expressed by Aristotle in Λ 10. Bodnár believes that the non-distributive sense of nature in (f) would necessarily lead to a strange circularity in which Aristotle would be arguing that it is not the interaction of the individual components of the universe and of the single excellent entity which gives rise to ordering, but rather a hierarchy that must direct the individuals towards the single excellent entity which then proceeds to produce the joint-arrangement among the entities within the cosmos.¹¹⁹ But this is clearly a circular argument if Aristotle is stating this, for presumably the passage is about how there is a nature of the whole and how it is good or possesses the good. But Bodnár's argument here is that the non-distributive reading of 'nature' in (f) would imply that the explanation for the joint-arrangement of things is a pre-existing hierarchy expressed by the regulation of the behavior of the individual entities in the hierarchy. But clearly such a joint-arrangement should be a characteristic of the hierarchy in the first place, not something which is explained by a pre-existent hierarchy. So Bodnár states that the non-distributive reading would force us to understand Aristotle's argument as essentially implying that "...the hierarchy needs to direct the individual entities towards the single excellent entity, and only after this will the individual entities produce the joint-arrangement among themselves."¹²⁰ For Bodnár, due to the vacuous nature of the argument when we take the non-distributive understanding of 'nature' in (f) seriously, it

¹¹⁹ Bodnár, "Teleology Across Natures," 20-21.

¹²⁰ Ibid, 20.

would be better to simply understand Aristotle as referring to the various natures of the natural kinds, and not a single ‘nature of the whole.’

However, Bodnár’s argument here is not convincing. What Bodnár believes is that there is a circularity that can be avoided in this passage which results from the non-distributive understanding of ‘nature.’ However, I believe that the non-distributive reading does not imply that Aristotle is necessarily providing a circular argument. Aristotle is not stating that there is a pre-existing hierarchy which explains the joint-arrangement, but rather that the fact that all things are jointly arranged in relation to one thing implies that there is a sort of nature beyond the individual natures of the entities within the cosmos, a nature which certainly does not account for the specific movements of the individual entities, but is necessary to account for the joint-arrangement of things within the cosmos.¹²¹ In other words, Λ 10 is stating that all things aim at one thing, and that implies that there is a sort of arrangement among the entities in the world. So far from implying that there is a hierarchy which then explains the arrangement among entities within the world, as Bodnár contends, it is rather that all things aim at the same one thing, and that this aiming also leads to a joint-arrangement of all things within the cosmos for Aristotle which is itself a necessary condition for the entities to achieve their aim in the first place. Rather, it is from the fact that all things according to Aristotle aim at one thing that there is in fact an arrangement which is the nature to which he is referring, and the arrangement itself is a necessary condition for the various entities within the cosmos to realize their own natures and aim at one thing, namely the UMM.

¹²¹ At this point, I have not explained in any detail what this nature is like and how we can account for it on Aristotelian terms. Chapter 6, after a careful consideration of Aristotle’s use of nature in the *Politics* I 2, will provide this explanation.

The upshot to all of this then is that there is indeed additional textual evidence that Aristotle is speaking of a cosmic nature in this passage, and that the reason that Ross's word order is not accepted is not due to textual reasons but rather due to philosophical reasons relating to a perceived inconsistency between a nature of the whole and Aristotle's understanding of nature in the other passages within the corpus. There really isn't much of a reason then to use Jaeger's word order other than the assumption that Aristotle's discussion of a nature of the whole would be a violation of Aristotle's general theory of nature. At this point then, we have seen evidence for the fact that Aristotle is both arguing that there is a separate good at which all things aim, and that there is a good associated with a nature of the whole and which is understood through the ordered arrangement of all things within the cosmos. It is now necessary for us to consider just how we are to understand this nature of the whole and the relation it has with both the various entities within the cosmos as well as with the UMM as a separate good.

3. Nature and the Analogies of Λ 10

Now that we have established that all things aim at the UMM as a final cause, and that there is good reason to believe that Aristotle is defending a cosmic nature in Λ 10, we now should set out to see if these concepts can be explained on Aristotelian grounds without conflicting with other basic Aristotelian claims. Thankfully, Aristotle provides us with several analogies to help us understand the cosmic nature which I believe are important in understanding Aristotle's claims in Λ 10. Specifically, Aristotle uses an army and a household in order to illustrate how the good is both a separate principle as well as how it is found in the order and arrangement of things within the cosmos.

Aristotle also seems to compare his understanding of how the good is found in the cosmos with a polis and specifically with a monarchy when at the end of Λ 10 he references Homer by stating that “And those who say mathematical number is first and go on to generate one kind of substance after another and give different principles for each, make the substance of the universe a series of episodes...and they give us many principles; but the world must not be governed badly. ‘The rule of many is not good; let there be one ruler.’”¹²² It is my view that these analogies are vital for unlocking the meaning of Aristotle’s assertion of a cosmic nature or ‘nature of the whole.’

The analogies of Λ 10 then have been discussed by several commentators. Sedley, who as we have already seen is one of the few contemporary scholars who defends the cosmic nature reading of Λ 10, uses the household analogy to show that all things share, to differing extents, in a single goal-directed activity. So when Aristotle states that the “freemen are least at liberty to act as they will, but all things or most things are already ordained for them, while the slaves and the beasts do little for the common good, and for the most part live at random,” he means to show us that the arrangement of the various entities within the cosmos is much like the arrangement of the members of a household hierarchy in so far as in both cases the entities involved share in a single goal-directed activity albeit to a differing degree. Sedley states that “The level of participation is higher among the free men than among the slaves...most of [the slaves’] own aims at best merely coincide with the aims of the household...”¹²³ So when Aristotle states that

¹²² οἱ δὲ λέγοντες τὸν ἀριθμὸν πρῶτον τὸν μαθηματικὸν καὶ οὕτως ἀεὶ ἄλλην ἐχομένην οὐσίαν καὶ ἀρχὰς ἐκάστης ἄλλας, ἐπεισοδιώδη τὴν τοῦ παντὸς οὐσίαν ποιοῦσιν...καὶ ἀρχὰς πολλὰς: τὰ δὲ ὄντα οὐ βούλεται πολιτεύεσθαι κακῶς. “οὐκ ἀγαθὸν πολυκοιρανίη: εἷς κοίρανος ἔστω. *Metaphysics* Λ 10 1075b37-1076a4 (Homer *Iliad* II 204).

¹²³ David Sedley, “*Metaphysics* Λ 10,” in *Aristotle’s Metaphysics A: Symposium Aristotelicum*, eds. Michael Frede and David Charles (Oxford: Clarendon Press, 2000), 332.

the slaves and beasts act by chance and at random, he does not mean that the slaves and beasts when acting by chance do not make a contribution to the household, but that rather their aims when they do so are not those of the joint-activity of the household. Through this interpretation of the household analogy, Sedley believes that Aristotle is arguing that all thing in the cosmos "...share, to differing extents, in a single goal-directed activity."¹²⁴ This single goal directed activity moreover is understood by Sedley to be the imitation of the unmoved mover, which ultimately is understood as the desire for pure actuality. So Sedley states that "Just as every heavenly sphere is motivated by love for its mover, and through that mover ultimately by love of the prime mover, so too sublunary things are motivated by love for the prime mover, even if the motivation is increasingly remote as one travels down the natural hierarchy."¹²⁵ The more this motivation is remote, the farther down the hierarchy an entity is; which according to Sedley is adequately expressed by Aristotle through the household analogy. All of this amounts to Sedley's claim that it would be better "...to see this inclination toward everlasting recurrence as an aspiration of the overall cosmic nature – than of the individual natures of cabbages, flames, or drops of water."¹²⁶ This is especially so since it is difficult to see what it means for a plant or a simple body to desire something like the unmoved mover. Finally, a cosmic nature that is being expressed in this way would also successfully account for Aristotle's assertion that the good is found in the arrangement, which would be the hierarchy of entities defined by their respective desire for the prime mover.

¹²⁴ Sedley, "*Metaphysics* Λ 10," 333.

¹²⁵ *Ibid*, 333.

¹²⁶ *Ibid*, 334.

In my view, Sedley is right regarding the fundamentals. He claims that there is a cosmic nature and that this is exhibited hierarchically through each individual's attempt to imitate the prime mover. This view moreover has textual justification both in Λ 10 as well as in those texts discussed in the first part of this chapter when discussing every entity's desire for the UMM. However, Sedley is also mistaken in crucial points as well. He firstly seems to believe that the household analogy shows us that the shared goal which is in general the motivating factor of the members of the household becomes increasingly remote the farther down the household hierarchy one is. And that this in turn illustrates for us that in the case of natural motions too the motivation is more indirect and thus increasingly remote the farther down the hierarchy one goes. According to Sedley, this is illustrated by the fact that most of the motions of the slave do not have as their end the good of the household. But this is not the point of the household analogy as far as I can see it. Rather, Aristotle is attempting to show us how various entities all attain a different level of that which they desire. In other words, all things aim at the UMM in so far as all things seek to share in the activity of actuality which just is the UMM according to Aristotle. The difference then between various entities is not how much of their movements directly aim at the good, but rather the way in which they are able to attain the end that they seek. We have already seen that Aristotle's ontology is partly understood through the ways in which each entity seeks the divine activity, and that there is a significant difference between the activity of the celestial bodies and the activity of plants regarding the way in which they successfully imitate the divine activity. And crucially, nowhere in the corpus is it found that the various entities seek or are motivated by the UMM in a way which indicates that most things do not seek the UMM

at least during some of their motions, which seems to be a necessary implication of how Sedley understands the household analogy used by Aristotle.

When one examines the cosmos through this analogy then, Sedley argues that the single goal directed activity in which all things share is the imitation of the unmoved mover. I think that this is correct, but that Sedley misses the point that the household analogy is meant to show us that just as all members of a household ultimately seek the activity, which is the good, of the head of the household in so far as the head of the household represents for Aristotle the fully actualized human life, so all things in the cosmos ultimately seek the activity of the UMM, in so far as all things seek actuality and the UMM represents pure act itself. There is not some external activity that things seek by their nature, such as the good of the cosmos or the arrangement within the cosmos, but rather they seek what would be in the household analogy the head of the household. They aim at becoming the head of the household in so far as they are able, just as all entities aim at becoming the UMM. This seeking, as I explained earlier, represents the reason or final cause for each entity's ultimate aim to realize its own nature, as this is the imitative activity which manifests itself from the desire for actuality itself. This desire then in the household ultimately manifests itself in the performance of the specific role that they play in the household. It seems obvious that every member of a household is understood to be lower in the hierarchy precisely due to the fact that they cannot perform the same sort of activities that the head of the household performs, and it follows straightforwardly from this analogy that the cosmos is hierarchically structured in so far as beings can imitate the divine activity in vastly different ways, some of which are closer to the divine activity than others due to their specific natures that they possess. Sedley

simply seems to confuse this point with attempting to indicate that there is some other activity which all things take a part in, which is not what Aristotle is saying either in *Λ* 10 or in the other passages that mention the role and place of the UMM in the cosmos as Aristotle sees it.

Sedley also argues that the cosmic nature that Aristotle is describing here is exhibited by the desire for what he calls everlasting recurrence but which in Aristotelian terms would be pure actuality. Sedley believes that it is the cosmic nature that is so exhibited in such motions precisely because it is odd to say that certain entities such as plants or even the elements desire anything, as they clearly do not have the type of soul necessary to actually have a capacity to desire anything. However, Aristotle does not need to account for a desire which he attributes to those entities that do not have such a faculty according to his own ontology. Everything in the cosmos for Aristotle is directed at actuality. And it is the nature of the UMM to be pure actuality. This of course accounts for the desire of the outer sphere and the celestial bodies in general, a desire moreover which in their case may in fact be a conscious one. But the desire for actuality in general is not necessarily a desire that is a conscious one. For us humans, we are aware of what it is that we want, and ultimately what it is that we want is actuality which manifests itself in the desire to contemplate as it is in doing this that human beings achieve the essential activity of the divine. But everything which has a potentiality is also necessarily disposed toward and driven at the actuality of that potentiality. This is not something that a life-form needs to be conscious of in order to do. Now of course this is the case when we are speaking in biological terms when we describe the plant's tendency to actualize itself and grow into a fully functioning adult. But it is also the case

that every entity according to Aristotle is driven at actuality *simpliciter*, which is ultimately no more to say that every entity is driven to approximate the UMM in so far as its nature allows it to do. This desire for actuality combined with the specific range of capabilities and ends dictated to an entity by the nature that it possesses leads then to the imitative motions that Aristotle believes can be found throughout the cosmos. To have a potentiality for Aristotle is to also have a nature, which in itself defines and limits the actuality of the potentiality. But every potentiality, and thus every nature, is driven to achieve actuality, and thus every natural entity is disposed to approximate as best as it possibly can the activity of the UMM, which is nothing other than the activity of pure actuality as such. This is what it means for something to desire the UMM, which of course implies that there is no need to entertain the notion that entities must be consciously aware of their desire for such actuality. What this all implies finally is that the notion that there must be a cosmic nature that is manifested in the desire for the UMM betrays an inaccurate understanding of the general drive for actuality manifested by every nature within the cosmos.

Finally, as I have discussed in the second chapter, Sedley also believes that Λ 10 serves as a justification for his anthropocentric interpretation of Aristotelian teleology. Since Sedley believes that *Physics* II 8 and *Politics* I 8 serves as clear examples of anthropocentric teleology, he then believes that the cosmic nature which is discussed in Λ 10 provides a further explanation of just how this anthropocentric external teleology works. Sedley argues that it would be absurd to say that it is the nature of the individual entities to aim at being consumed by an entity further up in the teleological hierarchy. So, just as Sedley assumes that a cosmic nature is necessary in order to explain the desire

for actuality among all the entities in the cosmos, he also believes that it is somehow the cosmic nature that is expressed in the anthropocentric teleology he reads into Aristotle. However, I have already shown in the last chapter that there is a distinct lack of anything which could actually support an anthropocentric interpretation in Aristotle. *Politics* I 8 is not explicitly promoted by Aristotle as a defense of his view on natural teleology, and *Physics* II 8 certainly does not make such a claim either, although it certainly seems to say more about the teleologically understood ends towards which things like winter rain is striving than that winter rain should simply be understood in terms of the teleological aims of water alone.¹²⁷ And the idea that a cosmic nature is necessary in order to account for an anthropocentric teleology is just as unfounded in relation to what is actually stated in Λ 10 as the claim that a cosmic nature is necessary in order to account for the general tendency for individuals to aim at actuality.

So at this point we have established that Λ 10 is speaking about and defending a cosmic nature or ‘nature of the whole.’ I have also defended the point with Sedley that this cosmic nature is ultimately a hierarchical one and which is ultimately explained through every entities’ desire for the UMM, or more precisely the desire for the activity of the UMM. However, Sedley seems to view the cosmic nature as the expression of the desire of each entity to imitate the UMM, that certain entities are less motivated for the UMM than others and that a cosmic nature is necessary for an anthropocentric teleology. But we have shown that this is not a necessary nor even a good reading of what a cosmic nature might mean on Aristotelian grounds.

¹²⁷ I will be returning to the claims of *Physics* II 8 in the final chapter.

Another account which has been provided to explain the concept of a ‘nature of the whole’ or a cosmic nature has been provided by Margarit Scharle.¹²⁸ Scharle ultimately believes that the cosmic nature Aristotle is describing in *Λ 10* amounts to and is understood through the theory of approximation that both she and I defend. The activity of all things in the cosmos for Aristotle is fundamentally defined through the attempt of each entity to approximate as far as it is able the divine activity of the UMM which is ultimately the activity of actuality as such. Scharle ultimately identifies the cosmic nature which Aristotle is referencing in *Λ 10* with the desire of individuals to approximate the UMM. So Scharle states that “...the natures of individual things are cosmic to the extent to which individuals’ natural movements approximate the activity of the Prime Mover.”¹²⁹ Consequently Scharle believes that there is a cosmic principle operating in each individual which is nothing other than the natures of these individuals but which is to be understood through an individuals’ attempt to approximate the activity of the UMM by imitating something higher in the ontological hierarchy of the Aristotelian cosmos. This essentially boils down to the claim that individual natures are cosmic from a certain point of view.

However, this account of cosmic nature is not satisfactory either. Essentially Scharle’s account states that individual natures are also cosmic natures, whatever it might mean for an individual nature to be cosmic at the same time. Scharle makes this argument explicitly when she states that “...the expression of an individual’s own nature just is an expression of the cosmic nature...”¹³⁰ Scharle believes that this approach to the

¹²⁸ Margarit Scharle, “Elemental Teleology in Aristotle’s *Physics* 2. 8,” *Oxford Studies in Ancient Philosophy* 34 (2008): 147-184.

¹²⁹ Scharle, “Elemental Teleology in Aristotle’s *Physics* 2. 8,” 170.

¹³⁰ *Ibid*, 170.

possibility of a cosmic nature in Aristotle avoids the pitfalls of attempting to account for a cosmic nature which is at the same time not a principle of rest and motion as detailed in the second chapter. Scharle argues that the problem with Sedley's account of cosmic nature in Λ 10 ignores the fact that Aristotle fails to provide an account of a natural object which can accord with Sedley's interpretation of a cosmic nature in Λ 10. She thus believes that taking Aristotle to be stating that there is a cosmic nature mentioned and discussed in Λ 10 allows her to provide the best and most natural reading of Λ 10 but that she can also avoid the minimalist critique that the cosmic nature mentioned in Λ 10 does not accord with anything that Aristotle has to say regarding nature in the rest of the corpus. But when one looks back at the two references to a cosmic nature in Λ 10, there is no clear indication whatsoever that this cosmic nature is simply individual nature taken from a certain point of view to be expressing a cosmic nature. When Aristotle states in Λ 10 that this 'nature of the whole' is a principle of each of them, he does not explicitly imply that it is merely that each individual also possesses a cosmic nature or even that the nature that each individual possesses is a cosmic nature from a certain perspective. And frankly, Λ 10 is easiest and most natural to interpret when one just takes Aristotle to be discussing what he states that he is discussing, namely a 'nature of the whole.'¹³¹

The problem that Scharle has with this reading is seemingly that such a nature is not accounted for in Aristotle's description of what a nature is in the rest of the corpus.

We have already discussed Aristotle's account of natural objects and explanation in the

¹³¹ Scharle agrees with me on this point, as she too believes that the natural reading of Λ 10 is a discussion of a nature of the cosmos. She simply wishes to avoid what she perceives to be interpretive pitfalls involved in taking Aristotle to be actually defending a nature like the natures possessed by individual entities. I agree with her on this point as well, but believe that Aristotle provides us way out, namely his discussion of the naturalness of the polis.

Physics, and what these accounts have in common is that they all imply that a natural thing possesses a principle of movement, and that that which is by nature in this sense is that which both possesses matter as well as a form which directs the growth and operation of the natural entity so that it can achieve the end dictated to it by the nature it possesses. Finally, that which possesses a nature is an organized whole which is arranged through the nature that it possesses and without which the parts of the whole would lose their meaning and function, further implying that the parts of the whole are in fact defined through the whole. But the cosmos does not grow for Aristotle, nor does it have a source of growth or becoming. In addition, the parts of the cosmos are in fact considered by Aristotle to have existential autonomy, and to be knowable through themselves and not as parts of a cosmic whole. Scharle refuses then to acknowledge that there is a cosmic nature over and above the individual natures explicitly defended in Λ 10 precisely because of the apparent lack of any account of nature within the corpus that could help us understand what such a cosmic nature would look like. In other words, a ‘cosmic nature’ just simply does not accord with how Aristotle defines natural objects in *Physics* 2.

Given the lack of a sufficient account for cosmic nature in Aristotle at this point, it would seem plausible to take the traditional position which has been recently defended by Bodnár and Johnson; namely that Λ 10 is not really speaking of a cosmic nature at all, but really just defending the fact that all entities simply aim at the UMM.¹³² However,

¹³² Bodnár in fact even goes as far as arguing that there is an emergent structure of inter-coordination that arises from the desire for the UMM. Bodnár states that “Once we take these sentences in this, traditional way, the further claims of the section [Λ 10] will much more naturally be read as stating that the common object of striving generates a web of mutual interrelationships...with the single goal as the focal point of this web.” (Bodnár, “Teleology Across Natures,” 21). I will be arguing that there is an emergent web of mutual interrelationships which is generated from the desire for the UMM as well. The main difference between Bodnár and I is that I believe that this web of relationships must be accounted for by Aristotle, and

we have already seen that this view is not fully supported by the text, and that moreover there is a distinct sense that the analogies used by Aristotle indicate for us that he is speaking of something more than just the fact that things happen to be related to each other.

In my view then, I think that it is best to re-consider the analogies that Aristotle is using to help explain the cosmic nature mentioned by Aristotle in Λ 10. Let us take the army analogy first. Firstly, it seems fairly obvious that the good of an army consists not just in the fact that its various parts are in a good arrangement, but that an army must be organized in such a way that each unit can do its particular function. And of course, we can see that a good army is one where each unit in it is in some sense able to cooperate with the other units in order to achieve its end. So for Aristotle an army possesses a good, and is evaluated as such based upon how well each unit within the army performs its function and how well it cooperates with the other units in the army in order to achieve the overall end of victory over the enemy army. So it follows that the good of an army is actually found both in the leader of the army and in the organization. The leader or general actually accounts for the organization of the army, and in this sense is also the good of the army. On the other hand, the organization of the army allows each unit within the army to perform its function, which of course is only possible through a coordinated effort which is a result of the general of the army.

This analogy clearly has implications that have already been indicated by those commentators that I have already mentioned in this chapter. The general then is akin to

that he is doing precisely that when he mentions a 'nature of the whole' which Bodnár denies. I will defend that there is a 'nature of the whole' defended in Λ 10, and account for this nature through an analysis of alternative concept of nature found in the *Politics*. Doing this will hopefully provide a more natural reading for Λ 10 than the one that Bodnár has provided.

the UMM, in so far as each represents the highest good. We have already seen that the UMM represents a kind of final cause for all things, and in this sense is responsible for the arrangement found within the cosmos. We have also seen that there is a kind of hierarchy within the cosmos which implies a kind of coordination which mirrors the coordination of an army. Just as each unit within an army is defined in terms of the function that it performs, in that an archer is defined in terms of what an archer is supposed to do, so each entity within the cosmos is also defined by the function that it performs which is ultimately explained by the natures that they possess. But an archer unit can only perform the function that it does precisely because of the other units within an army which allow for it to perform such a function. I think that this correctly mirrors Aristotle's understanding of the cosmos as well. Each thing within the cosmos possesses a nature which determines its function. But the performance of such a function relies on a kind of coordination which is only possible if the various entities within the cosmos are related to each other in a kind of whole which itself is good. Finally, just as an army is evaluated as being good or bad as a whole, it would seem to follow that the arrangement of the entities must be evaluated accordingly. This whole that is above and beyond the individual entities themselves would naturally be taken to be the cosmic nature that Aristotle explicitly states that he is talking about in this passage.

The household analogy essentially makes the same points regarding the cosmos as the army analogy. Just as is emphasized in the army analogy, there is in a household a kind of arrangement which allows the particular function of each member of the household to be expressed and pursued. However, the head of the household seems to represent the UMM in a more literal sense than a general, precisely because Aristotle

would have considered the head of the household to represent that which all other things seek to be but are unable to fully achieve due to the limitations inherent in their respective roles.¹³³ So the household analogy indicates an emphasis both on the separate good represented in the general and head of the household respectively, as well as on the good in the arrangement which helps to make sense of the ordered arrangement that exists between the various entities in an army and a household. When one applies these analogies to the cosmos, we see that Aristotle is attempting to point out both a separate good of the cosmos, which would be the UMM, as well as a good found in the order and arrangement of the various things within the cosmos. These points are generally accepted among all the commentators of Λ 10.

What has not been emphasized concerning the analogies however are two additional characteristics of an army and a household that I believe Aristotle is also attempting to apply to the cosmos as a whole. Firstly, there is the fact that both an army and a household are not just mere collections of things that are accidentally arranged or ordered. Rather both an army and a household are ordered together in a unified sense which allows for the individual entities to attain the end that they seek. In my view, this coordination of entities is also an important aspect of these entities which Aristotle is

¹³³ The limitations of the various members of the household would apply to anyone who is not the head of the household. But Aristotle would have had in mind more specifically, and more controversially, the limitations of women and slaves. Women are understood to be limited by Aristotle in so far as their natures are directed at reproduction and care of the household, and as such are not able to achieve the kind of life that is enjoyed by the head of the household who is able to fully realize his nature. Slaves on the other hand are distinguished by Aristotle between natural and conventional. Natural slaves are those who are unable to function on their own for Aristotle, and thus become a tool of a master who is both beneficial to and is benefited from the relationship with the slave. Needless to say, these are suspect statements and some are even convinced that such statements indicate that Aristotle could not have held that the relationship between entities in the cosmos is like the relationship between the members of a household. I don't think that Aristotle is bothered by this however, and although we should most certainly dismiss his assertions regarding slavery and women as mere nonsense, the hierarchical character of the household is in my estimation most certainly for Aristotle a mirror of the hierarchical structure of the cosmos.

attempting to apply to the cosmos as well. As Christoph Horn states “If, in an apartment, every detail is in an optimal condition, this does not yet imply that everything is optimally *coordinated*.”¹³⁴ It is the coordination of an army that allows it to achieve victory, and an uncoordinated army is a bad one which will be easily defeated by the enemy. For a household, an uncoordinated one would be a bad one which will prevent the various members of the household to fulfill their function and thus they will live less than ideal lives. I believe that this is also an important emphasis of the analogies that Aristotle wants us to apply to the cosmos as well. There is a sort of coordination at work in the cosmos, which can be seen at the level of sublunary life in so far as every entity is intimately arranged with other entities to create a balance or harmony which both allows for that entity to achieve reproduction and thus imitate the UMM in so far as it is possible for that entity to do so and which accounts for their interactions which allows for each entity a place within a larger and unified whole. This balance is not accidental, and helps to explain how entities are able to fulfill their desire for eternity through reproduction.

Secondly, the analogies both speak of an organization which in some sense has a nature which is other than the nature that is expressed by the individual entities within the arrangement. An army for instance is composed of multiple kinds of units which in themselves express a kind of nature and function. But the particular nature and function of the individual units within an army is not the same as the nature that the army itself possesses. This seems to me to be equivalent to saying that the arrangement and order of the cosmos is a good which must be accounted for, and which is accounted for by Aristotle through expressing and defending an account of a cosmic nature which is other

¹³⁴ Christoph Horn, “The Unity of the World-order According to *Metaphysics* Λ 10, in *Aristotle’s Metaphysics* Λ – *New Essays*, ed. Christoph Horn (Boston: De Gruyter, 2016), 285.

than the natures of the various entities within the cosmos. Now we have seen that Sedley primarily defends an account of cosmic nature that is over and above the natures of the entities within the cosmos. But the issue with Sedley's account is that not only does he fail to provide a defense of a cosmic nature in the face of the minimalist critique that there is no account of a natural thing, and thus a nature, in Aristotle to provide an explanation for what this cosmic nature could be, but he also seems to emphasize a separate cosmic nature for the wrong reasons. According to Sedley, the cosmic nature is defended by Aristotle for two reasons. Firstly, it allows Sedley to explain what nature is being fulfilled through the anthropocentric teleological actions of the various sublunary entities. Secondly, it helps to explain away what would otherwise be an anthropomorphic account of desire for the UMM which Sedley believes cannot be attributed to entities that do not have the capability to desire anything. But, despite these issues with Sedley's defense of a cosmic nature, I think that interpreting Λ 10 as discussing and thus defending an overall cosmic nature is the correct reading, and that it is corroborated through the analogies. The reasons for Aristotle's defense of a cosmic nature however is that there is also the need to explain the coordination of entities within the cosmos, and that a cosmic nature is how, in Aristotelian terms, one can account for such coordination.

4. Conclusion

In conclusion, I by no means believe that everything has been settled at this point. A cosmic nature is, as has been emphasized, something that Aristotle just simply does not reference in his discussions of natural things in his other works. Natural entities for Aristotle possess an internal principle which accounts for the essential motions of that substance, whether these motions are considered to be locomotive, qualitative change or

quantitative change, and it is associated with entities that can be safely considered to be existentially autonomous. This just is not what the cosmos is for Aristotle, and thus it is incumbent upon us to attempt to understand just what Aristotle is doing when ascribing to the cosmos a nature. I believe that the clue for us to unlock this concept of a cosmic nature is in the analogies as well. The household analogy is specifically what we ought to consider when attempting to understand Aristotle in *Λ 10*. We generally acknowledge that an army, although it may have a nature which helps to define what it does, what end it is attempting to achieve, and how good it is at achieving such an end, is nevertheless an artificial production. If we are to accept the fact that the cosmos possesses a nature, and that it is through the nature that we can understand how the whole possesses the good through its arrangement and ordering, then it seems that it is precisely at this point that the army analogy fails to apply to the concept of a cosmic nature. This is because if the cosmos does have a nature, it cannot be a nature on par with the artifacts of Aristotelian ontology. Artifacts are created products which depend upon an artificer who has the form or nature of the artifact in mind before producing the artifact.¹³⁵ But the cosmos is an eternal entity, not one which is dependent upon a creator. Thus the nature, or more specifically the kind of nature, that the cosmos possesses must be something other than the nature possessed by artifacts such as an army.

It is at this point, specifically regarding the kind of nature that the cosmos possesses, that the household analogy serves as a better comparison for what Aristotle is attempting to get us to see with his concept of a cosmic nature. For a household is not an artifact, but rather something that exists by nature.¹³⁶ The naturalness of the household is

¹³⁵ I have already pointed this distinction out in the second chapter.

¹³⁶ *Politics* I 2.

understood however through the relationship that a household has with the polis which represents the end of a natural development which begins with the household. And it is in the kind of nature that the polis possesses that can give us a clue into what the cosmic nature might be within the general Aristotelian ontology.¹³⁷

However, although this seems to be what Aristotle is attempting to convey in Λ 10, the implications of this kind of comparison still remain unclear. I contend then that an investigation into the ontology and nature of the polis will help us to better determine the nature of the cosmos defended by Aristotle in Λ 10. What will follow then in the following chapters is an investigation into the metaphysical and ontological claims regarding Aristotle's concept of the polis and how this relates to the cosmos and its ontological status within Aristotle's general worldview. Specifically, we have seen that the problem that has yet to be solved regarding the cosmic nature in Λ 10 is how we should best understand and make consistent the concept of a cosmic nature given Aristotle's other commitments regarding substances and that which possesses a nature. This needs to be resolved, and I think that the best way to do this is look at the naturalness of the polis and how it fits best with the general idea of nature within the corpus.

¹³⁷ The comparison between the polis and the cosmos is even explicitly suggested by Aristotle within Λ 10 (1076a4).

