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The Machines of Daedalus: Aristotle on the Truth and Potential of Political Science

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## Abstract

Aristotle says that true assertions in practical philosophy are true “for the most part.” I argue an assertion is true “for the most part” if it refers to the hypothetical realization of a substance’s essential capacities under some set of impediments. The removal of impediments to the full realization of human capacities is the ultimate goal of legislation and political science, and this insight underlies much of Aristotle’s influence in contemporary political philosophy.

The first two chapters address the prevalent view that Aristotle’s methodology discourages pursuing a scientific and systematic basis for ethics and politics. The common interpretation is that Aristotle’s theorizing concerns reconciling the conflicting “credible opinions” [*endoxa*] of the well-educated societal elite. Due to this limited starting point and method, his conclusions in practical philosophy can only describe what tends to happen and nothing more “precise.” In contrast I argue *endoxa* take a plurality of forms including common opinion, laws, societal customs, traditional sayings, and scientific discoveries. Second, *endoxa* can be used in a variety of contexts to settle both general and specific issues in practical philosophy. Third, the theories reached from the method are designed to be highly revisable, aiming towards a progressively more precise account of ethics and politics. He expects us to repeat this method continuously throughout time since, as he claims, we are designed to seek what is good and not just what is traditionally taken as good (*Politics* II.8). Aristotle is confident that, under a proper application of dialectic, the “most authoritative account” will arise among the *endoxa*. There is no hard limit on how exacting investigations can be in practical philosophy with my interpretation of *endoxa*. While some levels of theoretical exactness may be unnecessary in a given practical context, that does not mean such exactness is conceptually impossible.

In the third through fifth chapters, I argue that, despite the common view that “for the most part” refers to statistical frequency, in reality for Aristotle a proposition is true “for the most part” if it correctly describes the realization of a substance’s capacities under given conditions. It is the additional information available from my expanded scope of *endoxa* which provide the needed data for these claims. In politics, assertions are true “for the most part” if they correctly detail the realization of a person’s capacities under some social or political condition. Importantly, as “for the most part” refers to capacities under hypothetical conditions, it is possible for assertions to be true for the most part in political science even if they rarely obtain. The phrasing “for the most part” extends from his studying current conditions in Greece, but it hides a more powerful concept. The assertion “wealth is beneficial” is true for the most part because, even if people are rarely wealthy, it expresses the idea that wealth provides conditions for the fulfillment of our political and rational capacities. With plenty of money, I can go to the assembly and read philosophy as I will be relieved of time-consuming manual labor.

A full understanding of the phrase “for the most part” reveals that Aristotle’s practical philosophy contains the needed tools for constructing a truly “human science.” My concluding chapter considers how this capacital interpretation motivates later receptions of Aristotle from a variety of points on the political left. I consider three figures and their projects: 1) Martha Nussbaum’s project of “Aristotelian social democracy” and engagement with Rawlsian liberalism; 2) Karl Marx’s reception of Aristotle in his view of species-being and comments on what a communist society would look like (*Gotha Program, P&E Manuscripts*); and 3) Murray Bookchin’s eco-anarchism as found in *The Ecology of Freedom: The Emergence and Dissolution of Hierarchy*, which takes Aristotle’s biological understanding of the polis as a product of our political capacities and the foundation for his vision of an anarchist society.

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John Lubniewski - Mr. L, "Lube"- taught me the importance of standing up and arguing for what you believe (and the value of a good comeback). May you rest in peace. John McClellan showed me, through three years of policy debate, how to hone my arguments in a way that has guided me ever since. Pamela Stanescu, meanwhile, is simply the most powerful teacher I have ever encountered and the mastermind of the best class I have ever taken, a course at Warner Robins High School merely titled "Humanities." Lastly, I would like to thank Scott Daniel, a member of the triumvirate of teachers at WRHS who provided lessons during Humanities. Most of all,

however, Mr. Daniel provided me two things that changed my life: a small copy of Will Durant's *Story of Philosophy* and the confidence that I could one day understand it.

Next, I would like to thank my labor union, Northwestern University Graduate Workers (NUGW), for providing the opportunity to act out my beliefs, not just analyze them. Primarily, however, I thank my union and fellow graduate workers for their continual solidarity with and zealous advocacy for workers at Northwestern. I feel so much less alienated, both from my work and from my fellow workers, because of NUGW.

Millions upon millions are never given the encouragement and material resources to believe that they can do philosophy, that their minds and ideas are worth anything, and for every Aristotle there have been a thousand more who were not born to the physician of Philip the Great, who were never afforded a chance at all due to the caprice of luck and the cruelty of society. It is because I was born to such incredible parents and supported by such extraordinary friends, scholars, and teachers throughout my life that I can submit this dissertation at Northwestern. However, it too easily could have turned out otherwise.

Because of that, I dedicate this dissertation to all the people I have so far met in my brief time on Earth, from all walks of life and classes, who have challenged my assumptions and pretensions to knowledge, who have forced me to truly think about justice, and with whom I have had the pleasure – in the best sense of the word – to philosophize.

## Dedication

To my dad

His soul was powerful, able to confront the truth in its entirety and in all its aspects; unsophisticated, that is to say without presuppositions, not yet distorted by judgements concerning the value of reality, man, and life; it was also joyful, rightly so because of its power, its ability to master and to organize the mass of inquiries and phenomena; and finally peaceful, first because it was sure that all the spheres of knowledge could and should be harmonized and complete one another, and all points of view be unified, if one carefully marked their limits and defined their spheres, and then also because it judged that it was possible to regulate all human passions and all human experiences and in a measured fashion.<sup>1</sup>

Nietzsche, describing Aristotle; me, describing Roy Thurman Hull Jr.

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<sup>1</sup> Monique Dixsaut, slightly paraphrasing aphorism 424 of *Daybreak*.

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# Introduction

## §1

Near the beginning of the *Politics* we find a striking piece of social imagination:

For if each instrument could perform its own function on command or by anticipating instructions, and if – like the statues of Daedalus or the tripods of Haephestus (which the poet describes as having “entered the assembly of the gods of their own accord”) – shuttles wove cloth by themselves, and plectra played the lyre, an architectonic craftsman would not need assistants and masters would not need slaves. (I.4 1253b35-1254a1)

Daedalus was a mythical craftsman and architect, known for constructing the Minotaur’s labyrinth and designing autonomous machines. I would like to pose the following, somewhat fanciful, question on the way to introducing my more technical philosophic topics: to what extent does Aristotle think we could construct these machines of Daedalus so that they might anticipate and meet our practical needs?

In order to avoid writing a science fiction novel, this question can be rephrased in a more philosophically precise way: is there a way to comprehensively codify the syllogisms of practical science? This does not sound far-fetched for Aristotle. Afterall, he thinks the true statements of practical science are true for the most part, and statements which are true for the most part are also scientifically demonstrable in syllogistic form, making them suitable as scientific knowledge. If this ancient AI could perform syllogisms relating to natural science, and if practical science is logically and semantically equivalent with the other natural science, then what stops this machine from performing these practical syllogisms as well?

One might immediately object that the inability to reliably codify these syllogisms obviously stems from how Aristotle characterizes the truth of the syllogism’s premises. These



premises are only true “for the most part” (sometimes he will say they are “usually true,” but usually not). Such flaccid qualifications do not provide much support at all for a precise formalization of any sort of science, let alone practical science. If the best we can hope our knowledge of ourselves to be is that it is right “for the most part,” then it seems Daedalus’ machines will remain solely the domain of ancient daydreams.

Instead, I argue nothing precludes Daedalus’ machines in Aristotle’s world. Yes, true, Aristotle provides direct warnings in the *Nicomachean Ethics* against expecting too much precision in practical science, that we should recognize our knowledge often will be imprecise. These warnings are right as a matter of prudence and have undergirded Aristotle’s historical reputation as a practical philosopher of grounded expectations, social conservatism, and common sense. There is much to commend in this interpretative tradition, finding brilliant expressions in both Islamic and Christian political theory all the way up to today with (among many others) John Finnis, Eleanor Stump, and Alasdair MacIntyre.

However, if we soar higher into Aristotelian skies, we discover views of politics and science which display a much more utopic spirit, one which has inspired some of the greatest thinkers of radical political traditions including Karl Marx, Ernst Bloch, Martha Nussbaum, and Murray Bookchin. These philosophers are united both in their utopic aims and emphasis on utopian designs being scientific and critical. Utopias may not be real, but we can base them on reality and dialectically formulate them. This utopic vision with a pragmatic refrain is vintage Aristotelian thought that is exemplified in *Politics* VII-VIII, and Chapter 5 explores these figures’ Peripatetic debts in more detail. However, for now, consider that in the *Politics* Aristotle provides this warning about political imagination:

For it is not possible for the best political system to come into existence without equipment in good measure. And so we must presuppose many things that accord with our highest hope, although the existence of none of them must be impossible. (VII.3 1325b37-41)

I wish to explore Aristotle's scientifically utopic side and determine its roots in his system. The potential of political science is determined by a number of dimensions owing to Aristotle's highly interdependent system. It relies on his theory of truth, his scientific methodology, the endoxic method, and his understanding of the chance and uncertainty that is everywhere in the real world. I hope to examine these various dimensions throughout my dissertation.

## §2

However, what of Aristotle referring to truth in practical science as being only true "for the most part?" I cannot just fly right over it on my way to utopia. My view is that it is exactly the extent to which Aristotle thinks these statements can be treated rigorously and informatively in syllogism that speaks against this qualification being in any way "vague" or "imprecise." Throughout this dissertation I provide the grounds for interpreting statements that are true "for the most part" in a more logically and metaphysically robust way, one which explains the high level of work it does in his science. Instead of characterizing a statement being true "for the most part" as just being true more often than it is false (what I refer to as the statistical interpretation), I argue an assertion is true "for the most part" if it refers to the hypothetical realization of a substance's essential capacities under some given set of impediments. These impediments can be both internal impediments related to the substances' conditioning (for instance, bad habituation or malnutrition)

or external impediments related to conditioning of other causally connected substances which affect the substance's activities (for example, a bad constitution or poverty).

When interpreted this way, Aristotelian practical science quickly becomes more clearly “scientific” and ambitious. Instead of the “for the most part” phrase signaling a primitive level of unreliability in the statement, it refers to the diversity of impediments (or lack thereof) that human beings face. I thus read “for the most part” functioning as a sort of *ceteris paribus* phrasing. Aristotle's extant political-scientific writings are about the impediments Classical Greeks would have faced, and his students would have gone off to public life in Athens and other city-states. While different in many ways, these city-states (and other ancient Mediterranean civilizations) did face some common types of conditions and limitations. Aristotle, in describing all the various conditions (materially and politically) that societies can face, is able to provide models for how human capacities are realized. The “for the most part” refers to the understood set of constitutional and material conditions within which human capacities actualize. If one holds this reference set of conditions generally constant, one can build a political science that can serve as both scientifically informative and practically valuable for those who find themselves in those types of conditions. Moreover, if the *telos* of the *polis* (or any other political organization) is to ensure its members flourish by fully actualizing their distinctively human capacities, then removal of whatever may prevent the full realization of human capacities is the goal of legislation and political science. With these propositions, we can start to see the more ambitious side of Aristotelian political science.

## §3

The first objection which I deal with is the complaint that Aristotle's practical philosophy is imprecise due to methodological limitations. Specifically, the "endoxic method," wherein Aristotle collects so-called credible opinions (*endoxa*) which he then considers dialectically, eventually settling on a "most authoritative account." This process of just collecting "credible opinions" sounds imprecise and even amateurish. A more positive way of characterizing this method as imprecise and limited is to say Aristotle is being epistemically humble, trying to establish merely the most defensible version of an aristocratic Greek common sense.

However, while Aristotle does aim for establishing a rationalized synthesis of the opinions from esteemed people, I argue the endoxic method does not have to rest with what Aristotle lays out in the *Nicomachean Ethics*. The endoxic method can be performed more continuously, taking Aristotle's own system along with the opinions of new credible people. I argue along the lines of Richard Kraut in favor of a more inclusive scope of *endoxa*, including not only socially powerful people but rational people overall. This includes scientists, poets, and normal citizens, even the citizens of other *poleis*. I provide evidence that, when we take this more robust notion of Aristotle's method, we find it (*contra* Frede) to appear much more frequently in both his natural scientific and practical works.

The endoxic method is not merely a weak, somewhat quaint method for ethical investigations. Instead, the method in the *Nicomachean Ethics* is the practical application of a more general philosophic method. This more common method is defensible inside of Aristotle's system due to his almost naive realism about perception, which I argue equips normal observers with great capacity for deriving *epistemae*. The endoxic method is both powerful in its results (due to being

able to always bring in new credible opinions to clash against the most authoritative account) and surprisingly egalitarian in its presuppositions. This is why, despite Aristotle's more aristocratic deployment of it, somebody as progressive as Henry Sidgwick was able to perform the endoxic method equally as successfully in his *Methods of Ethics*.

#### §4

I then consider another fundamental objection, that Aristotle appears to establish definite disciplinary bounds to what counts as doing political science and what counts as doing a nearby natural science (such as medicine, zoology, meteorology, etc). It would appear my more ambitious aims would not properly respect Aristotle's dictums here.

However, I argue (using the results achieved from **Chapter 1** about the endoxic method) that we should adopt a less rigid understanding of cross-disciplinary premise sharing in Aristotle's epistemology and logic. What I mean is that we should stop reading Aristotle as somebody who, just because he established a sophisticated and compelling division of disciplines and subjects, was in favor of cordoning off disciplines from each other. This disciplinary permeability should be seen as extending to (indeed, especially to) political science. I provide evidence to show that Aristotle regularly takes into account the findings of other scientific fields in his political science, including leaving aspects of his ideal state in *Politics* VII and VIII open to later scientific advances which he encourages the politician to stay somewhat abreast of. This is where my debt to Terry Irwin's *Aristotle's First Principles* is most apparent, as I presuppose several his arguments relating to Aristotle's modes of dialectic, which Irwin refers to "weak" dialectic (like that found in the *Topics*) and "strong" dialectic such as that found in *Metaphysics* Book Zeta. Irwin argues for a

highly interdependent and systematic view of Aristotle's theory of knowledge, with human practical philosophy sitting at the top of a pyramid. I find this account generally convincing, but I try to provide the political-scientific upshot of this understanding, ramifications which Irwin does not explore as much. My argument is that the barriers Aristotle does draw between disciplines, and his warnings in the *Posterior Analytics* about mixing premises from different syllogisms, need not be read in as limiting a manner as they often are.

## §5

I then proceed to the technical core of my dissertation, examining the semantics and metaphysics of what makes a statement "true for the most part." These true for the most part statements (now abbreviated as FTMP statements) are the building blocks of any non-categorical membership statements in natural or practical science. I ultimately argue that FTMP statements refer to the realization of a capacity in a substance under a specified set of conditions. It is not about just statistical prevalence despite its rendering in English. Also, while I am influenced by Paolo Crivelli on several aspects relating to Aristotle's correspondence theory, I part with him on his endorsement of a statistically based understanding of FTMP statements and his reliance on possible world semantics for modelling. I argue that my interpretation better respects Aristotle's system, especially its ontology, and the interpretation of many in the commentator tradition. With this, I show that Finean truthmaker semantics, not Lewisian possible worlds, are able to better explain this capacious aspect of substances and how Aristotle thinks they can make FTMP statements demonstrable.

Because capacities are essential characteristics of a substance this ultimately makes FTMP statements demonstrable. A deeper investigation of his theory of truth in **Chapter 3** will determine how rooted the primary substance is to his entire thought including the precise nature of his correspondence theory. The demonstrability of FTMP statements ultimately rely on a metaphysical principle I refer to as the **Dunamis Principle (DP)**. **DP** states that a rational capacity only needs a lack of impediments (whether internal or external) to actualize, while nonrational capacities need a lack of impediments along with an appropriate efficient cause. I formally describe **DP** as  $(R_r \rightarrow \sim I_r \ \& \ \sim I_r^*) \ \& \ ((E_n \ \& \ \sim I_n \ \& \ \sim I_n^*) \leftrightarrow R_n)$ , where ' $R_r$ ' is a rational *dunamis*, ' $I_r$ ' and ' $I_r^*$ ' are internal and external (respectively) impediments relevant to the rational *dunamis*,  $R_n$  represents some *dunamis* with  $n$  indexing one of the genus/species' relevant *dunamai*, ' $I_n$ ' and ' $I_n^*$ ' represent internal and external (respectively) impediments to the specified non-rational *dunamis*, and ' $E$ ' is the presence of some appropriate efficient cause for the specified non-rational *dunamis*. The **DP** should be taken as a rough schema, such that any statement which may be described as true "for the most part" can be translated into talking about some instance of **DP**, dealing with either a  $R_r$  or an  $R_n$ . along with some specified (or understood) sets of  $I_s$ .<sup>2</sup> It turns out, this **Dunamis Principle** pops up everywhere in Aristotle, including in his account of topics as disparate as spontaneous generation and technological progress. I explore this principle, its appearances in Aristotle, and its legacy in radical politics in **Chapters 4-6**.

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<sup>2</sup> While I write **DP** with a material conditional connector ( $\rightarrow$ ) I do not want to assert here Aristotle has a particular theory of conditionals. Aristotle might have adhered to a form of relevance logic, meaning he may accept a form of the material condition but rejecting certain axioms such as weakening ( $A \rightarrow (B \rightarrow A)$ ), a proposal which holds a lot of promise (Steinkrüger 2015). While Belnap & Anderson's (1975) description of a relevant connector as requiring variable sharing is on face the type that has the most affinity to Aristotle's thinking, there are competitors, including from intuitionistic logic, such as Routley's stronger requirement of absolute sufficiency (e.g. Routley 2018, Routley & Sylvan 2019), Brady's "meaning containment" (2006), and Humberstone's "strongest anticipator connective," (2011). Gabbay (1978), Standefer (2022), and Humberstone (2011, esp. 614, 1233 - 1237) provide overviews of the conceptual spaces inside of which either a classical or relevant connective would have to broadly fit.

## §6

If being true FTMP is a characterization of true statements in practical philosophy, then my findings in Chapter 3 go a long way towards showing their link to Aristotle's larger theory of truth, one which reveals FTMP statement semantics to be much more metaphysically and epistemically robust than one may think based on the Greek. However, one might argue that there is still a great gap to be filled. Aristotle seems to think chance and fate are major forces in the universe, and these forces are ones which render any attempt to get a scientific handle on human life to falter. I argue that indeed we can understand Aristotle's concept of chance in a way which does not weaken the force of the **Dunamis Principle**. I show how Aristotle does not conceive of causal chance as an independent causal force distinct from the material cause, instead making chance a semi-idealist phenomenon where accidental events play out as if there were an intention behind their occurrence. This makes even chance events analyzable in terms of universal and FTMP statements, since their "chanciness" comes from incidental epistemic limitations, not because it is fundamentally unanalyzable.

I argue that this understanding of chance allows us to understand how Aristotle incorporates the concept of chance in his practical philosophy. I especially focus on Aristotle's enumeration of external goods, arguing for a reinterpretation of his theory which more properly focuses on these goods. External goods are the product of chance, but my interpretation gives us reason to hope in Aristotle's world that we can better manage these external goods for all.

In **Chapter 5** I discuss a further (and to many people most bizarre and disreputable) aspect of Aristotle's notion of chance and spontaneity, his theory of spontaneous generation of life. His theory is often disparaged and taken to be in opposition to more modern and materialist biology.



This conventional notion of spontaneous generation is also often linked to the view of chance as a primitive force in Aristotle, that spontaneous generation is a piece of Aristotle's still overly mystical understanding of nature. I argue against this view, that in fact his belief in spontaneous generation comes from positing a corporeal basis for life in the form of "soul-heat." This soul-heat in fact obeys **DP** nicely, allowing for a way to model spontaneous generation. This final issue may at first seem peripheral to my question about how scientifically we can analyze human practical endeavors. However, in fact this chapter establishes the fundamental connection between life (including human life) and the **Dunamis Principle**, since even the apparent counterexample to the comprehensive causal story I have for Aristotle can in fact be accounted for and made consistent with **DP**. Except for being practically onerous, there is no apparent phenomenon in life which Aristotle's system is unable to (with enough effort) sufficiently analyze down to the capacities of the involved substances and their realization under given conditions. This apparent side project is in fact just the remaining brick in my interpretative wall about how "for the most part" functions in his theory of truth.

## §7

In the course of five chapters, I present an interpretation of Aristotle's practical science, along with its conceptual underpinnings, which truly underlines why he is known as the father of political science. With the exception of **Chapter 3**, these chapters mainly took the form of rebutting objections which interpret key aspects of Aristotle in an epistemically weak or limiting light. I argue we do not have to make him so hidebound, whether that hideboundness appears in his methodology, disciplinary divisions, theory of truth, or understanding of complex causation.

My argument, then, primarily amounts to saying that we can have ambitious politico-scientific projects inside of Aristotle's system, even if Aristotle himself is of a more conservative demeanor.

Importantly, I avoid saying a specific political project is entailed by his system. My first five chapters are mainly exegetical, not prospective. In **Chapter 6** I present three broad attempts to adopt Aristotle's thinking into projects, especially the centrality of capacities and the general truth behind the **Dunamis Principle**. Aristotle, when interpreted as a philosopher of common sense and epistemic humility, has given rise to a long and well-studied tradition of political theory. However, he has had just as much an impact on more radical theorizing, and I consider briefly three projects and how they relate to my interpretation. I begin with Martha Nussbaum's Aristotelian social democracy, a proposed policy framework which takes human beings to have a general set of capacities and needs along many different lines and proposes a social democratic state which distributes resources based on encouraging broad fulfillment of these needs and widespread actualization of capacities in that state's citizens. I show how my interpretation of Aristotle's metaphysics provides a foundation for Nussbaum's and even more fine-grained projects like hers. I also compare her proposal to Rawls' characterization of a just state, with the argument that the Aristotelian approach (and here I draw on my work in Chapter 1) is able to respond to and philosophically engage with more people than the Rawlsian project, particularly those who may live in more traditional and religious communities, making Aristotelian social democracy a more viable project for achieving liberal aims in a world where liberal hegemony is on the decline.

I next consider more radical theorists, starting with somebody who also wrote their dissertation on ancient philosophy, Karl Marx. I show how Marx's understanding of activity and human labor extend from fundamentally Aristotelian understandings of nature and matter. While Marx would resist the Aristotelian claim that there is one kind of activity that is most beneficial to

human beings *qua* human beings (our lack of one is in fact what makes our species being distinct, early Marx thought), his resistance towards inert “French materialism” and explicit engagement with Aristotle throughout his writings show a fundamental agreement with the **Dunamis Principle**. I show how even his characterization of communist society, and why it is worthwhile to aim for, can be described in Aristotle’s capacity-based language. Marx’s description of the communist human being as one who excels in a number of different activities (hunting, fishing, philosophizing with friends) which they engage in freely and happily in a just and abundant society displays a striking resemblance to Aristotle’s account of the eudemonistic man and their life full of *kalon* actions, philosophizing, and political inclusion in a just *polis*. Moreover, Marx’s description of communism as operating according to the principle of “from each according to his abilities, to each according to his needs” takes on even more poignancy when it is placed in context and read in Aristotelian tones. It also speaks against reading this line as Marx making his ideal world a giant workhouse:

In a higher phase of communist society, after the enslaving subordination of the individual to the division of labor, and therewith also the antithesis between mental and physical labor, has vanished; **after activity has become not only a means of life but life's prime want; after the productive forces have also increased with the all-around development of the individual, and all the springs of co-operative wealth flow more abundantly—only then can the narrow horizon of bourgeois right be crossed in its entirety** and society inscribe on its banners: From each according to his ability, to each according to his needs!  
*(Critique of the Gotha Program)*

This section on Marx includes a discussion of Ernst Bloch, a philosopher who also saw the connection between Aristotle and Marx to be highly intellectually valuable and politically potent as shown in works such as *Avicenna and the Aristotelian Left* and *the Problem of Materialism*. My analysis differs from Bloch in that (thanks to **Chapter 5**) I argue Aristotle possessed a more robust view of matter with his characterization of soul-heat. Bloch thinks the revolutionary potential of Aristotle's hylomorphism comes from revising the priority between form and matter and that this is shown in ones such as Marx and Giordano Bruno. I argue that, luckily, we must do less revision than Bloch thinks.

Finally, after making Aristotle vote social democratic and join the communist party, I turn him into an anarchist. Murray Bookchin's concept of radical municipalism takes Aristotle's *Politics* and its naturalized description of the polis as the jumping off point. Most importantly, however, is that Bookchin is sensitive to how Aristotle's philosophy of the city (and human political activity more generally) is linked to his larger philosophy of nature. Bookchin saw the vitalism of Greek materialism as a way through the conceptual problems of contemporary anarchism, especially the competing influences of the Enlightenment and Daoist thought on anarchism. In contrast, Bookchin reads Aristotle as properly recognizing humanity's connection to nature (an insight he credits as well to Daoism) while still recognizing us as rational and political beings which can shape and understand nature in a way that aids humanity (a core feature of the Enlightenment). Nature has an intelligence that attempts to create and build from whatever matter is present, an intuition that anarchists dating to Kropotkin have emphasized. Bookchin reads Aristotle as providing a foundation for explaining that insight and linking it to human political struggles, a vision that puts the **Dunamis Principle** at the core of revolution and utopia.

# Chapter 1

**“...if only we are willing to undertake sufficient labors.”**

One of the most basic lessons that students learn about ancient philosophy is that, between Plato and Aristotle, Plato is the more utopian and imaginative political thinker. While Plato is presented as a grand concocter of impractical metaphysical systems,<sup>3</sup> Aristotle appears as the champion of epistemic humbleness and common sense.<sup>4</sup> This is how the two are presented in everything from school textbooks to the *School of Athens*.

However, is this a fair portrayal? This picture would seem to flatten out features of both philosophers in favor of a tidy contrast. Plato’s *Republic* can be as pragmatic and empirically-founded as anything in Aristotle’s *Politics*, with Plato devoting much of Book V and all of VI and VII to the question of how to implement the *kallipolis*, the second question raised by Polymarchus and Adeimantus’ three waves of criticism and the one described as the “largest and most difficult to deal with,” (V 472a).<sup>5</sup> Socrates is pessimistic about the possibility of establishing the Kallipolis (VI 502c), and he thinks it would require a miracle for a philosopher-ruler caliber person to come from an imperfect society.<sup>6</sup> Divine intervention may even be required because, like Aristotle, Plato believes humans are social creatures and even a would-be Philosopher Ruler follows the crowd (VI 492c-d). Philosophers may not even want to rule,<sup>7</sup> and their intelligence may make them truly tyrannical as well.<sup>8</sup> He is skeptical about efficacy of even basic labor and economic regulations (IV 425c10-d1; IV 426e4-427a7).

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<sup>3</sup> People who think Plato did not consider the practical aspects of instituting the *polis* or think he did not intend for it to be initiated at all include: Nettleship, 1906: 211; Cornford 1957: xxv; Cornford, 1973: 5; Barker, 1960: 277-282; Sinclair 1967: 157-9; Raeder 1905: 222. Jaeger 1939: II.278

<sup>4</sup> See for instance Popper 2013: 220-222; Copleston (1993: I.354); Broadie 1991: 198 ff (cf. Kraut 1993)

<sup>5</sup> See also Klosko (1981(; Demos (1957: 168-170).

<sup>6</sup> *Rep.* VI 492e-493a, VI 499b, IX 592a.

<sup>7</sup> *Rep.* VII. 519c-521b9; IX 592a-b.

<sup>8</sup> *Rep.* 491a-492b; cf. *Hipp. Min.* 366b ff.

As for Aristotle, besides his poetic remarks on the potential of the human intellect and its relation to the divine,<sup>9</sup> we find even in his “practical philosophy” seeds of a larger, more ambitious political project. It is this theoretical side of Aristotle’s politics which I wish to explore more in detail. While he cautions against the ambition of any given politician acquiring this level of knowledge in politics (especially in his time), it is my basic contention that this precaution is ultimately a circumstantial, practical one.

Throughout the course of this dissertation, I wish to defend the following two theses about the state of *πολιτική*:

1. *Πολιτική* is as potentially exact in its knowledge as a science needs to be.
2. The propositional knowledge of *πολιτική* is codifiable like other sciences.

Thesis 1 is equivalent to the claim that there is no reason to think *πολιτική* need be any less exact than natural science is. I will defend this claim that there is nothing in our investigative capacities that would prevent *πολιτική* from being as exact as science, even if the *archae* of *πολιτική* are reached through the *endoxic* method. Thesis 2 says that, due to aspects of Aristotle’s semantics and logic, the propositional knowledge of *πολιτική* is capable of being reasoned about in syllogistic form and has the same form as a statement in natural science.

Consider the following characterization of political science to see how these theses work together. Politics is a branch of zoology which studies political animals, their activities, and their capacities, and any statements which are true for the most part about in politics will ultimately concern these political animals as substances with capacities. We study these political animals the way we study any other animal, by direct observation of individual substance tokens of the species,

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<sup>9</sup> NE X.1177a14-16, 21, b28-31 cf. DC II.12 292b4-6 ; Met Λ.3 1070a24-26; Judson (2000: 134); cf. EE VII. 12 1244b7-8, 1245b14-10; NE IX.9 1170a2ff; X.8 1178b8 ff., esp. 21-22; X.8 1179a26.

and we draw conclusions about their essential qualities (including capacities) from that. Because of the diversity of these qualities, adjacent fields of study which deal with these attributes more intensely may be required as well. However, the study of politics itself is thoroughly scientific in character. This is, roughly, how I understand Aristotle's notion of political science and the nature of *πολιτική*.

In **Chapters 1 and 2**, I will defend Thesis 1. In **Chapters 3 and 4**, I will defend Thesis 2.

### §1 – Aristotle's Warning

Let me start with the bad news: there is a lot of evidence in the *corpus* to initially suggest Aristotle did not believe ethics was derivable from natural science. The first, most direct evidence comes near the beginning of the *Nicomachean Ethics*. This passage, due to its early place in Aristotle's principle ethical work, looms large for my argument:

[T1] “Our discussion would be adequate if we attained a level of clarity appropriate to the underlying subject matter. **Precision** [ἀκρίβεια] **should not be sought in all arguments alike, any more than in the products of a craftsman. Things that are fine and just** [τὰ δὲ καλὰ καὶ τὰ δίκαια], **the topics investigated by political science, involve a great deal of variation and fluctuation; as a result, people think** [ὥστε δοκεῖν] **that they are matters of convention, not nature.** Good things also involve a similar degree of fluctuation, because many people are harmed by them: some have actually been ruined by their wealth, and others by their courage. So when we are talking about such things and using premises of this kind, we should be content to indicate the truth roughly and in outline

[παχυλῶς καὶ τύπῳ]; and also, when we are discussing things that happen for the most part and using such premises, to establish conclusions of the same kind. In the same fashion, then, everything we say should also be received: **it is the mark of a well-educated person to seek precision in each type of thing only as far as the nature of the subject matter allows** [πεπαιδευμένου γὰρ ἐστὶν ἐπὶ τοσοῦτον τὰκριβὲς ἐπιζητεῖν καθ' ἕκαστον γένος, ἐφ' ὅσον ἢ τοῦ πράγματος φύσις ἐπιδέχεται]. **Accepting arguments that are merely plausible from a mathematician is like requiring an orator to give scientific demonstrations,**” (I.3 1094b11-27).<sup>10</sup>

This text is supremely rich, and it is often taken to succinctly capture Aristotle’s general philosophical temperament. The most salient point is that a person expects precision only as much as “the nature of the subject matter allows” [ἢ τοῦ πράγματος φύσις ἐπιδέχεται]. Getting a handle on how to exactly understand Aristotle’s maxim here is one of the key issues of this dissertation. Just how much of an allowance do we possess based on Aristotle’s characterizations of these subject matters and how they relate to his larger methodological and metaphysical commitments? I argue that, overall, political science provides us immensely detailed knowledge, even if the politician’s typical activities may not require such a high level of precision.

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<sup>10</sup> “ἢ μὲν οὖν μέθοδος τούτων ἐφίεται, πολιτικὴ τις οὔσα. Λέγοιτο δ' ἂν ἰκανῶς, εἰ κατὰ τὴν ὑποκειμένην ὕλην διασαφηθεῖη· τὸ γὰρ ἀκριβὲς οὐχ ὁμοίως ἐν ἅπασιν τοῖς λόγοις ἐπιζητητέον, ὥσπερ οὐδ' ἐν τοῖς δημιουργουμένοις. τὰ δὲ καλὰ καὶ τὰ δίκαια, περὶ ὧν ἢ πολιτικὴ σκοπεῖται, πολλὴν ἔχει διαφορὰν καὶ πλάνην, ὥστε δοκεῖν νόμῳ μόνον εἶναι, φύσει δὲ μή. τοιαύτην δὲ τινα πλάνην ἔχει καὶ τὰγαθὰ διὰ τὸ πολλοῖς συμβαίνειν βλάβας ἀπ' αὐτῶν· ἤδη γὰρ τινες ἀπόλωντο διὰ πλοῦτον, ἕτεροι δὲ δι' ἀνδρείαν. ἀγαπητὸν οὖν περὶ τοιούτων [b20] καὶ ἐκ τοιούτων λέγοντας παχυλῶς καὶ τύπῳ τὰληθὲς ἐνδείκνυσθαι, καὶ περὶ τῶν ὡς ἐπὶ τὸ πολὺ καὶ ἐκ τοιούτων λέγοντας τοιαῦτα καὶ συμπεραίνεισθαι. τὸν αὐτὸν δὴ τρόπον καὶ ἀποδέχεσθαι χρεὼν ἕκαστα τῶν λεγομένων· **πεπαιδευμένου γὰρ ἐστὶν ἐπὶ τοσοῦτον τὰκριβὲς ἐπιζητεῖν καθ' ἕκαστον γένος, ἐφ' ὅσον ἢ τοῦ πράγματος φύσις ἐπιδέχεται**· παραπλήσιον γὰρ φαίνεται μαθηματικῷ τε πιθανολογοῦντος ἀποδέχεσθαι καὶ ῥητορικῶν ἀποδείξεις ἀπαιτεῖν.



This claim that the well-educated person does not seek an inappropriate level of precision in ethics is reinforced a few chapters later at I.7 1098a26-33 where he warns against going down too many “digressions” when thinking about ethics. This is the second great text I must confront:

[T2] “We should remember also what we said earlier, and not seek precision in all things alike, but in every case according to the underlying subject matter, and only so far as is appropriate to the inquiry in hand. For a carpenter and a geometer study the right angle in different ways: one studies it in so far as it is useful for his work; the other asks what it is or what sort of thing it is, since he is a spectator of the truth. **We should do likewise in other cases as well, so that our work is not taken over by digressions,**” (I.7 1098a26-33).<sup>11</sup>

It gets worse for me. Thirdly, he thinks it is too burdensome for the politician to investigate psychology any further than what aides in statecraft:

[T3] “So the expert in politics too should study the soul, and should study it for these reasons, and as far as is adequate for his inquiry. Going into further precision is **presumably more burdensome [ἐργωδέστερον ἴσως]**<sup>12</sup> than the project demands,” (I.13 1102a23-25, tr. Scott 183).<sup>13</sup>

On an initial reading of [T3], even if a high level of precision were possible in an account of a political problem, there is no reason to pursue that level of precision except insofar as it helps governance.

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<sup>11</sup> μεμνησθαι δὲ καὶ τῶν προειρημένων χρή, καὶ τὴν ἀκρίβειαν μὴ ὁμοίως ἐν ἅπασιν ἐπιζητεῖν, ἀλλ' ἐν ἑκάστοις κατὰ τὴν ὑποκειμένην ὕλην καὶ ἐπὶ τοσοῦτον ἐφ' ὅσον οἰκεῖον τῇ μεθόδῳ. καὶ γὰρ τέκτων καὶ γεωμέτρης διαφερόντως ἐπιζητοῦσι τὴν ὀρθὴν· ὁ μὲν γὰρ ἐφ' ὅσον χρησίμη πρὸς τὸ ἔργον, ὁ δὲ τί ἐστὶν ἢ ποῖόν τι· θεατὴς γὰρ τάληθοῦς.

<sup>12</sup> One may credibly translate “ἴσως” as “perhaps” or “maybe,” words that are weaker than “presumably.” This change would make [T3] easier to tackle, but Scott’s translation better reflects the dominant view.

<sup>13</sup> θεωρητέον δὴ καὶ τῷ πολιτικῷ περὶ ψυχῆς, θεωρητέον δὲ τούτων χάριν, καὶ ἐφ' ὅσον ἰκανῶς ἔχει πρὸς τὰ ζητούμενα· τὸ γὰρ ἐπὶ πλεῖον ἐξακριβοῦν ἐργωδέστερον ἴσως ἐστὶ τῶν προκειμένων.

So, from the above three passages it looks as though Aristotle does not think practical science can be very precise, and there appears to be at least three different reasons to hold this position:

- 1) Methodological – A study is only as exact as its methodology. Ethics starts by examining common beliefs (*ἔνδοξα*), which are inherently inexact.
- 2) Formal – Natural science and politics ask different questions such that to investigate the science behind a true view in ethics is to no longer do ethics.
- 3) Pragmatic – The systematic reading burdens the aspiring politician or political scientist with an unnecessary amount of requisite knowledge.

These objections all carry great weight and must be dealt with separately. I will consider Objection 1 for the rest of this chapter. **Chapter 2** will consider Objections 2 and 3.

## **§2 - Ethics as the Most Exact Craft**

So, I have got my work cut out for me, yet happily my position has a couple of passages in support of it, too. Book II, Chapter 1 of *NE* suggests that ethics (and thus politics) at least *can* be highly exact, as much as any craft anyway:

[T4] Further, the source and means that develop each virtue also ruin it, just as they do in a craft. For playing the harp makes both good and bad harpists, and it is analogous in the case of builder and all the rest; for building well makes good builders, and building badly makes bad ones. Otherwise, no teacher would be needed, but everyone would be born a

good or a bad craftsman. It is the same, then, with the virtues. For what we do in our dealings with other people makes some of us just, some unjust... (*EN* II.1 1103b7-15)<sup>14</sup>

One property of harp playing and house building that seems uncontroversial is that it is possible to have more or less exact knowledge of these skills such that expertise may be possible. Further, some crafts allow for a lot of expertise such as medicine. However, if ethics is like craft, and if it is a basic property of crafts that they have expertise and teachers, then it seems that ethics itself could have experts in some way should somebody commit themselves to becoming such an expert.

[T1]-[T3] seems to throw cold water on this hope by saying ethics may be a craft but only an inexact one. However, my next passage from *NE* II.6 gives us reason to doubt this interpretation and believe ethics can be extremely exact. In fact, he says virtue is more exact than any craft [“ἡ δ' ἀρετὴ πάσης τέχνης ἀκριβεστέρα καὶ ἀμείνων ἐστὶν”]. This is how Irwin translates it:

[T5]: “In this way, every scientific expert avoids excess and deficiency and seeks and chooses what is intermediate – intermediate relative to us, not in the object. This, then, is how each science produces its product well, by focusing on what is intermediate and making the product conform to that. This, indeed, is why people regularly comment on well-made products that nothing could be added or subtracted; they assume that excess or deficiency ruins a good [result], whereas the mean preserves it. Good craftsmen also, we say, focus on what is intermediate when they produce their product. **And since virtue, like**

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<sup>14</sup> ἔτι ἐκ τῶν αὐτῶν καὶ διὰ τῶν αὐτῶν καὶ γίνεται πᾶσα ἀρετὴ καὶ φθείρεται, ὁμοίως δὲ καὶ τέχνη· ἐκ γὰρ τοῦ καθαρίζειν καὶ οἱ ἀγαθοὶ καὶ κακοὶ γίνονται καθαρισταί. ἀνάλογον [10] δὲ καὶ οἰκοδόμοι καὶ οἱ λοιποὶ πάντες· ἐκ μὲν γὰρ τοῦ εὖ οἰκοδομεῖν ἀγαθοὶ οἰκοδόμοι ἔσσονται, ἐκ δὲ τοῦ κακῶς κακοί. εἰ γὰρ μὴ οὕτως εἶχεν, οὐδὲν ἂν ἔδει τοῦ διδάξοντος, ἀλλὰ πάντες ἂν ἐγίνοντο ἀγαθοὶ ἢ κακοί. οὕτω δὲ καὶ ἐπὶ τῶν ἀρετῶν ἔχει· πράττοντες γὰρ τὰ ἐν τοῖς συναλλάγμασι [15] τοῖς πρὸς τοὺς ἀνθρώπους γινόμεθα οἱ μὲν δίκαιοι οἱ δὲ ἄδικοι...”

nature, is better and more exact than any craft, it will also aim at what is intermediate,” (EN II.6 1106b8-16).<sup>15</sup>

[T5] claims that when a craftsman approaches an object, they try to achieve the τέλος of their task as precisely as possible since reaching the goal of something is reaching what is best for that thing (cf. 1252b27-1253a2). If the craftsman truly hits their target, then the object will be “just right” in every relevant respect.

[T5] pushes against the normal reading of [T1]-[T3] because [T5] allows for ethics to be a field of intense intellectual engagement, one that can produce as great of experts as any other craft. But how do we account for [T1]-[T3] making it clear that there are limits to ethics’ exactness? Well, just because ethics is the most exact sort of productive knowledge does not imply that it is the most exact sort of knowledge unconditionally. Arithmetic and geometry are the gold standards of exactness, and Aristotle clearly does not believe ethics can reach their level.<sup>16</sup> However, physics, biology, and psychology all seem like respectable sciences with a body of ἐπιστήμη, and a given craft can certainly possess strong connections to ἐπιστήμη (cf. *Po. An.* I.9 76a23-25).<sup>17</sup> Further, even though scientific knowledge is more exact than productive knowledge, [T5] suggests skills are still highly important and worthwhile in their knowledge. But then, if ethics is more exact than an already fairly exact craft such as building or medicine, that would suggest ethics occupies an extraordinarily high place in Aristotle’s epistemic hierarchy. While this still precludes the Platonic dream of mathematizing ethics, ethics as a τέχνη can still be made highly

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<sup>15</sup> εἰ δὴ πᾶσα ἐπιστήμη οὕτω τὸ ἔργον εὖ ἐπιτελεῖ, πρὸς τὸ μέσον βλέπουσα καὶ εἰς τοῦτο ἄγουσα τὰ ἔργα (ὅθεν εἰώθασιν [10] ἐπιλέγειν τοῖς εὖ ἔχουσιν ἔργοις ὅτι οὐτ’ ἀφελεῖν ἔστιν οὔτε προσθεῖναι, ὡς τῆς μὲν ὑπερβολῆς καὶ τῆς ἐλλείψεως φθειρούσης τὸ εὖ, τῆς δὲ μεσότητος σφζούσης, οἱ δ’ ἀγαθοὶ τεχνῖται, ὡς λέγομεν, πρὸς τοῦτο βλέποντες ἐργάζονται)· ἢ δ’ ἀρετὴ πάσης τέχνης ἀκριβεστέρα καὶ [15] ἀμείνων ἔστιν ὥσπερ καὶ ἡ φύσις, τοῦ μέσου ἂν εἴη στοχαστική.

<sup>16</sup> While the distinction between Plato and Aristotle with regards to their concern for practicality is overblown, the notion Plato believed ethics was capable of a higher maximum precision than Aristotle is uncontroversial.

<sup>17</sup> “ἢ δ’ ἀπόδειξις οὐκ ἐφαρμόττει ἐπ’ ἄλλο γένος, ἀλλ’ ἢ ὡς εἴρηται αἱ γεωμετρικαὶ ἐπὶ τὰς μηχανικὰς ἢ ὀπτικὰς καὶ αἱ ἀριθμητικαὶ ἐπὶ τὰς ἀρμονικὰς.

exact. [T1] – [T3] pose no threat to me because they only temper the level of exactness to expect from a decent *logos* in ethics for the situations which face us on a day-to-day basis and which we need to make a choice about immediately, not that the level of exactness such a *logos* is capable of is low *qua logos*.