CHAPTER IV

THE NATURALNESS OF THE POLIS

1. Introduction

Our analysis of *Physics* II 8 and *Metaphysics* Λ 10 has established that Aristotle's account of teleology as it relates to that which is beyond simply explaining the internal actualization of individual natures is not quite as clear as it has been at times assumed to be. Specifically, I have shown that *Physics* II 8 does not have a clear meaning to it as of yet, and that the attempt to interpret the passage according to the internalist approach fails to account for what Aristotle actually states regarding the teleology of winter rain as opposed to summer rain. In addition, we have seen that Λ 10 defends both a concept of a separate good as well as a good of the whole, the latter of which is directly referenced in the passage by Aristotle. This good of the whole moreover seems to be explained by Aristotle through a series of analogies which lead one to the conclusion that there must be a cosmic structure of a sort which involves an organization and a teleology which surpasses the minimalistic reading of some. However, I have also shown that those who have acknowledged and defended the idea that there is a cosmic nature being defended and explained by Aristotle in Λ 10 have nevertheless failed to show how this cosmic nature can be explained on Aristotelian grounds while remaining faithful to the text. I then proceeded to argue that there is an account of nature in the Aristotelian corpus which does indeed provide the interpreter with the key necessary to unlock the puzzle of a cosmic nature. The account which I have in mind is of course Aristotle's argument that the polis is a natural entity. What this shows us, I believe, is that there is indeed an

account of nature in Aristotle which can help us to explain a cosmic nature but which does not violate other basic Aristotelian claims regarding substance and ontological autonomy but which allows us to both assert the existence of and the necessity of a kind of cosmic nature in which everything is organized in respect with the other entities in the cosmos to create a cosmic order. Therefore, the next two chapters of the dissertation will focus on the issues regarding the nature of the polis. What I hope to accomplish is to show both that the polis can be regarded as natural and prior to the individual, and that the precise account of nature and priority that Aristotle is using in the *Politics* is analogous in an important sense to the account of nature and priority that he has in mind regarding a cosmic nature in $\Lambda 10$. The application of this account of nature and priority to the cosmos will then comprise the final chapter of the dissertation.

2. The Polis: Artifact or Natural?

At the beginning of the *Politics*, Aristotle makes a series of controversial claims. He states that the polis, which is essentially a city-state or political community, is both prior to the individual and is a natural entity. He also makes the assertion that man is a political animal. The precise meaning of these claims is not quite clear, but the general idea that Aristotle is attempting to convey is that the polis represents a necessary part of human life and that it is impossible to live a good human life outside the polis since human beings are by nature political and the polis is itself a natural entity. The second chapter of the *Politics* begins then by providing a sort of genetic account concerning the beginning of the polis.¹³⁸ Aristotle argues that human communities begin through the

¹³⁸ The claim that the polis is natural, that it is prior to individuals and that human beings are by nature political animals as well as the genetic account of the origins of the polis are provided by Aristotle in the second section of the first book of the *Politics*.

desire, which human beings share with other animals, to reproduce an image of themselves. In order to do this, male and female come together, and thereby form a household. When then several households come together a village is formed. Aristotle then proceeds to argue that the combining of several villages then forms a polis, and he states that “When several villages are united in a single complete community, large enough to be nearly or quite self-sufficing, the state [polis] comes into existence, originating in the bare needs of life, and continuing in existence for the sake of a good life.”¹³⁹ What then Aristotle apparently believes follows from this genetic account is the claim that the polis a natural entity.

There are of course many questions that arise from this claim. First, it is not clear what precisely it means, in Aristotelian terms, what the naturalness of the polis amounts to. Does the naturalness of the polis imply that there is an internal principle of motion and stationariness to the polis, and that therefore the polis is ontologically the same in kind as the other natural things which populate the Aristotelian cosmos?¹⁴⁰ Moreover, how does the account that Aristotle provide here actually demonstrate the naturalness of the polis at all? For it seems as though one could certainly accept the genetic account that Aristotle has just provided without thereby being forced to accept the claim that the polis is a product of nature and that it itself is natural. Both of these questions are important for understanding Aristotle’s conception of the polis, and especially how he conceives of the ontological status of the polis, as well as for the argument I seek to defend concerning

¹³⁹ ἡ δ’ ἐκ πλειόνων κομῶν κοινωνία τέλειος πόλις, ἤδη πάσης ἔχουσα πέρας τῆς αὐταρκειᾶς ὡς ἔπος εἰπεῖν, γινομένη μὲν τοῦ ζῆν ἕνεκεν, οὐσα δὲ τοῦ εὖ ζῆν. *Politics* I 2 1252b27-30.

¹⁴⁰ Miller calls this interpretation of Aristotle’s argument the internal cause interpretation, since he understands the argument that the polis is natural due to its growth from earlier natural relations to be equivalent to arguing that there is a kind of internal cause, much like that which other natural entities possess, which leads to the natural existence of the polis. For this view see Fred D. Miller, Jr, *Nature, Justice, and Rights in Aristotle’s Politics* (Oxford: Clarendon Press, 1995), 37-40.

the nature of the cosmos. I will accordingly proceed in this chapter to focus on the arguments concerning the polis itself, and return to these arguments in the final chapter when I am better able to defend an account of a cosmic nature and teleology.

To begin, it is important to point out that the claim that the polis or city/state is natural is not a common one, as there have been many who have argued that the city or state is quite clearly an artificial entity.¹⁴¹ This seems to be the case precisely because the polis has been seen to be the deliberate creation of human beings who desired, for one reason or another, to escape the state of nature and enter a contract which provided for the protection and welfare of those which make up the polis. According to this view then, the polis would not be a natural entity at all, but would rather be better considered to be an artifact which helps human beings to achieve their end much like any other artifact, such as cooking pots, schools, or computers. So Hobbes, a proponent of the claim that the polis is an artifact, states that “For by Art is created that great Leviathan called a Common-Wealth, or State...which is but an *Artificiall* Man.”¹⁴² This idea, of which Aristotle was aware and which was stated or hinted at by other ancient thinkers, makes a rather intuitive claim regarding the state. The state, according to this view, is an artifact much like a building or a car. One does not simply find oneself in a natural political community, but rather a political community is created through the deliberate effort of a person or group of people who desire to create conditions which are somehow better or which allow for something better to be achieved. In Aristotelian terms, this

¹⁴¹ The Sophists made this argument and Aristotle is aware of this fact. Moreover, Plato has the Sophists within his dialogues make this argument at several points. For Plato’s depiction of the Sophists argument that the polis is artificial see *Gorgias* 482c4-484c3 and *Republic* II 357a-362d. Plato also attributes this view to the atheists in *Laws* X 888d7-890b2. For Aristotle’s recognition of the Sophists’ argument see *Nicomachean Ethics* I 3 1094b16, *Nicomachean Ethics* V 7 1134b24-1135a6, and *Politics* I 3 1253b20-21.

¹⁴² Thomas Hobbes, *Leviathan* (Oxford: Clarendon Press, 1909), 8. (My Italics).

view holds that the state is the creation of art, and that it is a product of the practical intellect. The questions as to why it is that Aristotle has argued that the state is not in fact an artifact, or if indeed it is best to simply accept the fact that Aristotle made a mistake in asserting that the polis is natural, needs to be addressed.

David Keyt has expanded upon the position that the polis must be considered an artifact through arguing that Aristotle should have on his own principles conceived of the state as a product of artificial production. Keyt argues that “Aristotle ought to agree with Hobbes, that according to Aristotle’s own principles the political community is an artifact of practical reason, not a product of nature, and that, consequently, there is a blunder at the very root of Aristotle’s political philosophy.”¹⁴³ Keyt uses passages such as that in which Aristotle states that “For just as other craftsmen, such as a weaver or a shipbuilder, must have matter that is suitable for their work (for the better prepared this happens to be, the finer must be that which comes into being by their art), so also must the statesman and the lawgiver have proper matter in a suitable condition.”¹⁴⁴ Keyt believes that Aristotle made a mistake in claiming that the polis is a natural entity, and that Aristotle should have rather accepted the fact that the polis is a result of the imposition of form upon matter, and that this process is precisely how Aristotle understands the creation of an artifact.

¹⁴³ David Keyt, “Three Basic Theorems in Aristotle’s *Politics*,” in *A Companion to Aristotle’s Politics*, edited by David Keyt and Fred J. Miller, Jr (Oxford: Blackwell, 1991), 118. This interpretation is a very common one. It has also been defended by C. C. W. Taylor, R. G. Mulgan, and even to a lesser extent by Jonathan Barnes. See Jonathan Barnes “Aristotle and Political Liberty,” in *Aristotles’ Politik*, edited by G. Patzig (Göttingen: Van den Hoeck and Ruprecht, 1990), 249-263; R. G. Mulgan, “Aristotle’s Doctrine that Man is a Political Animal,” *Hermes* 102, no. 3 (1974), 438-45; C. C. W. Taylor, “Politics,” in *The Cambridge Companion to Aristotle*, edited by Jonathan Barnes (Cambridge and New York, 1991), 238.

¹⁴⁴ ὥσπερ γὰρ καὶ τοῖς ἄλλοις δημιουργοῖς, οἷον ὑφάντη καὶ ναυπηγῶ, δεῖ τὴν ὕλην ὑπάρχειν ἐπιτηδεῖαν οὕσαν πρὸς τὴν ἐργασίαν (ὅσῳ γὰρ ἂν αὕτη τυγχάνη παρεσκευασμένη βέλτιον, ἀνάγκη καὶ τὸ γιγνόμενον ὑπὸ τῆς τέχνης εἶναι κάλλιον,) οὕτω καὶ τῷ πολιτικῷ καὶ τῷ νομοθέτῃ δεῖ τὴν οἰκείαν ὕλην ὑπάρχειν ἐπιτηδεῖως ἔχουσαν. *Politics* VII 4 1325b40-1326a5.

In his analysis of *Politics* I 2, the passage which contains the arguments defending the three claims mentioned above, Keyt argues that Aristotle is using a genetic argument in order to defend the naturalness of the polis.¹⁴⁵ Aristotle argues for the naturalness of the polis by asserting that:

When several villages are united in a single community, large enough to be nearly or quite self-sufficing, the state comes into existence, originating in the bare needs of life, and continuing in existence for the sake of a good life. And therefore, if the earlier forms of society are natural, so is the state, for it is the end of them, and the nature of a thing is its end. For what each thing is when fully developed, we call its nature, whether we are speaking of a man, a horse, or a family. Besides, the final cause and end of a thing is the best, and to be self-sufficing is the end and the best.¹⁴⁶

Keyt argues that the argument as a whole rests upon the assertion that that from which the polis comes, namely the village and the household, are natural entities and that therefore the polis is a natural entity. Of course, this is not a good argument, even on Aristotelian terms. It is clear for instance that just because something comes from a natural entity, it thereby does not make it certain that such a thing is natural itself. So it seems concerning the polis as well, as it is clearly not enough to argue that the household is natural and the polis comes from the household. In regard to the household, Aristotle asserts that the household is natural precisely because of the relations that exist within the household,

¹⁴⁵ Keyt identifies four separate arguments that Aristotle provides in order to demonstrate the naturalness of the polis: the genetic, telic, linguistic, and organic arguments. For the purposes of this chapter, we will be focusing primarily on the genetic argument. Miller believes that the genetic and telic arguments are one and the same argument, and that Aristotle is attempting to defend the idea that the reason that the polis is natural is due in part to the end that the earlier communities aim to achieve, and that the polis is the final realization of this teleological development. I agree with Miller on this, although it nevertheless does not fully answer Keyt's objections as we will see. For Miller's account of these arguments see Fred D. Miller Jr., "A Reply to David Keyt and David Gill," *Ancient Philosophy* 16 (1996): 446.

¹⁴⁶ ἡ δ' ἐκ πλειόνων κομῶν κοινωνία τέλειος πόλις, ἤδη πάσης ἔχουσα πέρας τῆς ἀταρκειᾶς ὡς ἔπος εἰπεῖν, γινομένη μὲν τοῦ ζῆν ἕνεκεν, οὓσα δὲ τοῦ εὔ ζῆν. διὸ πᾶσα πόλις φύσει ἔστιν, εἴπερ καὶ αἱ πρῶται κοινωναί. τέλος γὰρ αὕτη ἐκείνων, ἡ δὲ φύσις τέλος ἔστιν: οἷον γὰρ ἕκαστόν ἐστι τῆς γενέσεως τελεσθείσης, ταύτην φαμὲν τὴν φύσιν εἶναι ἐκάστου, ὥσπερ ἀνθρώπου ἵππου οἰκίας. ἔτι τὸ οὐ ἕνεκα καὶ τὸ τέλος βέλτιστον: ἡ δ' ἀτάρκεια καὶ τέλος καὶ βέλτιστον. *Politics* I 2 1252b28-1253a1.

which are themselves “grounded in natural instincts.”¹⁴⁷ From the naturalness of the household then, Aristotle proceeds to argue that the village and the polis are natural entities. According to Keyt, the only way to make sense of the argument is that it primarily relies upon the claim that the village and the polis are both prior to the household, and that it is from this priority that the naturalness of both the village and the polis can be ascertained.¹⁴⁸

The problem for Keyt is that Aristotle really does not have much to say regarding the village or its priority. What Aristotle does say is that “...when several families are united, and the association aims at something more than the supply of daily needs, the first society to be formed is the village.”¹⁴⁹ This is clearly not enough to establish the claim that the village is prior to the household. Keyt then attempts to reconstruct the argument that he thinks Aristotle has in mind in order to establish the priority of the village to the household.¹⁵⁰ Firstly, according to Keyt, the idea that Aristotle is attempting to express here is that the village, on account of it providing for a greater number of needs than the household, is both more self-sufficient and a greater good than the household. There are several passages from the Aristotelian corpus that are seemingly tacitly assumed in the argument then. In the seventh book of the *Politics*, Aristotle states that “...everyone would agree in praising the territory which is most self-sufficient; and that must be the territory which can produce everything necessary, for to

¹⁴⁷ Keyt, “Three Basic Theorems in Aristotle’s *Politics*,” 128.

¹⁴⁸ The notion of priority is an important concept for Aristotle. Priority will be the subject matter of the fifth chapter of this dissertation.

¹⁴⁹ ἢ δ’ ἐκ πλειόνων οἰκιῶν κοινωνία πρώτη χρήσεως ἕνεκεν μὴ ἐφημέρου κόμης. *Politics* I 2 1252b15-17.

¹⁵⁰ Keyt, “Three Basic Theorems in Aristotle’s *Politics*,” 129.

have all things and to want nothing is sufficiency.”¹⁵¹ This passage then shows us that Aristotle thought that the community which could produce everything necessary is worthy of praise. This is something which the village clearly can do more than the single household is able to do. Aristotle then, according to Keyt, claims that a community which is more self-sufficient than another community is thereby a greater good than the other community. Here Aristotle seems to support this claim in the second book of the *Politics* when he states that “If then self-sufficiency is to be desired, the lesser degree of unity is more desirable than the greater.”¹⁵² Keyt also references the *Rhetoric* to support this claim. Here Aristotle states that “And of two things that which stands less in need of other things is the greater good, since it is more self-sufficing. (That which stands less in need of others is that which needs either *fewer* or *easier* things). And when one thing does not exist or cannot come into existence without a second, while the second can exist without the first, the second is the better. For that which does not need something else is more self-sufficing than that which does and presents itself as a greater good for that reason.”¹⁵³ Self-sufficiency then is, according to both of these passages, a greater good and Aristotle seems to believe that the village is clearly more self-sufficient than the household and that therefore the village is a greater good than the household.

¹⁵¹ περὶ μὲν γὰρ τοῦ ποίαν τινά, δῆλον ὅτι τὴν αὐταρκεστάτην πᾶς τις ἂν ἐπαινέσειεν (τοιαύτην δ’ ἀναγκαῖον εἶναι τὴν παντοφόρον: τὸ γὰρ πάντα ὑπάρχειν καὶ δεῖσθαι μηθενὸς αὐταρκες) *Politics* VII 5 1326b27-30.

¹⁵² εἴπερ οὖν αἰρετώτερον τὸ αὐταρκέστερον, καὶ τὸ ἥττον ἐν τοῦ μᾶλλον αἰρετώτερον. *Politics* II 2 1261b 14-16.

¹⁵³ καὶ τὸ ἥττον προσδεόμενον θατέρου ἢ ἐτέρων: αὐταρκέστερον γάρ: ἥττον δὲ προσδεῖται τὸ ἐλαττόνων ἢ ῥαίων προσδεόμενον. καὶ ὅταν τόδε μὲν ἄνευ τοῦδε μὴ ᾖ, ἢ μὴ δυνατὸν ᾖ γενέσθαι, θάτερον δὲ ἄνευ τούτου, αὐταρκέστερον δὲ τὸ μὴ δεόμενον, ὥστε φαίνεται μείζον ἀγαθόν. *Rhetoric* I 7 1364a5-9. It is important to note here that Aristotle is claiming that that which is self-sufficient is a greater good. The fact that a village comes to be through a number of households and that therefore it would seem that the village requires the household to exist in order to come to be and that therefore the village cannot be understood as self-sufficing according to Aristotle’s own argument here is another matter which concerns a proper understanding of the naturalness and the priority of the polis which I will discuss later in this chapter and the next chapter.

These claims that Aristotle makes of the village then seem to lead to the claim that the village is prior to the household by reference to a claim made in yet another passage, which Aristotle seems to be tacitly assuming in the argument. This claim comes from the *Physics*, where Aristotle states that “For if a thing undergoes a continuous change toward some end, that last stage is actually that for the sake of which.”¹⁵⁴ The idea presumably is that the village represents a stage toward self-sufficiency. And since it represents a more self-sufficient community and is therefore the greater good, it represents the end, or that which is closer to the end in the case of the village, toward which the household is aiming. Since it is the end, the village, much like the adult specimen as opposed to the juvenile specimen, is prior in substance to the household. This concept of priority is clear from the following passage in which Aristotle states that “...because the things that are posterior in becoming are prior in form and in substance, e. g. man is prior to boy and human being to seed; for the one already has its form, and the other has not. Secondly because everything that comes to be moves towards a principle, i.e. an end. For that for the sake of which a thing is, is its principle, and the becoming is for the sake of the end...”¹⁵⁵ What this amounts to then is that the village is prior to the household on account of the village being the goal which the household strives to

¹⁵⁴ ...ὅν γὰρ συνεχοῦς τῆς κινήσεως οὐσης ἔστι τι τέλος, τοῦτο <τὸ> ἔσχατον καὶ τὸ οὐ ἔνεκα· *Physics* II 2 194a29-30.

¹⁵⁵ ἀλλὰ μὴν καὶ οὐσία γε, πρῶτον μὲν ὅτι τὰ τῆ γενέσει ὕστερα τῶ εἶδει καὶ τῆ οὐσία πρότερα (οἶον ἀνὴρ παιδὸς καὶ ἄνθρωπος σπέρματος: τὸ μὲν γὰρ ἤδη ἔχει τὸ εἶδος τὸ δ' οὐ), καὶ ὅτι ἅπαν ἐπ' ἀρχὴν βαδίζει τὸ γιγνόμενον καὶ τέλος (ἀρχὴ γὰρ τὸ οὐ ἔνεκα, τοῦ τέλους δὲ ἔνεκα ἢ γένεσις) *Metaphysics* Θ 1050a4-9. This passage also helps to solve the issue raised in an earlier footnote in which the village seems to require the household for its existence, and thus seems to fail to satisfy the conditions for self-sufficiency that Aristotle provides. The fact that the household exists before the village is much like the fact that the boy exists before the man. In both cases the fact that something exists before another does not imply for Aristotle that it is prior to the thing which comes after. This is also another example of the general principle that actuality is prior to potentiality.

achieve, and that the self-sufficiency of the village implies that the village is a greater good, and therefore closer to the end which is sought in the development.

This argument then leads to the crucial claim of Aristotle's that the priority of the village indicates that the village is natural, precisely because the village is prior and the household is a natural thing which aims at the village and therefore the polis as an end. It follows from this argument then that the polis, being more self-sufficient than the village and administering to a wider range of needs and having come from the village, is prior to the village. And given the fact that whatever is prior to a natural thing is also a natural thing, it follows that the polis is a natural entity. What Keyt is emphasizing here is that the naturalness of the village and of the polis is really a matter of the naturalness of the household combined with the claim that the village and subsequently the polis is prior to the household in substance. Keyt identifies this claim concerning the naturalness of the village and the polis as the 'Transitivity of Naturalness Principle,' which for him represents the primary failing of the argument. A thing which is prior to another thing, and which is made up of natural components, is not, even on Aristotelian grounds, a natural entity itself. Keyt uses the example of a house and states that "A house is prior in substance to the materials of which it is composed...and all of these materials are ultimately provided by nature – lumber comes from trees, bricks from clay and straw, and so forth -but houses exist by art, not by nature."¹⁵⁶ Any artifact that is made up of natural elements is not thereby natural in itself, which seems to be what Aristotle's argument that we have been discussing defends.

¹⁵⁶ Keyt, "Three Basic Theorems in Aristotle's *Politics*," 131.

Keyt argues that the primary issue which underlies all of the arguments that Aristotle provides in order to establish the naturalness of the polis is the claim that there is a law-giver for a polis, a person who provides the polis with the specific form that it will possess. Aristotle states that “A social instinct is implanted in all men by nature, and yet he who first founded the state was the greatest of benefactors. For man, when perfected, is the best of animals, but, when separated from law and justice, he is the worst of all...”¹⁵⁷ What this implies is that there is a crafter or artificer of the polis, which although Aristotle acknowledges that the polis develops from the household and village, also indicates that the polis is a product of productive activity and therefore reasoning. But, as we have already discussed in the second chapter, the basic account of nature that Aristotle provides is that a thing is natural because it possesses an internal principle of motion which implies that such an entity is not produced through the rational activity of an artificer.¹⁵⁸ Now, our consideration of *Metaphysics* Λ 10 has plausibly defended the position that Aristotle must have in mind a different account of a natural entity than that which he provides in the opening chapters of the second book of the *Physics*. And consequently the argument that the account of nature that is being used in the *Politics* must be something other than these accounts does have some traction. However, to simply say that the two uses of nature differ is not enough. For Keyt’s criticism of the position that the polis is a natural entity does not simply rely upon the idea that the use of nature in the *Politics* must be identical to the use of nature in the rest of the Aristotelian corpus. Rather the point is that since the polis is represented as having a creator, who

¹⁵⁷ φύσει μὲν οὖν ἡ ὀρμὴ ἐν [30] πᾶσιν ἐπὶ τὴν τοιαύτην κοινωνίαν: ὁ δὲ πρῶτος συστήσας μεγίστων ἀγαθῶν αἴτιος, ὥσπερ γὰρ καὶ τελεωθὲν βέλτιστον τῶν ζώων ὁ ἄνθρωπος ἐστίν, οὕτω καὶ χωρισθεὶς νόμος καὶ δίκης χεῖριστον πάντων. *Politics* I 2 1253a29-32.

¹⁵⁸ For this discussion see the first part of the second chapter.

presumably deliberated about the kind of society that he wanted to produce, it would seemingly follow that as a result the polis is the product of a reasoning process which would normally be understood as producing an artifact. And for Aristotle it would seem that if something comes about by nature and thus is natural, it is not going to come about through the reasoning process of a craftsman, but rather on account of the internal principle he normally associates with natural entities.¹⁵⁹ And at the very least, whatever is natural, if it does not come about through something which is identical to it in form and thus through an internal principle, will not come about through the rational process of an artificer. So Aristotle states that “This is most obvious in the animals other than man: they make things neither by art nor after inquiry or deliberation. That is why people wonder whether it is by intelligence or by some other faculty that these creatures work, - spiders, ants, and the like...If then it is both by nature and for an end that the swallow makes its nest and the spider its web, and plants grow leaves for the sake of the fruit and send their roots down (not up) for the sake of nourishment, it is plain that this kind of cause is operative in things which come to be and are by nature.”¹⁶⁰ So the web or nest is a natural entity not because it originates in a natural thing, nor because it allows for the attainment of certain natural capacities in the animal who produces the web or nest, but rather simply because it is for an end and is part of the purposeful actions of the animal in

¹⁵⁹ I will argue later in this chapter that in order to understand how the polis can be a natural entity it is necessary to understand it as arising through and as a part of the practical rationality of human beings. I am therefore somewhat sympathetic to the point that something natural can arise through human rationality. It is important to note though that not everything that arises through the rationality of human beings is natural simply because that very rationality is a natural feature of human beings. If this were to be the case, then Aristotle would seemingly undermine his distinction between artifacts and natural entities altogether.

¹⁶⁰ μάλιστα δὲ φανερόν ἐπι τῶν ζώων τῶν ἄλλων, ἃ οὔτε τέχνῃ οὔτε ζητήσαντα οὔτε βουλευσάμενα ποιεῖ- ὄθεν διαποροῦσιν τινες πότερον νόῳ ἢ τινὶ ἄλλῳ ἐργάζονται οἷ τ' ἀράχνη καὶ οἱ μύρμηκες καὶ τὰ τοιαῦτα... ὥστ' εἰ φύσει τε ποιεῖ καὶ ἕνεκά του ἢ χελιδῶν τὴν νεοττιᾶν καὶ ὁ ἀράχνης τὸ ἀράχνηον, καὶ τὰ φυτὰ τὰ φύλλα ἕνεκα τῶν καρπῶν καὶ τὰς ῥίζας οὐκ ἄνω ἀλλὰ κάτω τῆς τροφῆς, φανερόν ὅτι ἔστιν ἡ αἰτία ἢ τοιαύτη ἐν τοῖς φύσει γιγνομένοις καὶ οὐσίσι. *Physics* II 8 199a20-28.

its attempt to achieve its form. The polis on the other hand is explicitly considered to be the product of a deliberate process of a sort of craftsman, and thus it cannot according to Keyt, even when accepting a looser concept of nature than that which has been traditionally associated with Aristotle, be taken to be a natural entity. And this is a problem even if one were to accept the fact that the concept of nature that Aristotle is using in the *Politics* is not the same as the concept of nature in the rest of the corpus.

At this point then we have shown not only that the idea that the polis developing from a natural thing, namely the household, does not actually demonstrate the naturalness of the polis on Aristotelian grounds, but we have also seen that the very fact that the polis is the result of rational activity on account of the law-giver seems to necessarily indicate that the polis cannot be a natural entity, given Aristotle's distinction between that which arises from productive rationality and that which arises naturally. The question at this point then is whether it can be shown, on Aristotelian grounds, that the polis is natural.¹⁶¹

¹⁶¹ Ernest Barker and A. C. Bradley provide versions of an argument which states that the polis is natural because it is necessary for the development of human beings. For their specific arguments see Ernest Barker, *The Politics of Aristotle* (Oxford: Oxford University Press, 1948); A. C. Bradley, "Aristotle's Conception of the State," in *A Companion to Aristotle's Politics*, ed. Keyt and Miller (Oxford: Blackwell, 1991), 13-56. Wolfgang Kullmann argues that the substantial status of the polis, and thus its nature according to the Aristotelian ontology, is not at issue within the *Politics*. Rather, Kullmann states that "The polis as such, therefore, seems to be neither a biological nor a technological product. Hence, we are rather led to think, when the *phusis* of the polis is mentioned, of a metaphorical mode of expression similar to the statement in the *Poetics* (4. 1449a 14ff.) that tragedy stopped changing after it had attained its *phusis*" (Kullmann, "Man as Political Animal in Aristotle, 98). Kullmann then takes the *Politics* to be an anthropological work which is not concerned with ontology/metaphysics at all, and is rather an investigation which is always directed "toward the realization of values which apply to man as the subject, and not, as one might have thought, to the polis..." (Ibid, 114). Thus the naturalness of the polis must be taken, according to Kullmann, as a metaphor and heuristic. For Kullmann's defense of this position see Wolfgang Kullmann, "Man as Political Animal in Aristotle," in *A Companion to Aristotle's Politics*, ed. Keyt and Miller (Oxford: Blackwell, 1991), 94-117. Trevor Saunders, on the other hand, recognizes the possibility that the scope of what is considered to be natural for Aristotle seems to be widened considerably in *Politics* I 2. Saunders states that "It seems we have to recognize a category of 'natural artefacts'" (Saunders, *Aristotle: Politics Books I and II*, 63). Saunders' argues that there is a double use of the 'Natural' here, (a) the impulse men have to seek and adopt efficient means to meet their natural needs and (b) to denote those means themselves. Saunders' then argues that "...the fact that those means may be *contrived*, by human ingenuity, is not a license to regard them globally as not natural..." (Ibid, 63). For Saunders' argument see Trevor J. Saunders, *Aristotle: Politics Books I and II* (Oxford: Clarendon Press, 1996), 61-63.

Fred Miller has argued, partially in response to Keyt, that there is a legitimate way in which one can reconstruct Aristotle's argument for the naturalness of the polis.¹⁶² Miller essentially argues that, rather than attempting to argue that the polis is the result of an internal cause which manifests itself through the growth that eventually leads from the household to the polis, one should rather see the polis as fulfilling the teleological ends of human beings. In so far as the polis does this, it is a natural entity. Miller states that "...the ultimate basis for Aristotle is not the nature of the polis but *human* nature. His claims about the polis must be understood within the context of his teleological account of human beings as having natural ends."¹⁶³ Miller believes that the key point here is that the polis is the result of natural impulses and capacities, and that the function of the polis then is ultimately to promote "...an organism's natural ends."¹⁶⁴ The strength of this interpretation is that it allows one, according to Miller, to attribute a weaker causal role to nature than what Keyt had demanded. Instead of making the contrast between that which occurs without productive rationality and that which occurs through productive rationality as the only choices through which the polis can come to be, Miller rather argues that one can understand the polis as being the result of both human reason and

These arguments will for the most part be addressed in the rest of this chapter as I focus upon Miller's account of the naturalness of the polis. Specifically, the idea that the polis is natural because it is necessary for the development of human beings, and the idea that there is a more expansive use of nature at work here which includes something like 'natural artifacts,' will be addressed as a part of my criticism of Miller's account. As far as the assertion that the *Politics* is merely an anthropological study which attempts to make no claim concerning the ontological and metaphysical status of things is one with which I am sympathetic, and have already pointed out in the second chapter. However, it seems to me to be impossible to provide a sufficient and satisfying reading of *Politics* I 2 without understanding it as having a metaphysical claim. For Aristotle does not qualify his claim that the polis is natural and prior by stating this should be only understood as a heuristic. I thereby believe that it is only in the last resort that one should simply say that the arguments of *Politics* I 2 have no metaphysical implications.

¹⁶² Fred D. Miller Jr., *Nature, Justice, and Rights in Aristotle's Politics* (Oxford: Clarendon Press, 1995).

¹⁶³ Miller, *Nature, Justice, and Rights in Aristotle's Politics*, 40.

¹⁶⁴ *Ibid*, 41.

natural impulses.¹⁶⁵ Firstly the polis is the result of natural causes, which in Aristotelian terms is a cause which occurs without productive rationality, but secondly the polis is also the result of the application of laws by the lawgiver. There is no inconsistency here according to Miller, and is similar to Barker's assertion that "...art co-operates with nature: the volition and action of human agents 'construct' the state in co-operation with a natural immanent impulse."¹⁶⁶ This indicates for Miller that there is no contradiction strictly speaking in asserting that something comes to be both by craft and by nature.