It is on this point we should better recognize how high a status he accords technical knowledge, defining it as follows in Book Six, chapter 4 of the *Ethics*:

[T6] Now building, for instance, is a craft, and is essentially a certain state involving reason concerned with production; there is no craft that is not a state involving reason concerned with production, and no such state that is not a craft. **Hence a craft is the same as a state involving true reason concerned with production [εἷη τέχνη καὶ ἕξις μετὰ λόγου ἀληθοῦς ποιητική]. (VI.4 1140a6-10)**<sup>18</sup>

Firstly, identifying *τέχνη* at a10 with states “involving true reason concerned with production” clearly marks *τέχνη* out as a distinctly rational - and thus human - ability. And the intellectual aspect of this is confirmed in the next couple lines where the objects produced by the *τέχνη* are described as depending on their maker and their intelligence (1140a11-16).<sup>19</sup>

Secondly, the closeness of *τέχνη* to *ἐπιστήμη* suggested by the passages above does not mean only a few activities properly would qualify as *τέχνη*. Instead, the domain of *τέχνη* is very broad indeed and includes: Music and dance,<sup>20</sup> sculpture,<sup>21</sup> painting,<sup>22</sup> and architecture.<sup>23</sup> He even

<sup>18</sup> οὔτε γὰρ ἡ πρᾶξις ποιήσις οὔτε ἡ ποιήσις πρᾶξις ἐστίν. ἐπεὶ δ' ἡ οἰκοδομικὴ τέχνη τίς ἐστι καὶ ὅπερ ἕξις τις μετὰ λόγου ποιητικῆ, καὶ οὐδεμία οὔτε τέχνη ἐστίν ἥτις οὐ μετὰ λόγου ποιητικῆ ἕξις ἐστίν, οὔτε τοιαύτη ἢ οὐ τέχνη, **ταυτὸν ἂν εἷη τέχνη καὶ ἕξις μετὰ λόγου ἀληθοῦς ποιητικῆ.**

<sup>19</sup> ἔστι δὲ τέχνη πᾶσα περὶ γένεσιν καὶ τὸ τεχνάζειν καὶ θεωρεῖν ὅπως ἂν γένηται τι τῶν ἐνδεχομένων καὶ εἶναι καὶ μὴ εἶναι, καὶ ὧν ἡ ἀρχὴ ἐν τῷ ποιῶντι ἀλλὰ μὴ ἐν τῷ ποιουμένῳ· οὔτε γὰρ τῶν ἐξ ἀνάγκης ὄντων ἢ γινομένων ἢ τέχνη ἐστίν, οὔτε τῶν κατὰ φύσιν· ἐν αὐτοῖς γὰρ ἔχουσι ταῦτα τὴν ἀρχήν.

<sup>20</sup> [T4]; *Poet.* §1 1447a21-8; *Pol.* VIII.3 ff., esp. 1337b22-32; VIII.5 1339a23-4

<sup>21</sup> *Poet* §1 1 47a20; *PA* I.1 640a32

<sup>22</sup> *PA* I.4 645a12; *Poet.* I.1 1447a19

<sup>23</sup> [T5]; *PA* I.639b12 ff.; *Pol.* III.11 1281b12-15

identifies *τέχνη* with this sort of intellectual state [...εἴη τέχνη καὶ ἕξις...]; he does not merely define it as a species of this state. This all implies a very wide notion of *τέχνη*. Further, while he generally appears to not consider technical knowledge to be at the same level as *ἐπιστήμη*,<sup>24</sup> he conflates them elsewhere, suggesting substantial similarities.<sup>25</sup>

In summary, a *τέχνη* is being able to put your mind at work in the world in a particular way. As such, Aristotle does not see comparing ethics to a craft as a criticism or disclaimer about the potential of ethics as an exact field of study. However, one clear difference between ethics and other crafts is that with ethics we are learning how manipulate and cultivate ourselves as natural kinds, not as artificial objects. This is where Aristotle's essentialism becomes relevant because natural objects possess their *τέλος* as a product of their form (*PA* I.1 639b19).<sup>26</sup> What we are “building” in accordance with is not the wishes of the craftsman or some customer but the dictates of nature itself, something brought out in [T5], especially the last sentence: “ἡ δ' ἀρετὴ πάσης τέχνης ἀκριβεστέρα καὶ ἀμείνων ἐστὶν ὥσπερ καὶ ἡ φύσις.” It is after he calls virtue better and more exact than any skill that he introduces the comparison to nature (“ὥσπερ καὶ ἡ φύσις”). This sentence of [T5] should thus read:

[T5-1] “And as virtue is more exact and better than any craft, just like nature, so too virtue will aim at what is intermediate.” (*NE* II.6 1106b15-16)

Consider what this means if we were to push the craftsman analogy in [T5]-[T6] a bit further. When a craftsman determines how best to construct an artifact (e.g. a rug for a house) she would

<sup>24</sup> *EN* VI.3-4 1139b14ff.; Halliwell 1986: 47 n.5

<sup>25</sup> *Po. An.* I.29 46a22, *Met.* A.1 981a1-b9, *EN* I.6 1097a4-8, *Rhet.* I.1 1355b32. A number of *τέχνη*, particularly music, even contain elements of the divine in its use of harmony (Fr. 47 R<sup>3</sup> = [Plutarch], *de musica* 1139B).

<sup>26</sup> This is the mistake the Democritus and Empedocles made, by forgetting that nature provides a meaning of “necessary” whereby it is natural for something to develop or act in a particular way (*PA* I.1 639b21; for Empedocles: *PA* I.1 640a18, *Phys.* II.4 196a19-24; Cherniss 1964: 253, 256; KRS 1983: 307). He says they touch on form and essence “only very slightly,” not enough to make this connection at any rate. This is discussed more in **Chapter 4** and **Chapter 5**.

look to the examples of the old masters and leaders in her craft, the “state of the art.” But just as importantly she would consider what purpose she wants her product to serve: is the rug meant to really tie the room together or just provide a spot for people to wipe their feet before stepping inside? This question of use would concern any rug-maker when producing their next rug, but the answer to this question would appear to be reliant upon the wishes of the client or customer. However, as customers can be fickle and particular in their preferences, this makes the craftsman consider these teleological questions each time she makes a rug: an orange shag rug makes quite a statement but may not be appealing as a doormat.

Now consider how these teleological questions apply to ethics. To what would the craftsmen in ethics look in order to becoming a more perfect human being or running a *polis* more successfully? The answer appears clear under Aristotle’s telling: if nature is the source of a human’s τέλος, then she should look to nature to inform her what an excellent human being would do. Aspasius’ commentary on 1106b14-15 captures this connection to nature, recalling one of Aristotle’s most famous proclamations: “In fact nature is better than art, for art imitates nature. And virtue is still better, for virtue is the perfection of nature and is nature corrected.”<sup>27</sup> Ethics, then, is similar to a craft in that they both consider what the purpose of the productive action is; ethics however looks towards nature and not a particular person or instance to determine what this purpose is, making ethics more predictable and generalizable in its principles than other crafts.

Lastly, my interpretation of [T6] is compatible with [T1]. [T1] says there is going to be some inexactness, “such that some think it is by convention only, not by nature.”<sup>28</sup> He goes on to show that such relativism is mistaken, but he is cautioning against drawing the conclusion that,

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<sup>27</sup> For “art imitates nature” Cf *NE* I.9 1099b21-23, X.5 1175a23ff.; *Met.* VII.7 1032a12ff.; *Meteo.* IV.3 381b6; *PA* I.1 639b16; *Phys* II.2 194a21.ff, II.8 199a16; *Pol.* VII.14 1333a22-4; *Prot. Frs.* B13, 14, 23 During; [Arist] *de Mundo* 396b12. Cf. Alex (*Meteo* 197,1-8 *ad Meteo.* *ibid.*).

<sup>28</sup> ὅσπερ δοκεῖν νόμῳ μόνον εἶναι, φύσει δὲ μή...

because there is inexactness, there is no scientific backing to political science. [T1] never precludes science from the conversation, only that we cannot expect identical exactness to that of mathematics. Thus, the indexing of a τέλος to a particular species enmattered as a particular is static and analyzable as a science. Moreover, if this stable, static τέλος along with its correlate concepts such as *ousia* and *ergon* are the basic stuff of ethics, then ethics has a uniquely stable foundation as a τέχνη.<sup>29</sup>

### §3 – Architectonic *Phronesis*: Aggregated *Phronesis* or Substantively different?

However, consider the following complication. Sure, if the craftsman were looking at just what the techniques and paradigms of her craft are, then universal knowledge would be sufficient. But the craftsman has to deal with a particular commission from a patron now and must deal with the supplies and tools they have to meet that need. Something similar holds for ethics as well. The basic principles of the craft might be fixed, but each particular ethical case requires its own “supplies and tools” to achieve the right mean. How does universal knowledge help in the particular, often not entirely straightforward world of particular ethical decisions?

Aristotle himself was aware of this difference and the problems it poses for thinking about the structure of our practical knowledge at 1141b14-26:

[T7] “Nor is *phronesis* about universals only. It must also acquire knowledge of particulars, since it is concerned with action and action is about particulars. That is why in other areas also some other people who lack knowledge but have experience are better in action than

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<sup>29</sup> There is a tacit meta-ethical theorem here that there is a corresponding field of ethics for each species as every living being has a corresponding success activity where their τέλος is realized which can be called *eudaimonia*. However, the flourishing of a peach tree is probably a bit different from the flourishing my mother’s cat experiences or that I can experience.



others who have knowledge. For someone who knows that light meats are digestible and hence healthy, but not which sorts of meat are light, will not produce health; the one who knows that bird meats are light and healthy will be better at producing health. And since *phronesis* is concerned with action it must possess both [the universal and the particular knowledge] or the [particular] more [than the universal]. Here too, however, [as in medicine] there is a ruling [science].” Political science and prudence are the same state, but their being is not the same.”<sup>30</sup>

Here he emphasizes that action is concerned with particulars. Knowing light meats are digestible is scientific,<sup>31</sup> but it is further knowing that poultry “in particular” is digestible that we are able to actually acquire health.

One way to elaborate on Aristotle’s point here in stricter categorial terms (cf 1142a25 -31) is that a genus is a secondary substance that is said in another secondary substance, and this latter secondary substance subsists only in the particular individual substance it is the form of. Because the secondary substances both supervene on the primary substance, there is no example of just a “light meat” without any further species membership. Chicken, duck, and quail are all specific types of light meat because they are species which then have individual substances belonging to them. The proposition <<Light meats are digestible and healthy>> first “moves down” a level to specifying which species’ meat is digestible. So the resulting proposition is: <<chicken meat is

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<sup>30</sup> ὁ δ' ἀπλῶς εὐβουλος ὁ τοῦ ἀρίστου ἀνθρώπου τῶν πρακτῶν στοχαστικὸς κατὰ τὸν λογισμὸν. οὐδ' ἐστὶν ἡ φρόνησις τῶν [b15] καθόλου μόνον, ἀλλὰ δεῖ καὶ τὰ καθ' ἕκαστα γνωρίζειν· πρακτικὴ γάρ, ἢ δὲ πράξις περὶ τὰ καθ' ἕκαστα. διὸ καὶ ἐνιοὶ οὐκ εἰδότες ἐτέρων εἰδῶτων πρακτικώτεροι, καὶ ἐν τοῖς ἄλλοις οἱ ἔμπειροι· εἰ γὰρ εἰδείη ὅτι τὰ κοῦφα εὐπεπτα κρέα καὶ ὑγιεινά, ποῖα δὲ κοῦφα ἀγνοοῖ, οὐ ποιήσει ὑγίαιαν [b20], ἀλλ' ὁ εἰδὼς ὅτι τὰ ὀρνίθια [κοῦφα καὶ] ὑγιεινὰ ποιήσει μᾶλλον. ἢ δὲ φρόνησις πρακτικὴ· ὥστε δεῖ ἄμφω ἔχειν, ἢ ταύτην μᾶλλον. εἴη δ' ἂν τις καὶ ἐνταῦθα ἀρχιτεκτονική. Ἔστι δὲ καὶ ἡ πολιτικὴ καὶ ἡ φρόνησις ἢ αὐτὴ μὲν ἕξις, τὸ μέντοι εἶναι οὐ ταῦτὸν αὐταῖς. τῆς δὲ περὶ [b25] πόλιν ἢ μὲν ὡς ἀρχιτεκτονικὴ φρόνησις νομοθετικὴ, ἢ δὲ ὡς τὰ καθ' ἕκαστα τὸ κοινὸν ἔχει ὄνομα, πολιτικὴ· αὐτὴ δὲ πρακτικὴ καὶ βουλευτικὴ· τὸ γὰρ ψήφισμα πρακτὸν ὡς τὸ ἔσχατον.

<sup>31</sup> This will be more relevant in later chapters, but notice scientific knowledge is presented in the form of a capacital statement about light meats. What makes a light meat is that it is capable of being digested easily.

digestible and healthy.>> The action comes after going from knowledge about this most specific secondary substance to the primary substance itself: <<*This* chicken meat is digestible and healthy. Let's eat!>>

However, while he distinguishes *epistemae* and *phronesis* along these terms that does not mean *epistemae* has no relation to *phronesis* or that it is not more preferable to have *epistemae* and *phronesis* together. Knowing that chicken is healthy and digestible is important for producing health in a particular case, but an advantage of having *epistemae* about light meat is that such knowledge is transferrable to other species which have light meat. *Epistemae* thus can serve as a primer or provide an initial level of knowledge that experience can work from. I will not have to try the duck meat itself for me to know it is digestible or healthy, if I know a feature of the genus of fowl is that their meat is digestible and that ducks are fowl.

Aristotle describes *phronesis* as needing knowledge of both universals and particulars, and it is exactly because of this transferability. If one knows that red meat is linked to heart disease, then one does not have to try ground chuck, flank steak, or a beef rib each individually to know those can cause heart disease. One will know that it is necessary these meats tend to cause heart problems due to knowledge about their genus, yet the mechanism by which an aggregate of experiences of eating burgers and T-bone steaks would be able to justify such a necessity claim about meats outside of just those burgers or steaks is mysterious in lieu of some sort of more intensive knowledge about red meats *qua* red meats.

So scientific knowledge and practical wisdom are non-identical, and Aristotle implies that at least some knowledge of universals is required for proper *phronesis*. Yet [T7], by itself, does not entail the position that one must have formally studied a particular science to have knowledge of universals: our minds have the possibility of forming judgments about universals perfectly well

without the aid of scientists. But if knowledge of universals can be acquired at the same time as we acquire knowledge of the particulars, then understanding of universals is something even normal people going about their lives are capable of obtaining and in fact do obtain. If so, then all Aristotle has really asserted above about ethics as a craft is that people usually learn about other people and what makes them tick by interacting with individual people.

I admit that does not sound like a very exciting conclusion on its face, but just wait: this conclusion ascribes to the average person an impressive array of cognitive tools by Aristotle's lights, enough to make even average people highly valuable as a starting place for constructing a field of inquiry such as ethics. This idea will form the basis for my response to Objection 1, the supposed methodological limitation.

#### §4 – First Reason: ἔνδοξα as source of inexactness

So, why does Aristotle's caution us so much in [T1]-[T3] anyway? One reason might be methodological. The argument goes like this: he commonly starts his ethical inquiry with gathering “ἔνδοξα,” a noun often translated as “reliable opinions”. But these opinions, while reliable, are still inherently inexact, and the very definition of ἔνδοξα in the *Topics* shows just how hazy they can be:

[T8] ἔνδοξα are those opinions accepted by everyone, or by the majority, or by the wise— and among the wise, by all or most of them, or by those who are the most notable and having the highest reputation (*Top.* I.1 100b21–23).<sup>32</sup>

That is a wildly diverse range of forms ἔνδοξα can take, and this introduces at least one source of inexactness as the process of reconciling these opinions will not obviously result in an answer that

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<sup>32</sup> ἔνδοξα δὲ τὰ δοκοῦντα πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς σοφοῖς, καὶ τούτοις ἢ πᾶσιν ἢ τοῖς πλείστοις ἢ τοῖς μάλιστα γνωρίμοις καὶ ἐνδόξοις.

is as necessary or as exact as a scientific theory. Here is the principal passage which describes what we do with these *ἔνδοξα*, the endoxic method itself:

[T9] As in other cases, [i] we must set out the appearances [*φαινόμενα*] and run through [ii] all the puzzles regarding them. In this way we must prove the reliable opinions [*ἔνδοξα*] about these sorts of experiences—**ideally, all the reliable opinions, but if not all, then most of them**, [iii] those which are the most authoritative [*κυριώτατα*]. For if the objections are answered and the reliable opinions remain, we shall have an adequate proof. (*EN* VII.1 1145b2–7)<sup>33</sup>

Proponents of Objection 1 often interpret [T9] as a programmatic statement about the preferred method for starting places on ethical inquiry: the *ἔνδοξα* are what we interpret the *φαινόμενα* through, and the goal of the method is finding the best opinion that provides a coherent, credible account of the *φαινόμενα*. The implication is that, after settling on a set range of *ἔνδοξα*, the process is ultimately eliminative: from an initial set we settle on a handful or even just one view which provide together or by itself the authoritative account. But depending on what counts as “credible” this process could result in either far too many or far too few *ἔνδοξα* being used to analyze the appearance. Aristotle is wise to this limitation, and so he cautions us against exacting results in ethics as such exactness would be built on the sand of *ἔνδοξα*.

I have to admit there is much going for this explanation as one can detect a dual ambiguity in [T8] and [T9]. The first ambiguity is knowing how to determine the level of “credibility” itself, providing a list of criteria for narrowing down an indefinite number of opinions ranging from everybody to the majority to only the wise. The second ambiguity is knowing when you have

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<sup>33</sup> δεῖ δ', ὥσπερ ἐπὶ τῶν ἄλλων, τιθέντας τὰ φαινόμενα καὶ πρῶτον διαφορήσαντας οὕτω δεικνύναι μάλιστα μὲν πάντα τὰ ἔνδοξα περὶ ταῦτα τὰ πάθη, εἰ δὲ μή, τὰ πλεῖστα καὶ ku' ἐὰν γὰρ λύηται τε τὰ δυσχερῆ καὶ καταλείπεται τὰ ἔνδοξα, δεδειγμένον ἂν εἶη ἰκανῶς.

allowed in a sufficient number of initially credible *ἔνδοξα* for the process to arrive at a sufficiently authoritative conclusion. Even if we are able to resolve the first ambiguity and are able to determine whose opinions to collect and value the most, we still do not know how many of these opinions is sufficient to confidently reach a conclusion.

Further, it appears as though the *endoxic* method is somewhat conservative in its approach as it merely tries to sift through the opinions collected until the last one is left standing. This is the essence of what Davia (384) calls the **Standard Account (SA)** of *ἔνδοξα*. The SA as found in [T9] seems to consist of three steps:

- i. We “set the phenomena before us,”<sup>34</sup> which the Standard Account takes to mean establishing “starting points of inquiry by enumerating the *ἔνδοξα* about the subject matter,” (Davia’s language).
- ii. The content of true *ἔνδοξα* can already be found in this initial “setting of phenomena before us,” even if some refinement or rationalization is necessary (e.g. with epic poets)
- iii. The *endoxic* method then sifts through these various *ἔνδοξα* with the aim of developing the most consistent, authoritative, and believable account of some subject matter.

The Standard Account is called standard for a reason because, even if one believes Aristotle uses the method very little (e.g. Frede, Irwin, Greenwood) or uses it regularly (e.g. Barnes, Owen, Stewart), this is how the method itself is essentially interpreted.<sup>35</sup>

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<sup>34</sup> Aristotle refers to garden-variety *ἔνδοξα* as appearances sometimes (*EN* IV.3 1123b22-4; *Top.* I.14 105b1, 159b21, *Pr. An.* I.1 24b11, *EE* I.5 1216b26-8).

<sup>35</sup> There are many, many accounts of the *endoxic* method that essentially hold to the SA including from influential authors including: Barnes 1980: 494-5; Burnet 1902: p. xxxix; Cooper 1975: 69; Devereux 2015; Frede 2012”; Grant 1874: II.144; Grote 1872: I.286; Jost 1991; Karbowski 2015; Nussbaum 2001: ch. 8; Roche 1988; Sherman 1989: 8; Shields 2014: 24–28; Sidgwick 1962: xix-xxi; cf. Owen 1986; Woods 1992: 58; Zingano 2007.

The issue with *ἔνδοξα* under **SA** is that there is no clear space for independent empirical investigations. While Aristotle's highly realist account of perception can provide backing for why *ἔνδοξα* are valuable and fairly reliable, this method does not recommend further naturalistic study as enough empirical observation is done in normal human life so as to make the resulting conclusions sufficient for study. In this way, **SA** exhibits the essence of the infamous gap between Aristotle's science and ethics. On the one hand, Aristotle elsewhere is clearly committed to the idea that careful empirical study can reveal to us the essence of any species and reveal the first principles of nature, even if we are forced to revise fairly deep-rooted intuitions in the process.<sup>36</sup> On the other hand, we find Aristotle the ethical conservative, content to sift through existing opinions and seeming to use only reactions to these opinions as the basis for new judgments and *ἔνδοξα*.

How do we close this yawning divide? We do so by realizing that *ἔνδοξα* can in fact be far more exact than this objection assumes, even with (in fact partially because of) a very large domain of *ἔνδοξα*. This is to endorse what I call the **Inclusive Reading (IR)** of [T9]

To see why, consider the first ambiguity mentioned about the method: determining the initial domain of *ἔνδοξα*. In its narrowest construal, *ἔνδοξα* might just include sufficiently educated people. It may include even only specialists among that group such as poets and statesmen, people who may have special insight on human nature. This understands *ἔνδοξα* as exclusive and possessing relevant *ἔνδοξα* is a privileged epistemic state; I thus call it the **Privileged Reading (PR)**. **PR** offers a more parsimonious method with fewer half-baked opinions to sort through. It further offers an intuitive reason for doing so in ethics: With regards to ethics, asking people who are apparently happy/doing well for themselves what they are happy about seems a reasonable

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<sup>36</sup> E.g. *Po. An.* II.13 97b7-39; *Top.* VIII.1 156b10-17, VIII.2 157a25-33, VIII.2 157b3-8, VIII.8 160a37-9; *PA* I.3 643b9-26, I.4 644b1-8.

place to start when determining how to become happy. You likely would not ask the constantly miserable or angry person for advice on how to become happy. In this way, **PR** seems eminently “commonsense” as an approach, and it is the one with the lowest level of endoxic noise.

However, we are still left the ambiguity of what this level of privilege is, and we are faced with a further issue in making sure the criteria for “esteem” is not a product of our own blinkered upbringing. **PR** may include the wealthy under some valuations, but others may not think wealth is a sign of esteem and reliable opinion as there are plenty of rich people who are overworked and miserable in life otherwise.

So the **PR** benefits from being very close to describing the general approach the average person may take to determining the answer to a problem. However, it still suffers from a number of ambiguities with regards to its selection process. If **PR** is the correct view of the endoxic method, then Objection 1 looks tough to defeat.