Regarding the concept of nature that has been traditionally taken to be standard for Aristotle, Miller argues in response that there are clear indications in the corpus that Aristotle does not understand nature to be exclusively that which possesses an internal principle of motion. Rather Miller believes that Aristotle clearly had a broader understanding of nature than simply that which is limited to possessing an internal principle of motion. So in *Physics* II 8, a passage which I have already cited, Aristotle states that spider webs and bird nests are both natural objects. The fact of the matter however is that neither a bird nest nor a spider web come about due to an internal cause of motion. And, although it must be admitted that Aristotle also claims that they do not come about through deliberation unlike a polis, and that it is precisely this point which seems to make them natural objects according to Aristotle, it is nevertheless the case that

¹⁶⁵ Richard Kraut's interpretation is similar to Miller's argument here. Kraut argues that Aristotle is insisting that the polis is natural in response to the claim of someone like Callicles in Plato's *Gorgias* who believes that the polis is a place where our natural desires to dominate others are held in check by unnatural legal restrictions. Kraut argues that Aristotle on the other hand is insisting that the polis is natural. Kraut states that "...we ought to recognize how urgent are the desires that bring people together for the purpose of achieving common goals...Cities cannot be unnatural, because they are the outcome of a process that is initiated by nature" (Kraut, *Aristotle: Political Philosophy*, 246). For Kraut's arguments concerning the naturalness of the polis see Richard Kraut, *Aristotle: Political Philosophy* (Oxford: Oxford University Press, 2002), 240-276.

¹⁶⁶ Barker, *The Politics of Aristotle*, 7.

such objects are simply not natural in the same way as those natural entities accounted for in *Physics* II. At the very least then, according to Miller, this passage shows us that there is indeed an expanded concept of nature at work in Aristotle's ontology. And it is based upon this expanded concept of nature, and despite the admitted difference between the reason for a bird nest being natural and the polis being natural, that Miller argues we can justifiably conceive of an account that does justice to the explicit claim made by Aristotle in *Politics* I 2.

Miller also holds that we can then understand the genetic argument in a new light as well given that there is an expanded concept of nature in Aristotle. Recall that Keyt criticizes this argument due to the fact that it relies on the 'Transitivity of Naturalness Principle.' This principle is false on Aristotelian grounds since in no way does it demonstrate the naturalness of something simply to show that it comes from or is made up of natural things. Miller believes that given the expanded concept of nature and given that the polis is natural precisely because it results from human natural capacities and that its function is the promotion of the natural end of human beings, we can understand the transitivity principle in a new way. This modified transitivity principle states that if A exists by nature and B is a natural extension of A, then B also exists by nature. This transitivity principle holds that once one accepts that A comes to be at least in part from natural potential, it will follow that a natural extension of A will also come to be at least in part from natural potential. Miller goes on to state that "...it is plausible to speak of the self-sufficient natural extension of [A] as the end (and hence nature) of [A]...Aristotle will understand the transitivity principle as restricted to communities which serve human natural ends: it will include villages and polises but not associations

for vulgar pleasures...”¹⁶⁷ The polis then is natural not because it simply comes from natural entities and thus is a natural entity itself. Rather the naturalness of the polis is a product of the fact that the polis arises naturally and as an end from earlier communities which themselves are natural because they are the product of innate capacities and they help promote the attainment of the teleological end of the organism.

However, this position has been criticized in turn. Concerning the modified transitivity of naturalness principle just discussed, it would seem that it would allow certain objects to be natural which Aristotle most definitely did not consider to be natural.¹⁶⁸ A frying pan, for example, seems to fulfill both of the conditions provided here by Miller for the naturalness of the polis. A frying pan has the function of aiding in the cooking process, which in turn is necessary in order for human beings to fulfill a natural capacity and thus an end, namely nutrition. But frying pans are also the result of a natural capacity within humans, namely to make food digestible in order to satisfy the biological necessities associated with eating. This would presumably imply for Miller that Aristotle also believed that frying pans are natural objects as well. In fact there would be many objects which Aristotle considers to be artifacts which would have to be natural according to Miller’s argument.¹⁶⁹ And it is not enough to simply claim that

¹⁶⁷ Miller, *Nature, Justice, and Rights in Aristotle’s Politics*, 42-43.

¹⁶⁸ Keyt raises this objection as well. See David Keyt, “Fred Miller on Aristotle’s Political Naturalism,” *Ancient Philosophy* 16, no. 2 (1996): 428-429.

¹⁶⁹ As I mentioned in the second chapter, the distinction between an artifact and a natural object for Aristotle is not as clearly understood as I might be taken to be implying here. I therefore admit that my argument does not have a satisfying interpretation of Aristotle’s distinction between an artifact and a natural entity, or even an interpretation of his distinction between an artifact and a mere heap. However, although I grant that it is not precisely clear in all cases what makes an artifact different from a natural object, I will simply emphasize that Aristotle makes it clear that there is a difference, and he illustrates this point by using examples of objects, such as houses, which seemingly satisfy the conditions for a thing being natural according to Miller’s concept of natural extension. Houses are a result of a natural capacity within humans and they help promote the attainment of the end for human beings. But houses seem to be for Aristotle artifacts, however it is that he precisely understands the distinction between an artifact and a natural entity. Assuming, for my purposes, that Aristotle desired to make a distinction between natural

frying pans and other such objects are the result of an artificer who applied the form to the object and thus the end that it was for, since it is the very heart of Miller's argument that that which results from the activity of one whose form is other than that which is made through that activity can still be considered natural in some cases, since he admits that the polis does arise at least in part from the causal effects of a law-giver.

Keyt also raises the objection to Miller's argument that there is an extended concept of nature being defended in *Physics* II 8 by arguing that spider's webs and bird's nests are not comparable to how Aristotle conceives the polis. Thus Keyt states that "Aristotle tells us in this very passage why a spider's web or a bird's nest exists by nature. It exists by nature because it comes to be by nature. And for Aristotle if something comes to be by nature, it comes to be without inquiry or deliberation (*Phys.* II 8 199a20-21)."¹⁷⁰ The point here then is that Keyt believes that Miller still has not shown how it is that the polis comes to be by nature if there is a lawgiver who ultimately provides the constitution and thus the form of the polis through deliberate effort. According to Keyt, for Aristotle if something comes to be by nature it simply does not come to be through a deliberative process. And to argue that there is an extended concept of nature at work in Aristotle based off of the *Physics* II 8 passage is not enough, since it is still the case that that which comes about through deliberation is not something which comes about by nature for Aristotle.

In response to this criticism, Miller has argued that, for one, *Physics* II 8 is not meant to be understood as arguing that bird's nests and spider's webs are precise

entities or substances and artifacts, it is sufficient then for my argument to simply point out that Miller's concept of a modified transitivity principle cannot accept the very distinction that Aristotle clearly desires in the corpus.

¹⁷⁰ Keyt, "Fred Miller on Aristotle's Political Naturalism," 429.

counterparts to the polis and its naturalness. Rather, the passage is important "...because it shows that Aristotle uses 'exists by nature' in an extended sense even in the *Physics*. The passage thus enables [one] to drive a wedge between *existing by nature* and *having an internal cause of motion and rest*, the identification of which Keyt relied on in his own strict-constructionist interpretation of Aristotle's thesis that the polis exists by nature."¹⁷¹ Miller asserts here that with an extended account of nature, one can still defend the account that the polis is natural due to the two qualifications mentioned above.

As we have shown however, the problem with this argument is that it seems to allow for entities that Aristotle considered to be artifacts to be considered natural objects. Miller points out however that Aristotle has such a conception of nature that it allows for certain things to be considered both natural and artificial. Miller believes that as soon as one divorces oneself from the concept of nature that Aristotle offers in the *Physics*, and thereby accept that there is an expanded account of nature in the corpus, then it seems perfectly acceptable to allow for certain objects to be natural although they do not quite satisfy the Aristotelian definition of a natural object provided in the *Physics*. The evidence for this claim, outside of *Politics* I 2, is found in the *Poetics*. It is there that Aristotle recognizes that "...poetry has two natural causes: first, imitation is innate in human beings from childhood, and humans are superior to all other animals in being the most imitative and in learning through imitation; and second, enjoyment of imitation is innate in all human beings."¹⁷² Human beings enjoy imitation due to the deeper sense of

¹⁷¹ Fred D. Miller Jr., "A Reply to David Keyt and David Gill," *Ancient Philosophy* 16 (1996): 444-445.

¹⁷² Miller, "A Reply to David Keyt and David Gill," 447. *Poetics* 4 1448b5-9. It is important to keep in mind here that Aristotle actually states that the origin of the art of poetry has phusikai aitiai. There is accordingly some difference in the translations of the passage that Miller is considering here. The Greek that Aristotle uses is εὐοικασί δὲ γεννηῆσαι μὲν ὅλως τὴν ποιητικὴν αἰτία δύο τινὲς καὶ αὐτὰ φυσικαί. τό τε γὰρ μιμεῖσθαι σύμφυτον τοῖς ἀνθρώποις ἐκ παιδῶν ἐστὶ καὶ τούτῳ διαφέρουσι τῶν ἄλλων ζώων ὅτι μιμητικώτατόν ἐστι καὶ τὰς μαθήσεις ποιεῖται διὰ μιμήσεως τὰς πρώτας, καὶ τὸ χαίρειν τοῖς μιμήμασι

wanting to learn that all human beings share, even if in a limited way.¹⁷³ What this tells us then according to Miller is that Aristotle saw the creation of poetry as arising from natural inclinations and as serving to fulfill a natural capacity and thus an end in human nature itself. Now this is not the end of the story obviously, for there would have to be a person or a number of persons who sought to enact this natural capacity for imitation found in human nature. These would be, according to Aristotle, the earliest poets, and Aristotle states that “Imitation, then, being natural to us – as also the sense of harmony and rhythm, the metres being obviously species of rhythms – it was through their original aptitude, and by a series of improvements for the most part gradual on their first efforts, that they created poetry out of their improvisations.”¹⁷⁴ This of course entails that Aristotle thought of poetry as being created through the deliberate process of a creator of poetry. What results from this would be a number of artifacts which we would call ‘poems’ that are the creation of a person whose form is other than that which is created but which also stems from the natural capacities of human nature. Miller believes that this account successfully shows us that certain objects in the world are both artificial and

πάντας. Bywater then translates this passage as “It is clear that the general origin of poetry was due to two causes, each of them part of human nature. Imitation is natural to man from childhood, one of his advantages over the lower animals being this, that he is the most imitative creature in the world, and learns at first by imitation. And it is also natural for all to delight in works of imitation.” On the other hand, W.H. Fyfe translates the beginning of this passages as “Speaking generally, poetry seems to owe its origin to two particular causes, both natural...” Miller seems to agree with the latter of these two translations. However, it is not clear from the Greek that Aristotle is attributing natural causes to the art of poetry, but rather merely stating that there the two causes for the origin of poetry which are both a part of human nature. I admit that I am inclined to translate the passage according to Miller’s take on it, but it is not certain what Aristotle is stating regarding the origin of poetry and its causes in this passage. I do not have the room to investigate this issue concerning poetry in this dissertation, but it seems to me to be adequate to simply point out this issue in Miller’s understanding of this passage and, especially when combined with the fact that there is no explicit argument for artifacts to be considered natural in any of the other passages within the corpus, to look for an alternative conception of the naturalness of the polis than the one that has been provided by Miller.

¹⁷³ *Metaphysics* A I.

¹⁷⁴ κατὰ φύσιν δὲ ὄντος ἡμῖν τοῦ μιμεῖσθαι καὶ τῆς ἀρμονίας καὶ τοῦ ῥυθμοῦ (τὰ γὰρ μέτρα ὅτι μόρια τῶν ῥυθμῶν ἐστὶ φανερόν) ἐξ ἀρχῆς οἱ πεφυκότες πρὸς αὐτὰ μάλιστα κατὰ μικρὸν προάγοντες ἐγέννησαν τὴν ποίησιν ἐκ τῶν αὐτοσχεδιασμάτων. *Poetics* IV 1448b20-24.

natural for Aristotle. This is of course much like how the polis is formed, namely through the actualizations of the inherent capacities of human beings, whose form is other than the form possessed by the polis, in order to form social communities with the end of allowing life and eventually the attainment of a good life.

At this point then, we have provided an account of nature which supposedly allows for the naturalness of the polis. We have seen that that the criticism of the genetic argument relies on the notion that the polis is merely natural due to the fact that it is made up of natural things, which of course is a fallacious assertion. However, Miller has argued that this is not precisely what Aristotle has in mind in the genetic argument. Rather, the fact that the polis is the result of a teleological development which allows for the attainment of the human end and which is caused by the innate natural capacities of human nature leads to the assertion that the polis is in some sense natural. The fact that it is an artifact stems from the fact that there is a law-giver who undeniably provides the polis with a constitution which gives the polis the specific form that it possesses, whether that be the form of monarchy, polity, aristocracy etc... The polis then is both natural and artificial, and according to Miller this reading of the argument is justified as soon as one admits that there is an expanded concept of nature at work in the corpus. Presumably, it is this expanded account of what is natural that Miller is relying on to make the claim that it is perfectly Aristotelian to claim that the polis is natural and artificial.

However, the problem with this account of nature concerning the polis is precisely this claim that objects are both natural and artificial in the Aristotelian worldview. One can surely state that certain objects are the result of a natural process, but nowhere in the corpus does Aristotle acknowledge that many of the artifacts

commonly used by human beings are also natural. I acknowledge that Miller is correct to point out that poems seem to be an interesting exception to the general distinction that Aristotle wants to make between artifacts and natural objects. But pointing out such an example is simply not enough to truly demonstrate that the polis is such an object. At the heart of Miller's argument is the contention that if the polis is to be considered natural and artificial, then so would almost every other artifact mentioned by Aristotle. A frying pan for instance would most certainly be considered natural and artificial according to Miller's definition, and his account of an expanded concept of nature does nothing to avoid this fact. A frying pan is both the product of natural inclinations and it allows for the attainment of the human end. This would also be the case for computers and axes as well. Miller seems to agree with me on this and even considers the possibility of computers perhaps being both natural and artificial and states that "To the extent that [a computer] arises from the natural desire of human beings to know and serves the natural human end of wisdom, it would 'exist by nature,' although its genesis also depends on very sophisticated technology. The 'natural' and the 'artificial' are not mutually exclusive categories, as in the *Physics*, but refer to the different factors that give rise to human culture and politics."¹⁷⁵ This just does not fit in with the Aristotelian conception of artifacts as it is provided in the corpus. It is one thing to claim that the account of nature found in the *Politics* is one which does not fit the account in the *Physics*. This is something with which I would agree with Miller. But it is something altogether different to say that the various tools and devices that human beings have contrived which indeed help them to achieve their end, and which arise from natural inclinations, are indeed

¹⁷⁵ Miller, "A Reply to David Keyt and David Gill," 447.

natural and artificial. The problem is that Aristotle makes it clear that certain objects which would fit the account of natural and artificial that Miller provides here are explicitly described as artifacts by Aristotle. To use just one example from the corpus, Aristotle argues that “For the word ‘nature’ is applied to what is according to nature and the natural in the same way as ‘art’ is applied to what is artistic or a work of art. We should not say in the latter case that there is anything artistic about a thing, if it is a bed only potentially, not yet having the form of a bed; nor should we call it a work of art.”¹⁷⁶ Here Aristotle is clearly implying that a bed is an artifact. However, according to Miller’s conditions for being a natural artifact, Miller would have to argue that Aristotle also admits that beds are natural as well. This position however is clearly not expressed or defended by Aristotle in this passage. My contention here is that Miller has thus provided a thoroughly un-Aristotelian ontology, in which everything created by human beings and which serves to promote the attainment of the human end is natural at least in part, and that therefore almost every artifact would thereby also be natural in some sense. Nowhere in the corpus can one find such a statement, and indeed one finds explicit statements to the contrary.

To just briefly expand upon this last contention, when we look at Aristotle’s statements regarding artifacts, it is clear that for the most part he sees a distinction between artifacts and that which is natural as being at bottom a distinction between the

¹⁷⁶ ὥσπερ γὰρ τέχνη λέγεται τὸ κατὰ τέχνην καὶ τὸ τεχνικόν, οὕτω καὶ φύσις τὸ κατὰ φύσιν [λέγεται] καὶ τὸ φυσικόν, οὔτε δὲ ἐκεῖ πω φαίμεν ἂν ἔχειν κατὰ τὴν τέχνην οὐδέν, εἰ δυνάμει μόνον ἐστὶ κλίνη, μή πω δ’ ἔχει τὸ εἶδος τῆς κλίνης, οὐδ’ εἶναι τέχνην, οὔτ’ ἐν τοῖς φύσει συνισταμένοις· *Physics* II 1 193a32-36. I would also mention the four passages in the *Metaphysics* which Aristotle argues that artifacts are not substances. These passages are B 4 999b17-20, K 2 1060b16-28, H 3 1043b18-23, and Λ 3 1070a13-20. In these passages Aristotle nowhere makes the distinction between artifacts that are natural and those which are not, which would be what one would expect if Miller’s thesis is correct.

location of the moving cause which gives rise to the entity in question.¹⁷⁷ The efficient cause of a natural thing is the same as the thing which is caused, which essentially means that a tiger causes a tiger. So when one wants to know what causes the generation of a natural thing for Aristotle, one merely has to look for the adult specimen of the thing that one is investigating. And although it certainly is true that Aristotle acknowledges that polises can beget polises, he nevertheless sees that not all polises are caused by polises.¹⁷⁸ And this is where the lawgiver comes into play, which seemingly tells us that the polis must be considered an artifact despite Aristotle's assertion to the contrary. This is what Key contends, and it seems to be validated by much of what Aristotle states regarding natural and artificial entities in the physical and biological works. However, to respond to this position by stating that there is a class of things that are natural and artificial is not satisfactory either. Such a claim seems rather sloppy, precisely because it holds that most artifacts, at least the truly beneficial ones in the sense of aiding the person to attain the natural end as is dictated by human nature, are both natural and artificial. And this claim is just simply contrary to what we find throughout the corpus.

Furthermore, recall that Aristotle believed that the nature of something could be said to be its matter or its form.¹⁷⁹ When he states this, he means to say that we could

¹⁷⁷ I have already discussed at length Aristotle's account of nature in the *Physics*, and it is recommended to review that section for the following arguments. I have also already admitted that I do not have an exact account of what makes a thing an artifact in Aristotle. I noted in the second chapter however that I do not believe that I need such an account for the argument that I am making here. For whatever may be the precise interpretation of Aristotle's theory of artifacts, it is nevertheless the case that Aristotle believes that there *are* artifacts. And it is my contention that Miller's conditions for something to be natural in the expanded sense that he provides virtually eliminates the distinction between an artifact and a natural object. Almost every single artifact that Aristotle explicitly identifies as such can meet the conditions provided by Miller for a natural thing, and thus there would almost be no true artifacts for Aristotle if one were to accept Miller's argument here.

¹⁷⁸ Colonies would be an example of a polis begetting a polis.

¹⁷⁹ *Physics* II 1 194a13

describe the nature of a bed as being wood, and as a frying pan as being metal, and as a computer as being the various metallic and plastic components which make up a computer's innards. This would be correct, but it would not really tell the whole story or provide us with the account of the object in question. Rather Aristotle emphasizes that it is the form of a thing which is really the nature of it, stating that "The form indeed is nature rather than the matter; for a thing is more properly said to be what it is when it exists in actuality than when it exists potentially."¹⁸⁰ So a bed, to use Aristotle's example, would not have the nature of the material which makes it up, but would rather have a form imposed upon it by some external craftsman. So as Lear puts it "That a bed does not reproduce other beds shows that the bed does not have a nature. For the form of a bed is not a principle internal to the bed...Aristotle thinks that this [point] reveals an important difference between natural objects and artifacts."¹⁸¹ The conditions concerning a bed for Aristotle then is that a bed has its form imposed upon it by an alien craftsman, and thus a bed does not have an internal cause which is the mark of nature for Aristotle. So the fact that the polis has a form imposed upon it much like how a craftsman imposes a form upon material seems to lead us to Keyt's conclusion that the polis is an artifact, since its creation is not a matter of an internal cause.¹⁸² This is a crucial point in determining the difference between an artifact and a natural object for Aristotle, and

¹⁸⁰καὶ μᾶλλον αὐτῆ φύσις τῆς ὅλης· ἕκαστον γὰρ τότε λέγεται ὅταν ἐντελεχία ᾖ, μᾶλλον ἢ ὅταν δυνάμει. *Physics* II 1 193b7-10.

¹⁸¹ Lear, *Aristotle: The Desire to Understand*, 17.

¹⁸² One response that needs to be mentioned here is that unlike a bed, which does not and cannot produce other beds, a polis seems to be able to have the ability to produce other polises. I think that this does indeed show that there is a difference for Aristotle between simple artifacts and the polis, but it crucially does nothing to address the problems that I am raising here for Miller's account of naturalness of the polis. For Miller's account, I am arguing, leads to the virtual elimination of the nature/artifact distinction that Aristotle seems to want to make. I do however think that the fact that it could be argued that the polis is capable of producing another polis does indeed give Keyt's account some trouble.

Miller has not successfully answered it without thereby eliminating the distinction between natural entities and artifacts in the first place. When we look at a polis then, determining whether a polis is natural would presumably be the same as determining whether a bed is natural or artificial. The question would be regarding not the matter of the polis, namely the various households and perhaps even human beings which make up the polis, but rather regarding the form of the polis. And the form of the polis does not, in every case, come from another polis. Rather, Aristotle states that there is a law-giver, who should be praised for providing the form to the polis and thus providing the specific ‘nature’ to the polis, which presumably would show us that Aristotle must hold that the polis is an artifact.¹⁸³

There are other accounts concerning the naturalness of the polis which attempt to solve the fundamental problem that Keyt has pointed out in his criticism of *Politics* I 2. Richard Kraut for instance argues that there is no incompatibility in saying that something owes its existence both to a process of growth and to human beings.¹⁸⁴ He therefore insists that what marks a polis as being different than an artifact is the fact that it grows inevitably from human social interactions. This inevitability is not a characteristic of artifacts according to Kraut, and this point is coupled with the fact that the polis is the “...outcome of a process that is initiated by nature.”¹⁸⁵ Kraut does not deny that human care and influence is projected upon the polis, but he does not see this as being equivalent to the claim that the polis is merely the product of a craftsman. Rather Kraut argues that the creation of a polis is much like the growth of plants in an

¹⁸³ The solution to this difficulty, and thus my argument against Keyt that the polis should be considered natural, will be found in the third part of this chapter.

¹⁸⁴ Richard Kraut, *Aristotle: Political Philosophy* (Oxford: Oxford University Press, 2002).

¹⁸⁵ Kraut, *Aristotle: Political Philosophy*, 246.

agricultural setting. There are certain plants that may require the art of agriculture in order for them to survive and flourish, but this does not imply that those plants are therefore artificial.

On the other hand, Joseph Chan argues that determining the naturalness of the polis is, as opposed to Miller, a matter of determining an inner principle of change.¹⁸⁶ Chan believes that it is important to take seriously the claim that nature is an inner principle of motion and stationariness, and that Aristotle's claim that the polis is natural must amount to the claim that the polis possesses such an inner principle. However, Chan argues that possessing an inner principle of change does not imply that there can be no external cause affecting the growth and development of the entity in question. Rather, external causes exist throughout nature for Aristotle; such as the requirement that plants possess for water and nutrition which in turn implies that there be external causes to provide the necessary nutrients to the plant. Chan believes that the same holds for the polis, namely that there are external causes which affect the development of the polis. This point however does not show us that the polis is an artifact. Rather, Chan believes that the polis does indeed possess an inner principle of change despite the fact that polises are clearly affected by external causes as well. The inner principle that Chan identifies as that which is possessed by the polis is in fact human nature itself. Chan explains that "As human nature develops, it correspondingly determines types of human relation...since human nature has an autonomous tendency to develop itself, human relation has, accordingly, an autonomous tendency to develop into successive types in which the polis

¹⁸⁶ Joseph Chan, "Does Aristotle's Political Theory Rest on a 'Blunder?,'" *History of Political Thought* 13, no. 2 (1992): 189-202.

is the last and most embracing one.”¹⁸⁷ So for Chan the naturalness of the polis is based on the fact that the polis, like other natural entities in the Aristotelian world, possesses an inner principle of change. This inner principle is in fact human nature, and it works through the fact that human nature necessarily establishes relations, and these relations form the basis for communities which eventually and necessarily end in the polis, which is itself the end of the development resulting from the establishment of human relations. It is important to note then that the fact that there are external causes for the polis does not in itself undermine the thesis that the polis is a natural entity for Chan. He states that “...*human effort* plays the role of the *external conditions* of the existence of the polis and...*individual human persons or groups* play the role of an *artificer* who is responsible for and wholly explains the type of human relation the polis takes.”¹⁸⁸ Thus Chan asserts that the naturalness of the polis is compatible with the claim that human effort is a necessary condition of the polis.

Both of these interpretations are similar in so far as they assert that there is no issue whatsoever in asserting that there is an inner principle of change or growth possessed by the polis. However, the problem here is that this inner principle of change does not actually seem to be the same sort of thing that truly natural entities possess according to Aristotle. Firstly, both of these theories hold that the polis is much like a plant that needs the care of humans and requires external causes for its existence and flourishing. But as we have seen, one of the fundamental claims of Aristotle’s conception of natural objects is that they are eternal, in that they are not created at one point or another in order to exist. However, Aristotle clearly indicates that the polis may

¹⁸⁷ Chan, “Does Aristotle’s Political Theory Rest on a ‘Blunder?,” 193.

¹⁸⁸ *Ibid*, 194.

not have existed at some point, as we have already seen when discussing Keyt's criticism of *Politics* I 2. What this implies then is that there needs to be some external cause, whose form and thus nature is other than the polis, who needs to create the polis, or at the very least needs to create the first polis.¹⁸⁹ This is of course identified by Aristotle as the law-giver. And it is at least conceptually possible, given Aristotle's genetic account of the beginning of the polis in *Politics* I 2, for the polis not to have existed at some point and thus for it to be necessarily created or made by a law-giver. This point by itself should warn us that the polis is not a natural thing in precisely the same way and without qualification as those natural entities that possess an internal principle of change.

Secondly, it is important to point out that the teleological conditions concerning natural entities as compared to the polis also seem to be different enough for us to hold back using the agricultural analogy in order to show how the polis is natural. Agricultural practices, although they may be necessary for Aristotle at least in some instances in order for the respective plant to survive, nevertheless rely on the teleological development of an internal principle in order to operate effectively. There is no need whatsoever for an external cause to create the natural entity. Rather, for the farmer the natural entity with an internal principle already exists and it is her job to care for the plant in order for the plant to fully develop itself according to the end that is dictated by the nature that the plant possesses. The difference then between an agricultural plant and a

¹⁸⁹ The possibility that Aristotle might not seriously think that there was a first polis is a real one in my view. However, such a claim does not change the argument that I am making here. The fact that the polis is necessarily understood to be provided its form by a law-maker is all that I need to make my criticism work, for it shows that the polis could at least conceptually be created. This is simply not the same as other natural entities who never come to be as a kind, only individually, and which therefore conceptually cannot have been created by some divine craftsman or artificer whose form is other than the one possessed by the maker of the entity in question. I will be arguing in the third part of this chapter however that the fact that there is a kind of craftsman of the polis does not in fact show us that the polis must be an artifact.

polis is that such a plant does not require an external cause whose form is different than that which is possessed by the plant in order for the plant to come to be. The key difference than is precisely in the fact that a polis does indeed, by Aristotle's own confession, require an external cause whose form is other than that which is possessed by the polis. This external cause is not necessary in order to help the polis achieve its end, but rather is necessary in order for there to be a polis with a supposed internal cause of motion and rest at all. Thus using agricultural practices in order to explain a natural polis simply does not seem to work given the difference I have just pointed out between those entities which agriculture concerns itself with and the naturalness of the polis.

3. The Naturalness of the Polis

Despite the fundamental issue with the claim that the polis is natural that I have so far outlined, I believe that it is nevertheless possible to argue that the claim that the polis is natural is not a fallacious one, but rather consistent with how Aristotle understood the concept of nature broadly speaking. Firstly, I believe that Miller is correct to assert that there is a broader conception of nature at work in the corpus. For evidence for this, I would point to *Metaphysics* Λ and its conception of a cosmic nature or a 'nature of the whole,' which I discussed at length in the third chapter. What is important to take from my discussion there concerning the topic at hand is that the nature that is associated with the cosmos seems to imply a concept of nature that is other than the strict concept of nature used to describe a natural entity in the *Physics*. In addition, I agree with Miller in believing that the passage asserting the naturalness of bird's nests and spider's webs also points to an expanded concept of nature in the corpus. A nest is clearly not an entity which possesses an internal principle of motion like the bird possesses, for it at the very

least requires an external cause which does not have the same form as the nest for its very existence. And of course as we have seen several times so far, this just necessarily makes a thing natural in a different sense than something which comes to be from another individual who is identical in form, such as the parent of a bird. Yet both entities are considered to be natural for Aristotle, and it is this description of such things as nests and webs which thereby allow for an account of nature that does not simply require one to associate the natural thing with something that must possess an internal principle of motion in precisely the same exact way as animals and plants possess such a principle. What this ultimately implies is that there is indeed an expanded concept of nature in Aristotle.

Secondly, at the same time I also believe that Chan and Kraut are correct in emphasizing an internal principle of motion in relation to the polis. Although as I have just argued, I do not believe that the polis can possess the same internal principle of motion as an animal or a plant for instance, it is nevertheless true that there must be something about the way that a polis begins and develops that involves an internal motion. Even an expanded concept of nature must include something like this in order for the thing in question to be considered natural, otherwise we would simply be describing an artifact. The issue with the interpretations provided by Chan and Kraut, as we have seen, is that they both ultimately attempt to make the polis satisfy the requirements for naturalness provided in the *Physics* and the *Metaphysics*. This is where Miller's point regarding bird's nests can help, as it shows us that there are some objects that are natural for Aristotle but which are also constructed or made by something which

possesses a form other than that which is possessed by the nest itself.¹⁹⁰ I believe that the kind of internal principle that a bird's nest possesses is much like the internal principle that the polis possesses, and I aim to show this point later in the chapter.¹⁹¹

Keeping these points in mind, I believe that it is possible to provide an interpretation that explains the naturalness of the polis and that does not fall to the criticisms that I have already mentioned. Briefly, I believe that the naturalness of the polis is understood by Aristotle through a correct understanding of the nature of human beings.¹⁹² Human beings are identified by Aristotle as 'rational animals,' which is further explained by him to imply that human beings are animals with speech, as opposed to merely possessing a voice. Possessing a voice is, for other animals, used to express pleasure and pain which is associated with the sensitive soul possessed by animals as a whole.¹⁹³ However, the possession of reason associated with the rational soul leads to the possession of what Aristotle calls speech, something significantly different than mere voice. Aristotle states that speech [logos], flowing from the rational nature of human beings, is able "...to set forth the expedient and inexpedient, and therefore likewise the just and unjust. And it is a characteristic of man that he alone has any sense of good and evil, of just and unjust, and the like, and the association of living beings who have this

¹⁹⁰ Crucially, this is not to agree with Miller's assertion that the polis is natural and artificial. I merely am acknowledging Miller's point that a bird's nest is a good example of the kind of natural entity which exists due to a form which is other than what it possesses, but which is also natural precisely because it does not come about spontaneously nor through rational productive activity.