However, it is also possible that the scope of *ἔνδοξα* can be expansive, even categorically including all humans, such that possessing *ἔνδοξα* is no longer a privileged state. The **Inclusive Reading (IR)** argues Aristotle does have a more expansive view of *ἔνδοξα*, one that goes far beyond just including elites. I ultimately support **IR** and think there are compelling textual reasons to support it. To provide one example, at *NE* I.5 he declares it is foolish to deny what everybody takes to be true, even substantive ethical beliefs such as that the gods are happy.<sup>37</sup> If **PR** were true, his point would have been sufficient by just saying it is foolish to doubt what the wise universally believe. Yet he includes everybody. Kraut (79), a proponent of **IR**, capitalizes on this clue among others and argues that the scope of *ἔνδοξα* encompasses the opinions held by the average person.

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<sup>37</sup> *NE* I.5 1096a2-6.

He further shows that Aristotle does not rest at including the conventional, commonly held views as he also allows for new, more innovative insights, delimiting the domain of ἔνδοξα.

On the question of whether the specialist, the educated elite, or average people should be included, Kraut's response is: yes. In this way, **IR** clears up the question over the scope of the domain of the ἔνδοξα by just including everybody.

However, a supporter of **PR** could ask why this is at all necessary as **IR** still accepts that there are classes of people who might be more worthy of consideration than others depending on the area of inquiry. If the goal of the method is to establish the most authoritative opinions, why open the floodgates to the noise of useless and half-baked views when we already know where to look?

First, we do not always know where to look as Aristotle admits there are places in which we have insufficient appearances.<sup>38</sup> Secondly, Aristotle constantly affirms that a mark of a good theory is that it holds across a wide range of appearances<sup>39</sup> and explain why it is reasonable to expect why we might find those various appearances.<sup>40</sup> That we should seek out these appearances and those who have them to test a theory against is heavily implied by these passages. He makes the commission clear at *PA* I.5 644b22-645a2<sup>41</sup> and *GA* I.2 716a2-4.<sup>42</sup> Indeed, in *PA* I.5 we find Aristotle meditating on the various limitations and advantages of our investigations into terrestrial and celestial matters. When it comes to more terrestrial matters, including geology, meteorology,

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<sup>38</sup> *DC* I.4 270b13-17; II.5 287b29-288a12; II.12 291b24-8; II.12 292a15-19; *Meteo.* I.7 344a5-9; *PA* I.5 644b22-645a4.

<sup>39</sup> *GC* I.2 316a5-10; cf. *Met.* A.5 986a6-8, Z.10 1039b25-9; *Top.* VIII.3 158a36-7; *GA* I.2 716a2-4.

<sup>40</sup> *Meteo.* I.3 341a29-31, *Met.* M.10 1087b1-3; *Sens.* §6 446a7-10, §6 446a28-b2; *On Youth* §2 468a20-5, §3 469a23-b1; *PA* III.4 667b6-10; *GA* I.1 715b7-16, I.18 725b6, I.20 728a25-31, I.20 729a9-14, I.23 731a24-39, III.2 753a27-30, III.10 760b17-22, III.11 761a14-19.

<sup>41</sup> πολλὰ γὰρ περὶ ἕκαστον γένος λάβοι τις ἂν τῶν ὑπαρχόντων βουλόμενος διαπονεῖν ἱκανῶς.

<sup>42</sup> Περὶ δὲ τῶν ἄλλων ζώων τῆς γενέσεως λεκτέον κατὰ τὸν ἐπιβάλλοντα λόγον καθ' ἕκαστον αὐτῶν, ἀπὸ τῶν εἰρημένων συνείροντας.



zoology, and other sciences that are more closely related to political concerns, Aristotle is surprisingly sanguine and optimistic:

**[T10] Of substances constituted by nature some are ungenerated, imperishable, and eternal, while others are subject to generation and decay. The former are excellent and divine, but less accessible to knowledge. The evidence that might throw light on them, and on the problems which we long to solve respecting them, is furnished but scantily by sensation; whereas respecting perishable plants and animals we have abundant information, living as we do in their midst, and ample data may be collected concerning all their various kinds, if only we are willing to take sufficient pains [πολλὰ γὰρ περὶ ἕκαστον γένος λάβοι τις ἂν τῶν ὑπαρχόντων βουλόμενος διαπονεῖν ἱκανῶς]. Both departments, however, have their special charm. The scanty conceptions to which we can attain of celestial things give us, from their excellence, more pleasure than all our knowledge of the world in which we live; just as a half glimpse of persons that we love is more delightful than an accurate view of other things, whatever their number and dimensions. On the other hand, in certitude and in completeness our knowledge of terrestrial things has the advantage. Moreover, their greater nearness and affinity to us balances somewhat the loftier interest of the heavenly things that are the objects of the higher philosophy.<sup>43</sup> (tr. ORT)**

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<sup>43</sup> Τῶν οὐσιῶν ὅσαι φύσει συνεστᾶσι, τὰς μὲν ἀγενήτους καὶ ἀφθάρτους εἶναι τὸν ἅπαντα αἰῶνα, τὰς δὲ μετέχειν γενέσεως καὶ φθορᾶς. Συμβέβηκε δὲ περὶ μὲν ἐκείνας τιμίας οὐσας καὶ θείας ἐλάττους ἡμῖν ὑπάρχειν θεωρίας (καὶ γὰρ ἐξ ὧν ἂν τις σκέψαιτο περὶ αὐτῶν, καὶ περὶ ὧν εἰδέναί ποθοῦμεν, παντελῶς ἐστὶν ὀλίγα τὰ φανερά κατὰ τὴν αἴσθησιν), περὶ δὲ τῶν φθαρτῶν φυτῶν τε καὶ ζῴων εὐποροῦμεν μᾶλλον πρὸς τὴν γνῶσιν διὰ τὸ σύντροφον· πολλὰ γὰρ περὶ ἕκαστον γένος λάβοι τις ἂν τῶν ὑπαρχόντων βουλόμενος διαπονεῖν ἱκανῶς. Ἔχει δ' ἑκάτερα χάριν. Τῶν μὲν γὰρ εἰ καὶ κατὰ μικρὸν ἐφαπτόμεθα, ὅμως διὰ τὴν τιμότητα τοῦ γνωρίζειν ἥδιον ἢ τὰ παρ' ἡμῖν ἅπαντα, ὥσπερ καὶ τῶν ἐρωμένων τὸ τυχὸν καὶ μικρὸν μόνον κατιδεῖν ἥδιον ἐστὶν ἢ πολλὰ ἕτερα καὶ μεγάλα δι' ἀκριβείας ἰδεῖν· τὰ δὲ διὰ τὸ μᾶλλον καὶ πλείω γνωρίζειν αὐτῶν λαμβάνει τὴν τῆς ἐπιστήμης ὑπεροχὴν, ἔτι δὲ διὰ τὸ πλησιαιτέρα ἡμῶν εἶναι καὶ τῆς φύσεως οἰκειότερα ἀντικαταλλάττεται τι πρὸς τὴν περὶ τὰ θεῖα φιλοσοφίαν.

While he acknowledges the limitations of our knowledge as it stands with regards to natural science, these limits can be overcome, “if only we are willing to take sufficient pains.” There is a further reason to support **IR** over **PR**, by **PR**’s own lights. Consider that the sources for reliable opinions in a particular matter do not have to track the general reputations those sources enjoy in society at large. Aristotle never states that there must exist such a tracking to acquire an appropriate initial set of *ἔνδοξα*, even though he was prejudicial in his own particular collections of *ἔνδοξα* with respect to both his general emphasis on *ἔνδοξα* held by male citizens and relative erasure of *ἔνδοξα* held by ones such as women and slaves.

Aristotle was an imperfect collector of *ἔνδοξα*, but the formulator of a method in science does not have to be the method’s exemplar practitioner. They are pioneers, not masters. Additionally, besides Aristotle never stating such a correspondence between societal esteem and reliability, easy examples suggesting he denied such a correspondence are some of the philosophers he approvingly cites and draws opinion from at times, ones such as Anaxagoras (exiled from Athens as an atheist and had his books burned) and Socrates (executed by Athens as a corrupter of youth).

If there is no such correspondence, this opens up the method considerably, especially when we give Aristotle’s theory of perception its full due. Consider that manual laborers may have certain opinions that the comfortable philosopher or successful politician just do not possess, and it is exactly because of these laborers’ direct experience with these appearances that their opinions can be taken as reliable. Their knowledge is of things better known to us, subjects which (to again quote [T10]) “have a greater affinity to us” and balance our loftier obsessions. **PR** would have to provide a reason to think we can safely locate these relevant appearances among only the social elite, those we already think of as reliable. Yet it is not obvious Aristotle thinks this; everyday life

seems to speak against such a position; and Aristotle is generally confident that direct empirical experience provides us with a bevy of reliable information. In contrast, **IR** cuts through all the methodological confusion by including both the farmer and the philosopher.

The argument above relies on the idea that even the non-esteemed have sufficient capacities so that they could create credible opinions in respective fields. However, it is clear Aristotle sees the beliefs of common people as valuable given other aspects of his psychology and theory of perception. This optimism about the intellectual curiosity and abilities of the ordinary person is backed up all throughout the Corpus including in the very first line of the *Metaphysics* that "All humans by nature desire to know":

[T11] All humans by nature desire to know. A sign of this is the pleasure people take in having perceptions; for even apart from their usefulness they take delight in these perceptions for themselves, and above all vision. For not only with a view towards action, but even whenever we are not going to do anything, we prefer seeing to almost everything. The reason is that this, most of all the senses, makes known to us and makes clear many differences. *Met.* I.1 980a21-27 (tr. Ross with small modifications) <sup>44</sup>

See the prominent place he gives vision. In *De Sensue* we find out that sight provides us with properties related to both primary and secondary substances as well: shape, magnitude, motion, and number (*De Sens.* §1 437a12-17). Shape (cf. *Cat.* §8 10a11) is especially important because it forms the basis for the discrimination of different objects, and he thinks shape really does exist in primary substances in a way number and magnitude do not (193b23-25). His favorite case is the

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<sup>44</sup> “Πάντες ἄνθρωποι τοῦ εἰδέναι ὀρέγονται φύσει. σημεῖον δ' ἡ τῶν αἰσθήσεων ἀγάπησις· καὶ γὰρ χωρὶς τῆς χρείας ἀγαπῶνται δι' αὐτάς, καὶ μάλιστα τῶν ἄλλων ἢ διὰ τῶν ὀμμάτων. οὐ γὰρ μόνον ἵνα πράττωμεν ἀλλὰ καὶ μηθὲν [25] μέλλοντες πράττειν τὸ ὄρᾶν αἰρούμεθα ἀντὶ πάντων ὡς εἰπεῖν τῶν ἄλλων. αἴτιον δ' ὅτι μάλιστα ποιεῖ γνωρίζειν ἡμᾶς αὕτη τῶν αἰσθήσεων καὶ πολλὰς δηλοῖ διαφορὰς.” (see also Alex. in *Met.* 1,2-7; Irwin 1996: 371-3, 402-11)

snub nose, and he routinely describes this shape being manifested in the material itself.<sup>45</sup> All of this is extractable by our vision alone. This is hardly the only passage where he privileges sight. Consider as well the *Protrepticus* where he says:

[T12] Understanding and contemplation are the product of the soul, and this is of all things the most desirable for men, comparable, I think, to eyesight.” *Protrpt.* Fr. 70 During (= *Imbl. Prot. 41.27 Pistelli*)

The manual laborer works with the same sort of eyes that the trained botanist or sculpture does; they just have not received the theoretical or technical training required for these fields. The information that they receive, however, via their eyes is equally rich in terms of content.<sup>46</sup> Given Aristotle’s high opinion on our vision, these workers’ opinions do in fact bear some consideration as there is no apparent, non-arbitrary reason to exclude them. This all argues in favor of **IR**.

Moreover, **IR** - while it introduces more appearances to sort through - does not present any theoretical or formal barriers for more esteemed opinions. If the specialists’ expertise are worth anything, then the opinions of the specialist will be clearer, less confused, and more comprehensive of possible appearances than the non-expert. A proper application of the endoxic method should be enough to reveal this. A shared assumption of both **IR** and **PR** is that the expert has trained their faculties and truth-gathering processes to an exceptional extent in a relevant sort of appearances. That should mean something, not only as being the most authoritative in terms of qualifications of the theorist but authoritative in terms of the persuasiveness of the theory on its own terms. **IR** is thus coupled with a deliberative optimism that comprehends the privileged reading’s desire for the best opinions to rise to the top.

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<sup>45</sup> Met. E.1 1025b31, Z.5 1030b17, Z.5 1030b29, Z.10 1035a5, Z.10 1035a26, K.7 1064a23, K.7 1064a25

<sup>46</sup> *Pr. An.* II.23 68b15-29, 35-7; *Po. An.* I.3 72b27-30; II.6 92a37-8; *Top.* I.12 105a13-14.

## §5 – The Principle of Non-Contradiction as truly “Universal” ἔνδοξα

But it is precisely because the average person is a fairly impressive epistemic agent that any sort of truth that is common throughout even a maximally diverse domain of opinions would have a strong claim to authority. This would be at least one way to resolve the second ambiguity: knowing when you have reached a sufficiently authoritative opinion. Assuming experts are included in this consensus, the dramatically widened base makes finding these consensus opinions difficult, but it makes the ones which do exist all the stronger. For Aristotle, at least one opinion garnishes universal affirmation: **The Principle of Non-Contradiction (PNC)**. Further, this is a major opinion to establish the universality of as it underlies the foundations of his substantive metaphysics. If so, then the inclusive ἔνδοξα can produce at least one opinion that does a lot of work for science and is plenty exact. This would diffuse the objection about the endoxic method being inherently insufficiently exact for a natural science.<sup>47</sup>

To see how this works, consider how **IR** coincides with certain important, pro-democratic political intuitions that Aristotle holds. He considers the ability of the many to hold officials to account for their actions as a minimum part of being a free person in a *polis*,<sup>48</sup> and thinks this is a good idea because the judgment of the many can as valuable as the judgment of the one (1282a16-

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<sup>47</sup> Both readings share the assumption that consensus is good, especially **PR**. A consensus under **PR** enables Aristotle to discuss how “the wise” view a certain thing, a collective adjective which makes a certain opinion more trustworthy due to the collective weight of the opinion. But this consensus serves a dual role under **PR**: if esteemed opinions were drastically divided that would undercut how much they should be listened to as they do not even see each other as sources of truth and good opinion. To prevent **PR** from being self-defeating, then, a rough consensus among the wise is a desired outcome (though not a strictly necessary one).

<sup>48</sup> *Pol.* II.12 1274a15-18; cf. III.11 1281b28-30; III.12 1282a26 ff. esp. a34-b1.

17; cf. III.15 1286a26-35).<sup>49</sup> In fact, at 1282a he allows that the many will know even better than the expert [lit. “τῶν εἰδότηων” = “...than those who know”]:

[T13] “But perhaps not all of these things [reasons to prefer oligarchy based on expertise] are correctly stated, both because according to the earlier argument the multitude may not be too servile, since each may be a worse judge than those who know, but a better or no worse one when they all come together” (*Pol.* III.11 1282a14-17).<sup>50</sup>

This provides an additional reason to prefer **IR** as Aristotle thinks the many (not just the esteemed) have reliable enough opinions that they can be involved in even the architectonic art of politics, that “most exact craft.” If one of the main claims in favor of **PR** is that it allows us to sort through opinions better and provides the expert’s authoritative account being given the proper credence, but [T13] implies that we may be able to reach an equally authoritative opinion on the most important political controversies from mass deliberation anyway, then the motivation to protect experts’ opinions over mass consensus seems lacking.

So, due to the robust psychological and perceptual capacities of ordinary humans, **IR** shares this belief in consensus but can establish certain statements as “popularly authoritative” and provides reasons why this quality should matter. To see how important Aristotle sees consensus or universal opinion, consider that in the *Nicomachean Ethics* consensus matters on the question of whether virtue is a state or activity:

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<sup>49</sup> This is implicit in his criticism of Hippodamus’ proposed jury system at *Pol.* II.8 1268b3-22. He disagrees with allowing jurors advance separate judgements in cases, but it is only because he thinks this would result in unenforceable confusion. Such a method is allowable in arbitration, however, where they deliberate and come up with a collective opinion. Aristotle is optimistic a consensus will be reached in arbitration and assumes this will happen “even with a lot of [arbitrators]” who share diverse judgements. He both grants Hippodamus’ premise that citizens are a good source for opinions on justice and further ascribes to them deliberative and epistemic virtues (see also *Rhet.* I.1 1355a14-18). He just thinks this pluralistic approach is a bad fit for jury trials for practical reasons, not epistemic or moral psychological ones.

<sup>50</sup> “ἀλλ’ ἴσως οὐ πάντα ταῦτα λέγεται καλῶς [15] διὰ τε τὸν πάλαι λόγον, ἂν ἦ τὸ πλῆθος μὴ λίαν ἀνδραποδῶδες (ἔσται γὰρ ἕκαστος μὲν χείρων κριτῆς τῶν εἰδότηων, ἅπαντες δὲ συνελθόντες ἢ βελτίους ἢ οὐ χείρους)...” See [T19] below for 17-23.

[T14] But even this appears somewhat incomplete; for possession of excellence seems actually compatible with being asleep, or with lifelong inactivity, and, further, with the greatest sufferings and misfortunes; but a man who was living so no one would call happy, unless he were maintaining a thesis at all costs. (*NE* I.2 1096b31-a2)<sup>51</sup>

Aristotle introduces an important component of happiness by arguing on the basis of nobody believing the opposite. The argument appears structured like this: 1) If virtue is a state, then the sleeping man is virtuous. 2) Nobody believes the sleeping man is virtuous, thus 3) virtue is not a state.

This argument in [T14] is, as stated, not quite a *modus tolens* argument as the conclusion is not formally negated. Premise 2) only says that everybody would negate it if they were not trying to be perverse. However, elsewhere in Aristotle unanimity is treated as definitive proof of something. The universality of the denial that the sleeping man is virtuous is treated as showing the negation of ‘the sleeping man is virtuous’ must be actually true, thus negating the conclusion of the conditional and creating a *modus tolens*. Given again his belief that the many can outweigh the expert, and assuming the experts are also included in those who think the sleeping man is not virtuous, this would be sufficient for his argument since “everybody” thinks this. Premise 2) of [T14] would thus be taken as being practically negated, as all rational beings who argue in “good faith” would negate it.

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<sup>51</sup> “φαίνεται δὲ ἀτελεστέρα καὶ αὕτη· δοκεῖ γὰρ ἐνδέχασθαι καὶ καθεῦδειν ἔχοντα τὴν ἀρετὴν ἢ ἀπρακτεῖν διὰ βίου, καὶ πρὸς τούτοις [α1] κακοπαθεῖν καὶ ἀτυχεῖν τὰ μέγιστα· τὸν δ’ οὕτω ζῶντα οὐδεὶς ἂν εὐδαιμονίσειεν, εἰ μὴ θέσιν διαφυλάττων.”

However, the supporter of **PR** could grant the hypothetical desirability of universal consensus but challenge us to find those opinions.<sup>52</sup> “Everybody” agrees virtue isn’t found in sleeping; “everybody” probably agrees it is not found on Jupiter either. But what about actually positive, constructive opinions and views? To make matters worse, **IR** has to allow for a wide variety of methods and approaches to a problem as well as Aristotle includes everybody from philosophers to poets to porters. This will naturally result in a vast array of opinions and approaches. What *doxa* withstands all these obstacles? Here is one: **The Principle of Non-Contradiction (PNC)**.