¹⁹¹ This is not to say that bird's nests are natural in exactly the same way that the polis is natural. I am simply here emphasizing the point that there is an internal principle of motion that can be identified with the polis, and that bird's nests and other natural entities similar to bird's nests can help us to identify the internal principle of motion of the polis due to the fact that the internal principle that a nest possesses must be similar in some important sense to the internal principle that a polis possesses.

¹⁹² The following argument is similar to the one provided by K. Cherry and E. A. Goerner. For their account of the naturalness of the polis see K. Cherry and E. A. Goerner, "Does Aristotle's Polis Exist 'By Nature'?", *History of Political Thought* 27, no. 4 (2006): 563-585.

¹⁹³ This is not to say that all animals have voice, but rather that if an animal possesses a voice its end is to express pleasure and pain. Pleasure and pain, on the other hand, is possessed by all other animals.

sense makes a family and a state [polis].”¹⁹⁴ With Cherry and Goerner, I will call this particular kind of sociality, *logos-sociality*. Logos-sociality points out to us a particular kind of social interaction which is unique to human beings for Aristotle, and which is a part of the teleological development and growth of human beings. By asserting that human nature possesses logos-sociality, I am merely pointing out that human growth and development is “...dependent on exercises of reasoned and communicated judgments about what is to be done, about the advantageous and the harmful, the good and the bad, the just and the unjust, and other similar things.”¹⁹⁵ And it also must be admitted that the entirety of the ethical, political, and rhetorical writings of Aristotle attest to the fact that the discovery of the good and the bad and all of the rest is made over time, and accomplished through the relationships and institutions that human beings establish in interacting with each other by means of expressing their logos-sociality.

What this then leads to is the establishment of households, which have been admitted by all of those that I have discussed thus far as being a natural entity. The household is natural partly because it indeed arises from a natural desire to procreate, which is a desire that human beings share with other animals. But the household also emerges from the expression of an essential component of human nature, namely logos-sociality. As Cherry and Goerner state “Whereas man is placed among the genus of animals which form partnerships, the specifically human kind of partnership is tied to the exercise of the specifically human capacity for *logos*.”¹⁹⁶ This then leads to

¹⁹⁴ ὁ δὲ λόγος ἐπὶ τῷ δηλοῦν ἐστὶ τὸ συμφέρον καὶ τὸ βλαβερόν, ὥστε καὶ τὸ δίκαιον καὶ τὸ ἄδικον: τοῦτο γὰρ πρὸς τὰ ἄλλα ζῶα τοῖς ἀνθρώποις ἴδιον, τὸ μόνον ἀγαθοῦ καὶ κακοῦ καὶ δικαίου καὶ ἀδίκου καὶ τῶν ἄλλων αἰσθησὶν ἔχειν: ἡ δὲ τούτων κοινωνία ποιεῖ οἰκίαν καὶ πόλιν. *Politics* I 2 1253a14-19.

¹⁹⁵ Cherry and Goerner, “Does Aristotle’s Polis Exist ‘By Nature,’?” 570.

¹⁹⁶ *Ibid*, 571.

establishment of the household, which is natural not only due to the fact that it is a necessary part of the expression of the procreative drive that human beings share with other animals, but also because it is a necessary part of the expression of reason itself. However, the logos-sociality aspect of human nature does not just end with the household. Rather it begins with the household, but in order for it to fully express itself, it must do so within the context of the polis. Aristotle states as much *Politics* I 2 1253a14-19.¹⁹⁷ So therefore the household leads to the village and then the polis. The polis represents the end of this development precisely because it is only in the polis, which itself is made up of a series of households, that the logos of human beings can fully express itself. It is only in the polis that human beings are able to develop *fully* the activity of ordering human life through reasoning and discourse.

What this shows us is that the naturalness of the polis is a matter of understanding human nature itself. Human beings are identified by Aristotle as possessing reason. One of the fundamental ways in which human reason can manifest itself is through determining what Aristotle identifies as the right and wrong, the just and unjust, and in general the good way of life. But this is accomplished through discussion and discourse. And it is only in discussion and discourse that one is able to express this aspect of human nature. But discussion and discourse is only possible within the context of a community, a social structure which allows for and provides the conditions necessary to express human logos. This is why then the household is considered natural, because it is a necessary emergent entity from the mere expression of logos itself. This is not to deny that the household is also natural because of the desire for procreation, for this is an

¹⁹⁷ The passage just quoted above.

aspect behind the assertion that the household is a natural entity. But households necessarily lead to polises for Aristotle, and polises emerge as a part of the realizing of the logos-sociality aspect of human nature. It is in discussing and realizing the good, and all that is related to that, through the polis, that human nature is able to achieve what Aristotle identifies as the 'good life,' i.e. the ultimate goal of the polis to begin with. The idea here then is that the structure of a polis is a necessary one, in that it will ultimately arise from the fact that logos is being expressed. This is then what is behind the assertion that the polis is natural for Aristotle.

I also believe that this account answers the other fundamental criticisms that we have discussed thus far. Miller and those who make similar arguments concerning the naturalness of the polis miss a crucial point in their accounts. As we have seen, the issue with Miller's account is that his qualifications for naturalness which he argues the polis satisfies allow for a wide range of entities to be considered natural. What Miller essentially does is undermine, at least to a large extent, the distinction between an artifact and a natural entity that Aristotle explicitly makes. However, what Miller seems to want to argue with the qualifications that he offers is to emphasize the point that the polis is a result of human nature, and that its naturalness is due to the expression of human nature itself, which will inevitably bring about a polis through which such a nature fully expresses itself. However, the inevitability of the polis being brought about due to human nature is simply not enough to demonstrate that the polis is natural. Having said this, I argue that the account that I have just provided allows us to avoid the pitfall that Miller and similar commentators seem to fall into. Rather than accepting the qualifications that Miller offers, I believe that it is better to simply say that the polis is

more like the bird's nest or the bee hive than has been previously admitted. A bird's nest comes about through the natural actualization of the bird's nature, and the polis comes about through the natural actualization of human nature.¹⁹⁸ The important point here is that the polis is a special kind of entity, not like other artificially constructed institutions such as schools or hospitals, which do indeed allow for the realization of human nature, but which require productive activity to create on the part of a sort of practical craftsman. I believe that polises, on the other hand, come about in a teleological fashion but not primarily through the conscious productive activity of a 'polis-maker,' but rather a polis comes about necessarily through the mere expression of human nature itself. This is what makes such an entity natural and not merely a nice artifact for the attainment of the actualization of human nature. This is the point that Aristotle is trying to make when he states that human beings are political and that the polis is natural.

As we have seen, I also believe that the emphasis on an internal principle of motion, such as what was emphasized by Kraut and Chan in their respective arguments, is important as well. But the internal principle of motion is not like that which agricultural plants possess, or which animals and plants in general possess, as Kraut and Chan suggest. Rather, the principle of motion that the polis possesses is human nature itself, and this must be considered an internal principle precisely because the polis is a part of and comes about through the teleological development of human nature itself. Crucially, this would seemingly make the polis and other natural entities which are natural in the same sense as the polis a different sort of natural entity than what we normally find in the corpus. The principle of motion of such entities would come from

¹⁹⁸ This of course is not simply limited to the polis. My account here also includes the household and village.

something whose form is other than that which is possessed by the natural entity in question, much like the form of a bird would be different than the form that is possessed by the nest that the bird happens to make. But at the same time, acknowledging this does not force one to admit that such entities are really artifacts in the end. Rather, what is unique about the polis is that it is really a part or expression of human nature, and its naturalness is truly found in the fact that it emerges from the actualization of the particularly human characteristics associated with the form of a human being. Other artifacts are not like this, for they require conscious productive activity and do not necessarily have to exist in every case for human beings to realize their natures.

If I am right in asserting that the polis is natural because it emerges inevitably from human social interactions, then I think that it is safe to say that Aristotle believes that the principle of motion which leads to the development of the polis is human nature itself, and especially human nature as it is expressed in its logos-sociality. What this interpretation allows for then is the claim that the polis is natural, and that the development of the polis is on account of the social interaction of human beings, and that the full expression of this social interaction is the polis itself. This is moreover the inner principle of motion for the polis. But what I am not claiming is that the polis is natural simply because it is the social aspect of human nature. Rather the polis is a distinct entity, that which emerges from the social interactions of human nature, and which possess its own form and matter, a claim that is basic to Aristotle's conception of the polis and is found throughout the *Politics*. What I am saying is that the polis, along with the household and the village, is a separate entity which requires effort and input, but it is a special kind of entity which has as its counterparts in the natural world the hive of a bee

colony and the nest of a 'family' of birds. What makes it such a special entity is the fact that it will inevitably arise, precisely on account of the actualization of human nature itself, and that it is actually an integral part of the expressing of logos-sociality. And it is in expressing the various components of logos-sociality that human beings are able to attain the good life. Of course, we have seen in earlier chapters that the attainment of the good life of a natural entity implies nothing other than the fulfillment of the natural capacities that an entity possesses. Now Aristotle is aware of course that there are certain artifacts that are necessary for the attainment of the good life. But I believe that Aristotle is attempting to get us to see that the polis is more than simply an artifact necessary for the attainment of the good life. Rather the polis is part of the natural expression of human nature, in so far as it arises inevitably and is necessary for the meaningful expression of the social and rational components of human nature. When Aristotle claims that the polis is natural then, I take it that he means to say that the very expression of the social impulses found in human nature itself, which being a component of the attainment of the good life and thus the fulfillment of those capacities, involves the emergence of a special kind of entity called a polis which in turn is necessary in order for those components of human nature to be expressed and made meaningful.

The account of the naturalness of the polis that I have thus far provided has ignored a very important criticism however. The critique that I have yet to answer, and which I think is vital to respond to in order to defend my argument, is the claim that the polis is constructed through the conscious productive activity of a law-giver. As we have seen, the fact that the polis is a product of a political craftsman seems to mean that the polis must be an artifact. I think that Keyt is right moreover to press this claim, in that an

activity which involves a person consciously taking matter and imposing a form onto it results in the creation of an artifact. However, I do not believe that Aristotle believes this is how we should understand the creation of the polis.

Firstly, it might be argued that the wording that Aristotle uses in describing the creation of the first polis indicates that he conceived the polis as an artifact. However, I do not think that this is the case. In just one of the relevant passages, Aristotle asserts at one point that the person who first created the polis is the cause of the greatest of goods, stating that “ὁ δὲ πρῶτος συστήσας μεγίστων ἀγαθῶν αἴτιος.”¹⁹⁹ It might be argued that this passage is best translated as the person who first formed, or constructed, something is the cause of the greatest of goods. But ‘συστήσας’ here is used by Aristotle to describe merely coming together, rather than deliberately constructing something, and is used to account for the coming together of the family by Aristotle as well, which is clearly a natural, and not an artificially constructed, institution.²⁰⁰ There is a sense even in these passages in which Aristotle seems to be explicitly asserting that there is craftsman of the polis, that one can understand these passages without thereby making the polis an artifact. This is especially so when one understands the relevant verb in the above passage as indicating that the polis comes together without ever implying, necessarily, that the polis was formed deliberately by a craftsman.

Having said this, it is still true that Aristotle seems to admit that there is a first polis which was made by a kind of craftsman. Aristotle even mentions a few of the famous Greek law-givers such as Solon and Lycurgus as examples of those who formed a

¹⁹⁹ *Politics* I 2 1253a30-31. I have used the Greek here precisely because the translation of the passage depends upon one’s interpretation of the passages I have been discussing.

²⁰⁰ *Politics* I 2 1252b13.

constitution and thus provided the form to the relevant polises that they are credited with creating. In response, I will use Cherry and Goerner's argument as a basis, in which they state that "...the *Nicomachean Ethics* and the *Politics* are designed to promote a fully human approach to self-formation by societies of social animals the form of whose sociality is not wholly dictated by instinctive biological drives but rather leaves itself open to reflexive transformation..."²⁰¹ This is the key point to the interpretation I have been defending throughout this section. It is vital to keep in mind the fact that the polis is simply a part of the expression of the nature of human beings, primarily the social and rational nature of human beings, and that this aspect of the polis connects it with other fundamentally natural institutions such as the family and the village and which separates it from other non-natural entities which may indeed help human beings achieve their end, such as educational institutions and medical care facilities. Nowhere does Aristotle claim that a good law-maker, one who manages to create a polis which does indeed allow for or could allow for the attainment of the good human life, merely imposes a form on a group of passive people acting as the matter in a process akin to the creation of an artifact. Rather, when human beings act naturally they proceed to not only attain what is necessary for both survival and the fulfillment of their basic biological functions, but they also naturally act in a social and rational manner, which necessarily involves discussion. Primarily, the discussion is about what is good and bad, and how to attain the good and avoid the bad. All of this naturally leads to further conversations and debates concerning the right manner through which the good life can be attained. It is at this precise moment that the polis begins to form. It is not as though human beings are merely passive, and

²⁰¹ Cherry and Goerner, "Does Aristotle's Polis Exist 'By Nature,?'" 578.

that they require some ruling craftsman to come along and shape the group into some artificial society. Rather, the very expression of the rational nature that humans possess itself forms the structure that we call the polis.

However, this is not to say at the same time that there isn't a law-giver, for Aristotle clearly believes that there exists such individuals, and that they are even the cause of the greatest of goods. But the point that I am attempting to make here, which also resolves the difficulties of the critique raised by Keyt, is that such law-makers work with the people that will inevitably make up the society in question, and also and at the same time are the result of the discussions that are the expression of human nature itself.²⁰² In other words, there are law-givers for Aristotle, but there are no polis-sculptors. Law-makers are rather like leaders who are not separate from, but rather represent a vital part of the natural expression of human social and rational instincts which aim at eventually reaching the good life. This process does indeed include such leaders and law-givers as Solon and Lycurgus for Aristotle, but he does not see these men as somehow separate from the process itself. Rather the debate, argument, and discussion which must occur as part of the expression of human nature inevitably leads to the formation and development of the polis, which also in the process determines the form of the polis in question, and it is only in the polis that the speech about the good life to be attained can reach its fullest expression.

4. Conclusion

²⁰² This also leads to the fact that a polis is usually the result of laws made by the polis as a whole and not just a single lawmaker.

This then is my account of the naturalness of the polis. I have shown that it is not an artificial entity, primarily because I believe that Aristotle saw the polis as a part of the expression of human nature itself. Crucially, the polis is not natural because it possesses the same kind of internal principle of motion that the natural entities of the *Physics* possess, nor is it natural simply because it stems from the natural development of human beings and helps to allow human beings to achieve their end. The fact of the matter is, as I have already shown, that there are many artifacts which satisfy such conditions. Rather, the polis is the end of a teleological development stemming from the household all of which represent natural structures in so far as they are a part of the expression of the natural capacities of human nature. Simply speaking, one cannot express the social and rational aspects of human nature that Aristotle believes are so important to being and living a human life without at the same time doing it within the structures of the family, the village, and the polis. And the expression of such parts of human nature is to establish such structures which are a part of, and not just a means to, the achievement of the good human life.

Having said all of this, I also believe that this account requires some supplementation. An important issue, and one which is quite relevant to the thesis of this dissertation, is how to understand the priority of the polis in relation to the individuals who make up the polis. The priority question is relevant as it is connected to Aristotle's theory of a natural entity. And therefore, a consistent account of the priority of the polis can, when combined with the account I have just defended, provide us with an account of nature in Aristotle that will indeed help us to understand the idea of a cosmic nature. Accordingly, I will proceed to investigate the priority issue concerning the polis in the

next chapter, which will assume the interpretation concerning the naturalness of the polis that I have just defended. What all of this will lead to then will be the argument of the final chapter in which I will defend the concept of a nature of the cosmos as a whole.

CHAPTER V

THE PRIORITY OF THE POLIS

1. Introduction

In the last chapter, I argued that Aristotle's claim that the polis is natural can be defended in terms of what has been called the logos-sociality component of the Aristotelian conception of human nature. Once we understand and recognize that the social and rational components of human nature cannot function without at the same time giving rise to the polis, it becomes clear that the polis is fundamentally connected to the very expression of what is essential to human expression as such. However, demonstrating the naturalness of the polis is but one part of fully understanding Aristotle's conception of the ontology of the polis. We have yet to discuss another important issue concerning the polis which is closely connected to the thesis we have been discussing, namely the priority of the polis. This chapter will accordingly discuss this aspect of Aristotle's conception of the polis, along with the various interpretations that have been provided concerning what Aristotle might mean when he states that the polis is prior to the individual. I will argue in this chapter that the priority that Aristotle has in mind in regard to the polis and the individual is an ontological priority, but in a qualified sense. This implies that the polis is prior to the individual in that the individual cannot live a human life outside of the polis, and that the individual thus ceases to be human for the most part. The relevance of this topic in relation to the concept of a cosmic order will be discussed in the final chapter of the dissertation.

2. Priority and Totalitarianism

In the first book of the *Politics*, Aristotle asserts not only that the polis is a natural entity but also that it is prior to the individual by stating that:

Further, the state is by nature clearly prior to the family and to the individual, since the whole is of necessity prior to the part; for example, if the whole body be destroyed, there will be no foot or hand, except homonymously, as we might speak of a stone hand; for when destroyed the hand will be no better than that. But things are defined by their function and power; and we ought not to say that they are the same when they no longer have their proper quality, but only that they are homonymous. The proof that the state is a creation of nature and prior to the individual is that the individual, when isolated, is not self-sufficing; and therefore he is like a part in relation to the whole. But he who is unable to live in society, or who has no need because he is sufficient for himself, must be either a beast or a god: he is no part of a state.²⁰³

This claim that the polis is prior to the individual seems a rather radical statement.

‘Priority’ suggests that Aristotle is arguing and defending a concept of a state which has complete control over the individual, and so much so that the individual would be expendable given the right circumstances. Aristotle for instance compares the relationship between the individual and the polis as being like the relationship between a hand and the whole of which it is a part. What such an understanding of the polis in relation to the individual would imply, an implication defended by some scholars, is that Aristotle is here justifying a totalitarian state which has complete control, at least in terms of what it is justified in doing, over the individual.²⁰⁴

²⁰³ ἡ δὲ τούτων κοινωνία ποιῆι οἰκίαν καὶ πόλιν. καὶ πρότερον δὲ τῆ φύσει πόλις ἢ οἰκία καὶ ἕκαστος ἡμῶν ἐστίν. τὸ γὰρ ὅλον πρότερον ἀναγκαῖον εἶναι τοῦ μέρους: ἀναιρουμένου γὰρ τοῦ ὅλου οὐκ ἔσται πούς οὐδὲ χεῖρ, εἰ μὴ ὁμωνύμως, ὥσπερ εἰ τις λέγοι τὴν λιθίνην (διαφθαρεῖσα γὰρ ἔσται τοιαύτη), πάντα δὲ τῶ ἔργῳ ὄρισται καὶ τῆ δυνάμει, ὥστε μηκέτι τοιαῦτα ὄντα οὐ λεκτέον τὰ αὐτὰ εἶναι ἀλλ’ ὁμώνυμα. ὅτι μὲν οὖν ἡ πόλις καὶ φύσει πρότερον ἢ ἕκαστος, δῆλον: εἰ γὰρ μὴ αὐτάρκης ἕκαστος χωρισθείς, ὁμοίως τοῖς ἄλλοις μέρεσιν ἕξει πρὸς τὸ ὅλον, ὁ δὲ μὴ δυνάμενος κοινωνεῖν ἢ μηδὲν δεόμενος δι’ αὐτάρκειαν οὐθὲν μέρος πόλεως, ὥστε ἢ θηρίον ἢ θεός. *Politics* I 2 1253a19-30.

²⁰⁴ See Karl Popper, *The Open Society and its Enemies* vol. 2 (Princeton: Princeton University Press, 1966), 1-26. Popper argues that the totalitarian tendencies found in Plato’s political theorizing is echoed and repeated by Aristotle in his own political theorizing. Moreover, the mere proposition that the polis is prior to the individual seems to also justify the complete authority of the state in every aspect of the life of an

Jonathan Barnes has made a convincing defense of this thesis.²⁰⁵ Barnes argues that totalitarianism is at the heart of the Aristotelian political theory in part due to the metaphysical underpinnings of Aristotle's conception of the polis and the function that it is said to possess. The function of the polis is in fact to ensure the welfare and *eudaimonia* of its citizens. Aristotle of course believes that *eudaimonia* is attained through living a virtuous life, which entails that the person acquires the virtues that Aristotle identifies in the *Nicomachean Ethics*. And the acquisition of such virtues depends on how a person acts and what a person does in their individual lives. Since the attainment of *eudaimonia* is clearly a political concern for the polis in question, and the attainment of such requires the acquisition of the virtues that Aristotle enumerates, it follows that the polis must be concerned with legislation regarding many aspects of the life of an individual within that state. And Barnes argues that the definition of totalitarianism is roughly that "...all questions are political questions."²⁰⁶ And, as Barnes puts it, "...since most citizens live by their πάθη the legislator will in effect be *obliged* to operate *περὶ πάντα τὸν βίον*."²⁰⁷

Barnes also argues that this totalitarian impulse in Aristotle's political theory is found in the assertion that the polis is prior to the individual. Barnes points out that "Individuals are posterior to the State insofar as they are parts of the State. A citizen

individual within that state. So not only would it seemingly be the case that such aspects of political life like participation in the government, education of children, and the market are completely under the judgement of the government, but even what most would understand as non-political aspects of life such as what one wears and where one works would also be under the purview of the ruling government. This of course certainly seems to justify the claim that Aristotle defends a totalitarian approach to government rule.

²⁰⁵ Jonathan Barnes, "Aristotle and Political Liberty," in *Aristotle's 'Politik'*, ed. G. Patzig (Göttingen: Vandenhoeck and Ruprecht, 1990), 249-263.

²⁰⁶ Barnes, "Aristotle and Political Liberty," 249.

²⁰⁷ *Ibid*, 261.

stands to the State as a hand stands to a body...”²⁰⁸ This kind of priority then implies that just as a hand loses its meaning and function when separated from the body, so does a person. And that furthermore, a hand exists in order to serve the functions of the person to which it is connected. Similarly, a person is a part of the state in the same sense, so that the person not only ceases to exist outside or separated from the state, but also the person exists *for* the state. Barnes asks the pointed question by stating that “If a citizen is not ἀυτοῦ but τῆς πόλεως, does it not follow that citizens are slaves, that all rule must, despite his denial, be despotic – and despotic in a literal sense?”²⁰⁹ For Barnes, the priority of the polis seems to raise the state above that of any individual in terms of its priority, and that since the primary concern of the state is the *eudaimonia* of the individuals that are a part of the state, it follows from both of these points that most if not all aspects of one’s individual life is a valid subject of determination for the state.

David Keyt also believes that the priority thesis is problematic, stating that it is “...undoubtedly the most provocative assertion in the *Politics*.”²¹⁰ Not only does it imply that the individual is subsumed under the interests of the polis, but it also implies that a human being ceases to be a human being outside of the polis. No individual human being then remains a human being outside of the polis of which he/she is a part. The more disturbing part of the thesis is seemingly that even if such a separation were to occur by accident, the breaking of the connection between the individual and the whole would nevertheless still imply that the individual would cease to be human.²¹¹ This seems to

²⁰⁸ Ibid, 262.

²⁰⁹ Ibid, 262-263.

²¹⁰ Keyt, “Three Basic Theorems in Aristotle’s *Politics*,” 139.

²¹¹ Keyt refers here to Philoctetes from the Sophocles’ play. I will be discussing the fascinating example of a polisless individual later in this chapter.

entail that not only would the priority thesis imply a justification for the totalitarian regimes that Barnes points out, but that the kind of totalitarianism that is justified by the priority thesis goes so far as to entail that a person is not even a human unless they are part of a political community.

Keyt goes on to assert that the priority thesis is also false by Aristotle's own principles. The inability to share in a polis must be distinguished according to two different senses. Firstly, there is the inability to do such a thing by nature, in so far as the form or soul of the living thing in question simply is not capable nor will ever be capable of sharing in the political community. Secondly, there is the inability to be a part of the polis due to the lack of an opportunity to do so, in so far as a person may not be able to express those social and rational aspects required to participate in a political community simply because he/she is not in a situation that would allow for the expression of such. So a person who is untrained in carpentry and the carpenter without tools and material are both unable to express and carry out the essential function of carpentry, but their inability to express such a function does not necessarily say anything about the individuals themselves. For a trained carpenter lacking the necessary materials to do her work does not thereby cease to be a carpenter, but is rather simply unable to carry out the functions of carpentry because they are missing the necessary conditions for carrying out such an activity. Aristotle explicitly recognizes that there are situations when a person possesses knowledge but is not actively using that knowledge at the moment, such as when he states that:

But we must now distinguish different senses in which things can be said to be potential or actual; at the moment we are speaking as if each of these phrases had only one sense. We can speak of something as a knower either as when we say that man is a knower, meaning that man falls within the class of beings that know

or have knowledge, or as when we are speaking of a man who possesses a knowledge of grammar; each of these has a potentiality, but not in the same way: the one because his kind or matter is such and such, the other because he can reflect when he wants to, if nothing external prevents him. And there is the man who is already reflecting – he is a knower in actuality and in the most proper sense is knowing, e.g. this A.²¹²

The carpenter who possesses knowledge of her craft does not thereby cease to be a carpenter when they are unable to actually carry out the activity of carpentry due to a lack of the necessary materials. So Keyt argues that the same holds for human beings in general according to Aristotle's own principles, as the human being who is polisless by chance does not thereby cease to be a human being, but is rather unable to carry out the political activities essential to being human due to a lack of opportunity. So, Keyt believes that the priority thesis is mistaken due to Aristotle's own commitments in his general ontology.

Another critic of the priority thesis is C. C. W. Taylor who argues that the priority thesis entails a kind of relationship between the individual and the state which is on par with the relation which holds between a master and his slave. Aristotle famously (infamously) argues that the natural slave, as opposed to the conventional slave to which Aristotle is opposed, is the living tool of the master.²¹³ And the priority thesis, according

²¹² διαιρετέον δὲ καὶ περὶ δυνάμεως καὶ ἐντελεχείας· νῦν γὰρ ἀπλῶς ἐλέγομεν περὶ αὐτῶν· ἔστι μὲν γὰρ οὕτως ἐπιστήμιον τι ὡς ἂν εἴποιμεν ἄνθρωπον ἐπιστήμιονα ὅτι ὁ ἄνθρωπος τῶν ἐπιστημόνων καὶ ἐχόντων ἐπιστήμην· ἔστι δ' ὡς ἤδη λέγομεν ἐπιστήμιονα τὸν ἔχοντα τὴν γραμματικὴν· ἐκάτερος δὲ τούτων οὐ τὸν αὐτὸν τρόπον δυνατὸς ἐστίν, ἀλλ' ὁ μὲν ὅτι τὸ γένος τοιοῦτον καὶ ἡ ὕλη, ὁ δ' ὅτι βουληθεὶς δυνατὸς θεωρεῖν, ἂν μὴ τι κωλύση τῶν ἕξωθεν· ὁ δ' ἤδη θεωρῶν, ἐντελεχεία ὧν καὶ κυρίως ἐπιστάμενος τότε τὸ Α. *De Anima* II 5 417a21-30.

²¹³ Aristotle's views on slavery are controversial at best, and repugnant to most. Aristotle argues that slaves can be distinguished between 'natural' and 'by convention.' Slaves by convention are those who are not naturally suited to be slaves for Aristotle. Aristotle does not necessarily believe that slaves by convention are justified. On the other hand, Aristotle believes that there are some people who are naturally fit to be slaves, and that it is somehow better for them to be slaves, just as it is better for some to have slaves for necessary tasks. Aristotle argues that natural slaves lack the capacity for rational self-direction and thus are better off subject to the rational control of another, like a tool is under the direction of another when used. So the best life that can be lived for those who Aristotle describes as natural slaves is one which is wholly

to Taylor, seemingly implies the same kind of relation, so that "...like the slave we find our good not in the realization of any aims of our own, but in the fulfilment of the aims of that of which we are a part [the polis]."²¹⁴ And like Keyt, Taylor argues that there is a contradiction in the priority thesis, which is found not in the metaphysics of substance in which Keyt believes the contradiction can be found, but rather in the fact that it contradicts two important theses in Aristotle's political and ethical theory, "...that the aim of the *polis* is the promotion of the good life for its citizens, and that the central activity of the good life is the exercise of autonomous practical rationality."²¹⁵ The contradiction here then rests in the claim that, on the one hand, the individual stands in relation to the polis in the same sense as the natural slave stands in relation to the master. In this sense, the individual's good would be wholly subsumed by the good of the whole which represents its master in the master/slave relationship. On the other hand however, the polis is defined by Aristotle through its promotion of the good life for its citizens, which would make the life of the citizen the central focus of the individual/polis relationship, which seems manifestly at odds with the priority claim as Taylor understands it. Taylor believes that this inconsistency in doctrine was developed by Aristotle through an attempt to explain that human beings achieve their natural ends in a social system. But Taylor argues that acknowledging this dependence in no way demands a radical claim such as what the priority thesis implies.

Finally, Pierre Pellegrin also takes Aristotle to mean that the priority of the polis over the individual is of such a kind as to hold that the individual is wholly subsumed by

directed by a master, and that this is for the better for both the slave and the master. For Aristotle views on slavery see *Politics* I 4-7.

²¹⁴ Taylor, "Politics," 240

²¹⁵ Ibid, 241.

the state. Pellegrin states that “If we take this analogy seriously, we have to acknowledge that, according to Aristotle, just as in the case of a dead hand or a stone hand, a man who is not part of a city should be called a man only homonymously.”²¹⁶ Such a claim, as we have seen already from Keyt and Taylor, seems to subordinate the individual in such a way as the good of the individual is wholly directed at and understood through the good of the polis. This then lays the foundation for the claim that Aristotle defends totalitarianism, in that every aspect of an individual’s life, including the individual’s family and the direct community that he/she is a part of and works with, must necessarily submit to the dictates and rules of the ruling class, and thus to the dictates and good of the polis itself.

3. Aristotle’s Concepts of Priority

The understanding of the priority of the polis that has been defended, which is organic insofar as the priority of the polis over the individual is of the same kind as the priority of the whole body over the hand, is not the only sense of priority that Aristotle defends however. And in order to fully comprehend the claims made by Aristotle concerning the relationship between the polis and the individual, and whether such claims imply that Aristotle defends a totalitarian conception of rule, can only be accomplished once one works through the various senses of priority that Aristotle identifies.²¹⁷ I believe then that this is an important first step in understanding what Aristotle might mean by stating that the polis is prior to the individual.²¹⁸

²¹⁶ Pierre Pellegrin, “Aristotle’s Politics,” in *The Oxford Handbook of Aristotle*, ed. by Christopher Shields (Oxford: Oxford University Press, 2012), 564.

²¹⁷ Aristotle distinguishes several senses of priority in various passages, including *Metaphysics* Δ 11, *Categories* 12, *Physics* VIII 7 and 9.

²¹⁸ Keyt and Miller provide a list of four senses of priority that is helpful to examine. They of course disagree on the kind of priority that Aristotle is using concerning the relationship between the polis and the individual.

The first text we should examine to attain an account of priority is Aristotle's discussion of priority in *Metaphysics* Δ 11. In this passage, Aristotle first identifies what I will call (1) priority in beginning:

We call things prior and posterior in some cases (on the assumption that there is a first, i.e. a beginning, in each class) because they are nearer some beginning determined either absolutely and by nature, or by reference to something or in some place or by certain people, e.g. things are prior in place because they are nearer either to some place determined by nature or by reference to something or in some place or by certain people, e. g. things are prior in place because they are nearer either to some place determined by nature, e. g. the middle or the last place, or to some chance object; and that which is further is posterior.²¹⁹

This sort of priority is clearly the priority that occurs in generation for instance, as in the child is prior to the adult as it is nearer the beginning of the life of the individual organism. This priority is determined then by the acknowledgement of a beginning, from which things are called prior as they are closer to the beginning that has been identified. Something X is prior in this sense to another thing Y if it is closer to the beginning, and that this may be understood in an absolute or relative sense, and it may be in terms of a place, a time, etc. So when we say that a cub is prior to a bear, we mean by priority in the sense of priority of beginning.

Secondly, there is (2) priority in formula. The passage describes this kind of priority by stating "...in another sense that which is prior for knowledge is treated as absolutely prior..."²²⁰ This entails the kind of priority which comes up in definitions and for Aristotle knowledge as well. Something X is prior to another thing Y in formula just in case knowledge of X is required for knowledge of Y but knowledge of Y is not

²¹⁹ πρότερα καὶ ὕστερα λέγεται ἓνια μὲν, ὡς ὄντος τινὸς πρώτου καὶ ἀρχῆς ἐν ἐκάστω γένει, τῷ ἐγγύτερον εἶναι ἀρχῆς τινὸς ὀρισμένης ἢ ἀπλῶς καὶ τῇ φύσει ἢ πρὸς τι ἢ πού ἢ ὑπό τινων, οἷον τὰ μὲν κατὰ τόπον τῶ εἶναι ἐγγύτερον ἢ φύσει τινὸς τόπου ὀρισμένου (οἷον τοῦ μέσου ἢ τοῦ ἐσχάτου) ἢ πρὸς τὸ τυχόν, τὸ δὲ πορρώτερον ὕστερον: *Met.* Δ 11 1018b9-14.

²²⁰ ...ἄλλον δὲ τρόπον τὸ τῇ γνώσει πρότερον ὡς καὶ ἀπλῶς πρότερον. *Met.* Δ 11 1018b30-31.

required for knowledge of X. So in order to know what a musical man is I must first know what being musical is, but to know what musical is does not in itself require that I know what a musical man is. So in this case musical is prior in formula to musical man.

Next, Aristotle briefly mentions the (3) priority of certain kinds of attributes stating “The attributes of prior things are called prior, e. g. straightness is prior to smoothness; for one is an attribute of a line as such, and the other of a surface.”²²¹ This kind of priority is to be understood then through the idea of certain things being prior at least in certain ways to other things. It follows then that the attributes and properties of these prior things are themselves prior to the attributes of those things that are posterior to the original prior thing. It seems to me then that the priority spoken of here relates to priority in formula, in that those things which are in formula prior to other things possess properties that are themselves prior to the properties of the posterior thing.

In the *Categories* Aristotle identifies another kind of priority not mentioned in the philosophical lexicon of *Metaphysics* Δ. He states that “Further, besides the ways mentioned, what is better and more valued is thought to be prior by nature: ordinary people commonly say of those they specially value and love that they ‘have priority.’”²²² I will call this (4) priority in nobleness. By this sort of priority I take Aristotle to mean that that which is considered to be more valued, either absolutely or relative to an individual person, is thought to be prior. The way in which such a thing would be considered to be more prior would be how individuals consider the more valuable things

²²¹ ἔτι πρότερα λέγεται τὰ τῶν προτέρων πάθη, οἷον εὐθύτης λειότητος: τὸ μὲν γὰρ γραμμῆς καθ’ αὐτὴν πάθος τὸ δὲ ἐπιφανείας. *Met.* Δ 11 1018b36-1019a1.

²²² ἔτι παρὰ τὰ εἰρημένα τὸ βέλτιον καὶ τὸ τιμώτερον πρότερον εἶναι τῇ φύσει δοκεῖ· εἰώθασι δὲ καὶ οἱ πολλοὶ τοὺς ἐντιμότερους καὶ μᾶλλον ἀγαπωμένους ὑπ’ αὐτῶν προτέρους φάσκειν εἶναι· *Categories* 12 14b3-7.

in their life to be more important to protect and more vital to their lives than the more inessential things in their lives. Considered more absolutely, one can see that that which is considered to be better is also considered to be more actual, and actuality is considered by Aristotle to be prior to potentiality. This also seems to connect with the basic Aristotelian claim that the end toward which something aims at by nature is more complete and better. So the end by nature is also prior in being better and more valued, absolutely in this case, to the beginning.²²³

Aristotle also mentions elsewhere the kind of priority which can be called (5) teleological priority, which holds that a thing which is an end is also prior to that which is aiming at the end but which is still in potentiality in relation to the end at which it is aiming. So Aristotle states that actuality is prior in this sense "...firstly, because the things that are posterior in becoming are prior in form and in substance, e.g. man is prior to boy and human being to seed; for the one already has its form, and the other has not. Secondly, because everything that comes to be moves towards a principle, i.e. an end. For that for the sake of which a thing is, is its principle, and the becoming is for the sake of the end; and the actuality is the end, and it is for the sake of this that the potentiality is acquired."²²⁴ This type of priority is a fundamental aspect of Aristotle's general teleological theory. For every natural motion that occurs, Aristotle understands the

²²³ I am also reminded here of Aquinas' argument against the notion that God is a Body. Aquinas states that "God is the most noble of beings...Now it is impossible for a body to be the most noble of beings...Hence, it is impossible that God should be a body." (*Summa Theologica* I, Q. 3, A. 1) The argument that Aquinas provides here clearly involves more than simply the claim that what is more noble is prior, but it also involves this kind of priority. God, being the most noble of beings, is also prior to all other beings, who are themselves less noble than God.

²²⁴ ἀλλὰ μὴν καὶ οὐσία γε, πρῶτον μὲν ὅτι τὰ τῆ γενέσει ὕστερα τῶ εἶδει καὶ τῆ οὐσία πρότερα (οἶον ἀνήρ παιδὸς καὶ ἄνθρωπος σπέρματος; τὸ μὲν γὰρ ἤδη ἔχει τὸ εἶδος τὸ δ' οὐ), καὶ ὅτι ἅπαν ἐπ' ἀρχὴν βαδίζει τὸ γιγνόμενον καὶ τέλος (ἀρχὴ γὰρ τὸ οὐ ἔνεκα, τοῦ τέλους δὲ ἔνεκα ἢ γένεσις), τέλος δ' ἢ ἐνέργεια, καὶ τούτου χάριν ἢ δύναμις λαμβάνεται. *Met.* θ 8 1050a4-10.

reason for such motions as aiming at an end which itself actualizes the motion in question. This also holds for natural living substances, in so far as a juvenile member of a species is moving towards adulthood, the actualized form of the adult member of the species is the reason for the motion and growth of the juvenile. Aristotle makes this priority clear by arguing then that the potentiality to move needs to be actualized by something, which of course is actualized by the mover who possesses the end towards which the movement is aiming. The actuality toward which the motion is aimed at is prior precisely because the potentiality toward that end requires an actuality to aim at in order for the potentiality to be possessed in the first place. For Aristotle, the fundamental reason for all types of motion is that they all aim at an end toward which the motion is striving, and the end must exist in actuality in order for the motion to happen in the first place.

Finally, there is (6) priority in ontology, existence, or separateness. Aristotle states that some things are called prior "...in respect of nature and substance, i. e. those which can be without other things, while the others cannot be without *them*."²²⁵ This type of priority can be understood by stating that something X is prior to another thing Y in existence just in case X can exist without Y, but Y cannot exist without X. The Aristotelian example of this kind of priority is the relationship between the hand and the whole living body. As we have already discussed, the hand does not exist as such when separated from the body. We may still call such a separated limb a hand, but we only do so according to Aristotle homonomously. The sculpted or carved hand of a statue is understood in the same sense by Aristotle. The hand only exists as such when it is

²²⁵ τὰ δὲ κατὰ φύσιν καὶ οὐσίαν, ὅσα ἐνδέχεται εἶναι ἄνευ ἄλλων, ἐκεῖνα δὲ ἄνευ ἐκείνων μὴ *Met.* Δ 11 1019a1-4.

connected to the whole body, and its function is only utilized when it is part of such a whole.

This notion of priority has received some attention in the recent scholarship. Precisely what it actually means for something to be capable of being without another thing is somewhat unclear.²²⁶ Kit Fine has argued that the notion of priority in respect of nature entails a modal/existential dependence relationship.²²⁷ The existential construal of dependence is defined by Fine as "...taking the existence of the one to depend upon that of the other."²²⁸ The modal construal of dependence is then defined by him as "...it is necessary that if the one item has its 'being' then so does the other."²²⁹ The combination of these two senses of dependence then leads to the account in which "One thing x will depend upon another y just in case it is necessary that y exists if x exists." Fine then proceeds to argue that this existential/modal construal of the dependence relationship is precisely what Aristotle means by priority in nature by arguing that "...the obvious way to construe [Aristotle] is by reference to the notions of existence and modality."²³⁰

However, this construal of the priority in nature relationship is by no means the only interpretation of Aristotle's claim. Peramatzis argues that Aristotle has an essentialist notion of ontological independence and thus of priority in nature.²³¹

According to Peramatzis, the priority relation expressed here concerns the 'what it is to

²²⁶ I do not intend to discuss the entire controversy here regarding priority in nature. I simply intend to briefly discuss a few of the interpretive positions here in order to indicate the various ways in which the type of priority has been understood. The goal of this chapter is indeed to show that the polis is prior by nature to the individual, and this is the kind of priority that Aristotle intends when he states that the polis is prior to the individual. However, it suffices for my project to simply show that my understanding of the priority of the polis can be made consistent with how priority by nature is understood by the scholarship.

²²⁷ Kit Fine, "Ontological Dependence," *Proceedings of the Aristotelian Society* 95, no. 1 (1995): 270-271.

²²⁸ Fine, "Ontological Dependence," 270.

²²⁹ Ibid, 270.

²³⁰ Ibid, 270.

²³¹ Michail Peramatzis, *Priority in Aristotle's Metaphysics* (Oxford: Oxford University Press, 2011).

essentially be A' rather than the existential independence of A. So Peramatzis argues that ontological priority or priority in nature should be understood as the following: A is ontologically prior to B if and only if A can be what it essentially is independently of B being what it is, while the converse is not the case."²³² Peramatzis argues that this is the case precisely because the existential construal of priority by nature does not make sense of some of the examples that Aristotle uses in order illustrate what he means by priority in nature. For instance, Peramatzis points out that substantial forms are clearly ontologically prior to the particular compounds that they inform, but it is nevertheless the case that substantial forms require the body in order to exist. In fact, substantial forms are the kinds of things that in order to exist at all, there must also exist a body which is informed by their corresponding substantial form. But the existential/modal construal of ontological priority would necessarily imply just this point, namely that substantial forms, being ontologically prior, necessarily are able to exist without their corresponding bodies. This is just not the case in the Aristotelian ontology, and thus Peramatzis argues that we must modify our understanding of ontological priority and rather see it as a claim regarding the priority of the essence of a thing in relation to that to which it is prior.

However, Peramatzis' interpretation is clearly not the only interpretation that Aristotle intends by identifying ontological priority or priority in nature. There are clear instances that Aristotle does seem to me to defend a type of ontological priority that does indeed imply the existential variety. The hand for instance, which is by the by the very example that Aristotle uses in the *Politics* passage we are considering, does not exist if the human soul does not exist. But on the other hand, the human soul can exist even if

²³² Peramatzis, *Priority in Aristotle's Metaphysics*, 13.

the body which it informs does not possess any hands.²³³ This leads then to admitting that Aristotle seems to have several senses of this type of priority in mind as well. Following Emily Katz, I distinguish at least four senses of the priority that Aristotle seems to intend.²³⁴ The first of the four senses states that A's existence is a necessary condition for B's existence, but not conversely. Secondly, A's existence is a cause of B's existence, but not conversely. Thirdly, A's essential being is a necessary condition for B's essential being, but not conversely. And fourthly, A being what it is is a cause of B's being what it is, but not conversely. The question of what kind of priority then seems to be more involved than simply assuming that the priority of the polis is of the ontological variety.

4. The Ontological Priority of the Polis

Miller believes then that the priority thesis as it is understood by Keyt involves interpreting priority according to the fifth sense just outlined, the ontological or separateness sense. The problem that Miller has with this interpretation of the priority thesis is that, as has already been pointed out, it firstly seems to lead to the totalitarian impulses that Barnes and Taylor indicate in their analysis of the thesis. Miller states explicitly that such an interpretation inevitably understands the polis as a 'social organism,' much like the Hegelian understanding of the political community.²³⁵ This of course leads not only to the thesis that a person cannot be a person at all outside of the

²³³ This of course would not come about if the body develops normally according to Aristotle. But the accidental loss of the hands of a body would nevertheless fail to cause the soul which informs the specific body to cease to exist.

²³⁴ Emily Katz, "Ontological Separation in Aristotle's *Metaphysics*," *Phronesis* 62, no. 1 (2017): 26-68. See especially Katz, 39.

²³⁵ Miller, *Nature, Justice, and Rights in Aristotle's Politics*, 49.

polis, but also that the polis has the kind of jurisdiction over the individual as the person has over their own hand. Secondly, Miller agrees with Keyt on the point that such a thesis is inconsistent with Aristotle's own metaphysical commitments. Just as a painter does not cease to be a painter if they are missing their paint and canvass, so a person does not cease to be a person if they are missing the opportunity to actualize those essential aspects of humanity such as the social and practical reason that Aristotle examines so extensively in the *Nicomachean Ethics*.

On the other hand, Miller believes that the priority thesis defended by Aristotle should be understood according to what Miller calls "priority in completeness."²³⁶ Something X is prior in completeness to another thing Y just in case X is more perfect or actualized or realized than Y. Given Aristotle's commitment to teleology, this sense of priority can best be understood as recognizing that a thing can be closer to actualizing its own nature than another, and it is the nature of that thing as its form that represents the truest sense of that thing. So, a cub may be prior in generation to the adult bear, but the adult bear is prior in completeness to the cub. The cub still needs to actualize what is at the moment merely potential, and such an actualization represents the manifestation of the nature that the cub already possesses. So the bear on the other hand already possesses in actuality that which is only potent in the cub. This is what makes the bear, or of course any other adult life form, prior in this sense to the cub.

Miller takes the priority argument to argue that the relationship between individual persons and the polis is the analogue of the relationship between the hand and the whole of which it is a part. It is not the case for Miller that the individual person

²³⁶ Ibid, 50-53.

ceases to be a human being when outside the polis. Rather, the part when separated from the whole cannot perform its defining function, which therefore implies that the part as such is not self-sufficient. The whole is self-sufficient and is therefore according to Miller "...prior (in completeness) to the part."²³⁷ The individual human being therefore, when separated from the polis, is not self-sufficient, and as a part of the polis, this implies that the individual when separated is not able to perform its defining function. Since the polis is self-sufficient, this implies that the polis is prior in completeness to the individual.

Trevor Saunders, in his commentary on the first two books of the *Politics*, also argues that this is what Aristotle means by claiming that the polis is prior to the individual. Saunders states that "Though the state is of course chronologically later than its parts, it is 'prior by nature' to them in having been immanent in them as the structured unity, the end or form, to which they naturally developed historically."²³⁸ Saunders believes that Miller is correct in asserting that the kind of priority that Aristotle intends is not simply the basic ontological priority that Keyt and the others defend. He believes that Aristotle sees the polis as a complete actualization of what is there in the parts of the polis, including the individual. Saunders also believes that, with Miller, the human being does not cease to exist when separated from the polis, like the hand does when separated from the body. Rather Saunders states that "...a man cut off from a state suffers functional impairment, and his happiness diminishes. He can indeed exist outside a state (the analogy of the severed and therefore dead hand does not imply he would be dead),

²³⁷ Ibid, 51.

²³⁸ Saunders, *Aristotle's Politics I and II*, 70.

but not in his complete and functional fulfilment...”²³⁹ Miller and Saunders therefore understand the priority relationship between the polis and the individual as one which implies completeness and self-sufficiency. So the priority of the polis does not indicate the ontological relationship that Keyt and the others believe.

Furthermore, Miller believes that the claim that the human being does not cease to exist when separated from the polis gains some justification once one recognizes that Aristotle understands this separation of the individual from the polis as producing a corruption rather than a simple ceasing to exist. Aristotle uses the participle *διαφθαρεῖσα* in the argument concerning priority and what happens to the thing which is separated from the whole of which it is a part. The relevant passage as a whole in Greek is stated thusly “τὸ γὰρ ὅλον πρότερον ἀναγκαῖον εἶναι τοῦ μέρους· ἀναιρουμένου γὰρ τοῦ ὅλου οὐκ ἔσται πρὸς οὐδὲ χεῖρ, εἰ μὴ ὁμωνύμως, ὥσπερ εἴ τις λέγοι τὴν λιθίνην (διαφθαρεῖσα γὰρ ἔσται τοιαύτη)...”²⁴⁰ Miller argues that *διαφθαρεῖσα* here does not necessarily mean to be destroyed, but rather merely to be corrupted. It is this corruption which occurs to the individual when separated from the whole polis that marks the polis to be prior to the individual. Miller believes that this interpretation of *διαφθαρεῖσα* is especially relevant once one considers that later in the same book of the *Politics* Aristotle uses the same term to contrast things that are in a corrupted state with things that are in a natural state. Aristotle argues that “But then we must look for the intentions of nature in things which retain their nature, and not in things which are corrupted (*diaphtharmena*). And therefore we must study the man who is in the most perfect state both of body and soul, for in him we shall see the true relation of the two; although in bad or corrupted natures the body

²³⁹ Ibid, 70.

²⁴⁰ *Politics* I 2 1253a20-23.

will often appear to rule over the soul, because they are in an evil and unnatural condition.”²⁴¹ What this indicates for the interpreter is that one does not necessarily have to understand Aristotle here as arguing that the human being as such is necessarily destroyed when separated from the polis. Rather, the human being, and specifically the nature of the human being, is corrupted when separated. Thus for Miller the argument “...obviously assures that human beings *can* exist in an imperfect, debased, corrupted condition.”²⁴² So the priority thesis that Aristotle defends can be understood as the kind of priority which represents completeness, and with it self-sufficiency. The polis is obviously complete and self-sufficient, and the individual human being is not precisely because the individual person is corrupted outside of the polis, and the individual requires the polis in order to function and actualize the potencies found in their nature.²⁴³ Thus the individual is posterior in completeness to the polis.

Miller believes then that his interpretation of the priority thesis allows him to answer the objections to the priority thesis that Keyt and Taylor raised, namely that it is in some sense inconsistent according to Aristotle’s own principles for Aristotle to claim that the human being is posterior to the polis even though Aristotle claims as much. One would be able to answer such a charge precisely because one is able to understand the priority claim according to a different sense of priority than the one which Keyt and Taylor take to be Aristotle’s understanding of priority. As we have seen, Taylor argues

²⁴¹ δεῖ δὲ σκοπεῖν ἐν τοῖς κατὰ φύσιν ἔχουσι μᾶλλον τὸ φύσει, καὶ μὴ ἐν τοῖς διεφθαρμένοις: διὸ καὶ τὸν βέλτιστα διακείμενον καὶ κατὰ σῶμα καὶ κατὰ ψυχὴν ἄνθρωπον θεωρητέον, ἐν ᾧ τοῦτο δῆλον: τῶν γὰρ μοχθηρῶν ἢ μοχθηρῶς ἔχόντων δόξειεν ἂν ἄρχειν πολλάκις τὸ σῶμα τῆς ψυχῆς διὰ τὸ φαύλως καὶ παρὰ φύσιν ἔχειν. *Politics* I 5 1254a35-1254b2.

²⁴² Miller, *Nature, Justice, and Rights in Aristotle’s Politics*, 51.

²⁴³ Unless of course the individual in question is more than a human being, and thus has no need for the polis. But for the purposes of the argument I find it sufficient to merely indicate that a human being is corrupted once separated from the polis.

that the priority thesis justifies a master-slave conception of the ruler and ruled relationship for the state as such. However, because Aristotle recognizes firstly that the master slave relationship is only one type of rule, and since, unlike the master slave relationship, the polis is partly there for the *eudaimonia* of the individuals within the polis, the priority thesis is inconsistent with Aristotle's ethical-political theory in general. Keyt believes that the priority thesis, on the other hand, is inconsistent with Aristotle's general ontology, in that a substance such as a human does not cease to exist when accidentally separated from a polis, unlike a hand which clearly does cease to exist as such when separated. Miller's solution is simply to understand the priority thesis in a different light, and according to a different sense of priority that nevertheless is still acknowledged by Aristotle in his discussions of the meaning of priority.

Miller seems to me to be correct in some sense here, although I also believe that his interpretation of the priority thesis is problematic. One of the issues with Miller's argument is that once one takes the passage just cited with the context of the overall argument that Aristotle is providing concerning priority in *Politics* I 2, it seems reasonable to believe, as Keyt and Taylor clearly believe, that Aristotle is not simply stating that the polis is complete and self-sufficient and the individual is not. As I have already noted, Aristotle first compares the priority of the polis with the priority which exists between a hand and the whole of which it is a part. Now, it takes some convincing then to understand Aristotle as interpreting the separation of the individual from the whole as not being identical to the separation of the hand from the whole. For Aristotle states that the priority that he is talking about is much like the priority of the body to the

part, and that since things are defined in terms of their function, it follows that the loss of this function entails that the thing itself has ceased to exist as it once was.

Despite acknowledging the context of the passage in which we find the priority thesis, I nevertheless think that Miller is correct to emphasize the loss of the ability to function outside of the polis. And in defense of Miller's thesis, Aristotle explicitly states that an individual separated from the polis by nature is not a human being, but he also states that when separated from the polis by accident the human being does not necessarily cease to be a human being. Specifically, Aristotle states that "And he who by nature and *not by mere accident* is without a state, is either a bad man or above humanity; he is like the 'Tribeless, lawless, hearthless one,' whom Homer denounces..."²⁴⁴ This claim by itself seems to vindicate Miller's claim that Aristotle is not speaking here of ontological priority such as that which holds in the relation between a part of a substance and the whole substance as such. Aristotle also explicitly states that self-sufficiency is the important point that he is emphasizing concerning the priority of the polis. It is the fact that the individual is not self-sufficient outside of the polis which makes the individual posterior to the polis.²⁴⁵ Aquinas, in his commentary on the passage, seems to also agree with this point regarding self-sufficiency and the necessity of a polis for the individual by stating that "And if someone should need nothing, being self-sufficient, as it were, and so should not be part of a political community, the individual is superior to human beings, for such a one is a kind of god, as it were."²⁴⁶ Aquinas here is precisely

²⁴⁴ καὶ ὁ ἄπολις διὰ φύσιν καὶ οὐ διὰ τύχην ἦτοι φαῦλός ἐστιν, ἢ κρείττων ἢ ἄνθρωπος: ὥσπερ [5] καὶ ὁ ὑφ' Ὀμήρου λοιδορηθεὶς "ἀφρήτωρ ἀθέμιστος ἀνέστιος;" *Politics* I 2 1253a3-5. The Homeric passage is from *Il.* 9. 63. The italics are my own.

²⁴⁵ Recall here the reason that Aristotle states that political communities are formed in the first place, which is to provide the goods necessary for life.

²⁴⁶ Aquinas, *Commentary on Aristotle's Politics*, I 22.

indicating what Miller has also argued concerning the priority thesis. The individual requires the polis in order to actualize and ultimately achieve *eudaimonia*.²⁴⁷ But the polis does not require the individual in order to achieve its end, which for a polis would constitute one of the ideal political communities discussed by Aristotle.²⁴⁸ The priority thesis then certainly is connected to the self-sufficiency of the individual, and Miller is correct to point this out.

However, it is not simply self-sufficiency as such that completely defines Aristotle's use of priority here. For if we are to take self-sufficiency to simply mean survival or the ability to live outside of the polis, Aristotle certainly believes that this is possible for human beings outside of the polis. Rather complete self-sufficiency represents the ability for a human being to actualize their nature, including that part of their nature which is social and rational, or the logos-sociality component of what it means to be a human being for Aristotle. Simply surviving is not living the human life, but is rather closer to the life of beasts and animals. But outside of the polis, it is not possible for the individual to actualize these components of human nature. Miller also believes that his interpretation can account for this point as well. Miller states that there are three successive stages of potentialities and actualizations for Aristotle.²⁴⁹ There is first of all the young child, who certainly has the capacity to acquire the ethical and moral virtues of action and desire as well as the rational virtues, both the practical and the

²⁴⁷ The exception to this claim may be the life described by Aristotle in *Nicomachean Ethics* X, which is clearly the life of contemplation. Whether and how much this life requires the polis is interesting and worth exploring, but I do not have the ability in this dissertation to do so. Briefly, I will state that my position regarding *NE* X is mostly in agreement with that which Jonathan Lear describes in his study *Aristotle: The Desire to Understand*.

²⁴⁸ *Politics* VII and VIII.

²⁴⁹ Miller, *Nature, Justice, and Rights in Aristotle's Politics*, 52.

theoretical.²⁵⁰ The child has these potentialities precisely because of the human nature that the child possesses, which of course in turn explains why it is that the child will be expected to be able to acquire these virtues and also why a tree sapling for instance would not possess this potentiality. The child then grows into a healthy adult and acquires these virtues through being habituated in the right way and through careful studying. This person then has the third stage of actually carrying out these virtues through action and engagement. What we can see here is that in order for this person to acquire the higher stage it is necessary for them to be in a community which allows for or provides the capability for the actualization of the corresponding potentialities that the child possesses. This is of course the case when considering how to reach the second stage, as it is simply not possible to acquire the virtues enumerated by Aristotle on one's own, unless of course the person in question is more than human and rather is something divine. But of course, in order to carry out and engage in the activities that constitute the realization of any of the virtues, one must be in a situation in which one is capable of engaging in the first place. But the only way in which one is given the capability is within the confines of a political community of some sort. The political community which provides all of the conditions necessary for virtuous activity is of course the polis, and thus the polis is necessary for an individual to reach a higher stage of development.

However, although I believe that Miller's argument is correct in some important senses, especially regarding the lack of self-sufficiency on the part of the individual who is outside of the polis, and the fact that such an individual is corrupted when outside of a polis, it still does not strictly speaking correctly conform to Aristotle's own analysis of

²⁵⁰ I am using here a human child as an example, but of course this analysis would apply to every living thing according to their respective natures.

what priority means for him. As we have seen, Aristotle designates several senses of priority. And in the passages that mention these senses of priority, there is indeed a sense which can be construed as teleological. However, the teleological sense of priority is one which involves the posterior entity aiming at an end which is represented by the prior entity. So the bear cub is posterior to the adult bear in a teleological sense precisely because the adult bear represents the end toward which the cub is aiming at. All movements that are essentially ordered for Aristotle are ordered in such a way as they aim at an end, which itself explains both the potentiality that exists and the actualization of that potentiality which proceeds to aim at the actuality that it is attempting to acquire. All of this is standard fare as far as Aristotle is concerned, but I do not see how the self-sufficiency interpretation provided by Miller and Saunders can be understood according to this sense of priority. The polis may very well be considered the aim of the other political organizations like the household and the village, and thus can be understood to be prior to these communities in the teleological sense. But the individual, although certainly a political animal, is nevertheless aiming at something other than simply the polis. The aim of the individual is rather *eudaimonia*, which is the actualization of the various natural capacities of the human being. What this involves of course is the acquiring of the various virtues of character as well as the virtues associated with practical reason.²⁵¹ This is the aim of the potentialities associated with the human being and which Aristotle explicitly recognizes. However, the teleological sense of priority

²⁵¹ The virtues of theoretical reason are certainly a part of the full actualization of the individual, but precisely how this is achieved is a matter of some controversy which I do not have time to address in this dissertation. It is sufficient to simply point out that the teleological sense of priority strictly involves the aiming of the posterior entity at the prior entity, and that this sense of priority does not really match the aiming of the individual human being, which is at *eudaimonia*, and not at the complete polis as such.

involves understanding the potentiality or capacity in terms of the actuality that it is aiming at, and although the human being is certainly understood by Aristotle to be a political animal, the aim of the natural capacities of the human being is not the polis as such, but rather the various virtues identified by Aristotle in the *Nicomachean Ethics*.

Rather than simply understanding the priority thesis to entail the self-sufficiency interpretation defended by Miller and Saunders, it seems more appropriate then to take Aristotle to have in mind the ontological or natural sense of priority. I think that this is the right interpretation of the priority thesis for two reasons. Firstly, it better accords with Aristotle's actual explanation of the priority thesis in *Politics* I 2. As we have seen, Aristotle states that the polis is prior to the human being much like the body is prior to the hand. When the hand is separated, it loses its function or capacity to be a hand, and thus retains only the shape of a hand. The kind of relationship that is expressed here is clearly the ontological sense of priority that Aristotle discusses in other passages. Secondly, the self-sufficient interpretation of priority is not explicitly identified by Aristotle in his discussions concerning priority. Aristotle recognizes a teleological sense of priority, but as we have seen something is prior to another thing in this sense through the fact that the potentialities of the posterior thing require an actuality to aim at as an end. But the kind of relationship expressed by the polis and individual is not of this sort.

It must be admitted though that Miller's emphasis on self-sufficiency and function is an important aspect of the kind of priority that Aristotle is attempting to defend in the *Politics*. I think that his emphasis on the corruption of the individual which occurs when the individual is outside of a polis is also a good one. However, the priority that Aristotle is insisting upon in the passage seems to be an ontological one, rather than simply one

emphasizing self-sufficiency or completion. We have already marked several senses of ontological priority, and I believe that of the four senses identified the first sense, in that A's existence is a necessary condition for B's existence but not conversely, is the sense that Aristotle is defending in the *Politics* passage. Aristotle is arguing here that the polis is necessary for the functioning of human beings. As we saw in the last chapter, the very act of logos/sociality produces an emergent entity called the household whose aim is then fulfilled through the emergence of the polis. In other words, in order for a human being to achieve the good life, and even to function at all in an essential manner, the polis must exist as a condition for the functioning. I believe that the first sense of the ontological sense of priority is correct precisely through the fact that the other senses of ontological priority do not quite accurately describe the relationship that exists between the polis and the individual for Aristotle. The essence of the human being, or its form/nature, is not caused by nor explained by the polis, and the polis does not in itself cause the existence of the human being. Rather, the polis is an emergent entity which comes about through the discussions of the good and bad life which thereby provides a framework through which the good life can be achieved. It is therefore best to understand Aristotle here as stating that the polis is a necessary condition for the existence of individual human beings.