**[T15] For a principle which everyone must have who knows anything about being [ἦν γὰρ ἀναγκαῖον ἔχειν τὸν ὅτιοῦν ξυνιέντα τῶν ὄντων], is not a hypothesis; and that which everyone must know who knows anything, he must already have when he comes to a special study. Evidently then such a principle is the most certain of all [αὕτη δὴ πασῶν ἐστὶ βεβαιοτάτη τῶν ἀρχῶν]; which principle this is, we proceed to say. It is, that the same attribute cannot at the same time belong and not belong to the same subject in the same respect; we must presuppose, in face of dialectical objections, any further qualifications which might be added. This, then, is the most certain of all principles, since it answers to the definition given above. For it is impossible for any one to believe the same thing to be and not to be, as some think Heraclitus says; for what a man says he does not necessarily believe [καθάπερ τινὲς οἴονται λέγειν Ἡράκλειτον. οὐκ ἔστι γὰρ ἀναγκαῖον, ἃ τις λέγει, ταῦτα καὶ ὑπολαμβάνειν].** If it is impossible that contrary attributes should belong at the same time

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<sup>52</sup> **[T11]** is based on a contingent fact that the myth of Endymion was well known, see Aspasius’ commentary on *NE* 10, 25-6; cf. *NE* X.8, 1178b19-20). We may not have the same intuition or draw the same lesson about Endymion, so the moves he makes in **[T11]** may not be very compelling. It definitely does not seem like a very exact, precise way to make your argument about virtue.



to the same subject (the usual qualifications must be presupposed in this proposition too), and if an opinion which contradicts another is contrary to it, obviously it is impossible for the same man at the same time to believe the same thing to be and not to be; for if a man were mistaken in this point he would have contrary opinions at the same time. **It is for this reason that all who are carrying out a demonstration refer it to this as an ultimate belief; for this is naturally the starting-point even for all the other axioms [φύσει γὰρ ἀρχὴ καὶ τῶν ἄλλων ἀξιωματῶν αὕτη πάντων].**

(*Met.* Γ.3 1005b11-1005b33)<sup>53</sup>

If any other hypothesis about any other topic whatsoever is subject to the **PNC** (b33), then one cannot even hypothesize that the **PNC** is false without simultaneously affirming its truth. We will see how the **PNC**'s claim to this unhypothetical truth is based on an aspect of the one characteristic uniting all sources for *ἐνδοξα*: their rationality. Because this is a belief that everybody holds as well, this counts as *ἐνδοξα* according to **[T11]** and is as authoritative as possible by **IR**. Indeed, **[T15]** broadens the scope of *ἐνδοξα* beyond **IR**'s domain to include all rational beings whatsoever. As this would include the gods, Aristotle earns a bit of extra credit by providing a belief that is a consensus among a domain that has humans as only a proper subset. The **PNC**'s is thus undeniable

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<sup>53</sup> ἦν γὰρ ἀναγκαῖον ἔχειν τὸν ὅτιοῦν ξυνιέντα τῶν ὄντων, τοῦτο οὐχ ὑπόθεσις· ὁ δὲ γνωρίζειν ἀναγκαῖον τῷ ὅτιοῦν γνωρίζοντι, καὶ ἦκειν ἔχοντα ἀναγκαῖον. ὅτι μὲν οὖν βεβαιωτάτη ἢ τοιαύτη πασῶν ἀρχή, δῆλον· τίς δ' ἔστιν αὕτη, μετὰ ταῦτα λέγωμεν. τὸ γὰρ αὐτὸ ἅμα ὑπάρχειν τε καὶ μὴ [20] ὑπάρχειν ἀδύνατον τῷ αὐτῷ καὶ κατὰ τὸ αὐτὸ (καὶ ὅσα ἄλλα προσδιορισαίμεθ' ἂν, ἔστω προσδιορισμένα πρὸς τὰς λογικὰς δυσχερείας)· αὕτη δὴ πασῶν ἔστι βεβαιωτάτη τῶν ἀρχῶν· ἔχει γὰρ τὸν εἰρημένον διορισμόν. ἀδύνατον γὰρ ὄντινοῦν ταῦτόν ὑπολαμβάνειν εἶναι καὶ μὴ εἶναι, καθάπερ [25] τινὲς οἰόνται λέγειν Ἡράκλειτον. οὐκ ἔστι γὰρ ἀναγκαῖον, ἃ τις λέγει, ταῦτα καὶ ὑπολαμβάνειν· εἰ δὲ μὴ ἐνδέχεται ἅμα ὑπάρχειν τῷ αὐτῷ τάναντία (προσδιορισθῶ δ' ἡμῖν καὶ ταύτη τῇ προτάσει τὰ εἰωθότα), ἐναντία δ' ἔστι δόξα δόξη ἢ τῆς ἀντιφάσεως, φανερόν ὅτι ἀδύνατον ἅμα [30] ὑπολαμβάνειν τὸν αὐτὸν εἶναι καὶ μὴ εἶναι τὸ αὐτό· ἅμα γὰρ ἂν ἔχοι τὰς ἐναντίας δόξας ὁ διεψευσμένος περὶ τούτου. διὸ πάντες οἱ ἀποδεικνύοντες εἰς ταύτην ἀνάγουσιν ἐσχάτην δόξαν· φύσει γὰρ ἀρχὴ καὶ τῶν ἄλλων ἀξιωματῶν αὕτη πάντων.

for every rational being, even if their respective experiences are radically different from each other.<sup>54</sup>

The **PNC** in [T15] does a lot of work in Aristotle's system, providing the basis for substance, essence, and even the four causes. The foundation Irwin – and ultimately I - wants to provide for ethics is what Karbowski (2015: 127-129) calls a “hybrid” between dialectic and science, and the starting place is the **PNC**. I ultimately agree with Irwin's basic reconstruction of Aristotle's metaphysics, though I am unable to defend his interpretation at length in the course of my dissertation.<sup>55</sup> However, the immediate results of the **PNC**'s truth is it shows that the *endoxic* method is capable producing at least one exact, informative claim. To see how this instance of the endoxic method can in fact lead to highly robust metaphysics and underpinning ἐπιστήμη, Irwin establishes a distinction between “pure” dialectic and “strong” dialectic. Pure dialectic is basically what the *Topics* instructs on and what I have mostly been discussing throughout this chapter. In pure dialectic, one selects premises from *ἔνδοξα*, but the selection is up to the interlocutor.<sup>56</sup>

However, pure dialectic has a much more ambitious cousin: strong dialectic. Whereas pure dialectic simply takes just some set of propositions and plays them off each other, strong dialectic confines “itself to those premises we have strong reason...to take to correspond to independent reality,” (1988: 467), and what underwrites this criteria is the “first philosophy” found in

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<sup>54</sup> This change hardly poses a threat to **IR**, however, because the gods do not have much to say on human ethics, given they do not need friends, a *polis*, or any basic material conditions. As such, **IR** can exclude them because, while their rationality allows them to know something about the **PNC**, their incorporeal nature makes any hypothetical *ἔνδοξα* about human ethics from them not very reliable as they just do not have experiences a theory of ethics would have to take into account in order to find the most authoritative account.

<sup>55</sup> Though I will attempt to address objections related to this metaphysics-heavy reading of ethics as they appear. To defend Irwin against every argument that has been offered in recent literature, however, would result in a work far larger than this dissertation.

<sup>56</sup> Karbowski (2015: 129) allows that there is a question of why Aristotle uses two different methods of inquiry. See Frede 2012 and Zingano 2007 as well.

*Metaphysics* Gamma, Eta, and Zeta. One of the key texts to show this more theoretical use of *ἔνδοξα* is found in the *Topics*:

[T16] This [discovering the *archai* of sciences] task belongs properly, or most appropriately, to dialectic; for dialectic is a process of criticism wherein lies the path to the principles of all inquiries.”<sup>57</sup> (*Topics* II.1 101b3-4)

If the **PNC** is a non-hypothetical *archai* that undergirds all scientific study, and if *ἔνδοξα* can be shown to uncover it, then the endoxic method is very valuable indeed for founding scientific knowledge regardless of the field. [T16] in effect writes a promissory note about what *ἔνδοξα* can do *via* the dialectic involved in the endoxic method, and both Irwin (§9, p.22) and myself think Aristotle pays up with the **PNC** in [T15]. However, one side effect of making the **PNC** this fundamental is that it becomes awfully difficult to prove. Due to this, Aristotle has to unconventionally argue by refutation (1006a18-25):

[T17] “Now the starting-point for all such things is not a demand for <the respondent> to say that something either is or is not <and not both> - for someone might perhaps suppose that this would be begging the question; it is a demand for him to signify something both to himself and to another. For he must do this if he speaks of something, since otherwise he has no rational discourse either with himself or with another. If he grants this, there will be a demonstration <by refutation>, since something will be definite as soon as he grants this.” (tr. Irwin, brackets in original).<sup>58</sup>

<sup>57</sup> τοῦτο δ' ἴδιον ἢ μάλιστα οἰκεῖον τῆς διαλεκτικῆς ἐστίν· ἐξεταστικὴ γὰρ οὕσα πρὸς τὰς ἀπασῶν τῶν μεθόδων ἀρχὰς ὁδὸν ἔχει.

<sup>58</sup> ἀρχὴ δὲ πρὸς ἅπαντα τὰ τοιαῦτα οὐ τὸ ἀξιοῦν ἢ εἶναι τι λέγειν ἢ μὴ εἶναι (τοῦτο μὲν γὰρ τάχ' ἂν τις ὑπολάβοι τὸ ἐξ ἀρχῆς αἰτεῖν), ἀλλὰ σημαίνειν γέ τι καὶ αὐτῷ καὶ ἄλλῳ· τοῦτο γὰρ ἀνάγκη, εἴτερ λέγοι τι. εἰ γὰρ μή, οὐκ ἂν εἴη τῷ τοιούτῳ λόγος, οὐτ' αὐτῷ πρὸς αὐτὸν οὔτε πρὸς ἄλλον. ἂν δέ τις τοῦτο διδῶ, ἔσται ἀπόδειξις· ἤδη γὰρ τι ἔσται ὀρισμένον.

[T17] establishes three criteria by which somebody might be able to successfully deny the PNC:

1. The opponent signifies some subject S to which he ascribes the properties F and not-F. This is necessary since the **PNC** is about the same subject receiving contradictory properties.
2. The properties F and not-F are contradictory, thus non-identical, properties. This is necessary for the opponent to assume because if they were identical his statement would be trivially true and the ‘not-’ would be rendered meaningless.
3. The opponent signifies the same subject is the subject of both properties and affirms they hold at the same time. This means the subject under the two contradictory pair of properties is able to stay the same subject, so its identity is independent of any particular set of properties.<sup>59</sup>

Meeting all these criteria simultaneously is impossible, and demonstrating this only requires the opponent to agree that they are predicating the same subject for any pair of contradictory, non-identical properties, which is something they have to by #1 ([T15]’s statement of **PNC**).

Next, take some property X to be characteristic of being an species (e.g. cat), such that one is a cat if and only if one has X. By denying the **PNC**, the object can have both X and not-X. In other words, they will have to affirm the subject is both “cat” and “not-cat” but also (by #3) affirm the subject stays the same under this compound (cf. *Po. An* I.22 83a25-b10).<sup>60</sup> But by this they

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<sup>59</sup> Irwin (p. 548 n.3 *ad* Ch. 9 §98) breaks the exact steps of the argument down in the following way (using ‘O’ to denote the dialectical opponent): “(1) First O speaks of something, 1006a12-13. (2) We ask O to agree that he signifies something, a18-22. (3) O agrees that he does signify something, a26-7. (4) We consider the consequences of signifying something, a29-30. (5) We consider the consequences of signifying one thing, a30-b1. (6) Aristotle explains parenthetically why the move from 4) to 5) is justified, because signifying something requires signifying one thing, b5-11.”

<sup>60</sup> As we shall see, the opponent cannot call foul by saying they are only talking about accidental properties because they would be acknowledging the legitimacy of such a distinction between essential-accidental along with substancehood, species, etc.

affirm the properties in the contradictory pair are identical as the “not” in being “not-cat” has no effect on the subject being a cat or not; it is thus not a proper negation. But if the “not-“ serves no purpose, then the subject in effect utters the same predicate twice, making them not contradictory and violating #2.

So the opponent will have to either admit:

A ) They are speaking about two different subjects,

B ) They are speaking about the same subject but the properties are actually identical and thus not contradictory.

Γ ) They are speaking about the same subject holding the contradictory properties but at non-identical times (or in some other respect).

Yet none of these negate the **PNC** as no counter-example is presented against the necessary negative existential claim. As these are the only ways to possibly deny the **PNC**, and none of them do, the **PNC** is impossible to deny.

Importantly, Aristotle provides the **PNC** with a dual modality. The first, existential modality is that it is not possible for any object to exist which holds a contradictory pair of properties at the same time. The second, assertoric modality is that the **PNC** is impossible to deny; if one understands anything at all, then one understands the **PNC** and affirms it. When 1105b11 says the “surest principle” (“*πασῶν βεβαιοτάτη τῶν ἀρχῶν*”) is characterized by being impossible to be in error about it, he is referring to this assertoric modality. These modalities are connected as the assertoric necessity comes from the **PNC** being about object themselves, making the **PNC** an ontological principle instead of a logical principle.<sup>61</sup> However, this makes it all the more

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<sup>61</sup> A formulation repeated throughout his corpus: *Met.* Γ.3 1005b18-20; *De Int.* 21a19-33, *SE* §5 167a1-6 ff; *Top.* IV.1 121a22-24; [MXG] 979a36-37, b5-7. see also Alexander (*Met.* 269,25-30 *ad* 1005b17-18, cf. Madigan 1993: 154, n.276).

foundational for our knowledge as objects are ontologically prior to words and propositions and because primary substances are “better known to us” and what we start with in any investigation.<sup>62</sup>

It is true that he gives formulations such as a psychological one (b23-24) which pertains to thoughts and a logical version (*Met.* Γ.6 1011b13-14) which pertains to assertions.<sup>63</sup> However, both the logical and psychological versions are posterior in formulation to the metaphysical one as our thoughts are always and only about things and their attributes (implied at [T17], lines 20-21),<sup>64</sup> and *SE* §5 says contradictions are constituted by statements about things (*SE* §5 167a23-7; *Alex. Met.* 269,27 ff.). All this may be why Aristotle, despite axioms such as the **Law of Excluded Middle (LEM)** or the **Principle of Bivalence (PB)** appearing to be equally foundational principles in classical logic, challenges us to find any principle that is prior to the **PNC** (*Met.* IV.4 1006a8-11; 1005b32-4) and suggests it is the “most intelligible” principle possible.<sup>65</sup>

Before moving on, I want to briefly sketch how Aristotle gets from the **PNC** to the doctrines of substance and essence. We saw how the successful denier of the **PNC** needs to guarantee that they are speaking about the same subject being F and not-F. But what allows them to make this guarantee? If we do not accept the doctrine of essence (and thus making every property merely an accidental or coincidental one that has no essential connection with a subject), then there is no special property that marks out a subject as subsisting through change. A **PNC** skeptic will need to show the same subject (the “this”) can hold contradictory properties and be the same *this*, but he has no tools in order to do that unless he accepts the doctrines of substance and essence, a doctrine which presupposes the existence of an underlying material subject. But if

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<sup>62</sup> *NE*. VII.1-3; *Phys.* I.1; *NE* 1.4 1095b2-4; *Met* B1, H3, Z.3 1029b1-2, see Nussbaum 1985 [*de Motu*]: 103-6.

<sup>63</sup> see Lukasiewicz and Wedin 1971: 487-90, though on 488 see my Ch. 2

<sup>64</sup> *Met* M.2 1077b3-4, following Peramatzis 2011: 24, 27-8;

<sup>65</sup> Wedin 2004: 228-229, 233-234. This object-centric approach, and how deeply it penetrates his metaphysics and ontology, will be explored in more detail in Chapters 3 and 4.

it is a condition of any denial of the **PNC** that substance and essence are assumed, and is also required of any affirmation of the **PNC** as well, then we are committed to saying essence and substance exist.

Is Aristotle begging the question (as he himself acknowledges the possibility of at 1006a15-18) with his insistence on the fundamentality of substance and essence? No, because while this would be a problem in a straightforward demonstration of the **PNC** it is not a problem for a dialectical argument like the one seen here, so long as the opponent is the one who has to beg the question. A commitment to the existence of substance is necessary to any attempted **PNC** denial by the formulation of the **PNC** and the assumed basic brute fact that objects exist, so by an indispensability argument the opponent is committed to the existence of substance. At this point, the opponent is agreeing to something philosophically minimal: in order to say subject X is capable of being both F and not-F, there must be some property Z of X that is not simply being both F and not-F such that Z makes underlying subject Y for subject X be X. The identity and constraints of this mysterious property Z is left underdetermined. At this point in the argument Z could be a disjunctive property, a qualitatively primitive *haecceity*, or some sort of temporally indexed property (cf. Irwin p. 185 Ch. 9 §100). However, Z's possible range should not bother Aristotle as what matters is that the opponent, by being compelled to believe the above, buys onto some concept of essential properties, substance-hood, and underlying subjects. They are the ones making use of this mysterious Z, but those who affirm the **PNC** still takes them on because they are necessary to communicate to the denier of the **PNC** why they are still affirming the **PNC**. And notice that affirming this will only get the denier of the **PNC** out of admission **A**. They still have to avoid **B** and **C**. Aristotle, through the fact that everybody at least agrees with the **PNC** - whether

they know it or not - is able to bootstrap in these properties which he then nuances and establishes the relative priorities of in later books.

That is quite an impressive result, but it is time to bring this back full circle and remember that this all came from identifying one, truly universally held *ἔνδοξα* and importantly *shows us why there cannot be a competing ἔνδοξα about it*. Anybody who is rational affirms the **PNC**, but if affirming the **PNC** entails affirming the existence of essence, substances, and hylomorphic compounds then these are also concepts which are highly authoritative as well, even if nobody until Aristotle explicitly described these ideas in *Physics* I.7 and *Metaphysics Gamma*.<sup>66</sup> We all believed in them all along, even his predecessors. For example, to Aristotle under Plato's Forms was the belief in the existence of essence as a principle, and while Democritus' monistic metaphysics proved unable to account for sideways motion or substantial chance it understood the role of the material subject as a principle of competing standing. The job of metaphysics is to then, using insights like the **PNC** as guiding *archai*, to discover and crystalize our beliefs about being *qua* being. These doctrines are latent in every person who sees and discriminates between objects, any person capable of providing relevant *ἔνδοξα*, no matter their standing in society.

Does this feel like cheating? I set up the *endoxic* method such that the **PNC** is affirmed as true, but it is more a property of the **PNC** than a property of our rationality that the **PNC** is universally affirmed. What about all those who do say the **PNC** is false, sincerely deny it with their whole minds? We have some people alive today! But notice [T15] refuses to ascribe to Heraclitus - who is of course famous for his seeming denial of the **PNC** – a genuine denial, instead saying this is merely something “τινὲς οἴονται λέγειν Ἡράκλειτον.” Aristotle is clearly skeptical Heraclitus could truly believe a denial of the **PNC**. While τινὲς are right to ascribe Heraclitus at

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<sup>66</sup> With the *Physics* likely being the “authoritative” account: Kelsey 2010: 107-108; Ross 1936: 22; Mansion 1946: 70-71; Wieland 1970: 111; Bostock 1982: 194; Graham 1999: 133; Lewis 1991: 193; Horstschäfer 1998: 181-182.



least an intention to negate the **PNC**, they go wrong in believing he fully believes in such a denial or is even capable of denying it. Aristotle, throughout his uses of others' opinions, is not adverse to clarifying and placing their opinion in more precise terms as a muddy, confused opinion is presumably difficult to compare with other opinions.<sup>67</sup> This is what [T9.i] means when it says we must “τιθέντας τὰ φαινόμενα.” It just turns out, when we put Heraclitus' *ἔνδοξα* out in front of us and puzzle through it, his denial of the **PNC** results in an affirmation.

While Irwin refers to this process as “strong dialectic,” it is still ultimately dialectic like the pure dialectic done on more garden-variety *ἔνδοξα*. This shows that a proposition arising from *ἔνδοξα* need not be inexact simply because it arises from *ἔνδοξα*.<sup>68</sup> This is not to say an arbitrary *ἔνδοξα* must be exact or that the *ἔνδοξα* Aristotle happened to work with were exact. And if the objection were simply that *ἔνδοξα* on average were imprecise, then there would be little debate. However, the idea that politics is inherently imprecise does require a more intensive claim about limitations of *ἔνδοξα*, and I think I have shown this claim is not true. When we consider the strengths of **IR** in connection with how Aristotle proves the **PNC**, we see that the endoxic method can be very powerful. At least with regards to ethics' methodology, ethics and politics can be plenty exact.

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<sup>67</sup> Many find Aristotle's treatment of his predecessors to be patronizing and condescending, and this can be detected in his treatment of Heraclitus. However, this impression is likely an unfortunate side-effect of adopting a developmentalist account of the history of philosophy (one often hears the same complaint about Hegel for instance).

<sup>68</sup> This does not imply that ethics or politics can only arise from a precise, “long path” that starts with the **PNC** and leads up to discussions of the human good. While I think I have shown that this longer path starts from a sort of *ἔνδοξα*, a shorter path which starts from less universally held *ἔνδοξα* is still entirely possible and still has a sizable claim to authority as well. The privileged account of *ἔνδοξα* is capable of generating such a path, but it is a less exact and “firm” one.

**§6 – ἔνδοξα: All It's cracked up to be.**

So the endoxic method is pretty impressive, but a skeptic may question just how much he actually uses this method in his ethical reasoning, and Dorothea Frede (2012: 185) is one of the strongest proponents of this view. She describes ἔνδοξα as possessing a certain “mystique” in Aristotelian interpretation, as if it is ubiquitous and mysterious method for ethics. However, Aristotle rarely uses the word ἔνδοξα and, according to Frede, uses the *endoxic* method itself just as seldomly. Frede brings up some other possible examples of Aristotle using past opinions that some may point to for *endoxa* such as *Metaphysics* Alpha, and she argues they are not applications to the *endoxic* method. The main reason for this is that these surveys are meant to set up Aristotle's own position, not to honestly sort through a puzzle and achieve clarity.

This is true, but I think qualifying passages do exist in the *Politics* and his scientific works. Further, these examples become visible once we reject the assumption that, when surveying possible *endoxa*, the method must be carried out in as elaborate and extensive a process as that shown in NE VII.2-10. He sets out and considers different views of justice and how they have played out, and he always treats it as “some say” or if a famous person says something he quotes them.

But I would like to especially focus on the latter books of the *Politics*. Consider Book VII where he thinks of Egyptians as very reputable and says we should consider them (but also to examine those groups and individuals commonly passed over):

[T18] “That all such matters are ancient is indicated by the facts about Egypt. For the Egyptians seem to be the most ancient of peoples, yet they possessed laws and political

order. That is why one should make adequate use of what has been discovered, but also try to inquire into what has been overlooked.” (VII.10 1329b32-35)

It is the fact that as ancient of people as Egypt attended to these matters of classifying citizens that shows they are to be at least respected and listened to on this. Frede (or any proponent of **PR** from what I can tell) never weighs in on whether whole societies should be sources of *ἔνδοξα*, but there is no reason to think Aristotle would preclude them. An ancient, established nation such as Egypt which has fascinated Greek writers since at least Herodotus would surely count as esteemed and reputable enough source to count as *endoxa* under even the strongest, most restrictive version of **PR**.<sup>69</sup>

Indeed, in our own practices allusions to the beliefs of certain societies and states are common in political and ethical discourse today as if fundamental agent-beliefs in political and social philosophy can be mapped onto state states and society. Consider the following statements:

- 1) “Cuba believes free, universal, public healthcare is necessary for a just society;”
- 2) “The United States sees individual economic freedom as necessary for a free society.”
- 3) “Finland believes well-educated citizens make a good society.”

These statements need not make appeals to these countries’ respective governments. These statements’ persuasive power can just as much come from implicit appeals to beliefs that are widely esteemed and hold a lot of “purchase” in that society, beliefs which would count as *ἔνδοξα* by Aristotle and thus subject to critical examination. By endorsing one of these statements I am saying that “We” should adopt that position as well, where ‘we’ refers to people who live in the same society as the speaker. When I say “Finland is right” I am really saying “We should widely

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<sup>69</sup> Frede at 193 n.16 acknowledges that Aristotle has a lot of respect for the beliefs of common people, but argues this respect is not found in the *endoxic* method. I disagree and believe other, smaller instances of the method demonstrate such a trust.

adopt the belief - currently widely held in Finland, by Finns - that well-educated citizens make for a good society.” In Aristotle’s day, allusions to Babylon, Egypt, Sparta, and the Scythians carried with them baggage which would have made allusions to their practices influential on a reader’s opinion in one way or another. But if societies are allowed to be a source for *ἐνδοξία*, then the *Politics* is full of instances of the method.