Of course, at this point it is relevant to return to the criticism provided by Keyt. Recall that Keyt states that the ontological understanding of the priority thesis is not consistent with Aristotle's understanding of priority in his other writings. Keyt states that the carpenter without her tools is nevertheless still a carpenter, and that this Aristotelian principle flatly contradicts the priority thesis. However, I do not believe that the

carpenter analysis is an accurate depiction of what Aristotle is attempting to defend here. Carpentry is a type of productive knowledge, and the carpenter is therefore defined by possessing this type of knowledge.²⁵² Aristotle describes craft knowledge or productive knowledge by saying that “A craft, then, as we said, is some sort of state involving true reason concerned with production...”²⁵³ To know how to do the productive work involved with being a carpenter is the condition necessary for someone being a carpenter. So I agree with Keyt’s assessment that for Aristotle the carpenter without her tools remains a carpenter despite the fact that she cannot practice her knowledge regarding carpentry, or in other words despite the fact that she cannot fulfill the function of carpentry. However, when it concerns human beings, it is also recognized by Aristotle that the very function and nature of what it is to be human is to act rationally, and to do so in a practical manner. Without the ability to do this the life that can be led by such an individual can only be one that resembles the lower animals or beasts. The difference between the carpenter without tools, and the individual without a polis is that the carpenter still retains the knowledge of doing carpentry. This possession of the relevant knowledge is precisely what makes the carpenter remain a carpenter despite the fact that the carpenter is unable to do her essential activity of carpentry. However, what makes a human being live a human life is, for Aristotle, to live the life involving logos/sociality, or to live a life involving practical reason. The goal of such a life is of course to attain practical wisdom, but what is important for the purposes of the argument here is precisely that the human life consists in the practical rational activities that constitute

²⁵² For Aristotle’s distinction between the different types of knowing see *Nicomachean Ethics* VI

²⁵³ ἡ μὲν οὖν τέχνη, ὥσπερ εἴρηται, ἕξις τις μετὰ λόγου ἀληθοῦς ποιητικὴ ἐστίν, *Nicomachean Ethics* VI 4 1140a20.

logos/sociality. It is not the case that the human being remains human and therefore lives a human life outside of the polis, precisely because practical knowledge and its activity consists in actually practicing and acting it out. Without the ability to do this, the individual seems to merely resemble a human being and thus can be justifiably described by Aristotle as being a human being homonomously.

The difference of course between the separated hand and the separated individual is that there is the possibility for the individual to live a human life even after being separated from the polis. Acknowledging this point seems to lead to also agreeing with Miller in saying that it might be better to understand Aristotle as arguing that the separated individual is in a ‘corrupted’ state, rather than simply being destroyed altogether.²⁵⁴ As we saw, Aristotle uses this term in the very passage we are examining, and I think that it is a better one to describe the unique situation of an animal who requires a political community to truly express itself as such but is found to be outside or separated from the community.

What is important to add to this account however is the fact that the expression of the logos-sociality aspect of human nature is what, according to the argument given in the fourth chapter, leads to the existence of a polis, in that the polis emerges from the practical and social actions of individuals as they discuss the good and the bad and the just and the unjust. According to my view, the polis is natural precisely because it is a part and manifestation of these activities, and it constitutes a part of the very expression of these aspects of human nature. So how is it that the polis is able to be prior according

²⁵⁴ I do not have the room in this dissertation to analyze all of the ways in which Aristotle understands corruption as opposed to simply being destroyed in the rest of the corpus. It suffices for the argument here though that Aristotle does indeed make a distinction, and we can see that he does in the *Politics* I 5 passage quoted both earlier in this chapter as well as by Miller.

to my view? My answer is that priority according to the first sense of ontological priority identified earlier allows us to see that the priority in question is one in which the individual is only able to achieve their end through the means provided by the polis, and that the polis is able to provide such means through emerging from the logos-sociality aspect of human nature. What this also allows us to do is to see that the human being is corrupted in a very important and meaningful sense when separated from the polis, and that it is much like the hand when separated from the whole of which it was a part in that the human being for the most part ceases to exist as a human outside of the polis since she cannot practice those essential aspects of what it is to be human, namely the activities of practical reason. The difference between the hand and the individual is that the individual does not cease altogether to exist in an unqualified fashion as a human being when separated from the polis. However, the individual is not able to express their social and practical potentialities which also implies that they are *de facto* outside of a polis or at the very least a political/social community such as the family unit. So, although they remain human beings *simpliciter*, they are much like the stone hand that Aristotle mentions in that almost every aspect of what it means to be a human being for Aristotle is missing, and the person in question would be living a life more similar to a beast than to anything that one might recognize as being distinctly human. This allows us to understand Aristotle's notion of priority in relation to the polis and the individual as being an ontological one, since it is a fact that a human being virtually ceases to be human outside of the confines of polis, which itself necessarily emerges from the essential activities of human life. I would argue that then that a person who is even accidentally outside of the polis is not able to really live anything like a human life, and is

thus not really human except in technical sense. The difference, just to emphasize, is that the ostracized or separated person does not absolutely cease to be human, but nevertheless resembles that of a beast more than that of a human being.

An example which will flesh out the thesis that I am defending here is also one that is frequently discussed both by Aristotle and by a large part of the interpretive literature on this topic. The example I have in mind is *Philoctetes* in the play by the same name written by Sophocles. The play describes the events and fate of the character Philoctetes during the events of the Trojan war. Nine years before the play begins, Philoctetes is abandoned on the desert island Lemnos. The reason for his abandonment is due to a snake bite that Philoctetes received which was found to be incurable, and which festered. The snakebite proceeded to cause constant pain and began to fester, which accordingly convinced the Greeks who were on their way to Troy to abandon Philoctetes rather than having to put up with the noisome pain that the wound clearly caused in Philoctetes. The play itself then tells of the visions of a seer who declared that the Greeks would not be able to take Troy without the famous bow of Philoctetes, which was left with Philoctetes on the desert island nine years previously. The Greeks, led by Odysseus, decided to go back to the deserted island and take possession of the bow that they left behind. Odysseus, the infamous wordsmith, thought it best to trick Philoctetes into coming back with them to Troy, and afterward simply admits that he merely wants the bow, and does not care what happens to Philoctetes the person. After becoming aware of the plot, Philoctetes' bow is taken from him by Neoptolemus and the latter is about to set sail with Odysseus back to Troy and once again abandon Philoctetes on the island without a means to even survive given the festering wound which has nearly crippled

him. At the last minute however, Neoptolemus decides that it is best to give back the bow to Philoctetes despite Odysseus' warnings that doing so would mean that Neoptolemus is a traitor. After Neoptolemus gives the bow back Philoctetes then sees a vision in heaven of Heracles, his ancestor, who convinces Philoctetes to return with the Greeks to Troy and fight with them to take the city.

Aristotle is quite familiar with the play as he references it several times throughout the corpus.²⁵⁵ Keyt uses the play as an example of how Aristotle is contradicting his own doctrine when he states that the polis is prior to the individual, in that Aristotle is forced to admit that Philoctetes remains a human being even when left alone on the deserted island by those whom he considered to be his friends and compatriots. Keyt states that "Thus by Aristotle's own principles Philoctetes while living in isolation remains a human being."²⁵⁶ But as we have seen, the priority that Aristotle is speaking of here is not identical to the part/whole priority of an organic being as Keyt believes. Rather Aristotle is arguing that there is an important aspect found in the relationship between a hand and the body which allows us to better understand the relationship between the individual and the larger political community of which he is a part, and the hand/body relation illuminates this important aspect.

Miller argues then that Philoctetes indeed remains human, but since we are to understand the priority thesis to imply that the polis is prior in completeness, indicating that the polis is necessary for the individual to actualize his/her capacities and potentialities, Aristotle can hold that Philoctetes remains human, but in a lesser way.

²⁵⁵ *Nicomachean Ethics* VII 2 1146a19, VII 7 1150b10, VII 9 1151b18, *Poetics* 22 1458b23, *Rhetoric* III 3 1413a7.

²⁵⁶ Keyt, "Three Basic Theorems in Aristotle's Politics," 139.

Contrary to Keyt, Miller argues that “If we recognize different levels or degrees of being human, then there is a plausible sense in which a Philoctetes stalled...has failed to realize his humanness and is ‘less than human.’”²⁵⁷ This understanding of the priority thesis seems to be borne out by the way Sophocles depicts Philoctetes after years of separation from the political community of which he was a part. While Neoptolemus is searching the island for Philoctetes, the chorus of sailors describe the state that Philoctetes is in by saying that “O how piteous thy lot, luckless man, by man forgot; none thy solitude to share, none to tend with loving care; plagued and stricken by disease, never knowing hour of ease, facing death each moment, how hast, poor wretch, endured till now?”²⁵⁸ The chorus proceeds to describe Philoctetes as resembling a wild beast, which in turn lends support to Aristotle’s claim that a person outside of a polis is like a beast. Now what the play also shows us however is that Philoctetes is not simply a beast, or that he has absolutely lost his humanity. Rather, his condition is *corrupted* in so far as he is unable to act on those essentials of what it is to be a human being, especially the social and political aspects of being human. Without these, what is left is simply the base parts of being an animal with the higher parts of the human soul stalled and unable to be expressed in any concrete way.

Crucially however, Philoctetes does not cease to be a human altogether, and this is marked by the first meeting between Neoptolemus and Philoctetes when Philoctetes is overjoyed to hear someone speak to him again. Philoctetes expresses his joy by saying “O welcome utterance! Ah, how good to hear those accents, long unheard, from one like

²⁵⁷ Miller, *Nature, Justice, and Rights in Aristotle’s Politics*, 53.

²⁵⁸ Storr, F., translator, *Ajax, Electra, Trachiniae, Philoctetes*, Revised Edition (Cambridge: Harvard University Press, 1993), 170.

thee! What quest, my son, what venture brought thee here, what breeze compelled thy canvas? Happy breeze! Speak, tell me all, that I may know my friend.”²⁵⁹ What occurs in the rest of the play, the deception and trickery and Philoctetes’ final decision to go with his bow to Troy bears out the re-actualized logos-sociality that Philoctetes is experiencing once again. Cherry and Goerner argue that this experience bears out not only a different understanding of the priority thesis than the one that Keyt defends, but that it also shows us just how Aristotle would have conceived the thesis that human beings are by nature political animals.²⁶⁰

The political animal is in an important sense corrupted by being outside of a polis, even if this person is found to be without a polis by accident. This corruption is what is meant to be illustrated by the hand analogy that Aristotle uses to depict the kind of relationship that persists between the part and the whole when it comes to the polis and the individual. This corruption does not, as Keyt imagines, imply precisely the same type of priority as the one which exists between a hand and the body of which it is a part.

There is technically a human being left over when separated from the polis, like

²⁵⁹ Storr trans., *Ajax, Electra, Trachiniae, Philoctetes*, 233-240.

²⁶⁰ Cherry and Goerner, “Does Aristotle’s Polis Exist ‘By Nature,?’” 582-584. The ‘Political Nature’ thesis is not discussed at length in this dissertation. Although I certainly recognize that it is an important and vital theory both for Aristotle’s political and anthropological theory in general as well as for understanding the priority thesis and the fact that the polis exists by nature, I do not believe that an exploration of this claim will directly affect the thesis of my dissertation. Just a brief comment on this thesis though is that it is closely connected to the interpretation of the ontology of the polis that I have been defending both in this chapter as well as in the last chapter. The polis is natural, as we have seen, precisely because it is an emergent entity which necessarily accompanies the discussion of the good and the bad, the just and the unjust, virtue and vice that inevitably unfolds as human beings express their logos-sociality. The priority of the polis is found in the idea that it is only in the polis that the function of a human being, her logos-sociality, can be expressed. What this entails for us is in my estimation two important and related points. Firstly, the concepts of the naturalness and the priority of the polis are interconnected. The polis is natural in that it is a part of human expression itself, and the polis is prior because human expression cannot fully actualize or realize itself without the polis being there. All of this points to the second entailment, namely that it is indisputable given this understanding of the relationship between the polis and the individual that human beings are political by nature. The implications of this claim seem to involve what I have just mentioned, and entail some interesting interpretive approaches that I intend to pursue in the future.

Philoctetes stranded on the island, but the human being is firstly not able to express his own nature fully in such a position, and secondly as a result of this he will be corrupted and not able to really be a human being in any meaningful way. With Aquinas and Miller, I believe that it is better to understand this priority in terms of the ability for a human being to realize itself, and that the lack of being able to do this implies living the life of a beast rather than of a human being. All of this best fits with the ontological sense of priority that I have identified above. Understanding priority in this way allows us to see that the polis is essential to living a human life, so that without a polis a human being will be barely human and almost a human in name only. The difference is however that, as we have seen with Philoctetes, a human being is capable of becoming a participant in a political community once again and thereby actualizing their logos-sociality once they are a part of a community which allows for such activities to take place.

5. Is Aristotle a Totalitarian?²⁶¹

In regard to the claim that the priority thesis implies a justification of totalitarianism, I argue that it is mistaken to simply assume that Aristotle believed the state should have control over every aspect of one's life, which is the definition of totalitarianism that I assume Barnes has in mind. Not only does the *Nicomachean Ethics* recognize the importance of acquiring the right habits without explicitly mentioning anything like the fact that these habits and virtues are acquired exclusively through the laws and legislative acts of the state, but Aristotle seems to recognize at points that any

²⁶¹ This section is not intended to be an exhaustive argument/defense of Aristotle political theory. I am rather simply pointing out that for Aristotle the priority thesis did not necessarily imply the kind of totalitarianism that Barnes, Keyt and Taylor seem to argue.

state which in fact does legislate concerning every aspect of an individual life is not a good state. An example of Aristotle being against the overriding power of a state can be found in his criticism of Plato's utopian state defended in the *Republic*.²⁶² There Aristotle argues that it is wrong for the state to abolish the family and to abolish private property. Aristotle goes so far in his criticism of Plato as to state that "since the nature of a state is to be a plurality, and in tending to greater unity, from being a state, it becomes a family, and from being a family, an individual; for the family may be said to be more one than the state, and the individual than the family. So that we ought not to attain this greatest unity even if we could, for it would be the destruction of the state."²⁶³ So Aristotle argues that the state should be understood in terms of a plurality and not a unity, and this plurality does indicate some limits to the state's ability to control the lives of individuals. In general, and as we have seen, Aristotle founds the concept of the state on the household or family unit, and believes that the family is the foundation to the state, as it is in the household that the practical rationality of human beings begins to be practiced and actualized. It is clear then that Aristotle would object to the state abolishing the family, or even to some degree at the least to the state legislating and controlling the family rather than the head of household leading the family as Aristotle clearly believes should be the case. Aristotle also clearly objects to the elimination of private property in this section, and complains that a state which shares all property in common would suffer from people neglecting to care for any of it, since Aristotle believes that people care more

²⁶² *Politics* II 1-5.

²⁶³ πλῆθος γάρ τι τὴν φύσιν ἐστὶν ἡ πόλις, γινομένη τε μία μᾶλλον οἰκία μὲν ἐκ πόλεως ἄνθρωπος δ' ἐξ οἰκίας ἔσται: μᾶλλον γὰρ μίαν τὴν οἰκίαν τῆς πόλεως φαίμεν ἄν, καὶ τὸν ἓνα τῆς οἰκίας: ὥστ' εἰ καὶ δυνατός τις εἴη τοῦτο δρᾶν, οὐ ποιητέον: ἀναιρήσει γὰρ τὴν πόλιν. *Politics* II 2 1261a18-22.

for things they consider their own, and care less for things that are held in common since they will expect others to care for those very things.

All of this simply goes against the idea that Aristotle justified and defended a totalitarian state, since Aristotle clearly believed that there were limits to the power of the state in regard to private property and the household. I admit though that Aristotle did not at any point go through an exhaustive argument demonstrating what he believed should be the limits of a state's power to interfere in an individual life. But I believe that his emphasis on the importance of the family and the recognition of private property at the very least points the way to an account of the limitations of the state in order to preserve its plurality and thus allow for the healthy development of the household/family and thus the ability for the citizens of the state to acquire the virtues necessary for *eudaimonia*. Once one recognizes the value that Aristotle has in the foundation of the family and the happiness of the individual being acquired through the acquisition of the right habits and the right reasoning, it follows that Aristotle did not believe that the state should have absolute power over every aspect of an individual's life.

And if this is true, then it also follows that Aristotle's belief that the state is prior to the individual was not for him an implicit justification for a totalitarian state. The problem as far as I can see it however is that Aristotle does not anywhere in the corpus actually discuss this problem at length, and thus leaves it an open question as to whether and if the state would have power over a certain aspect of an individual life. The fact that this is missing for Aristotle though does not, in my view, imply that Aristotle's priority thesis necessarily leads to the justification of a totalitarian state. Rather, as I have argued throughout this chapter, the priority thesis simply emphasizes the necessity of a state for

the realization of what is essentially human, namely the practical and rational aspects of human nature. Without a state, the human being is unable to carry these things out, and thus lives a life that more closely resembles the life of a beast than it does the life of a human being.

The human being must be in a polis to live a human life, and to have the chance at achieving *eudaimonia*. And given Aristotle's account of happiness or flourishing in the *Nicomachean Ethics*, the idea that the government should have total power simply flaunts Aristotle's own concept of human nature. It is clearly up to the individual to acquire the virtues, and the state is there in order to facilitate this acquisition. But this does not imply that the state has the authority and power over every aspect of the life of a citizen. How to live one's life is precisely for Aristotle a question of how to acquire the right habits, or virtues. And the acquisition of these right habits is a matter of the individual and the family just as much as it is the polis.

All of this assumes that the political community which emerges from the ethical discussions and actions of individuals is a good community as Aristotle identifies them at the end of the *Politics*. There are of course perversions of the ideal communities, and these can emerge as well. But the perversions of the ideal communities are not what Barnes's critique is discussing, rather I understand him as implying that even the ideal communities are totalitarian. But given the argument that I have just provided, I do not think that Barnes is necessarily correct in simply stating that Aristotle is necessarily justifying a totalitarian state. For Aristotle, the important aspects of an individual's life, namely those that concern the attainment of his/her happiness, are most definitely a concern for the polis. But it is also an open question in many cases if the state actually

should have the power to interfere in the life of an individual, especially as this concerns the family and private property. It is therefore a mistake to simply assume that Aristotle's political theory is a justification of totalitarianism *simpliciter*.

6. Conclusion

Having defended my interpretation of Aristotle's concept of the priority of the polis then, it is now time to move to the conclusion of this dissertation. What I will attempt to show is that based upon the interpretations that I have defended concerning the teleological system in Aristotle's writings, the cosmic nature hinted at by Aristotle in Λ 10, and the naturalness and priority of the polis defended in *Politics* I 2, is that Aristotle conceived of a broader and more complex understanding of the teleology within the cosmos than what has usually been ascribed to him. There is indeed a cosmic nature in Aristotle marked primarily by the fact that the entities within the cosmos are ultimately attempting to achieve the actuality found and described by Aristotle in the Unmoved Mover, and that the textual and philosophical explanation of this cosmic nature can be found in an analysis of *Politics* I 2 and specifically through the interpretations that I have defended regarding the ontology of the polis in *Politics* I 2. What I will attempt to show is that Aristotle understood the cosmic nature in an ontological and teleological sense at least as being comparable to his understanding of the teleology and ontology of the polis, and that this is indicated for us by Λ 10 itself.

CHAPTER VI

COSMIC TELEOLOGY

1. Introduction

The argument of this dissertation has so far focused upon two important and what I believe to be interrelated subjects. In the first two chapters I discussed some issues with the interpretation of Aristotle's account of teleology and of specifically *Physics* II 8, and *Metaphysics* Λ 10. In the fourth and fifth chapters I argued for a specific interpretation of the polis, especially concerning its naturalness and its priority over that of the individual. The aim of these chapters was very restricted however, and that was to offer an interpretation of Aristotle's account of the polis that could provide the framework for an interpretation of Λ 10 and of Aristotle's brief hints at a teleological system which extends beyond the teleology involved in the actualization of individual natures. Therefore, whatever may be the consequences of the arguments that I have provided in the previous chapters, the aim of these chapters was first and foremost an attempt to provide a reading of Λ 10, and secondarily of *Physics* II 8. In this chapter, I intend to provide this reading of which this dissertation has established what I believe is the framework. Concerning the particular structure of the cosmic teleology, a further explication of such a topic would require a deeper and more thorough analysis of the natural works of Aristotle and in particular the biological works. Such an account would neither be justified by the specific arguments I have given in this dissertation, nor would I be able to give a satisfactory account of the specifics of an Aristotelian cosmic structure without a lengthy treatment of the relevant works. The goal of this chapter then is to

merely show that a cosmic structure or order is defensible from the corpus, and that the interpretive moves that I have made in this dissertation allow for a reading that can provide the framework necessary for a further exploration of the cosmic order mentioned in Λ 10.

2. Λ 10 Interpretations

I have shown in this dissertation that the interpretation of the 10th chapter of book Λ in Aristotle's *Metaphysics* has been unsuccessfully interpreted by modern scholarship. Aristotle clearly claims in the relevant passage that there is a 'nature of the whole' which contains a good. Aristotle of course asks in what way the good is contained in this nature of the whole, but he does not apparently or explicitly question if the whole does indeed possess a good at all. On the contrary, Aristotle argues that the whole possesses the good in both ways, but just as an army relies more on the good found in its leader so the cosmos possesses the good more as a separate thing than in its order. However, it is vital here to admit and understand Aristotle's claim that although the good is certainly found as a separate entity, it is also found in the order or arrangement of the whole. In the third chapter, I have attempted to explain precisely how I understand these claims. In summary, I argued that the good as a separate entity is clearly to be identified as the Unmoved Mover found in the discussions of *Metaphysics* Λ . In my discussion concerning the accepted account of a natural object and the four causes found in the Aristotelian corpus I indicated there that it is vital to understand that the final cause represented the good at which every entity strives. This good then is identified and understood through the nature or form that that entity possesses. So, if we are to understand the good of a kitten for example, we should look at the adult cat. This will

allow one not only to *understand* the good toward which the kitten is striving, but also explain *metaphysically* the movements and actualizations of the kitten itself. But of course, this does not completely explain the fact that this sort of actualization happens at all, but rather simply explains how it is that a life form will develop given the right conditions. The fact that it happens at all is because Aristotle's teleology is *theocentric*, in the sense that every entity strives to attain and become, in so far as it is able, the Unmoved Mover.²⁶⁴ I have shown in the third chapter that the separate good that Aristotle acknowledges in Λ 10 is in fact that unmoved mover, and that this makes sense for Aristotle of the very fact that there is motion at all. And, of course, these motions are inherently and fundamentally teleological, so that every entity strives toward a separate good which is found in an entity which exists beyond the natural world, namely the Unmoved Mover. Every entity then has a proximate good toward which it strives, and which is identified as the end dictated by the nature that that entity possesses. But everything in the cosmos also indeed strives to attain a good in the unmoved mover as pure act, and which is separate from the natural itself. I argue that this explains why it is that there is motion at all, and why it is fundamentally that creatures strive to attain the various ends that they pursue.

However, Aristotle in my view also argues that there is a structure within the cosmos which is also to be accounted for in his metaphysical system. I argued in the third chapter that Aristotle's account of the nature of the whole is not simply a sloppy description of all the entities within the cosmos. It is rather an explicit acknowledgement of an ordered structure within the cosmos. This ordered structure of course is described

²⁶⁴ I borrow this term from Sedley. For his discussion of it see Sedley, "Is Aristotle's Teleology Anthropocentric?" 195-196.

by Aristotle through his use of analogies, in which he compares the order of the cosmos to the order that is exhibited by an army and a household. I argued that an army is an organized structure composed of various units whose function is only possible through the cooperation of the other units within the army. The general is responsible for the cooperation and organization of the army, but each unit within the army is able to perform its specific function due to the organization which the army possesses as well as due to the general who directs the army towards its goal of victory. The organization of an army then is precisely one of the aspects that Aristotle is emphasizing in explaining the nature of the whole referred to in Λ 10. Just as the excellence of an army is in part determined by the organization it possesses, which in turn allows for the various units within the army to perform their respective functions satisfactorily, the cosmos possesses such an order and organization.

Aristotle also compares the whole with a household, which provides another useful analogy for what I argue to be the organization of the cosmos. The head of the household is that at which all the other members of the household strive to become. The other members are unable to become such a one merely because of their respective natures, but not because they do not seek to be the head of the household in actuality. As was discussed in the third chapter, this is not to say that the members of the household nor the entities within the cosmos seek to eliminate themselves in an effort to become something other than what they are. Rather, the seeking at actuality provides the causal explanation for their actualizations in the first place. And for Aristotle, the head of the household represents the highest stage of actuality that a human being can possess, so it stands to reason that Aristotle also held that the other members of the household seek the

same kind of actuality that the head of the household possesses, but that due to their specific natures they are unable to achieve that kind of actuality, and are thus capable only of imitating the head of the household by actualizing their own specific natures.²⁶⁵ And the household also requires an organization in order for the respective members to successfully fulfill their particular functions. Both of these aspects of a household then are to be understood as also applying to the cosmos as a whole, as I have already demonstrated.

What these analogies show us then, and what I have attempted to defend, is that it is very unlikely that the correct interpretation of Λ 10 is one which attempts to simply dismiss the reference to a nature of a whole. For Aristotle, any purposeful order that is found, whether it is in relation to individual animal bodies or in relation to the ordered structure involved in certain communities that some animals construct, must be accounted for and is not simply a mere accident. The fact is that the cosmos for Aristotle is an ordered whole, and this is clearly indicated in the passage that we are considering. The main thrust of my argument then is that this position that I am defending has been generally ignored for primarily two reasons.²⁶⁶ Firstly, it has been assumed that there is no account of this ‘nature of the whole’ elsewhere, and especially that there is no account of nature specifically within the corpus that can account for the sense of nature that Aristotle seems to be using here. Secondly, even if there were to be some larger cosmic

²⁶⁵ Once again, this ontology assumes Aristotle’s specific views on the role of women and slaves within the household. However unfortunate and repugnant this view of human beings is, it is, according to my reading, a useful analogy for understanding Aristotle’s views concerning the nature of the whole.

²⁶⁶ There are exceptions to the general dismissal of a ‘nature of the whole.’ For instance, both Sedley and Scharle accept that there is a cosmic nature being defended here to some degree. However, their arguments regarding Aristotle’s understanding of the cosmic nature fail to account for what Aristotle states here, or simply do not provide enough of an explanation for how Aristotle can conceive of the cosmic nature given his other claims within the corpus.

order being hinted at here, such an assertion would fly in the face of much of what Aristotle has to say in regard to his ontology. Not only, the argument goes, is there no account of nature that would adequately explain Aristotle's assertion that there is a 'nature of the whole,' but such an entity as a cosmic whole would seemingly have to be a substance understood in the Aristotelian variety. And given Aristotle's account of substance, in which each part is defined as such precisely because it is a part of the whole, like a hand to the body of which it is a part, it would seemingly follow that if we are to accept Aristotle's assertion of a 'nature of the whole,' then we would also be forced to accept the claim that Aristotle's cosmos is one substance, and that each part of the cosmos is merely a part like the hand is a part, so that each part possesses a function and purpose to benefit and work toward the end of the whole cosmic substance. But this would fly in the face of Aristotle's account of substances in his other works, most especially the *Categories*, the *De Anima*, the *Metaphysics*, and the biological works. Whatever one believes about Aristotle's account of substance, the fact that he believed that individual life forms were substances is almost undeniable. But the cosmic order thesis that I am defending would seemingly make the various substances of the world merely parts, and thus by Aristotle's own definition, not substances. These then are the reasons I would argue that the thesis that I am defending here has been for the most part ignored or dismissed by the commentators.

3. The Ontology of the Polis

Instead of abandoning the cosmic order thesis as a result of the issues just mentioned, I believe that Aristotle provides for us in this passage an explanation of what he means by the 'nature of the whole.' As we saw, Aristotle compares the good that

exists in the whole, as well as how the separate good exists in relation to the cosmos, with the order exhibited by an army and a household. It is the household analogy that allows us to understand Aristotle's account of the cosmic order. The army analogy, although useful to see just how it is that Aristotle conceives of the order and how it allows each entity within the cosmos to achieve its good and also strive for the UMM, fails to fully explain how the whole represents a nature in Aristotelian terms. The army is an artifact, and as an artifact it does not possess an internal principle which explains its existence. Rather the form of an army, its size and organization, is established by something external, both locally and in form, to the army itself. Thus an army needs to be formed through the result of a productive capacity of an entity whose form is other than what the army possesses itself. The cosmos cannot be an artifact like this, as there is nothing in the Aristotelian world that can explain its existence in the way that artifacts are explained by the craftsman who constructs them. Additionally, the role of the general in an army is indeed to provide the organization of the army so that the army can be as successful as possible. In so far as the general is responsible for the order of the army, the general provides a good analogy of the role that the UMM plays in the cosmos. Clearly, that which is responsible for the order of the whole that Aristotle explains in *Λ 10* must be the UMM.²⁶⁷ But the general fails to be analogous in the sense that the individual parts of the army do not actually strive to be the general in the same or in an analogous way that the individual entities of the cosmos strive to become the UMM in so far as they are able.

The household analogy provides this account in a better way, and it seems to better represent what Aristotle means by the order of the whole that he is describing. The

²⁶⁷ Precisely how this happens is not quite the goal of this project. However, I will provide some account of my understanding of this aspect of the UMM later in this chapter.

head of the household represents for Aristotle the pinnacle, and it is toward that pinnacle that the other members of the household strive in so far as they are able. The household is also organized by the head of the household, and the organization that is produced is for the benefit of each of the members of the household. This represents a very nice analogy for the cosmos and the ordered structure that Aristotle believes the cosmos represents. However, from what I have described in the first part of the second chapter of the dissertation, I showed that Aristotle's conception of organized things seems to fall between that which is natural, which possesses an internal principle of motion and which has a nature which organizes the matter as the principle much like a syllable is the principle of organization for the letters that make up the syllable, or that which is artificial which is given its form and thus organization by something which possesses a form that is other than the form that is possessed by the artifact. What this analysis seemed to show us is that organized things in general for Aristotle are not accidentally formed, like a heap into a statue, but are rather the result of a principle that is either provided to the body by an artificer, or it is the result of natural reproduction, or finally it is eternal. We know that the cosmic order as such cannot be an artifact, for the only potential artificer for Aristotle would be the UMM, and the UMM as such is immovable and thus does not partake in the productive process necessary for the creation of an artifact. It is also not the case that the cosmic order can be the result of natural reproduction, since it is not the result of something that has the same form as it as well as the simple fact that Aristotle seems to believe that natural reproduction is reserved for sublunary things. The cosmic order then might be eternal, but even if it is eternal, it

would still need an account of the kind of nature that it has and how it can be explained without thereby making the cosmic order into a substance.