For further proof that the *Politics* makes use of the method even by **PR**, consider the opening paragraphs of Book VII of the *Politics*:

**[T19] Considering many things said about the best way of living even in the external accounts to be adequate, then, we should make use of them here as well. For, to tell the truth, as regards one way of divide them at any rate, no one would dispute that, since there are three groups – external goods, goods in the body, and goods in the soul – all of them must belong to those who are blessed. For no one would say that somebody is blessed who has no shred of courage, temperance, justice, or practical wisdom, but is afraid of the flies buzzing around him, stops at nothing, no matter how extreme, when he has an appetite to eat or drink, kills his dearest friends for a pittance, and has thought as foolish and deluded as a child’s or a madman’s. But while these claims are ones that almost everyone would agree with, people disagree about their quantity and their relative superiority. For they consider quantity of virtue, however small, to be sufficient, whereas of wealth, property, power, reputation, and the like they seek unlimited excess. We, however, will say to them that it is easy to achieve conviction on these matters even from the facts themselves.”** (*Pol.* VII.1)

So let us break down this programmatic statement. He announces in the course of Book VII that he will:

1. Acknowledge disagreements
2. Collect views and opinions
3. Weigh and consider them
4. Set them against other appearances and facts
5. Will sort through these views and ultimately achieve clarity and “conviction.”

If one holds to the **SA** and **PR**, looks a lot like the *endoxic* method. For comparison, I repeat **SA**’s schema below:

1. We “set the phenomena before us,” which **SA** takes to mean establishing “starting points of inquiry by enumerating the *ἔνδοξα* about the subject matter,” (Davia’s language).
2. The true *ἔνδοξα* are already contained in this enumerated list of *ἔνδοξα*.
3. The *endoxic* method then sifts through these various *ἔνδοξα* with the aim of developing the most consistent, authoritative, and believable account of some subject matter.

In this particular case, the topic that seems to present an impasse is the relative importance of bodily, psychological, and external goods. However, while he will go on to attempt to clear up their relative priorities,<sup>70</sup> he still - time and again, in more specific questions about the relative importance between these goods - make use of *ἔνδοξα* in order to do so in a way that is more positive and engaging than what Frede ascribes to him.

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<sup>70</sup> Aristotle has a wide variety of comments on external goods scattered across all his ethical works, and Chapter 4 discusses these difficulties in greater detail.

For instance, the method even appears with regards to building walls around the city VII.11, which concerns basic design of the city:

[T20] “As for walls: **those who say that cities laying claim to virtue must not have them are making a proposal that is quite antiquated, especially since they see that cities that showed off in that way are refuted by what happened to them. It is true that against those who are one’s match and not very superior numerically that it is not noble to try and defend oneself through the security provided by walls.** But it can turn out that the superiority of the attackers surpasses human virtue and the virtue of a small number, and if the city must be preserved and avoid ill-treatment and arrogant insult, then one should realize that the highly secure defense provided by walls is quite an appropriate military measure, **particularly in light of recent discoveries about the accuracy of missiles and devices used in sieges.**” (*Pol.* VII.11 1330b32-1331a1)<sup>71</sup>

He acknowledges why people do not have walls around their city as it is shameful to close oneself off from those like you (1330b35), and he admits that the reasoning has an ancient pedigree. Yet despite its traditional authority this position is insufficient in light of recent discoveries in technical knowledge (1330b32-1331a2). Less than a quarter of a Bekker page later, he canvases options how the city should be laid out, and Aristotle’s comments should be considered in full here. This passage will be discussed more extensively in later chapters:

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<sup>71</sup> οὕτω γὰρ καὶ πρὸς ἀσφάλειαν καὶ πρὸς κόσμον ἔξει καλῶς. περὶ δὲ τειχῶν, οἱ μὴ φάσκοντες δεῖν ἔχειν τὰς τῆς ἀρετῆς ἀντιποιομένας πόλεις λίαν ἀρχαίως ὑπολαμβάνουσιν, καὶ ταῦθ' ὀρῶντες ἐλεγχόμενας ἔργω τὰς ἐκεῖνος καλλωπισσάμενας [35]. ἔστι δὲ πρὸς μὲν τοὺς ὁμοίους καὶ μὴ πολὺ τῷ πλήθει διαφέροντας οὐ καλὸν τὸ πειρᾶσθαι σφύζεσθαι διὰ τῆς τῶν τειχῶν ἐρμυνότητος· ἐπεὶ δὲ καὶ συμβαίνειν ἐνδέχεται πλείω τὴν ὑπεροχὴν γίνεσθαι τῶν ἐπιόντων καὶ τῆς ἀνθρωπίνης καὶ τῆς ἐν τοῖς ὀλίγοις ἀρετῆς, εἰ δεῖ σφύζεσθαι καὶ μὴ πάσχειν κακῶς μηδὲ ὑβρίζεσθαι, τὴν [b40] ἀσφαλεστάτην ἐρμυνότητα τῶν τειχῶν οἰητέον εἶναι πολεμικωτάτην [1331], **ἄλλως τε καὶ νῦν εὐρημένων τῶν περὶ τὰ βέλη καὶ τὰς μηχανὰς εἰς ἀκρίβειαν πρὸς τὰς πολιορκίας.**

[T21] As to strongholds, what is suitable to different forms of government varies: thus an acropolis is suited to an oligarchy or a monarchy, but a plain to a democracy; neither to an aristocracy, but rather a number of strong places. The arrangement of private houses is considered to be better divided and generally more convenient if the streets are regularly laid out after the modern fashion which Hippodamus introduced, but for security in war the antiquated mode of building, which made it difficult for strangers to get out of a town and for assailants to find their way in, is preferable. A city should therefore adopt both plans of building: it is possible to arrange the houses irregularly, as farmers plant their vines in what are called 'clumps'. The whole town should not be laid out in straight lines, but only certain quarters and regions; thus security and beauty will be combined. (*Pol.* VII.11 1330b23-31)

Hippodamus is an example of somebody who has authority and which Aristotle is sympathetic towards on other occasions (*Pol.* II.8 1268b3-22). Again, while he acknowledges the worth of an opposing view, he thinks the view that values the antiquated style has considerable security benefits. This point is important as it shows that a practice or belief which is old fashioned need not be necessarily wrong or inferior to newer opinions. On the contrary, the method proceeds to subject these two beliefs to dialectic, but the older opinion is not permanently discarded nor Hippodamus' approach adopted wholesale. Instead, a composite opinion is reached, and thus his city design is a compromise between the Egyptian and Hippodamian approach (*Pol.* VII.11 1330b30-31) that contains both "beauty and security."

The question of how a city should be arranged is a serious question in Aristotle's highly naturalistic politics, and in the course of this discussion he invokes those who oppose walls, those who favor more ancient layouts, and those who prefer Hippodamus' design. He lays out these

views, places them next to some empirical observations (i.e. there have been advances in military weapons; sometimes cities are located near foreign cities who have similar citizens), and then tries to synthesize these views into a coherent position for how a *polis* should be arranged.

Aristotle does not merely present his view of the city but takes it as aiming for an account that threads the key insights each of these ἔνδοξα make. Each of these views tries to capture one of our needs: The ancient method of housing physically protects us from invasion (a bodily good), the orthogonal streets are beautiful and encourage getting to the *agora* and the philosophy and politics going on there (a psychological good), and a city should have walls while acknowledging the city should be open and accessible to those friendly and similar to the city's citizens (friends and allies are external goods). He thus acknowledges all three priorities that he mentions at the beginning of Book VII in the course of weighing these *endoxa*, and he discovers a way to design the city such that those who live in it can count themselves as truly blessed. Under **SA**, Aristotle's discussion of urban design would be a straightforward application of the *endoxic* method. So, even though I think the **SA** is insufficient as a general description of the *endoxic* method due to its overly narrow domain of ἔνδοξα, **SA** can still represent a class of instances of how the *endoxic* method could actually play out. In the case of this passage, while the steps of **SA** are expressed in a different order in this passage, it is still an example of ἔνδοξα being brought to bear on a difficult but important discussion in political science in a way that does not contradict **SA** or **PR**. Considering Frede affirms both **SA** and **PR** as true, this makes VII.10 a counter-example and suggests the *endoxic* method is not such a strange method of doing ethics after all. When deployed in the *Politics*, it feels so natural and commonsense as to generally escape notice. At this point, the burden shifts to the position shared by ones such as Frede, who would nearly



banish the method from the Corpus, to provide an explanation for why these passages are not plausible applications of the endoxic method.

Aristotle's contemporary and ancient authorities are regularly played off each other in the latter books of the *Politics*, and both are placed in comparison to the needs of humanity (informed by other *ἔνδοξα*) and scientific knowledge. In some ways, his design of the ideal *polis* is using *ἔνδοξα* in the richest, most fluent way possible, dealing with sources and proponents who all have a certain level of *doxa* or notoriety/fame (cf. Frede 193), whether that be politicians, political theorists, or whole societies. The statement at 1329b itself could serve as a maxim about *ἔνδοξα* and how to use it: "One should make adequate use of what has been discovered, but also try to inquire into whatever has been overlooked."

Further, some background assumptions in Aristotle's cosmology along with a cyclical view of history yields a corollary for *ἔνδοξα* and why it is potentially highly trustworthy:

[T22] The separation of the multitude of citizens according to kind, on the other hand, originated in Egypt. For the kingship of Sesostris extends much further back in time than that of Minos. **We should take it, indeed, that pretty much everything too has been discovered many times, or rather an unlimited number of times, in the long course of history. For our needs themselves are likely to teach the necessities, and once they are present, the things that contribute to refinement and abundance quite reasonably develop.** [τὰ μὲν γὰρ ἀναγκαῖα τὴν χρεῖαν διδάσκειν εἰκὸς αὐτήν, τὰ δ' εἰς εὐσημοσύνην καὶ περιουσίαν ὑπαρχόντων ἤδη τούτων εὐλογον λαμβάνειν τὴν

**αὕξησιν·]** So one should think that, where matters pertaining to constitutions are concerned, things hold in the same way. (VII.10 1329b22-31)<sup>72</sup>

He thinks even *endoxa* that appear at the cutting edge in how to obtain greater flourishing will have likely already been established in some previous historical era. The key inference he makes in this passage goes by almost too quickly to notice. Because our needs teach us our necessities, we will continue to learn enough about ourselves that we will also learn what leads to flourishing soon enough. He describes this entire process of human achievement and ever increasing progress in a cycle as happening ‘εὐλογον’, that is to say sensibly and reasonably, and it starts from something literally everybody is able to do which is discerning their bodily necessities.

And this optimism about the ability for human beings to reach greater levels of knowledge is not confined to the climax of the *Politics*. It is even found in his opening considerations in the *Rhetoric*:

**[T23]** For the true and the approximately true are apprehended by the same faculty; it may also be noted that men have a sufficient natural instinct for what is true, and usually do arrive at the truth. Hence the man who makes a good guess at truth is likely to make a good guess at what is reputable. (*Rhet. I.1* 1355a14-18)<sup>73</sup>

He makes a distinction here between the what is true and what is “ὅμοιον τῷ ἀληθεῖ,” but while these might be references to different levels of knowledge such as between *epistemae* and *phronesis*, the point is that humans are capable of reaching both and – in fact – do. And this ability for humans to reach certain

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<sup>72</sup> ἢ μὲν οὖν τῶν συσσιτίων τάξις ἐντεῦθεν γέγονε πρῶτον, ὁ δὲ χωρισμὸς ὁ κατὰ γένος τοῦ πολιτικοῦ πλήθους ἐξ Αἰγύπτου· πολὺ γὰρ ὑπερτείνει τοῖς χρόνοις τὴν [25] Μίνω βασιλείαν ἢ Σεσώστριος. σχεδὸν μὲν οὖν καὶ τὰ ἄλλα δεῖ νομίζειν εὐρησθαι πολλάκις ἐν τῷ πολλῷ χρόνῳ, μᾶλλον δ' ἀπειράκις. **τὰ μὲν γὰρ ἀναγκαῖα τὴν χρεῖαν διδάσκειν εἰκὸς αὐτὴν, τὰ δ' εἰς εὐσχημοσύνην καὶ περιουσίαν ὑπαρχόντων ἤδη τούτων εὐλογον λαμβάνειν τὴν αὕξησιν·** [30] ὥστε καὶ τὰ περὶ τὰς πολιτείας οἶεσθαι δεῖ τὸν αὐτὸν ἔχειν τρόπον.

<sup>73</sup> τό τε γὰρ ἀληθές καὶ τὸ ὅμοιον τῷ ἀληθεῖ [15] τῆς αὐτῆς ἐστὶ δυνάμεως ἰδεῖν, ἅμα δὲ καὶ οἱ ἄνθρωποι πρὸς τὸ ἀληθές πεφύκασιν ἰκανῶς καὶ τὰ πλείω τυγχάνουσι τῆς ἀληθείας· **διὸ πρὸς τὰ ἐνδοξα στοχαστικῶς ἔχειν τοῦ ὁμοίως ἔχοντος καὶ πρὸς τὴν ἀλήθειάν ἐστιν.**

truths overtime is something that would naturally interest Aristotle under both **PR** and **IR**. However, as we saw with the **PNC**, it is only the **IR** that can make this unanimity mean something particularly significant. That some concepts can be reached virtually unanimously and that there is an important explanation for why there is unanimity at all is shown in *Politics* VII if we consider the following, unfulfilled promise at 1330a4-5:

[T24] “As for communal messes, everyone agrees [συνδοκεῖ πᾶσι] that it is useful for well-established cities to have them (what the cause is of our agreeing with this will be stated later).”<sup>74</sup> (*Pol.* VII.10 1330a4-5)

Here Aristotle provides an example of an *ἔνδοξα* and then promises to give a causal explanation for its widely held status. Unfortunately, he never fulfills this promise in the extant *Politics*, yet he clearly sees it as interesting to explain why it is so widely believed, similar to why he is interested in why the **PNC** is so widely believed.

That “everybody” agrees to a fairly substantive, debatable political belief is fascinating for another reason. Inside this view there is a range of options for how to run these common meals: fully co-ed, men only, or men and women but segregated are all stances Aristotle would have been familiar with in Classical Attica. These ideas were instituted in a number of constitutions (Sparta, Crete most famously) and theorized by Plato in the *Laws*. However, these all agree on communal halls being beneficial and *χρήσιμον*, and Aristotle at this point in the investigation is just wanting to find the basic organs of government and civil society in his *polis*. This is an issue for **PR** because this claim would have been just as effective if Aristotle had said, “All the great Greek civilizations and their lawgivers agree that communal halls are good.” However, he goes further and just says

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<sup>74</sup> περὶ συσσιτίων τε συνδοκεῖ πᾶσι χρήσιμον εἶναι ταῖς εὖ κατεσκευασμέναις πόλεσιν ὑπάρχειν· δι' ἣν δ' αἰτίαν [a5] συνδοκεῖ καὶ ἡμῖν, ὕστερον ἐροῦμεν.

συνδοκεῖ πᾶσι on this and it is this unanimity that is important to him, suggesting **IR** since these other opinions would not even be considered in the first place under **PR**.

Can this really be an example of the endoxic method? Yes, as the above can be reframed as a trivial application of the **SA** dealing with a single *endoxa*. Generally, when Aristotle looks around for views on a subject he we will find a great assortment. However, if there is a unanimous, clear conclusion, and if that conclusion is the one most relevant for Aristotle’s purposes, then he can naturally point out that universal consensus as the most authoritative ἔνδοξα because nothing contradicts it. The set of *phenomenon* would just contain one element: that common meals are good. He does an expanded version of this same process elsewhere in VII when he considers what makes a good citizen and he says proponents of all constitutions seem to agree on this issue and takes it as settled (VII.1-2).<sup>75</sup>

**IR** provides clear criteria of knowing when one has collected all the ἔνδοξα one needs in order to start sorting and further when one is qualified to say “all agree” on something. But if everybody really does believe in a certain issue, then such a belief is not merely a function of their upbringing but likely due to something more general (and thus more liable to a scientific account). That “everybody” likes as specific a social institution as common meals is certainly grounds for investigating as this is a fascinating fact, and Aristotle’s interest in the reason for that commonality is left unaccounted for under **PR**. In contrast, **IR** allows him to make such a substantive claim and explains why this claim is important and worthy of scientific investigation.

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<sup>75</sup> Unfortunately, we do not possess the passage where Aristotle more thoroughly considers the arrangement of common meals. However, my interpretation can accommodate the most plausible way this would have gone. The initial controversy was trying to determine which institutions to include in a *polis*. A trivial application of **SA** leads to the conclusion that there should be some sort of common meals. The further questions, however, can be considered by engaging in a non-trivial iteration of **SA**, this time using the non-singleton set of *endoxa* concerning how to arrange common meals.

Why do these examples matter? Because while he uses the word ‘*ἔνδοξα*’ only rarely, that does not mean he avoids using the *endoxic* method in more subtle ways elsewhere or lacks ample theoretical assumptions to justify the high status he generally gives reliable opinion. Books VII and VIII of the *Politics* can be seen as laying down the first principles of a type of science, the science of politics and legislation for the truly flourishing human being under basically ideal conditions. However, the initial insights which guide this legislation must come from somewhere, and so Aristotle considers what distinguished people or societies would consider to be hallmarks of a successful, flourishing *polis*. Perhaps marks of a successful *polis* include holding common meals, not having walls, or dividing up property evenly. These ideas certainly have some purchase among different groups of people, and Aristotle at least tries to consider these. In some cases, the range of available *endoxa* may be rather small, but that can also be because there are only so many possible answers to a given question.

### **§7 – Progress in Aristotle and the Repeatability of the Endoxic Method**

So the endoxic method is in fact both very powerful and commonly employed by Aristotle. Given the ability of normal people to hold potentially highly exact *ἔνδοξα*, however, one may wonder if a notion of social or political progress could be constructed from the nature of *ἔνδοξα*. If so, then there would be good reason to repeat the method often as both 1) the most authoritative accounts will advance and become ever more useful for us and 2) Aristotle appears to believe this progress occurs among even ordinary people eventually. The main text that points to an Aristotelian notion of progress is *Politics* II.8:

[T25.1] In other sciences at any rate change has certainly proved to advantageous – for example, medicine has changed from its ancestral ways, as has athletic training, and all the

crafts and capacities generally. **So, since politics too must be posited as one of these, it is clear that something similar must also hold of it.**

**[T25.2] An indication of this, one might claim, is provided by the facts themselves. For the laws/customs of ancient times were exceedingly simple and barbaric. For example, the Greeks, used to both carry weapons and buy women from each other, and the pieces that remain of ancient laws in some places are quite simpleminded –** such as the homicide law in Cyme that if prosecutors can provide a number of his own relatives as witnesses, the defendant is guilty of murder.

**[T25.3] In general, everyone seeks not what is ancestral but what is good.** But it is probably that the first ones, whether they were “earth-born” or the survivors of some cataclysm, were like random people [today] or people who lack understanding (and this in fact is precisely what is said about the earth-born). **So it would be absurd to cling to their beliefs.**

**[T25.4] In addition, it is not better to leave written laws unchanged either.** For just as it is in the other crafts, so too in [the science of] political order, it is impossible to write down everything exactly. For it is necessary to write them in universal terms, whereas actions are concerned with particulars.

Aristotle gives two examples of “discoveries” that have proven advantageous to humans. The first was the abolition of buying women as wives. Second, citizens no longer carried arms in the city. But there are other cases, and one example was already seen above in the discussion of Hippodamus’ city designs [T21]. While he thinks Hippodamus’ orthogonal layout must be tempered with certain defense-minded features, he also fully grants the benefits of his innovation:

it is convenient, *kalon*, facilitates good air flow, and other benefits to our flourishing. Even in this realm of practical knowledge he is completely open to innovation in the arts.

This fortifies a further point: even if *endoxa* right now are not as exact as they could be, we “do not seek what is ancestral but what is good” and thus should try to uncover that truly most authoritative opinion again and again [T25.3], not being satisfied by the answers reached in earlier times. Ethics (or at least political science) can then nearly always be open to revision on the basis of further scientific and practical investigation and experience. If ancestors’ beliefs should no longer bound us, then in some amount of time it is conceivable that the *endoxa* Aristotle himself used to help construct a human ethics will have to also be similarly treated as partially antiquated and in need of revision as more scientifically-informed and authoritative *endoxa* become available to answer the new-found objection. This is consistent with Sebell’s (2016: 86) position that Aristotle’s “philosophy of human affairs” represents the perspective of ordinary moral-political opinion as clearly and precisely as possible. Since this opinion can update overtime, however, the ethical system Aristotle’s system would derive in 2022 could also look very different from the account he reached in 450 BCE. This point about the repeatability of the method is the same insight Henry Sidgwick in fact has when he starts his own investigation, eventually arriving at utilitarianism:

[T26] “What [Aristotle] gave us there was the Common Sense Morality of Greece, reduced to consistency by careful comparison: given not as something external to him but as what ‘we’ – he and others – think, ascertained by reflection. And was not this really the Socratic induction, elicited by interrogation? Might I not imitate this: do the same for our morality here and now, in the same manner of impartial reflection on current opinion?” (*The Methods of Ethics* xix-xx)

While *endoxa* at the time Aristotle was writing seemed rather imprecise, we have seen how this is not the full story and that we should not be pessimistic about the potential of *endoxa* and the practical science they establish. As Sebell (2016) puts it: “Aristotle does, then, advance a kind of defense of the ‘normative’ political theorist's refrain, and yet that defense frankly acknowledges—rather than absurdly denies—the legitimacy of the ‘empirical’ political scientist's demand that political theory become ‘more scientific.’” There is no reason to believe ordinary people cannot improve in their opinions and judgments over time.

II.7 also poses a problem for **SA**. **SA** tends to treat the “true” *ἔνδοξα* as existing in the phenomena that are set down, yet Aristotle never says that the ultimately true *ἔνδοξα* must be in the pre-existing *ἔνδοξα*, only that in that group there exists an *ἔνδοξα* that is the *most authoritative* and that it is possible to determine what the most authoritative *ἔνδοξα* in the set is. We have reason to replay this method and achieve an *ἔνδοξα* that is even more authoritative than any *ἔνδοξα* collected in the first application. There is no clear limit to the detail and precision reachable by enough iterations of the endoxic method. As he says in *Parts of Animals*, all that is stopping us is just “hav[ing] to take sufficient pains,” [T10].

So under my telling, the *endoxic* method is used very often, has an inclusive domain of acceptable opinion, and is capable of yielding very robust, ever increasingly beneficial accounts, including empirical observation. Objection 1 to my position – the “methodological concern” – is answered.

As a final upshot before I move onto **Chapter 2**, my interpretation helps alleviate the question of whether the endoxic method is a method of description or a method of revision. People and societies revise their beliefs over time in order to do what is better and more advantageous;



the endoxic method then provides as rigorous a description of these beliefs as possible. Because Aristotle thinks people are a good judge of truth overall, even as good as an expert if a group of people are brought together, this essentially descriptive ethics (if the method is accomplished with the highest rigor and with sufficient iterations) becomes *de facto* a better prescriptive ethics as well.