I argued then in the third chapter that the best route for answering these issues is to understand Aristotle's use of the household analogy as also providing an alternative avenue for an account of nature and priority in Aristotle. The household as such for Aristotle is discussed in the *Politics*, and in the *Politics* Aristotle states that the household is part of a genetic development which ends in the establishment of the polis. Aristotle states that the household and village are there to provide for the necessities of life, and the polis is established for the sake of the good life. The polis then represents the end of the development which begins with the household, and thus it seems at least permissible to understand what Aristotle has to say regarding the polis and see how it might relate to the account of cosmic order that Aristotle is defending in Λ 10, specifically relating to the nature and ontology of the cosmic order in question. This move in my argument gains additional support when Aristotle at the very end of Λ 10 compares the cosmos with a polis through his citation of a Homeric quote citing the fact that it is better that the cosmos is *ruled* by one principle rather than many.²⁶⁸ The polis, and the account that Aristotle provides for its ontology, is indeed key to my interpretation of the cosmic order.

In the next two chapters of the dissertation I argued that the account of the polis, and especially the account of the nature and the priority of the polis, provides the necessary framework that can help us to understand the order of the whole and answer the important issues that I have raised with my interpretation. Firstly, Aristotle makes it clear that the polis possesses a form and a matter, and that such entities in his ontology

²⁶⁸ I will discuss this claim and the citation further later in this chapter.

seem to be either artifacts or the kind of natural entities that he describes in the *Physics*. As I argued in chapter four, the polis is not an artifact and it is not the case that Aristotle was simply mistaken in claiming that the polis is natural. The naturalness of the polis is rather the result of the logos-sociality of human beings. To reiterate, the rational components of human nature, and especially the ability to discuss the just and unjust, the good and the bad, and virtue and vice, leads necessarily to the establishment of a polis. The polis is not then the result of a deliberate process but is rather an emergent entity that is a part of the very expression of what is essential to the nature of being a human being. Its naturalness then is unique for Aristotle, as its nature is not the same as the nature that is possessed by those entities that are also substances in the primary sense, such as individual human beings or individual animals and plants in general. Rather, the polis is natural because it is part of a fundamentally teleological process that is itself natural and is necessary as part of the fulfillment of that process. This then is what leads me to argue that the order of the cosmos in $\Lambda 10$ can be understood as natural precisely because Aristotle does indeed have a concept of nature in the corpus that can explain the naturalness of the cosmic order. The naturalness of the cosmic order is of the same kind, at least in the relevant sense that I am discussing here, as the naturalness of the polis. What is the same for both of these concepts of nature for Aristotle is that neither of them comfortably fit into the nature/artifact distinction that is expressed explicitly in the natural/metaphysical works of Aristotle. Rather, the nature of these entities lies somewhat between the nature of a substance and artifact. A polis does indeed possess a separate nature or form, represented by Aristotle as a constitution, and of course a matter, and the cosmos likewise I would argue possesses a form and a matter. However, this

does not imply that the cosmos or the polis is like a primary substance. Rather, these things are natural for Aristotle in so far as they arise from the teleological motions of the inhabitants of the respective entities.

As far as the second critique that needs to be answered, namely whether the cosmic order is a substance unto itself, I would accordingly refer to the arguments I have presented in the fifth chapter in addition to those which I presented in the fourth chapter. I argued there that the priority of the polis is not such as to subsume the individual under the polis. The individual is not lost under the polis in such a way as to make the individual a mere part of the polis like a hand is to the body of which it is a part. Rather the priority of the polis is such as to indicate that the individual cannot really be a human being outside of the polis. I pointed out that the person is corrupted, in that they are only a human being homonymously in such a position, like Philoctetes stranded on an Aegean isle. This is the case precisely because the practical rationality of a human being can no longer function, and its not functioning truly does prevent a human being from living a human life. The only life that can be lived by a human being in such circumstances is one of a beast.²⁶⁹ The practical rationality of a human being leads to the emergent construction of a polis by its very functioning, so that not only is it the case that a person cannot live the human life outside of the polis, but also just by performing what is essentially human a polis emerges. The priority of a polis then is such that the polis is prior ontologically to the individual human being. But all of this, including the specific sort of priority that I am defending here in relation to the polis and the individual human

²⁶⁹ Another life is that of a god who has no need of a polis. What Aristotle has in mind here is not quite clear, but it certainly is not what happens to a human being if they are separated from a polis against their wishes. I will discuss this type of person later in this chapter.

being, does not imply that the human being's sole function is to be a part of the polis and thus to work exclusively for the good of the polis. Rather the polis (and this of course follows from Aristotle's definition of the polis) is there in part to provide the individual members of the polis with the good life that they seek through their own natures. This then leads to the concept of the polis that I am defending, namely that it is not an Aristotelian substance that is prior to the individual in the same sense as the body is prior to the hand. It is not the case that the individual's good is solely aimed at the good of the polis, although the individual's good is most definitely tied up with and connected to living within and participating in a polis. The polis is indeed prior to the individual, but only in the sense that the individual is unable to exist outside of the polis and remain a human being in all the important senses that being human means for Aristotle.

The polis emerges from the natural rationality of the human being, and its naturalness is a function of the rational practices of the human person. Understanding this then leads to the point that the polis is natural as it constitutes a part of the very rationality that at the same time requires the polis in order to function. Its naturalness then is founded in the very act that inevitably leads to the emergence of the polis itself. The polis is ontologically prior to the individual in that the individual cannot exist as such outside of a polis, and it is natural because the very functioning of the social and rational aspects of a human life leads to the emergence of the polis as a very part of that functioning. It is not the case, according to my argument, that the polis is natural merely because it is necessary for the functioning of those essential aspects of the human person. Rather it is natural because it is a part of the very functioning of a natural process, and thus its naturalness is established as being a part of practical rationality itself. And its

priority is grounded in the fact that in order for a human being to live a human life, and thus to be human at all, she must be a part of a polis. The two theses then are closely related, the naturalness of the polis leads to the priority of the polis, and the reason that the polis is prior is due to the way in which it is natural.

The priority thesis that I defended in the fifth chapter then, as well as the emergence thesis I have defended in the fourth chapter, provides us with the theoretical framework to explain the ontology of the ‘order of the whole’ or the cosmic order. I would argue that just as the polis is not a substance in the primary sense for Aristotle, so the cosmic order is not a substance in the primary sense. And the theoretical apparatus for this reading is found in the very passage that Aristotle seems to refer to in Λ 10, namely the political passages and especially those arguments that concern the ontology and nature of the polis itself. It is there I have argued then that one finds a sense of the natural and of the prior within the Aristotelian corpus that one can use to understand how the cosmic order or ‘order of the whole’ is natural and prior, and it is there that one can find the arguments necessary to establish that the cosmic order does not necessarily imply one cosmic substance, so that the general theory of substance that is taken to be basically Aristotelian can still be preserved while providing a reading of Λ 10 that does not ignore the explicit claims made there by Aristotle.

4. Cosmic City and Cosmic Teleology

In the second chapter of this dissertation, I discussed the varying interpretations concerning Aristotle’s account of teleology in the cosmos. I discussed this issue by dividing the interpreters into two camps broadly speaking, namely the internalist and the externalist camp. The major view within the externalist camp moreover is the

anthropocentric one, which holds that Aristotle viewed the good of the human being as the aim at which all other sublunary things strive. I then argued that this position is not convincing, since the texts that are used to support the anthropocentric position are few and rather weak. However, I also argued that the internalist camp, which holds that Aristotle's view on teleology is simply confined to the teleological motions of the individual substances within his ontology, is mistaken. The internalist believes that there is no evidence of a broader cosmic teleology in which some entities aim at benefiting other substances. I argued in the second chapter that there are, however, several passages within the corpus that the internalist must ignore in order to defend their position. Among these passages is Λ 10, which speaks of a good of the whole and a broader ordering and arrangement that seems to have problematic consequences if accepted for the internalist position. I pointed out then that in order to understand the claims of Λ 10, one must seek an alternative concept of nature to account for the cosmic nature defended by Aristotle. I have just shown how I accomplished this project.

However, I also pointed out there that the internalist has an issue interpreting *Physics* II 8. In this passage, Aristotle seems to argue that winter rain ought to be considered as teleological since it aims at the benefit of something, whereas summer rain should not be considered as such. This passage then seems to make a claim that is difficult to account for given the internalist assumptions. According to the internalist approach, winter rain cannot be specifically teleological and summer rain not teleological if the teleology that is involved with rain is nothing other than the teleology involved with the internal motion of water. I concluded the second chapter then with an acknowledgement of this difficulty and a promise to return to it. Now that I have

provided the arguments necessary to defend my reading of Λ 10, I believe that it is possible to return to the passage and to provide an interpretation of it that can successfully deal with what Aristotle explicitly claims there.

I believe that a correct reading of *Physics* II 8 must involve an understanding and recognition of the cosmic order which I have defended. Firstly, in a general sense, the cosmic order implies that the ordering of all things within the cosmos allows for certain entities within the cosmos to benefit each other and to generally relate to one another in an arrangement and coordination that can only make sense if one accepts a cosmic order. To use Aristotle's army analogy again, one can understand the coordination of an army as being such that not only do the parts of an army gain the ability to perform their specific functions through this coordination, but in the process of performing their specific functions they thereby help or benefit the other parts of the army. So, the archers for instance provide the missile fire necessary to cover for the charge of the infantry, thereby aiding the infantry in the fulfillment of their function. The infantry moreover allows the cavalry to flank the enemy, and thereby allow for maximum damage applied to the enemy. All of these functions not only are made possible through the organization of the army, but they also provide benefits to the other parts of an army in a coordinated and organized way. The benefits that are so provided then are not the direct aim of each function respectively, they rather arise out of the successfully actualized functions themselves. All of this of course requires coordination, which is provided to the army as a whole by the general. This view of how an army functions then is, I argue, very similar to the way that Aristotle understands the order that the cosmos possesses. It is not that each thing simply possesses a nature which provides it the teleological functions that

it must carry out. Rather these functions, and the teleological motions of entities in general, are understood by Aristotle within the context of an ordered, organized and coordinated whole. The animal aims at the fulfillment of the nature that the animal happens to possess, and this gives rise to the knowable and purposeful motions that are characteristic of the animal. But these very same motions also provide benefits and are for the better of the other entities that exist in coordination with the entity in question. So in the process of carrying out those motions that are characteristic of the nature that the animal possesses, the animal actually benefits and perhaps even gives rise to other characteristic and essential motions of other entities around it. All of this requires, and I believe Aristotle is aware of this, a context which involves a community or group of entities which are all intricately related to each other and which in a sense, although certainly not directly, provide benefits for each other. As Aristotle states "...all things are ordered together somehow...both fishes and fowls and plants; and the world is not such that one thing has nothing to do with another, but they are connected."²⁷⁰ The organization and coordination, which indeed resembles that of an army in certain important senses, of natural things provides for us then a distinctly Aristotelian approach to a theory of ecosystems and habitats in general.²⁷¹ All of this is given firm foundations from the interpretive arguments that I have provided in this dissertation, as we now have the ability to develop such ideas without the fear of violating basic Aristotelian principles.

²⁷⁰ *Metaphysics* Λ 10 1075a15-17.

²⁷¹ I do not have the room in this dissertation to examine this idea in any great detail. However, I do believe that the account that I have provided here of the nature and priority of the cosmic order also provides a context within which one can further develop such a theory. I therefore intend to return to this thesis and develop a theory involving ecosystems, habitats and biomes which rests upon an Aristotelian basis.

The order then that exists within the cosmos for Aristotle provides for us the necessary background for interpreting *Physics* II 8. The idea that winter rain is specifically the teleological event that must be explained is a matter of understanding the coordinated order that is manifested in the complex structure that the nature of the whole possesses. It is my contention then that winter rain is specifically for the better, and that summer rain is not.²⁷² This follows once we recognize that, according to Scharle, “...Aristotle maintains that water’s movement is teleologically directed towards the Prime Mover via the heavenly bodies.”²⁷³ The idea here is that water’s rectilinear motions imitate the circular motion of the heavenly bodies, which in turn imitates the activity of the UMM.²⁷⁴ However, not just any of water’s downward motion is an

²⁷² This contention is at odds with my argument in “Man, God, and Rain.” In that paper, I generally agreed with the view defended by Robert Wardy. For Wardy’s view on the winter rain phenomenon see Chapter 2. My view on the passage has certainly evolved since I originally wrote that paper, and I no longer believe that Wardy’s reading of it is correct. Specifically I firstly deny Wardy’s claim (and my own claim in “Man, God, and Rain”) that there is no difference teleologically in the occurrence of summer rain with that of winter rain. Wardy argues that it is the conditions which produce rain that occur more often in the winter than in the summer which thus produce the regular occurrence of winter rain and the irregular occurrence of summer rain. I agree with him on this point. But Wardy also claims that acknowledging this point does not in any way force us to understand winter rain as teleological and summer rain as not teleological, and I disagree with Wardy on this. I have changed my position on this partly because of the obvious sense of the passage, in which Aristotle states that winter rain is for an end. Moreover, I believe that the main reason for avoiding this straightforward reading of *Physics* II 8 was I believe to avoid the anthropocentric interpretation of Aristotle’s teleology. However, I have shown in the second chapter that this interpretation has very little support in Aristotle generally. Therefore, if one can accept the straightforward reading of *Physics* II 8 without thereby committing oneself to the anthropocentric interpretation then I believe one should take this approach to interpreting *Physics* II 8. This is precisely what I am doing with the current argument here. Secondly, Wardy argues that there is a difference in Aristotle between something being *phusei* and being *phusis*. I agree with him on this, and I also agree that understanding either the polis or the cosmic order as a *phusis* in the *Physics* sense of that term contradicts much of Aristotle has to say throughout the corpus and which I have discussed throughout this dissertation. However, I do not believe that Wardy is correct in simply stating that the cosmic order is *phusei*, since Aristotle clearly states that there is a *phusis* of the whole in *Metaphysics* Λ 10. What I take Aristotle to mean rather is that both the polis and the cosmic order are *phusis* in the sense of an emergent entity that comes from and are a part of the very teleological motions that give rise to it, and not that they are substances in the full-blooded sense themselves. There is a ‘nature of the whole’ though, and its ontology is an emergent one which is natural much like the polis is natural.

²⁷³ Margaret Scharle, “Elemental Teleology in Aristotle’s *Physics* II 8,” *Oxford Studies in Ancient Philosophy* 34, (2008): 178.

²⁷⁴ The account that I am providing here is mostly taken from Scharle. The difference of course is that, unlike Scharle, the account that I have given allows for constructive order in the cosmos necessary to provide the foundational context of the order that Scharle and I defend.

imitation of the UMM. Rather, the movement of water that occurs due to the recession of the sun during the winter, which is what produces the effect of winter rain, is an instance of water moving because it is better. This movement is of course better in an Aristotelian sense precisely because the movement is an instance of water imitating the UMM, and this movement is an imitation of the UMM precisely because it is part of a rectilinear movement that imitates the circular movement of the celestial bodies which in turn is an imitation of the UMM. This is not to say that winter rain is specifically good because of the benefits that it provides to the crops or anything else, which is what the anthropocentric interpretation would hold. Rather it is good, because it is specifically teleological in so far as it is winter rain that represents the imitation of the UMM through the imitation of the circular motion of the heavenly bodies. Although summer rain is certainly teleological in so far as it represents the element of water seeking its natural place in the cosmos, it is as a whole an accidental occurrence for Aristotle. And as such summer rain is not an event that seeks an end, but rather simply happens to occur irregularly.

Expanding upon the assertion that the movement of winter rain is for the better, Scharle states that rectilinear movement imitates circular movement, which is itself an imitation of the divine activity of the UMM. So it follows that the movement of winter rain can best be understood as an activity which aims at and thus imitates the UMM through the intermediary of the circular motions of the heavenly bodies. And this rectilinear movement occurs on the heels of another rectilinear movement with which it composes a cycle. It is therefore in the cyclical nature of the respective rectilinear movements that the component elements involved in these rectilinear movements imitate

the circular motions of the heavenly bodies, and thus imitate the activity of the UMM. So the motions of water falling to the earth during winter occurs in relation to other elements and these motions of the elements then form a continuous cycle. And the repetition of this cycle is in itself an imitation of the most perfect of motions, namely circular motion, which is itself the closest imitation of the activity of the divine.

All of this is clearly grounded in Aristotle's account of the elements and his meteorology. In this context, Aristotle specifically makes the claim that the rectilinear motions of the elements form a cycle in their imitation of the circular motion of the higher bodies by stating that "For when Water is transformed into Air, Air into Fire, and the Fire back into Water, we say the coming-to-be has completed the circle, because it reverts again to the beginning. Hence it is by imitating circular motion that rectilinear motion too is continuous."²⁷⁵ But the point here that is crucial to keep in mind is that the way in which water forms a part of this imitation of the circular motion is through its being efficiently caused by the sun, and specifically the position of the sun as being farther away from the earth, which of course occurs in the winter and not in the summer. All of this is further confirmed through Aristotle's account of the process of the formation and reason for rain. Aristotle states in the *Meteorology* that as the sun approaches and recedes it causes dissipation and condensation, and when the sun is near the earth it produces heat which causes the moisture around the earth to evaporate. But when the sun is farther away, the heat which caused this evaporation to take place is no longer present, and thus the vapor cools and turns into water and rains.²⁷⁶ So one can

²⁷⁵ ὅταν γὰρ ἐξ ὕδατος ἀήρ γένηται καὶ ἐξ ἀέρος πῦρ καὶ πάλιν ἐκ πυρὸς ὕδωρ, κύκλω φαμὲν περιεληλυθέναι τὴν γένεσιν διὰ τὸ πάλιν ἀνακάμπτειν· ὥστε καὶ ἡ εὐθεῖα φορὰ μιμουμένη τὴν κύκλω συνεχῆς ἐστίν. *On Generation and Corruption* II 10 337a4-7.

²⁷⁶ *Meteorology* I 9 346b 20-32.

clearly see from this understanding of the causes of rain that the production of rain is not merely mechanistically understood, although the process that Aristotle describes is certainly mechanistic in part, it is nevertheless also a part of a larger teleological process which has as its focus the imitation of the UMM, which thus also causes an imitation of circular motion among the elements. Aristotle then proceeds to describe the process of the creation of rain as an effect of the sun's motions and as a part of an imitative circular motion. He states that:

...we get a circular process that follows the course of the sun. For according as the sun moves to this side or that, the moisture in this process rises or falls. We must think of it as a river flowing up and down in a circle and made up partly of air, partly of water. When the sun is near, the stream of vapor flows upwards; when it recedes, the stream of water flows down; and the order of sequence, at all events, in this process always remains the same.²⁷⁷

All of this leads to the conclusion then that for Aristotle it is not just any rain whatsoever that is for the better. Rather it is specifically winter rain, but not because winter rain is somehow teleologically aiming at the benefit of the creatures and plants that actually do benefit from it, but rather because it is winter rain that forms part of the rectilinear movement that causes the formation of water due to the distance of the sun, and thus causes winter rain to occur. And all of this is an imitation on the part of the elements of circular motion, which is itself understood by Aristotle to be one of the primary ways in which things imitate the UMM. Winter rain is specifically a teleological process then because it is an example for Aristotle of something acting for the better, but what makes such a process actually for the better is that winter rain is a part of a larger imitative

²⁷⁷ γίγνεται δὲ κύκλος οὗτος μιμούμενος τὸν τοῦ ἡλίου κύκλον· ἅμα γὰρ ἐκεῖνος εἰς τὰ πλάγια μεταβάλλει καὶ οὗτος ἄνω καὶ κάτω. δεῖ δὲ νοῆσαι τοῦτον ὡσπερ ποταμὸν ῥέοντα κύκλῳ ἄνω καὶ κάτω, κοινὸν ἀέρος καὶ ὕδατος· πλησίον μὲν γὰρ ὄντος τοῦ ἡλίου ὁ τῆς ἀτμίδος ἄνω ῥεῖ ποταμός, ἀφισταμένου δὲ ὁ τοῦ ὕδατος κάτω. καὶ τοῦτ' ἐνδελεχῆς ἐθέλει γίγνεσθαι κατὰ γε τὴν τάξιν· *Meteorology* I 9 346b35-347a6.

process that seeks in so far as it can the UMM and its activity. Thus it makes sense for us to understand the *Physics* II 8 passage as stating that winter rain, and not summer rain, acts for the better.

This reading of *Physics* II 8 is consistent with what Aristotle has to say elsewhere concerning his cosmology, and successfully understands the passage in its most explicit and direct sense without having to ignore or muddle the translation in order to get something out of it that better fits the interpreter's conception of Aristotle rather than what Aristotle himself is actually arguing. What was missing, and why it is that I waited until the sixth chapter to provide my reading of *Physics* II 8, was a coherent conception of a cosmic nature that provides the necessary context for the reading I have just defended. A cosmic order of the kind that I am defending, one which is both prior to individual entities that exist within the cosmos as well as natural, also allows us then to explain the structured order and coordination which exists within the cosmos and which is exemplified by the very example of winter rain. For it is due to winter rain that crops grow, and plants and animals in general are able to thrive, and the success of these life forms thus provide a greater eco-relationship that provides an environment in general for living things to thrive. This is of course, and as I have already mentioned, not to say that winter specifically aims at this benefit. Winter rain itself is for the better because it, unlike summer rain, is specifically aiming at the UMM in the form of imitating the UMM. Rather the various goods provided to the other entities through such things as winter rain is produced through the cosmic order that is necessarily emergent from the various teleological motions of the entities within the cosmos. And among these teleological motions is winter rain which provides these benefits, but does so through the

larger cosmic order that is both natural and prior and which emerges from the teleological motions of the entities within the cosmos seeking actuality which pans out as an imitation of the UMM and which explains the entities desire to realize their own natures in the first place. And the living things which thus are able to thrive are then able to pursue in their own ways the UMM. So winter rain is explained through the pursuit for the UMM, and it produces benefits that thereby make possible the pursuit of the UMM for other entities, especially and specifically the sublunary ones which require the regular occurrence of rain during certain seasons to thrive themselves. All of this forms a complex structure of interrelationships which must be accounted for. And how this is in fact accounted for by Aristotle is through his acknowledgement that there is a ‘order of the whole’ in which all things are arranged according to each other and which is a good separate and distinct from but clearly related to the separate good represented by Aristotle as the UMM. This structure of course emerges from the motions of the various entities and is thus natural and prior to each of them like the polis is natural and prior to each of the individuals which compose it.

The teleological nature of reality for Aristotle is thus not anthropocentric, nor is it merely internal to natural things. It is fundamentally theocentric, in that all entities aim at achieving the life of the divine.²⁷⁸ However, this fact also produces for Aristotle a kind of ordering that is both natural and prior to any individual entity within the cosmos. The ordering that Aristotle has in mind is partly acknowledged through the elements’ activity which attempts to attain circular motion. There is in this very description an acknowledgement of an order which exists not only between the elements themselves,

²⁷⁸ This claim that Aristotle’s teleology is fundamentally theocentric was made by me originally in “Man, God, and Rain,” and is something with which I still agree.

but also with the celestial bodies which carry out the circular motions that the elements imitate. Moreover, the fact that the elements carry out such organized activity then implies that the whole of the sublunary realm also is ordered by and responds to the activity of the elements. What this allows for is the establishment of communities of entities which exist as a result of the ordered movements of the elements which themselves are ordered by the celestial bodies. Each of these entities possess a nature which then seeks to actualize itself, but also carry on activities that are ultimately an attempt to achieve the divine in their own way. This imitative activity for living things is reproduction, and the fact that things reproduce allows for living things which prey upon these entities to thrive. The fact that all of these things do occur then allows for human beings to carry out the best activity that they can, namely the theoretical wisdom which is the activity of the UMM itself. These various movements and arrangements do not imply specifically that any of these entities seek the benefit of other entities in their teleological motions, but rather they imply that there is an ordered structure which emerges from each entity's own characteristically teleological motions.

I believe then that this order and arrangement can best be explained through Aristotle's conception of the polis. Just like the emergence of a polis, the cosmic structure emerges from each entity's desire to attain its end. The ability to do so is predicated upon the fact that there is an ordered whole which allows for each entity to attain its end. And this ordered whole is a kind of structure which is a very part of the teleological movements of these entities. The structure is exemplified by the fact that plants need winter rain, predators need prey, and human beings need both crops and animals in order to survive. This structure is in turn also prior, in the same sense as the

polis is prior to the individual, in that it is not possible for an animal, plant or human to truly be what it is outside of the order exemplified within the cosmos. Each entity then pursues its own good dictated by its nature, and in the process a cosmic order emerges that is natural and thus possesses a good, but its naturalness is a result of being a part of the very same teleological processes that these entities carry out.

Furthermore, the point of the polis for Aristotle is to allow its members to achieve the good life, which is the actualization of the nature for a human being. I would argue that the point of the cosmic order is in turn to allow for each of the entities within the cosmos to achieve the actualization of their respective natures. It is simply true that the various and diverse life forms living on this planet require a balanced order so that they are able to thrive. Without the existence of some crucial part of this order, the ability to thrive seems impossible. Without winter rain, crops will be unable to grow and thus many life forms will be detrimentally affected. Within a polis, the various members contribute to the good of the whole in their own way, and in the process of doing so they provide benefits to other member of the polis despite the fact that they are not aiming specifically at the benefit of those other members. Similarly, within the cosmos, various entities provide benefits to other entities without essentially aiming to do so. The cosmic teleology is found within the structured whole, which is itself good and natural and prior and which in turn allows for and is there for the attainment of the good on the part of the various entities within the cosmos.

One might object to this account by stating that there is a discrepancy between the polis and the order of the whole which I am defending. One could say that the polis is there to achieve the good life and thus the complete actualization of the individual human

beings who make up the polis, and that it ideally succeeds in doing this. Whereas the cosmic order only succeeds in allowing for the actualization of the individual natures of the various entities within the cosmos, and not the highest kind of life which is only achievable by human beings for Aristotle. However, I would respond to this criticism by pointing out that Aristotle is quite aware that not every member of a polis will be able to achieve the actualization of their respective natures. There are for Aristotle an unfortunate number of people within the polis who will not be able to achieve the best life, but only the best life available to them. Nevertheless, the polis is there in order for each of its members to achieve the best possible life available to them. As John Cooper states "...of course in any city...many, perhaps most, of the citizens will not attain the highest degree of civilized perfection...The city itself, however, will live well if those who are naturally capable of a very high degree of mental and moral perfection attain and sustain it through life in the city, and the others attain as high a degree of perfection as they are naturally capable of. So, at a minimum, one could say that in the best, most successful cities an excellent life is provided for those individuals...capable of leading it, while the others get as nearly excellent a life as they are severally able to manage, given their natural limitations."²⁷⁹ Likewise, in the cosmic order, not every entity will be capable of attaining the highest degree of life possible, but will simply be able to attain the highest degree possible given their limitations which is dictated to them by the very natures that they possess. The fact of the matter is that all entities in a way for Aristotle do indeed seek the highest degree of activity possible, and thus the best life possible. But not all of them are able to attain this life in the same degree. Thus, each entity attains

²⁷⁹ John Cooper, "Political Animals and Civic Friendship," in *Aristotles' 'Politik,'* ed. G. Patzig (Göttingen: Van den Hoeck and Ruprecht, 1990), 239.

what it can, and does so through the context of a natural and prior cosmic order that allows each entity to attain the best life possible for each of them.

One final point that I would like to address and to touch upon for my argument concerning the cosmic whole and the polis is the further comparison between the actual structure of the ideal polis and the structure of the cosmic order that may be compared to it. One of the reasons that I provided for using Aristotle's account of the nature and priority of the polis as a way for understanding the order of the whole is due to Aristotle's own statement of comparing the order to a monarchy by asserting that "...the world must not be governed badly. 'The rule of many is not good; let there be one ruler.'"²⁸⁰ Aristotle is of course specifically refuting what he calls the mathematicians and their propensity to multiply the number of principles necessary to explain the world. Aristotle does not think that this is an appropriate way of approaching the explanation of the cosmos, and specifically claims that one ought to presuppose one ruling principle rather than many. However, not only does this provide us a clue into how Aristotle understood the nature of the cosmic order he is referring to in this passage, but he also seems to be specifically asserting that the order must be understood in terms of a certain kind of political arrangement, namely one which possesses one ruler. When one considers the various kinds of political ordering that Aristotle identifies as being good, one can immediately identify monarchy as the one which possesses only one ruler. Now Aristotle seems to specifically identify five types of monarchy.²⁸¹ The type of monarchy that Aristotle spends the most time discussing is a kind of total kingship, in which "...one

²⁸⁰ *Metaphysics* Λ 10

²⁸¹ *Politics* III 14

man has the disposal of all.”²⁸² The only way that such a polis is justifiably defensible for Aristotle is if there is a person or family who is of such an excellence that they are a law unto themselves. Aristotle describes such a person by stating that “...for men of pre-eminent excellence there is no law – they are themselves a law. Anyone would be ridiculous who attempted to make laws for them...”²⁸³ For such men, they would have complete disposal of the polis and its functions precisely because their excellence and virtue would be equivalent to a perfect law, and thus there would be no need to legislate a law concerning them. Every other person in the polis of this excellent person would gladly give up their ability to participate in the functions of the polis, precisely because the excellence of the individual would be equivalent to the law itself. So Aristotle goes on to state that “But when a whole family, or some individual, happens to be so pre-eminent in excellence as to surpass all others, then it is just that they should be the royal family and supreme over all, or that this one citizen should be king.”²⁸⁴ Aristotle thus argues that there is a justifiable form of monarchy, and that such an institution is justified

²⁸² ὅταν ἢ πάντων κύριος εἷς ὢν *Politics* III 14 1285b 29-30. The kind of monarchy in which one person has the disposal of all seems to be at odds with Aristotle’s account of citizenship, a citizen being defined by Aristotle as someone who takes part in the political activities of the polis. Of course, in a general and total kingship only the king will be able to take part in the political activities of the polis. This seems to make the polis into a tyranny and certainly not a political community at all. Thus John Cooper states that “...under the rule of a king, one of the types of constitution Aristotle counts as ‘correct,’ the monarch reserves to himself and his personal appointees both the deliberative and the judicial function – so that, if the aim of a king was the common advantage of what Aristotle *officially* counts as citizens, there would in fact be no distinction between rule by a king and a tyranny, its deviation-form” (Cooper, “Political Animals and Civic Friendship,” 228). Whatever may be the case concerning this definition, it is not the intention of my argument to either justify Aristotle’s account of monarchy in general, nor is it an attempt to argue that there is a perfect analogy between the order of the cosmos and a monarchy as it is described by Aristotle. I merely am emphasizing one aspect of Aristotle’s account of monarchy here and attempting to emphasize that Aristotle indeed had in mind the concept of a monarchy specifically when he described the cosmos as an order and as possessing a good.

²⁸³ κατὰ δὲ τῶν τοιούτων οὐκ ἔστι νόμος: αὐτοὶ γὰρ εἰσι νόμος. καὶ γὰρ γελοῖος ἂν εἴη νομοθετεῖν τις περὶ ὧν κατ’ αὐτῶν. *Politics* III 13 1284a12-15.

²⁸⁴ ὅταν οὖν ἢ γένος ὅλον ἢ καὶ τῶν ἄλλων ἓνα τινὰ συμβῆ διαφέροντα γενέσθαι κατ’ ἀρετὴν τοσοῦτον ὥσθ’ ὑπερέχειν τὴν ἐκείνου τῆς τῶν ἄλλων πάντων, τότε δίκαιον τὸ γένος εἶναι τοῦτο βασιλικὸν καὶ κύριον πάντων, καὶ βασιλεύει τὸν ἓνα τοῦτον. *Politics* III 17 1288a16-19.

precisely because of the excellence of the individual, which so surpasses all others that it presumably cannot be helped to provide such a person the complete disposal of the polis and its various functions, for such a person is a law unto themselves.

Now how such an institution could still be considered a polis, and whether such an institution is practically possible are questions I will leave aside at this point. But what this description of a general or total monarchy does represent for the purposes of my argument is that a person of such excellence would not even really be human in an important sense, in so far as such a person would be living the activity of the divine through what is presumably theoretical wisdom. For the premise behind Aristotle's justification of such a form of rule is that the monarch would have to surpass everyone else in excellence to such a degree that they would apparently have no desire to pass laws controlling them, for it would be like controlling a god. What is clear is that such a person would be living the life of the divine for Aristotle. Being human still, the perfect king would require a polis in order to provide the king with the necessary goods for living, such as food and water, and the king would presumably require a polis in order to live a life of eudaimonia. But in so far as the perfect king is perfectly actualized and living the life of eudaimonia, there would be no need for laws to control the king, and there would be no need for the polis as such to really pass laws, as the perfect king would represent a law unto himself. Whether or not this is possible for Aristotle is another question, but it seems obvious that in many ways the perfect king would be living a life resembling the divine for Aristotle. And as such they would not really be a part of the polis, since the polis is there for the achievement of happiness and flourishing on the part of the individuals as such. Under other forms of government, including the ideal form of

government defended by Aristotle at the end of the *Politics*, the law and the participation in the functions of the government is a part of and allows for the attainment of happiness for the individuals that so invest themselves and are capable by nature of doing so. But in the perfect monarchy on the other hand, such a possibility would not be available to the members of the polis. What would rather be the case, I would argue, is that the function and goal of the members of the polis would be to imitate and attempt to achieve the level of excellence that their divine ruler exhibits. So that the law, and the happiness that it allows the citizens to achieve, would be replaced by the person who is a sort of living law that would be admired and would be a goal of all of the activity of those who make up the polis in question.²⁸⁵ Moreover, as a being who has no need to be subjected to the mere laws of imperfect human beings, the monarch would be as it were separate from the polis which they rule, although they would still need, being human, the products and goods of the polis. The polis would be made up of individuals who are attempting to achieve the life that they see in the example of their ruler, but their ruler would clearly not be a part of the daily life and the successes and failures found in that daily activity of the polis.²⁸⁶

²⁸⁵ Another point that I have yet to explore and which is related to the argument that I am providing here is that for Aristotle there seems to be no need to speak of scientific laws in the way that modern science seems to assume them as basic. For Aristotle, the order of the cosmos is founded upon a teleological conception of form which allows him to account for the order exhibited throughout the cosmos without referring to scientific laws as they are understood in modern science. In the perfect monarchy, there would equally be no need for laws since the divine ruler would himself be the ordering law of the polis. This is a similarity that I wish to further explore in the future but is at this point merely potential.

²⁸⁶ My reading of Aristotle's account of the perfect king and thus perfect monarchy has some precedent as well. Plato in the *Statesman* speaks of the best sort of king when he has the visitor states that "...it is clear that the art of the legislator belongs to that of the king; but the best thing is not that the laws should prevail, but rather the kingly man who possesses wisdom" (*Statesman* 294a6-9). And later the visitor states that "...any one of those who had really acquired the expert knowledge of kingship would hardly put obstacles in his own way by writing down these laws we talked about" (*Statesman* 295b3-5). Here Plato is speaking of the relationship between the laws of a polis and the king who is perfectly excellent. And Plato clearly states that such a king would merely be blocked by laws that are written down, since his excellence would be satisfactory for the polis itself. This is what, I believe, Aristotle is stating about the perfect monarchy as well. I do not think that Aristotle actually believed that such an organization was actually possible, but he does believe that it is important to recognize that a perfect monarchy would be a different kind of system altogether than the ideal polis that he later describes. I also believe that Aristotle's account of perfect

I admit that there is some speculation to my account of the perfect monarchy, as Aristotle certainly does not provide the detailed account of a perfect monarchy that we might desire. And the practicality of a divine and total monarchy may amount to admitting that it is impossible to achieve, as no such person exists. Moreover, I will even admit that this form of government does not seem to be the ideal one for human beings, as the goal of a polis is in fact to allow for the achievement of happiness on the part of the individuals, and a total monarchy does not seem to easily allow for that. However, if I am correct in my speculative reading, the comparison of the cosmic order to a monarchy in *Metaphysics* Λ 10 is not accidental. As I have attempted to show throughout this dissertation, the cosmic order that Aristotle defends has at its heart the desire for the UMM. The UMM is not a part of nature, and it is not one of the things that goes through the common activities especially present in sublunar entities. Rather, the UMM is a completely separate entity which is pure act and is the object of desire. In a very important sense, Aristotle believes that the UMM is the law and thus has no need for a law to govern it. What results from this is an order of the cosmos which has various entities seeking the divine in their own way and in so far as they can attain it, and a structure and order that emerges from these very motions which both allows for the entities to seek the divine as well as emerging from the very motions of seeking the divine. This order is also prior in that it simply does not make sense for an entity to be outside of it, as it would not be able to even actualize its motions toward the UMM nor would it be able to actualize its own nature. What results from this reading then, and

monarchy, knowing full well that it is not a practical possibility, was provided by him in order to better understand the system which holds in the order of the cosmos, which is precisely what I am defending in this dissertation. Once again, my evidence for such a claim is the very Homeric quote that concludes Λ 10.

from the arguments that I have made throughout this dissertation, is that Aristotle believed that all things are arranged in such a way as to produce an organized whole in which the function of each thing also leads to the ability of other entities to perform their functions, and which is entirely founded upon the eternal and everlasting desire of these entities to imitate and obtain the actuality of their divine ruler in so far as they possibly can.

A final point then is that a polis possesses both a form and a matter. The form of a polis is represented by Aristotle as the constitution of that polis, whereas the matter is the individuals that make up the polis. However, when one examines the form of a total monarchy, one seems compelled to say that the form is the monarch.²⁸⁷ Since there is no need for a law in such a community, there would presumably be no constitution at all, since the function of both would be represented by the monarch and the imitation of the monarch on the part of the members of the polis. It seems to follow then that the form of such a community is the monarch. This would presumably be the case concerning the cosmos as well, for since there is a structure and order to the cosmos it would have to have a form corresponding to the order. However, the only form possible would seemingly be the UMM itself, since it would represent the divine activity that is the goal of every other entity within the cosmos. The matter then would be the entities, and the form would be found in the UMM. The cosmic structure would be the organization that results from the UMM, which as I have shown is established through each entities seeking the divine activity itself, and this prior and natural structure would then allow for

²⁸⁷ Matthen in "The Holistic Presuppositions of Aristotle's Cosmology" makes a similar argument as this. The difference is that Matthen defends the view that the cosmos is one substance, whereas I argue that the cosmos is an emergent entity unlike a primary substance and more akin to a polis.

each entity to achieve the best life possible for each individual thing within the cosmos in imitation of the UMM. Human beings of course through their ability to reason theoretically are able to carry on the life of the divine in a real sense, albeit temporarily and in a truncated form, but all entities strive toward this goal and thus work within an order and structure that resembles, at least to a degree, the form of a divine monarchy.

5. Conclusion

The arguments of this chapter constitute a mere reading of the relevant passages discussed throughout this dissertation. What I hoped to have shown is that the reading that I am providing, although certainly not a demonstratively certain one, nevertheless provides us with some useful insights into some difficult passages that have challenged many commentators working with Aristotle. And at the very least I hope to have demonstrated that a consistent reading of the passages can be attained without thereby undermining or contradicting or ignoring other Aristotelian claims. A critic may contend of my arguments here that it is mere speculation and that it has very little grounding in what Aristotle explicitly claims about the cosmos in his cosmological works. I would answer such a criticism by stating that I admit that Aristotle does not speak in depth about the order of the whole and the teleology that arises from the order. However, he does indeed mention the order, and the fact that he does so seems to compel a commentator to at least provide an interpretation. What I have done in order to construct my account is to take the claims of Λ 10 as basic and to provide an interpretation of these claims. What Λ 10 does claim is that there is an order, and that it is similar to the way that a political structure works. The move to use the *Politics* as an interpretive lens for understanding Λ 10 is founded upon recognizing this comparison. And it is shown that by looking at the

arguments of the *Politics*, one can find an ontological and teleological account that provides us with a satisfactory reading of Λ 10. Therefore, although I have not necessarily demonstrated that my reading is the only correct reading available, I do believe that I have demonstrated a possible viewpoint of the relevant passages that is both philosophically fruitful as well as faithful to the Aristotelian corpus.

BIBLIOGRAPHY

Primary Sources

- Aquinas, Thomas. *Commentary on Aristotle's Politics*. Translated by Richard Regan. Indianapolis: Hackett, 2007.
- Barnes, Jonathan, editor. *The Complete Works of Aristotle (The Revised Oxford Translation)*. Princeton: Princeton University Press, 1984.
- Bloom, Allan, translator. *The Republic*. 3rd edition. New York: Basic Books, 2016.
- Bodnár, István, Michael Chase and Michael Share, translators. *Simplicius: On Aristotle Physics 8 1-5*. London: Bloomsbury, 2014.
- Bywater, I., editor. *Aristotelis: Ethica Nicomachea*. Oxford: Oxford University Press, 1949.
- Cooper, John, editor. *Plato: Complete Works*. Indianapolis: Hackett, 1997.
- Forster, E.S. and D.J. Furley. *On Sophistical Refutations, On Coming to be and Passing Away, On the Cosmos*. Cambridge: Harvard University Press, 1955.
- Fowler, H.N. and W.R.M. Lamb, translators. *Statesman, Philebus, Ion*. Edited by G.P. Goold. Cambridge: Harvard University Press, 1925.
- Genequand C. *Ibn Rushd's Metaphysics. A Translation with Introduction of Ibn Rushd's Commentary on Aristotle's Metaphysics, Book Lam*. Leiden: Brill, 1986
- Grube, G.M.A., translator. *Plato: Republic*. 2nd edition. Revised by C.D.C. Reeve, Indianapolis: Hackett Publishing Co., 1992.
- Guyer, Paul, editor. *The Critique of the Power of Judgment*. Cambridge: Cambridge University Press, 2000.
- Hobbes, Thomas. *De Cive (The English Version)*, edited by Howard Warrender. Oxford: Clarendon Press, 1983.
- _____. *Leviathan*. Oxford: Clarendon Press, 1909.
- Irwin, Terence and Gail Fine, eds. *Aristotle: Selections*. Indianapolis: Hackett, 1995.
- Jaeger, W., editor. *Aristotelis: Metaphysica*. Oxford: Oxford University Press, 1957.
- Lee, H.D.P., translator. *Meteorologica*. Cambridge: Harvard University Press, 1952.
- Lucretius. *On the Nature of the Universe*. Translated by Ronald Melville. Oxford: Oxford University Press, 1999.
- McKirahan, Richard, translator. *Simplicius: On Aristotle Physics 8 6-10*. London: Bloomsbury, 2001.

- Popper, Karl. *The Open Society and its Enemies*. 5th Edition. Princeton: Princeton University Press, 1966.
- Raalte, Martin, editor. *Theophrastus' Metaphysics*. Leiden: Brill, 1993.
- Reeve, C.D.C., translator. *Nicomachean Ethics*. Indianapolis: Hackett, 2014.
- Ross, W.D., editor. *Aristotelis: Physica*. Oxford: Oxford University Press, 1950.
- _____, editor. *Aristotelis: De Anima*. Oxford: Oxford University Press, 1956.
- _____, editor. *Aristotelis: Politica*. Oxford: Oxford University Press, 1957.
- Storr, F., translator. *Ajax, Electra, Trachiniae, Philoctetes*. Revised Edition. Cambridge: Harvard University Press, 1993.
- Tredennick, Hugh and E.S. Forster, translators. *Posterior Analytics*. Cambridge: Harvard University Press, 1960.
- Van Den Bergh, S. translator. *Averroes' Tahafut al-Tahafut (The Incoherence of the Incoherence)*. London: Luzac and Co., 1954.

Secondary Sources

- Ackrill, J. *Aristotle the Philosopher*. Oxford: Oxford University Press, 1981.
- _____. "Change and Aristotle's Theological Argument." In *Oxford Studies in Ancient Philosophy* (Supplementary Volume), edited by H. Blumenthal and H. Robinson, 57-66. Oxford: Clarendon Press, 1991.
- Anagnostopoulos, G. *The Blackwell Guide to Aristotle*. Oxford: Blackwell, 2007.
- Annas, Julia. *The Morality of Happiness*. Oxford: Oxford University Press, 1993.
- Balme, D. "Teleology and Necessity." In *Philosophical Issues in Aristotle's Biology*, edited by A. Gotthelf and J.G. Lennox, 275-286. Cambridge: Cambridge University Press, 1987.
- Bambrough, R., editor. *New Essays on Plato and Aristotle*. London: Routledge & Kegan Paul, 1965.
- Barker, Ernest. *The Political Thought of Plato and Aristotle*. London: Methuen, 1906.
- _____. *The Politics of Aristotle*. Oxford: Oxford University Press, 1946.
- Barnes, Jonathan. "Aristotle and Political Liberty." In *Aristotles' 'Politik'* edited by G. Patzig, 249-263. Gottingen: Van den Hoeck and Ruprecht, 1990.
- _____. *Posterior Analytics* 2nd edition, Oxford: Clarendon Press, 1994.
- _____. "Metaphysics." In *Cambridge Companion to Philosophy*. Cambridge: Cambridge University Press, 1995.

- Bodnár, István. "Teleology Across Natures." *Rhizai* 2, no. 1 (2005): 9-29.
- Bostack, David. *Aristotle: Metaphysics Books Z and H*. Oxford: Oxford University Press, 1994.
- Bradley, A. C.. "Aristotle's Conception of the State." In *A Companion to Aristotle's Politics*, edited by David Keyt and Fred D. Miller Jr, 13-56. Oxford: Blackwell, 1991.
- Broadie, Sarah. "Que fait le premier moteur d'Aristotle? (Sur la théologie du livre Λ de la 'Métaphysique')." *Revue philosophique de la France et de l'Étranger* 183, no. 2 (1993): 375-411.
- Chan, Joseph. "Does Aristotle's Political Theory Rest on a Blunder?" *History of Political Thought* 13, no. 2 (1992): 189-202.
- Charles, David. "Aristotle on Hypothetical Necessity and Irreducibility." *Pacific Philosophical Quarterly* 69, no. 1 (1988): 1-53.
- _____. "Teleological Causation in the *Physics*." In *Aristotle's Physics: A Collection of Essays*, edited by Lindsay Judson, 101-129. Oxford: Clarendon Press, 1991.
- Cherniss, Harold. *Aristotle's Criticism of Presocratic Philosophy*. New York: Octagon Books, 1935.
- _____. *Aristotle's Criticism of Plato and the Academy*. Baltimore: Johns Hopkins University Press, 1944.
- Cherry, K. and E. A. Goerner. "Does Aristotle's Polis Exist 'By Nature'?" *History of Political Thought* 27, no. 4 (2006): 563-585.
- Cooper, John. "Aristotle on Natural Teleology." In *Language and Logos*, edited by Malcolm Schofield and Martha Nussbaum, 197-223. Cambridge: Cambridge University Press, 1982.
- _____. "Political Animals and Civic Friendship." In *Aristotles' 'Politik'* edited by G. Patzig, 249-263. Gottingen: Van den Hoeck and Ruprecht, 1990.
- Corbett, Ross J. "The Question of Natural Law in Aristotle." *History of Political Thought* 30, no. 2 (2009): 229-250.
- Deslauriers, Marguerite and Pierre Destrée ed. *The Cambridge Companion to Aristotle's Politics*. Cambridge: Cambridge University Press, 2013.
- Devereux, Daniel. "The Relationship between Theophrastus' *Metaphysics* and Aristotle's *Metaphysics A*." In *Theophrastean Studies: On Natural Science, Physics and Metaphysics, Ethics, Religion, and Rhetoric*, edited by William Fortenbaugh and Robert W. Sharples, 167-189. New Brunswick: Transaction, 1988.
- Everson, Stephen. "Aristotle on the Foundations of the State." *Political Studies* 36, no. 1 (1988): 89-101.

- Ferejohn, Michael. *The Origins of Aristotelian Science*. New Haven: Yale University Press, 1980.
- Fine, Kit. "Essence and Modality." In *Logic and Language*, edited by J. Tomberlin, 1-16. Atascadero, CA: Ridgeview, 1994.
- _____. "Ontological Dependence." *Proceedings of the Aristotelian Society* 95, no. 1 (1995): 269-290.
- Frede, M. and David Charles, editors. *Aristotle's Metaphysics A: Symposium Aristotelicum*. Oxford: Clarendon Press, 2000.
- Furley, David. "The Rainfall Example in *Physics* ii 8." In *Aristotle on Nature and Living Things*, edited by Allan Gotthelf, 177-183. Bristol: Bristol Classical Press, 1985.
- _____. "What Kind of Cause is Aristotle's Final Cause?." In *Philosophical Issues in Aristotle's Biology*, edited by A. Gotthelf and J. G. Lennox, 204-242. Cambridge: Cambridge University Press, 1987.
- Gill, David. "Political Rights in Aristotle: A Response to Fred Miller Jr., Nature, Justice, and Rights in Aristotle's Politics." *Ancient Philosophy* 16, no. 2 (1996): 431-442.
- Gotthelf, Allan. "Aristotle's Conception of Final Causality." In *Philosophical Issues in Aristotle's Biology*, edited by Allan Gotthelf and James Lennox, 204-243. Cambridge: Cambridge University Press, 1987.
- _____. "The Place of the Good in Aristotle's Teleology." In *Teleology, First Principles, and Scientific Method in Aristotle's Biology*, edited by A. Gotthelf, 45-66. Oxford: Oxford University Press, 2012.
- Guthrie, W. K. C.. *Aristotle: An Encounter*. Cambridge: Cambridge University Press, 1981.
- Hankinson, R. J. "Philosophy of Science." In *Cambridge Companion to Aristotle*. Cambridge: Cambridge University Press, 1995.
- _____. "Science." In *Cambridge Companion to Aristotle*. Cambridge: Cambridge University Press, 1995.
- Henrigillis, Brandon. "Man, God, and Rain: Is Aristotelian Teleology Hierarchical?" *Akropolis* 1, no. 1 (2017): 92-110.
- Henry, Devin. "Aristotle on the Cosmological Significance of Biological Generation." In *Theory and Practice in Aristotle's Natural Science*, edited by David Ebrey, 100-119. Cambridge: Cambridge University Press, 2015.
- Horn, Christoph. "The Unity of the World-order According to *Metaphysics* Λ 10." In *Aristotle's Metaphysics Λ – New Essays*, edited by Christoph Horn, 269-295. Boston: De Gruyter, 2016.
- Jaeger, W. *Aristotle: Fundamentals of the History of his Development*. Oxford: Oxford University Press, 1934.

- Johansen, Thomas K. "The Two Kinds of End in Aristotle: The View from the *De Anima*." In *Theory and Practice in Aristotle's Natural Science*, edited by David Ebrey, 119-136. Cambridge: Cambridge University Press, 2015.
- Johnson, Monte Ransom. *Aristotle on Teleology*. Oxford: Clarendon Press, 2005.
- Judson, Lindsay, editor. *Aristotle's Physics: A Collection of Essays*. Oxford: Clarendon Press, 1991.
- _____. "Chance and 'Always or For the Most Part' in Aristotle." In *Aristotle's Physics: A Collection of Essays*, edited by Lindsay Judson, 73-101. Oxford: Clarendon Press, 1991.
- _____. "Aristotelian Teleology." In *Oxford Studies in Ancient Philosophy* 29, edited by David Sedley, 341-367. Oxford: Oxford University Press, 2005.
- Kahn, Charles. "The Place of the Prime Mover in Aristotle's Teleology." In *Aristotle on Nature and Living Things*, edited by Allan Gotthelf, 183-207. Bristol: Bristol Classical Press, 1985.
- Katayama, Errol G. *Aristotle on Artifacts: A Metaphysical Puzzle*. New York: State University of New York Press, 1999.
- Katz, Emily. "Ontological Separation in Aristotle's *Metaphysics*." *Phronesis* 62, no. 1 (2017): 26-68.
- Keyt, David. "Three Basic Theorems in Aristotle's Politics." In *A Companion to Aristotle's Politics*, edited by David Keyt and Frek J. Miller, Jr, 118-141. Oxford: Blackwell, 1991.
- _____. "Fred Miller on Aristotle's Political Naturalism." *Ancient Philosophy* 16, no. 2 (1996): 425-430.
- Kraut, Richard. "Two Conceptions of Happiness." *Philosophical Review* 88, no. 2 (1979): 167-197.
- _____. *Aristotle: Political Philosophy*. Oxford: Oxford University Press, 2002.
- _____. "Nature in Aristotle's Ethics and Politics." *Social Philosophy and Policy* 24, no. 2 (2007): 199-219.
- Kullmann, Wolfgang. "Different Concepts of the Final Cause in Aristotle." In *Aristotle on Nature and Living Things*, edited by Allan Gotthelf, 169-177. Bristol: Bristol Classical Press, 1985.
- _____. "Man as a Political Animal in Aristotle." In *A Companion to Aristotle's Politics*, edited by David Keyt and Frank J. Miller, Jr, 94-117. Oxford: Blackwell, 1991.
- Lear, Gabriel Richardson. *Happy Lives and the Highest Good: An essay on Aristotle's 'Nicomachean Ethics.'* Princeton: Princeton University Press, 2004.

- Lear, Jonathan. *Aristotle: The Desire to Understand*. Cambridge: Cambridge University Press, 1988.
- Lennox, James. "Teleology, Chance, and Aristotle's Theory of Spontaneous Generation." *Journal of the History of Philosophy* 20, no. 3 (1982): 219-238.
- _____. "Form, Essence, and Explanation in Aristotle's Biology." In *A Companion to Aristotle*, edited by Georgios Anagnostopoulos, 348-368. Sussex: Blackwell, 2009.
- Lloyd, G. E. R.. *The Revolutions of Wisdom, Studies in the Claims and Practice of Ancient Greek Science*. Berkely: University of California Press, 1987.
- _____. *Aristotelian Explorations*. Cambridge: Cambridge University Press, 1996.
- Matthen, Mohan and R.J. Hankinson. "Aristotle's Universe: Its Form and Matter." *Synthèse* 96, no. 3 (1993): 417-435.
- _____. "The Holistic Presuppositions of Aristotle's Cosmology." In *Oxford Studies in Ancient Philosophy* vol. XX, edited by David Sedley, 171-201. Oxford: Oxford University Press, 2001.
- _____. "Teleology in Living Things." In *A Companion to Aristotle*, edited by Georgios Anagnostopoulos, 335-348. Sussex: Blackwell, 2009.
- Mayhew, Robert. *Aristotle's Criticism of Plato's Republic*. Lanham, M.D.: Rowman & Littlefield, 1997.
- _____. "Part and Whole in Aristotle's Political Philosophy." *The Journal of Ethics* 1, no. 4 (1997): 325-340.
- _____. "Rulers and Ruled." In *A Companion to Aristotle*, edited by Georgios Anagnostopoulos, 526-540. Sussex: Blackwell, 2009.
- Menn, Stephen. "Aristotle and Plato on God as Nous and as the Good." *Review of Metaphysics* 45, no. 3 (1992): 543-573.
- _____. "The Origins of Aristotle's Concept of Ἐνέργεια: Ἐγέργεια and Δύναμις." *Ancient Philosophy* 14, no. 1 (1994): 73-114.
- Miller, Fred D. Jr. *Nature, Justice, and Rights in Aristotle's Politics*. Oxford: Clarendon Press, 1995.
- _____. "A Reply to David Keyt and David Gill." *Ancient Philosophy* 16 (1996): 443-454.
- _____. "Naturalism." In *The Cambridge History of Greek and Roman Political Thought*, edited by Christopher Rowe, 321-344. Cambridge: Cambridge University Press, 2000.
- _____. "Aristotle's Divine Cause." In *Aristotle on Method and Metaphysics*, ed. Edward Feser, 277-298. New York: Palgrave Macmillan, 2013.

- Mulgan, R. G.. "Aristotle's Doctrine that Man is a Political Animal." *Hermes* 102, no. 3 (1974): 438-445.
- _____. *Aristotle's Political Theory*. Oxford: Oxford University Press, 1977.
- Nussbaum, Martha. *Aristotle's De Motu Animalium*. Princeton: Princeton University Press, 1978.
- _____. *The Fragility of Goodness: Luck and Ethics in Greek Tragedy and Philosophy*. Cambridge: Cambridge University Press, 1986.
- Owen, G.E.L. "The Platonism of Aristotle." *Proceedings of the British Academy* 51 (1965): 125-150.
- Owens, Joseph. *The Doctrine of Being in the Aristotelian Metaphysics*. 3rd Edition Toronto: The Pontifical Study of Mediaeval Studies, 1978.
- _____. "The Teleology of Nature in Aristotle." In *Aristotle: The collected Papers of Joseph Owens*, edited by John R. Caton, 136-148. Albany: State University of New York Press, 1981.
- Pellegrin, Pierre. "Naturalité, Excellence, Diversité: Politique et Biologie chez Aristote." In *Aristotles' 'Politik'* ed. G. Patzig, 249-263. Gottingen: Van den Hoeck and Ruprecht, 1990.
- _____. "Les ruses de la nature et l'éternité du mouvement. Encore quelques remarques sur la finalité chez Aristote." In *Le Style de la pensée. Recueil des textes en hommage à Jacques Brunschwig*, edited by M. Canto-Sperber and P. Pellegrin, 296-323. Paris: Les Belles Lettres, 2002.
- _____. "Aristotle's Politics." In *The Oxford Handbook of Aristotle*, edited by Christopher Shields, 558-588. Oxford: Oxford University Press, 2012.
- Peramatzis, Michail. *Priority in Aristotle's Metaphysics*. Oxford: Oxford University Press, 2011.
- Raalte, Marlein. "The Idea of the Cosmos as an Organic Whole in Theophrastus' *Metaphysics*." In *Theophrastean Studies: On Natural Science, Physics and Metaphysics, Ethics, Religion, and Rhetoric*, edited by William Fortenbaugh and Robert W. Sharples, 189-216. New Brunswick: Transaction, 1988.
- Reeve, C. D. C. "The Naturalness of the Polis in Aristotle." In *A Companion to Aristotle*, edited by Georgios Anagnostopoulos, 512-526. Sussex: Blackwell, 2009.
- Ross, W. D. *Aristotle* fifth ed. London: Methuen, 1964.
- Rossi, Gabriela. "Aristotle and the Rain, Once Again." *Dianoia* 56 (2010): 91-123.
- Rowe, Christopher. "Aims and Methods in Aristotle's *Politics*." In *A Companion to Aristotle's Politics*, edited by David Keyt and Fred D. Miller Jr., 57-74. Oxford: Blackwell, 1991.

- _____ and Malcolm Schofield, ed. *The Cambridge History of Greek and Roman Political Thought*. Cambridge: Cambridge University Press, 2000.
- Saunders, Trevor. J. *Aristotle: Politics Books I and II*. Oxford: Clarendon Press, 1996.
- Sauvé Meyer, S. "Aristotle, Teleology, and Reduction." *Philosophical Review* 101, no. 4 (1992): 791-825.
- Scharle, Margaret. "The Role of Material and Efficient Causes in Aristotle's Natural Philosophy" *Apeiron* 41, no. 3 (2008) (Special Issue: *Aristotle on Life*, J. Mouracade, ed.): 27-46.
- _____. "Elemental Teleology in Aristotle's *Physics* II 8" *Oxford Studies in Ancient Philosophy* 34 (2008): 147-184.
- _____. "'And these things follow': Teleology, Necessity, and Explanation in Aristotle's *Meteorologica*." In *Theory and Practice in Aristotle's Natural Science*, edited by David Ebrey, 79-100. Cambridge: Cambridge University Press, 2015.
- Sedley, David. "Is Aristotle's Teleology Anthropocentric?" *Phronesis* 36, no. 2 (1991): 179-196.
- _____. "*Metaphysics* Λ 10." In *Aristotle's Metaphysics A: Symposium Aristotelicum*, edited by Michael Frede and David Charles, 327-351. Oxford: Clarendon Press, 2000.
- Shields, Christopher, ed. *The Oxford Handbook of Aristotle*. Oxford: Oxford University Press, 2012.
- _____. *Aristotle*. London: Routledge, 2014.
- Sorabji, Richard. "State Power: Aristotle and Fourth Century Philosophy." In *Aristoteles' "Politik"*, edited by G. Patzig, 265-277. Gottingen: Van den Hoeck and Ruprecht, 1990.
- Taylor, C. C. W.. "Politics." In *The Cambridge Companion to Aristotle*, edited by Jonathan Barnes, 233-259. Cambridge: Cambridge University Press, 1995.
- Taylor, Richard. "Providence in Averroes." In *Fate, Providence and Moral Responsibility in Ancient, Medieval and Early Modern Thought*, edited by Pieter d'Hoine and Gerd Van Riel, 455-473. Leuven: Leuven University Press, 2014.
- Ward, Julie K. "Aristotle on *Physis*: Human Nature in the *Ethics* and *Politics*." *Polis* 22, no. 2 (2005): 287-308.
- Wardy, Robert. "Aristotelian Rainfall or the Lore of Averages." *Phronesis* 38, no. 1 (1993): 18-30.
- Waterlow, Sarah. *Nature, Change, and Agency in Aristotle's Physics*. Oxford: Clarendon Press, 1982.
- Wieland, W. "The Problem of Teleology." In *Articles on Aristotle*, edited by J. Barnes, M. Schofield, R. Sorabji, 141-160. London: Duckworth, 1975.