## Chapter 2

### §1 – Politics as an Inherently General Subject

The last chapter introduced reasons why one might think πολιτικὴ is imprecise, mainly because of its reliance on ἔνδοξα. At first, ἔνδοξα and the endoxic method looked weak, but I showed why we should think better of them.

There may be other reasons, however. Another potential reason is that the generality and inexactness of political science is a feature of it *qua* political science. In other words, too much scientific thoroughness, even when one is engaging in relevant arguments on subjects relating to politics or ethics, means one has simply left the discipline of political science and entered another. The imprecision is a formal feature of the discipline and is not inherent in the methodology or even the subject matter. This broad objection can take three different strengths:

1. Political science is not able to be as precise as some sciences such as mathematics.
2. Political science is not able to study what is good for the individual and remain a science.
3. Political science is not able to be as precise as the type of science performed by observation and induction.

The first version is the weakest claim and the easiest to deal with because I just agree with it. Aristotle clearly denies that political science can be as precise as mathematics. Many textbooks overstate certain distinctions between Aristotle and Plato, but they do not exaggerate their difference here.

However, the second and third versions are more onerous. After considering the primary texts that would support this objection regardless of the specific strength, I will address the viability

of these two versions. Further, throughout this chapter I will be making reference to Dominic Scott's *Levels of Argument*. Scott posits (I think correctly) that there seem to be two different methods for how an Aristotelian ethical subject deliberates and reaches a conclusion. He refers to these two methods as the "Shorter Route" and the "Longer Route." I will briefly describe these as I will use these helpful labels elsewhere in this dissertation.

- A. **Shorter Route:** A person reaches a practical conclusion through a combination of habit, practical wisdom, and observations about the immediate situation at hand. These habits and practical wisdom are both built up over time, and a virtuous person can quickly and (almost unconsciously) reach the practically wise decision.
- B. **Longer Route:** A person reaches a practical conclusion *via* deduction from rigorous scientific and metaphysical knowledge along with observations about the immediate situation at hand. This route is much more rationally intensive and relies on careful study of scientific knowledge about humans and any *pragma* relevant to the particular situation.

There are a couple reasons to believe Aristotle may attach these formal constraints on political science and thus make us think he intends for us to use the Shorter Route. The main evidence where Aristotle appears to make politics imprecise is in *Politics* VII:

[T27] Let this much serve, then, as a preface to our discussion. **Not to touch on these matters is not feasible, but neither is it possible to go through all of the relevant arguments, for that is a task for another study.** For the present, let us assume this much: that the best life, both separately for each individual and collectively for cities, is the life of virtue sufficiently equipped for taking part in virtuous actions. Though we are setting aside objections in our present inquiry, they must be considered later, if it emerges that

someone is not persuaded by what is said[...]And next, which political system and which condition of the city should be taken to be best – regardless of whether sharing in the city is choice-worthy for all or for most even if not for some? **Since the latter question is the task of political understanding and theory (and not what is choice-worthy for each), and this is the investigation we have now chosen, the former question would take us beyond our task, but the latter one is the task of this enquiry.** (*Pol.* VII.1 1323b37-VII.2 1324a22, tr. Kraut 2-3)<sup>76</sup>

This passage operates with Book X.7-8 of the *Ethics* in the background as he is aware of the tension between the political and philosophic life. As *NE* shows us, in the choice between the philosophic life or political life Aristotle gives a clear answer on in the individual case (the philosophic life, if one can keep it) but provides a more circumspect answer in an aggregate case.<sup>77</sup> Determining how many people should receive the treatment provided in the passages above for philosophers is not a task he will enter into, and his excuse is that it would take him beyond his task. However, this is not identical to the claim it is impossible to systematically determine in any given individual case whether the political life is best, but the passage can be interpreted as saying considering individual cases is no longer to perform a properly *scientific* task, i.e., finding essential features about natural

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<sup>76</sup> “ἀλλὰ γὰρ ταῦτα μὲν ἐπὶ τοσοῦτον ἔστω πεφρομισσόμενα τῷ λόγῳ· οὔτε γὰρ μὴ θιγγάνειν αὐτῶν δυνατόν, οὔτε πάντας τοὺς οἰκείους ἐπεξελεθεῖν ἐνδέχεται λόγουσ, ἐτέρας γὰρ ἐστὶν ἔργον σχολῆς ταῦτα· νῦν δὲ ὑποκείσθω τοσοῦτον, ὅτι βίος μὲν ἄριστος, καὶ χωρὶς ἐκάστῳ καὶ κοινῇ ταῖς πόλεσιν, ὁ μετ’ ἀρετῆς κεχορηγημένης [1324a] ἐπὶ τοσοῦτον ὥστε μετέχειν τῶν κατ’ ἀρετὴν πράξεων, πρὸς δὲ τοὺς ἀμφισβητοῦντας, ἐάσαντας ἐπὶ τῆς νῦν μεθόδου, διασκεπτέον ὕστερον, εἴ τις τοῖς εἰρημένοις τυγχάνει μὴ πειθόμενος [...] ἔτι δὲ τίνα πολιτείαν θετέον καὶ ποίαν διάθεσιν πόλεως ἀρίστην, εἴτε πᾶσιν ὄντος αἰρετοῦ <τοῦ> κοινωνεῖν πόλεως εἴτε καὶ τισὶ μὲν μὴ τοῖς δὲ πλείστοις. **ἐπεὶ δὲ τῆς πολιτικῆς διανοίας καὶ θεωρίας τοῦτ’ ἐστὶν ἔργον, ἀλλ’ οὐ τὸ περὶ ἕκαστον αἰρετόν, ἡμεῖς δὲ ταύτην προηγήμεθα νῦν τὴν σκέψιν, ἐκεῖνο μὲν ἀρεργον ἂν εἴη, τοῦτο δὲ ἔργον τῆς μεθόδου ταύτης.**” Kraut (1997: 61) has this to say about why Aristotle sets aside the question of whether sharing in the city is choiceworthy for all or only for the most (1324a18-19): “It might be the case that the best sort of life – one that only a few are capable of – is that of an alien; and because political theory allows this possibility, it is not an investigation of what is ‘choiceworthy for each’ (a20-1).” He points out this is why ethical and political theory are separate disciplines.

<sup>77</sup> Elsewhere, he describes the political life as the “active life” (*NE* VII.2 1324a27) but also suggests only a few people will reach philosophy (*NE* VII.14 1333a16-30, *NE* VIII.2 1337a33-b3). It is worth it, however, to make sure people capable of this life are able to achieve it, suggesting a compromise between the two positions (*NE* VIII.3 1337b33-1338a1, a9-1338b4).

kinds. He is not saying that such a systematic study is impossible, only that to do so is to no longer inquire as a political scientist, with an emphasis on ‘scientist’ (cf. *Pol.* VII.9 1329a23; VII.13 1332a36). This is the substance of the second version of the objection, though it is also entailed by the third version.<sup>78</sup>

However, the main threat comes from Book VI. The passage comes after Aristotle points out that a wise person is taken to be one who can provide a demonstration for their knowledge in chapter 6:

[T28] Knowledge is belief about things that are universal and necessary, and there are principles of everything that is demonstrated and of all knowledge (for knowledge involves reasoning). This being so, the first principle of what is known cannot be an object of knowledge, of art, or of practical wisdom; for that which can be known can be demonstrated, and art and practical wisdom deal with things that can be otherwise. (VI.6 1140b30-1141a1)<sup>79</sup>

[T27] might be seriously bad news to me if we read it as saying that ethics is not able to reach the sort of knowledge required to posit and study first principles. According to this interpretation, it is because practical matters are too contingent for the stability that *archae* are able to achieve. This looks grim for me if we think natural science might be capable of discovering these *archae*. That would establish a major distinction between political science and natural science that would place a limit on the discipline. Fortunately, he also says:

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<sup>78</sup> This is because the third version of the objection describes scientific reasoning as involving induction, and induction aims at making statements that either have a non-contingent modal or a universal quantifier. Contingent statements about individuals would be indefinite, and these statements (while convertible) are just not the statements that speak at the correct level of generality for scientific purposes.

<sup>79</sup> Ἐπεὶ δ' ἡ ἐπιστήμη περὶ τῶν καθόλου ἐστὶν ὑπόληψις καὶ τῶν ἐξ ἀνάγκης ὄντων, εἰσὶ δ' ἀρχαὶ τῶν ἀποδεικτῶν καὶ πάσης ἐπιστήμης (μετὰ λόγου γὰρ ἡ ἐπιστήμη), τῆς ἀρχῆς τοῦ ἐπιστητοῦ οὐτ' ἂν ἐπιστήμη εἴη οὔτε τέχνη οὔτε [b35] φρόνησις· τὸ μὲν γὰρ ἐπιστητὸν ἀποδεικτόν, αἱ δὲ τυγχάνουσιν [a1] οὔσαι περὶ τὰ ἐνδεχόμενα ἄλλως ἔχειν.

[T29] Nor are these first principles the objects of wisdom, for it is a mark of the wise man to have *demonstration* about some things. If, then, the states by which we have truth and are never deceived about things that cannot— or can—be otherwise are knowledge, practical wisdom, philosophic wisdom, and comprehension, and it cannot be any of the three (i.e. practical wisdom, scientific knowledge, or philosophic wisdom), the remaining alternative is that it is comprehension that grasps the first principles.<sup>80</sup>

So [T27] appears to say that practical knowledge is fundamentally deficient in finding the principles required for a science, but [T28] say empirical observation is not any better at it. Instead, it is *nous* which grasps *archae*, so these principles are not even assertions that would fall within the set of propositions that any sort of ‘wisdom’ would be able to generate. Ethics may be different from science and metaphysics, but it is similar to them in virtue of not having *archae* as its *pragmata* of knowledge.

Further, while political science may not be able to discover its *archae*, it is able to do demonstrations with them, and individual practical actors (like individual physicians or craftsmen) are about to establish themselves as authorities:

[T30.1] **Wisdom in the arts we ascribe to their most finished exponents,**<sup>81</sup> e.g. to Phidias as a sculptor and to Polyclitus as a maker of statues, and here we mean nothing by wisdom except excellence in art; but we think that some people are wise in general, not in some

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<sup>80</sup> οὐδὲ δὴ σοφία τούτων ἐστίν· τοῦ γὰρ σοφοῦ περὶ ἐνίων ἔχειν ἀπόδειξιν ἐστίν. εἰ δὴ οἷς ἀληθεύομεν καὶ μηδέποτε διαψευδόμεθα περὶ τὰ μὴ ἐνδεχόμενα ἢ καὶ ἐνδεχόμενα ἄλλως ἔχειν, ἐπιστήμη καὶ φρόνησις ἐστὶ καὶ σοφία καὶ νοῦς, τούτων δὲ τῶν τριῶν μὴδὲν ἐνδέχεται εἶναι (λέγω δὲ τρία φρόνησιν ἐπιστήμην σοφίαν), λείπεται νοῦν εἶναι τῶν ἀρχῶν.

<sup>81</sup> Including legislators: *Pol.* VII.12 1331a39-40, cf. *NE* III.8 1116a17-32; IV.9, X.9 1179b7-13

particular field or in any other limited respect, as Homer says in the *Margites*, Him did the gods make neither a digger nor yet a ploughman Nor wise in anything else.

**[T30.2] Therefore wisdom must plainly be the most finished of the forms of knowledge.** It follows that the wise man must not only know what follows from the first principles, but must also possess truth about the first principles. **Therefore wisdom must be comprehension combined with knowledge—knowledge of the highest objects which has received as it were its proper completion.** [1141a20] **For it would be strange to think that the art of politics, or practical wisdom, is the best knowledge, since man is not the best thing in the world.**<sup>82</sup> (*NE VI.7 1141a9-23*)

This passage plays well with my arguments in **Chapter 1**. He describes the greatest possessors of both practical wisdom and scientific knowledge in similar terms, and **Chapter 1** showed why there is nothing about the endoxic method that necessitates it be any less precise than scientific observation. In particular, his beliefs about the capacities of ordinary people provides the most reason to be optimistic about the potential of the endoxic method.

From the above comment and the arguments in **Chapter 1**, version three of the objection is dubious: political science is capable of operating on the basis of induction, observation, dialectic, and demonstration just as much as natural science.

However, these two passages do not quite defuse a related objection: Natural science and politics simply study different things or even just different aspects of the same thing:

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<sup>82</sup> Τὴν δὲ σοφίαν ἐν τε ταῖς τέχναις τοῖς ἀκριβεστάτοις 1141a.10 τὰς τέχνας ἀποδίδομεν, οἷον Φειδίαν λιθουργὸν σοφὸν καὶ Πολύκλειτον ἀνδριαντοποιόν, ἐνταῦθα μὲν οὖν οὐθὲν ἄλλο σημαίνοντες τὴν σοφίαν ἢ ὅτι ἀρετὴ τέχνης ἐστίν· εἶναι δὲ τινὰς σοφοὺς οἰόμεθα ὅλως οὐ κατὰ μέρος οὐδ' ἄλλο τι σοφούς, ὥσπερ Ὅμηρός φησιν ἐν τῷ Μαργίτη τὸν δ' οὐτ' ἄρ σκαπτῆρα θεοὶ θέσαν οὐτ' ἀροτῆρα οὐτ' ἄλλως τι σοφόν. ὥστε δῆλον ὅτι ἀκριβεστάτη ἂν τῶν ἐπιστημῶν εἴη ἡ σοφία. δεῖ ἄρα τὸν σοφὸν μὴ μόνον τὰ ἐκ τῶν ἀρχῶν εἰδέναι, ἀλλὰ καὶ περὶ τὰς ἀρχὰς ἀληθεύειν. ὥστ' εἴη ἂν ἡ σοφία νοῦς καὶ ἐπιστήμη, ὥσπερ κεφαλὴν ἔχουσα ἐπιστήμη τῶν τιμωτάτων. ἄτοπον γὰρ εἴ τις τὴν πολιτικὴν ἢ τὴν φρόνησιν σπουδαιωτάτην οἶεται εἶναι, εἰ μὴ τὸ ἄριστον τῶν ἐν τῷ κόσμῳ ἀνθρώπος ἐστίν.

[T31.i] Now if what is healthy or good is different for men and for fishes, but what is white or straight is always the same, any one would say that what is wise is the same but what is practically wise is different; **for it is to that which observes well the various matters concerning itself that one ascribes practical wisdom, and it is to this that one will entrust such matters. This is why we say that some even of the lower animals have practical wisdom**, viz. those which are found to have a power of foresight with regard to their own life.

[T31.ii] It is evident also that wisdom and the art of politics cannot be the same; for if the state of mind concerned with a man's own interests is to be called wisdom, there will be many wisdoms; there will not be one concerned with the good of all animals (any more than there is one art of medicine for all existing things), but a different wisdom about the good of each species. (*NE VI.7*)

First, [T29.ii] seems to posit the following theorem about knowledge of other species:

**Ethical Correspondence Theorem [ECT]:** Every living species has a corresponding set of true assertions about what is good or beneficial for that species.

I define a 'ECT-set' as that set composed of all statements which concern what is good (or bad) for that species. Second, the main point of [T29] is to establish the distinction between practical knowledge (even of the architectonic type) and "higher" (i.e. theoretical and scientific) knowledge. However, while the ECT is established by the discussion in [T29.ii], [T29.i] claims that this wisdom seems to be present in some non-human animals as well, and this entails a stronger version of ECT:



**Reflexive Ethical Correspondence Theorem [RECT]:** Every living species has a corresponding body of knowledge about what is good or healthy for that species, and some species have access to this knowledge about themselves.

Or put another way, since humans are assumed to satisfy **RECT** and the implicature is that at least some other species does too, the following also holds:

**Shorter Reflexive Ethical Correspondence Theorem [SRECT]:** There exist at least two species that can have epistemic access to their respective **ECT**-sets.

A note of clarification is needed. [T29] does not on its own specify the route by which the **ECT-set** is to be known. It could be through habit or by intensive study. However, given the reference to non-rational animals in [T29.i], **RECT** entails there is a Shorter Route to practical wisdom for a number of other animals, not just for humans. Under Aristotle's telling, a cat affirms "fire is bad for me" because the cat will hiss and run away scared if it gets too close to a fire, and it knows this through habit and instinct. While the cat's **ECT-set** may not be as complex as a human **ECT-set**, a cat can still access the practical knowledge it needs to survive and avoid

The existence of an **ECT-set** is the body of knowledge ethics and politics deal with most properly, and it is ultimately because the **ECT-set**'s elements are all about benefit. To see why this matters, consider some adjacent fields dealing with human *pragmata*. Fields such as human psychology, physiology, anthropology, and others could be construed as understanding only what human beings do according to nature and not address teleology. Knowledge acquired about human reactions to, say, an optical illusion will tell us something about how a human's eye is connected

to the brain and how that eye functions according to nature, but the optical illusion tells us nothing about what it takes for the eye to perform *well* or how the eye's holder can flourish. It is only once we switch over to considering what is good for these things that we are discussing some sort of ethics, whether human or not. It is when we lose sight of this teleological question that we stop doing politics or ethics and switch to something else.

## §2 – Thales and the Theoretically Practical Person

This may, however, cause an issue for me because a politician *qua* politician only needs to know science relevant to flourishing, not a complete scientific understanding of humans. This would appear to cast the suitability of the Longer Path in doubt because it would imply the political scientist cannot complete and remain a political scientist the whole time. Ultimately, this argument is not a threat to my thesis because this demarcating between politics and natural science can run the other way: after a certain point the subject matter being reasoned about stops being psychology and starts being politics. If the discussion concerns whether the soul has an appetitive part, then the statesman is engaging in psychology; if this discussion of the appetitive soul then leads to deliberation on how to sufficiently feed poorer citizens then that switches to politics. Politics is what one engages in once psychological and anthropological principles are set down, but the politician might have good reason to “study as” a psychologist or anthropologist before moving on and study in their capacity as a politician. If the subject matter of these disciplines blend into each other, then when the politician moves from psychology to politics they can bring their assertions and syllogisms with them. While Aristotle in the *Posterior Analytics* cautions against mixing terms across sciences carelessly, that hardly means he thinks it is unproductive. Indeed, it

is exactly because mixing terms across sciences is so useful that one may be tempted to use it as a crutch for any sort of scientific problem.

**ECT** entails the existence of bodies of ethical knowledge which correspond to essential properties for each living being (**ECT-sets**), but the boundaries of **ECT-sets** are left underdetermined, so it is entirely possible assertions which belong in psychology or metaphysics belong in a **ECT-set**, especially for those species which satisfy **RECT**. A human being is one of the species that Aristotle clearly considers **RECT** to cover; a human being, unlike a cat, might actually make beneficial judgments because they believe in the soul in some way.<sup>83</sup> However, the politician cannot yet know which metaphysical or scientific assertions exactly belong in this set. Sure, they may be able to tell certain general truths about human psychology are relevant, but what about more specific, fine-grained truths about human psychology? **RECT** says we can know what assertions are in this set, even very fine-grained, specific assertions about humans. And, because **RECT** places no immediate restrictions on how this knowledge is accessed, this knowledge need not be held in the head of a politician all at once when it might be stored in some sources the politician can readily draw from. To know which fine-grained assertions belong in the **ECT-set** of assertions about human flourishing, we then just consult somebody who knows those true, fine-grained assertions from natural scientific investigations. We can then sort through those assertions to find the ones relevant to the question of human flourishing. The politician can switch back to politics with the assertion she just learned from the natural scientist and think: “Does this say anything about how human flourishing is affected by climate change?” If yes, then that assertion

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<sup>83</sup> Socrates’ belief in the immortal soul does a lot to motivate his decisions in the *Apology*, *Crito*, and *Phaedo*. If he were to not have these strong psychological beliefs, Socrates as he is portrayed in the dialogues would have likely acted quite a bit differently as the resultant harms he sees with regards to breaking out of prison in the *Crito* or drinking hemlock in the *Phaedo* would be very different.

belongs in the **ECT-set**. If no, then the politician keeps looking. In this way, while politics and natural science are not identical, they run alongside each other and talk regularly.

To show that politics and science are much closer than this passage might suggest on its face (and thus why the Longer Route need not be considered so strange and daunting), I would like to consider Aristotle's description of Thales at *NE VI.8 1141a31-b2* as theoretically wise but not practical:

[T32] From what has been said it is plain, then, that wisdom is knowledge, combined with comprehension, of the things that are highest by nature. This is why we say Anaxagoras, Thales, and men like them have wisdom but not practical wisdom, when we see them ignorant of what is to their own advantage, and why we say that they know things that are remarkable, admirable, difficult, and divine, but useless; viz. because it is not human goods that they seek. Practical wisdom on the other hand is concerned with things human and things about which it is possible to deliberate.<sup>84</sup>

It is true that Thales earned his title as one of the Seven Sages due to his knowledge of geometry, astronomy, and other matters. Among other things he discovered *Ursa Minor*, predicted a total solar eclipse correctly, and proved several geometric theorems. Demonstrating his devotion to all things scientific, the only writings by name attributed to him are the *Nautical Star-Guide*, *On the Solstice*, and *On the Equinox*.<sup>85</sup> So far, [T30] looks to forward the idea that the Longer Route is

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<sup>84</sup> φανερόν δὲ καὶ ὅτι οὐκ ἂν εἶη ἡ σοφία καὶ ἡ πολιτικὴ ἡ αὐτή· εἰ γὰρ [a30] τὴν περὶ τὰ ὠφέλιμα τὰ αὐτοῖς ἐροῦσι σοφίαν, πολλὰ εἰσονται σοφίαι· οὐ γὰρ μία περὶ τὸ ἀπάντων ἀγαθὸν τῶν ζώων, ἀλλ' ἑτέρα περὶ ἕκαστον, εἰ μὴ καὶ ἰατρικὴ μία περὶ πάντων τῶν ὄντων. εἰ δ' ὅτι βέλτιστον ἄνθρωπος τῶν ἄλλων ζώων, οὐδὲν διαφέρει· καὶ γὰρ ἄνθρωπος ἄλλα πολλὰ [b1] θειότερα τὴν φύσιν, οἷον φανερώτατά γε ἐξ ὧν ὁ κόσμος συνέστηκεν. ἐκ δὲ τῶν εἰρημένων δῆλον ὅτι ἡ σοφία ἐστὶ καὶ ἐπιστήμη καὶ νοῦς τῶν τιμωτάτων τῆ φύσει. διὸ Ἀναξαγόραν καὶ Θαλῆν καὶ τοὺς τοιοῦτους σοφοὺς μὲν φρονίμους [b5] δ' οὐ φασιν εἶναι, ὅταν ἴδωσιν ἀγνοοῦντας τὰ συμφέροντα ἑαυτοῖς, καὶ περιτὰ μὲν καὶ θαυμαστὰ καὶ χαλεπὰ καὶ δαιμόνια εἰδέναι αὐτοὺς φασιν, ἀχρηστα δ', ὅτι οὐ τὰ ἀνθρώπινα ἀγαθὰ ζητοῦσιν. Ἡ δὲ φρόνησις περὶ τὰ ἀνθρώπινα καὶ περὶ ὧν ἔστι βουλευσασθαι

<sup>85</sup> Simp. *Phys.* 23,29; Suda s.v. Hesychius (=DK 11 A2). On the *Nautical Star Guide* being spurious, even in antiquity, see: Plut. *De Pyth. Or* 18, 402e (=DK 11B1); DL I.23.1; KRS 87.

not very appropriate. However, that is not the whole story about Thales. He was also able to use this scientific knowledge for his advantage by shorting the oil press market and generating a huge windfall on his predicted increase in olive oil, a prediction made because of his knowledge of meteorology. Aristotle recounts the story in *Politics* I.11 1259a5-18:

[T33] “All these stories are useful to those who value money-making, including of Thales of Miletus [...] When people criticized his philosophy as useless because he was poor, they say he perceived by studying the sky that there would be a good olive harvest. While it was yet winter and he had some money, he put down deposits on all the olive presses in Miletus and Chios for a small sum, paying little because no one bid against him. When harvest time came and everyone needed the presses right away, he charged whatever he wished and made a good deal of money – thus demonstrating that it is easy for philosophers to get rich if they wish, but that is not what they care about.”<sup>86</sup>

Now Aristotle goes on to relate this story to the principle that in commerce it is advantageous to procure a monopoly early in a market when there is low current demand but expected high demand.<sup>87</sup> But the last line is especially interesting: “**συλλέξαντα ἐπιδείξει ὅτι ῥάδιόν ἐστι πλουτεῖν τοῖς φιλοσόφοις, ἂν βούλωνται, ἀλλ' οὐ τοῦτ' ἐστὶ περὶ ὃ σπουδάζουσιν.**” He makes this argument in response to the worry that science is merely interesting but not beneficial. It would be

<sup>86</sup> πάντα γὰρ ὠφέλιμα ταῦτ' ἐστὶ τοῖς τιμῶσι τὴν χρηματιστικὴν, οἷον καὶ τὸ Θάλεω τοῦ Μιλήσιου· τοῦτο γὰρ ἐστὶ κατανόημά τι χρηματιστικόν, ἀλλ' ἐκεῖνῳ μὲν διὰ τὴν σοφίαν προσάπτουσι, τυγχάνει δὲ καθόλου τι ὄν. ὀνειδιζόντων γὰρ αὐτῷ διὰ τὴν πενίαν ὡς ἀνωφελοῦς [10] τῆς φιλοσοφίας οὔσης, κατανοήσαντά φασιν αὐτὸν ἔλαιων φορὰν ἐσομένην ἐκ τῆς ἀστρολογίας, ἔτι χειμῶνος ὄντος εὐπορήσαντα χρημάτων ὀλίγων ἀρραβῶνας διαδοῦναι τῶν ἐλαιουργίων τῶν τ' ἐν Μιλήτῳ καὶ Χίῳ πάντων, ὀλίγου μι-σθωσάμενον ἅτ' οὐθενὸς ἐπιβάλλοντος· ἐπειδὴ δ' ὁ καιρὸς [15] ἦκε, πολλῶν ζητουμένων ἅμα καὶ ἐξαίφνης, ἐκμισθοῦντα ὄν τρόπον ἠβούλετο, πολλὰ χρήματα συλλέξαντα ἐπιδείξει ὅτι ῥάδιόν ἐστι πλουτεῖν τοῖς φιλοσόφοις, ἂν βούλωνται, ἀλλ' οὐ τοῦτ' ἐστὶ περὶ ὃ σπουδάζουσιν.

<sup>87</sup> 18-21: Θαλῆς μὲν οὖν λέγεται τοῦτον τὸν τρόπον ἐπίδειξιν ποιήσασθαι τῆς σοφίας· ἔστι δ', ὥσπερ [20] εἶπομεν, καθόλου τὸ τοιοῦτον χρηματιστικόν, ἐάν τις δύνηται μονοπωλίαν αὐτῷ κατασκευάζειν.

helpful to consider the reasoning that Aristotle ascribes to Thales in this story, however, as I believe it can provide a convenient expression of the outlines of an application of Scott's Longer Route:

- 1) He starts with current meteorological observations.
- 2) He compares these observations with his *epistemae* of meteorology.
- 3) He realizes how meteorology impacts olives due to (2) and his *epistemae* about olives.
- 4) By extension of (3) he can also know how meteorology impacts olive harvests.
- 5) He knows by household *πολιτικῆ* that the size of a harvest impacts demand for presses to process those olives.
- 6) By (4) and (5) he knows that the current meteorological conditions will cause a certain level of demand for olive presses.
- 7) By (6) and household *πολιτικῆ* he knows this means the current meteorological conditions present an opportunity to make a lot of money from the demand by owning olive presses.
- 8) He wants to make money.<sup>88</sup>
- 9) Thales affirms (8) because he believes money will lead to him flourishing. Thus, he puts the assertion "wealth is beneficial" in his **ECT**-set.
- 10) By (7) - (9), for the sake of his flourishing, he makes use of his *πολιτικῆ* and buys olive presses to make money off the olive harvest that his *epistemae* about both meteorology and olives tells him will be coming.

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<sup>88</sup> This one is included because he says that Thales "demonstrates" that a philosopher can make money "if they wished." The clear implication in the text is that Thales in this case wished to make a lot of money (even if just to prove the haters wrong).

Science is useless by itself, but it can quickly prove useful once the knowledge is put to answering the right questions. In Thales' case, he was thinking about how science may bring a great windfall for him and his household, and his reputation for shrewdness lasted at least up to Plutarch.<sup>89</sup> Moreover, this view of Thales as able to bridge the divide between science and practical wisdom predates Aristotle, and these stories involve bridging science and architectonic practical wisdom. Herodotus (1.74.4-14) tells of Thales predicting an eclipse that helps the Lydians:

[T34] The war [between King Alyattes of Lydia and King Cyaxares of Media] waged on even terms until the sixth year of the conflict when it happened that as a battle was raging the day suddenly turned to night. This change of day Thales of Miletus predicted to the Ionians, setting as a limit that year in which the change actually took place.<sup>90</sup>

This battle became known as the “battle of the eclipse” (Clem. *Strom.* 65.1; Eudemos Fr. 143 Wehrli) and it is important for the story to know that the total eclipse mentioned (around ~97% coverage by our calculations now)<sup>91</sup> would have occurred in the early evening, right when fighting with the Persians would have been most tense, giving the prepared Lydians an advantage despite the decreased visibility. Further, Thales' prediction is astonishing because total eclipses only cover a small geographical area at one time. He had to have known both that an eclipse would occur and that it would occur over the battlefield in a way that could be turned towards the Lydians' advantage.<sup>92</sup> While the Ionian Revolt would eventually fail, Thales' prediction was crucial for making the revolt much more viable and threatening to the Persians than it might have been

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<sup>89</sup> cf. *Solon* 2.4 = DK A11

<sup>90</sup> διαφέρουσι δὲ σφι ἐπὶ ἴσης τὸν πόλεμον τῷ ἔκτω ἔτει συμβολῆς γενομένης συνήνεικε ὥστε, τῆς μάχης συνεστεώσης, τὴν ἡμέρην ἐξαπίνης νύκτα γενέσθαι. Τὴν δὲ μεταλλαγὴν ταύτην τῆς ἡμέρης Θαλῆς 1.74.10 ὁ Μιλήσιος τοῖσι Ἴωσι προηγόρευσε ἔσεσθαι, οὐδρον προθέμενος ἔνιαυτὸν τοῦτον ἐν τῷ δὴ καὶ ἐγένετο ἡ μεταβολή. Οἱ δὲ Λυδοὶ τε καὶ οἱ Μῆδοι ἐπειτε εἶδον νύκτα ἀντὶ ἡμέρης γενομένην, τῆς μάχης τε ἐπαύσαντο καὶ μᾶλλον τι ἔσπευσαν καὶ ἀμφοτέροι εἰρήνην ἐωυτοῖσι γενέσθαι.

<sup>91</sup> Asheri et al 2007: 134

<sup>92</sup> It is so amazing a story that some scholars question whether Thales could have possibly calculated this at all or just got lucky: Asheri et al 2007: 134; Blanche 1968: 153 ff.; Mosshammer 1981: 145-55.

otherwise. Just like in the olive press story, this shows how Thales can use his unrivaled *epistemae* to make just better practical decisions than even a highly practically experienced general or entrepreneur would be able to reach without such *epistemae*.<sup>93</sup>

Scott and others who are skeptical that Aristotle intends for a Longer Route to be explored may rightly respond that the Thales story occurs over months as it references him buying presses in winter for a harvest mid-spring. That is not a time scale everyday ethical decision generally operate on; we usually only have moments to give the right amount of charity, to decide whether to run or fight, or whether to have another beer when you are out with friends.

This argument is true, but it is not fatal to the position that Aristotle is supportive of a Longer Route. First, as a matter of fact, individual ethical decisions can indeed occur over months, even if most do not. Second, I concede the Longer Route is not always appropriate if the Shorter Route will give the identical answer, but in this case, it was clearly appropriate as a way for Thales to get what he wanted. In fact, it was “easy” for him and is easy for other philosophers in general. Politics may be able to answer a smaller range of questions than natural science is able to, but that does not preclude science from offering valuable information for the questions politicians asks in such a way as to make a politicians’ answer be better tailored to the exact circumstances the politician finds themselves in. Scott never mentions Thales in any regard, but Thales’ success seems to be an example of the Longer Route used in highly effective ways, even in individual ethical considerations.

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<sup>93</sup> And this is not the only story of Thales using his scientific knowledge to advance the war effort. Herodotus at 1.75.3 reports that the Greeks credit Thales with getting Croesus’ army across the River Halys by diverting the rivers flow enough so as to make the rest of the river easily fordable (1.75.4-5). Herodotus mentions that before this Croesus was completely baffled on how to manage his army in the face of the river and the necessity of crossing it. Thales thus provided a valuable piece of war engineering that somebody who would most likely be an expert in war (a general) simply did not even think of as a solution.



### §3 – A Defense of the Shorter Route that becomes a Defense of the Longer Route

To review, much of the above has been concentrated on resisting the objection that political science is just not capable of deliberating in a highly exact way that proceeds from basic scientific facts to practical decisions. I argue, against Scott and others, that political science is not a field demarcated by its lack of precision and that the different questions of political science can still be highly informed by natural scientific reasoning and the *epistemae* generated by that natural scientific reasoning. I even recounted some neat stories - which Aristotle himself knew - about the “father of Greek philosophy” to demonstrate this.

But is there some independent defense of the Shorter Route? The Shorter Route’s main claims to value are that it:

- 1) Maps onto how normal people ethically reason.
- 2) Is more practical in the moment of deliberation

1) is true enough as a description of individual ethical choices. Not everybody can be Thales and brilliantly deduce how to make a windfall based on some meteorological observations months before. Because not everybody can be one of the Seven Sages, however, then Thales’ method of reasoning is not very relevant to the average person who just wants to decently get by in life in a virtuous way. The Shorter Route is thus the most appropriate for the most people the most often.

However, while not everybody can be Thales, so too not everybody can be a Cabinet Secretary or a Senator. If the Shorter Route were preferable because it describes how most individuals think in individual ethical circumstances, it falls because it does not so describe the way those who do practice architectonic *πολιτικῆ* reason. While circumstances can still require

individual decisions on short notice, the decisions made with architectonic *πολιτική* affect a wider group of people, and this increased level of generality matters because, while Aristotle is pessimistic about our ability to give an account of the particular, he has no issue with giving an account of the aggregate. Governing a *polis* will require much more frequent conscious references to these accounts of the human species and human good than individual decisions will as the politician has to deal in the realm of law and policy, which Aristotle sees as inherently sitting at the level of the universal. This is true even in politics today; one regularly hears recourse to (true or not) facts about human nature and human society while deliberating or crafting legislation in a manner one would never apply in mundane practical decisions such as whether to have another drink at a party or to run away from something threatening.

So political activity gives us one reason to think 1) is false: politics does not operate on just habit and experience but operates on substantive, “thick” beliefs about humanity as well. In Aristotle’s telling, this will take the form of debates about what is equality and justice and applying these concepts in legislating and governing. The Shorter Route, then, is perhaps too short to serve as an adequate description of political deliberation. is a stronger reason for the Shorter Route because it still holds true of politics. Even if politics does not extend from just habit, it still has to make decisions in short order sometimes. Happily, the sort of experience which enables quick decisions is entirely compatible with a more careful approach entailed by the Longer Route. I would like to consider one further reason:

- 3) The Shorter Route has access to some practical knowledge which the Longer Route does not.

If 3) is the case, there would be a serious reason to sometimes prefer the Shorter Route on its own merits even if one were in the practical position to pursue the Longer Route as well. Is there a

plausible example of this in Aristotle? Yes: the virtue of magnificence. Aristotle defines magnificence as balancing several variables at *EN* IV.2 1122a22-26:

[T35] “For, as the name itself suggests, [magnificence] is a fitting expenditure involving largeness of scale. But the scale is relative; for the expense of equipping a trireme is not the same as that of heading a sacred embassy. It is what is fitting, then, in relation to the agent, and to the circumstances and the object,” (tr. Barnes).<sup>94</sup>

Magnificence may require application “in the field” to fully understand in a way required for no other virtue. Irwin emphasizes the number of factors that must be taken into account which distinguish a magnificent act from merely a generous act: besides a great scale and large amount spent, there is a matter of “taste” along with how the magnificent act or object relates to others in a *polis*.<sup>95</sup> Curzer (2012) and Young (1994) - while disagreeing with Irwin on the importance of scale in delineating between a merely generous act and a magnificent - do agree that it is in many ways much harder to accomplish a magnificent act rather than a generous one. Aristotle explicitly distinguishes this at 1122a20-3: “Magnificence...does not like liberality extend to all the actions that are concerned with wealth, but only to those that involve expenditure; and in these it surpasses liberality in scale,” (cf. 1107b17-19, 1125b1-4). The special sort of habituation that the rich are able to acquire is necessary for magnificence, but it may be very difficult to give a highly precise account of, especially since that would seem to allow for the non-wealthy to discover how to be truly magnificent if they just had the requisite resources, something that would stand in tension with other comments on the virtue (*EN* IV.2 1122a27; X.8, 1178a28–b3).

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<sup>94</sup> καθάπερ γὰρ τοῦνομα αὐτὸ ὑποσημαίνει, ἐν μεγέθει πρέπουσα δαπάνη ἐστίν. τὸ δὲ μέγεθος πρὸς τι· οὐ γὰρ τὸ αὐτὸ δαπάνημα τριηράρχῳ καὶ ἀρχιθεωρῷ. τὸ πρέπον δὴ πρὸς αὐτόν, καὶ ἐν ᾧ καὶ περὶ ὅ.

<sup>95</sup> (1988: 63), though see Kraut 1988 in same volume (79-86)

However, seeing magnificence as imprecise is not consensus across the Aristotelian tradition. This issue especially engaged Medieval and Renaissance commentators, writing in the context of a society which greatly valued individual expressions of largess by nobility in the form of statues, churches, and public buildings. However, Aquinas and Albert the Great both present different takes on magnificence that may allow for a more exact understanding.<sup>96</sup> Aquinas sees actions as required for magnificence, but he believes the poor can become so good at generosity that they need only a little exposure to wealth to discern its proper use in magnificence. Albert goes even further by considering the intention by poor person to be magnificent to be sufficient, so long as they are habituated towards the other factors required for magnificence (good taste, proper scale, etc.). Both commentators can rely on Aristotle's analogy claiming that "a magnificent person is just like an expert" in their ability to judge what is tasteful ("ὁ δὲ μεγαλοπρεπῆς ἐπιστήμονι ἔοικεν") (*NE* IV.2 1122a34). If either of these commentators are correct, then it would seem a poor person may still be able to acquire a highly precise (though not totally precise in Aquinas' view) account of magnificence and what it takes to achieve a magnificent act.

However, neither of these commentators consider how difficult it is to get an exact handle on what it means to have "taste," especially as magnificent acts can take a wide variety of forms and be tasteful. This is an issue for a proponent of what is called the "Scale Thesis" (Irwin 1988: 63) where magnificence is composed of several factors where the first is "spend in good taste."<sup>97</sup> Proponents of the Scale Thesis struggle to provide a complete answer on what this tastefulness is, making this variable somewhat undefined. A fine, beautiful object given to a friend can be called

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<sup>96</sup> Aquinas: *Scriptum in Sententias* IV.14.1.3 q. 2, 4: 604; *De virtutibus cardinalibus 2 ad 5 et ad 9*, in *Quaestiones disputatae*, ed. P. Bazzi et al. (Turin etc., 1949), p. 820, see also Hoffman 110 ff. Albertus Magnus: (*Super Ethica* 4.5.282; p. 243–244)

<sup>97</sup> The whole list: (a) Spending in good taste, (b) Spending for the public good, (c) Rejecting bad advice, (d) Cooperating with others, (e) Being patient.

magnificent just as much as a building a museum for a city is and coming up with a definition that comprehends both of these cases is not obvious. Further, one of the best defenses of what is called “Asymmetry Thesis” (Curzer 122) between magnificence and liberality is that expense is not the distinguishing factor, with 1122b13-14 offering the best support: "At an equal expense [the magnificent person] will produce a more magnificent result [than the liberal person]."<sup>98</sup> But it would seem that he makes it clear that the state of possessing wealth itself accords some sort of insight beyond having theoretical study on this, too. So even under Irwin’s analysis there is still a variable that could be left unknown to a strict follower of the Longer Route that would be exclusive to the Shorter Route. Given the other variables Irwin’s list are seemingly all accessible by the Shorter Route, this would give the Shorter Route a distinct advantage in this case. If there is a political correlate to this type of knowledge, then I am in serious trouble, Curzer, however, is ultimately right that, given its incommensurability with the sort of generous action practiced by ordinary people and by its resistance to easy study, Aristotle considers magnificence one of the “heroic” virtues and thus one meant to be extraordinary in a way that is beyond mere scale or other factors that are easily quantifiable.<sup>99</sup> This may be another reason magnificence is not subject to a more formal, systematic account because it is by definition meant to be in defiance of the normal and accountable. The Longer Route could speak on generosity (even if in an impractically roundabout way) but does not touch on magnificence because it is a virtue that is posterior to the virtue of generosity in formulation as it exceeds the norm of generosity yet is still virtuous. Even while it still obeys the basic structure of a virtue in being a mean between excesses, there is

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<sup>98</sup> “[...]καὶ ἀπὸ τῆς ἴσης δαπάνης τὸ ἔργον ποιήσει μεγαλοπρεπέστερον.”

<sup>99</sup> “I argue that liberality and magnificence are not separate virtues differing merely by scale. Instead, magnificence is heroic liberality. It is the version of liberality possessed by Aristotle’s heroically virtuous person. In addition to solving the various interpretative problems that the usual interpretation cannot solve, taking magnificence to be heroic liberality captures an important moral intuition, the intuition that, within limits, the more generous a person is, the better.”

something about the “extremeness” of the person’s virtue that makes it not susceptible to the general account that would hold for most people.<sup>100</sup>

Yet this does not cause problems for me as I am not able to think of an architectonic parallel to the individual – heroic – virtue of magnificence. Aristotle certainly makes a number of recommendations about the aesthetics of a flourishing city (e.g. VII.11 1330b21-31) to the point of considering the city parks manager (IV.8 1321b26-30) and overseer of public beautification to be “necessary offices” (1321b17-26; cf. b5), but these are considered constitutive features of an actually functioning *polis*, not an ideal or even pretty good one. In contrast, he does not consider magnificent acts necessary for individual flourishing. While Irwin is correct that magnificence is an especially public (and thus political) form of individual virtue, it is still an individual act and not architectonic *πολιτικῆ*. Aristotle provides us good reason to think the Longer Route is highly useful, just not appropriate in all contexts of individual ethics, and granting that magnificence may not even be subject to the Longer Route amounts to saying the Longer Form is especially inappropriate in the context of a individual virtue. There does not obviously seem to be a corresponding virtue in legislating, however, so it remains that all political decisions can be subject

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<sup>100</sup> The whole idea that there can be a sort of “extreme” or “excessive” virtue seems like an oxymoron in Aristotle, and to make matters worse he also describes the possessor of *megalopsuchia* in these heroic and excess terms. While a number of scholars (Curzer 1991: 527-8; Horner 1998: 421; Kristjansson 1998a, 1998b: 400) have argued the idea that there can be “extreme virtues” undermines the coherence of his doctrine of the mean, I ultimately agree with Crisp (2006: 159-161) in interpreting *megalopsuchia* as a sort of virtue that supervenes on other virtues in that the other virtues establish you are worthy of great honors while *megalopsuchia* is the recognition that we deserve these great honors. This disposition leads then to great acts which accord with that good reputation/high honor (*NE* I.9 1366b17; IV.3 1123b17-21). There is a strong connection, then, between possessing *megalopsuchia* and great instances of certain virtues, and it is natural to think as well that *megalopsuchia* sanction somebody to be magnificent, because the magnificent gift feels in accordance with how great the person is, neither too spendthrift nor too showy yet worthy of greatest acclaim. Crisp (161; cf. Gauthier 1958: 20) points out that *megalopsuchia* and *megaloprepeia* (magnificence) had basically equivalent usages, and greatness of soul was generally associated with greatness of generosity (Dover 1974: 178).

to the Longer Route, even if the individual virtue of magnificence escapes it and can only be reached *via* the Shorter Route.<sup>101</sup>

So, it would seem the value of a Shorter Route lies principally in being just much faster than the Longer Route. I do not wish to discount this, however, as *Politics* II.8 (covered in **Chapter 1**) provides us some reason to believe that even the Shorter Route can improve as well. The Shorter Route as Scott defines it allows that we are shaped not only by the actions observed around us but by the principles and beliefs we see espoused around us as well. To recall *Politics* II.8, what seems like sound *endoxa* one day may seem like backwards nonsense the next, and one pursues the good, not the ancestral or traditional. Yet if even the basic ethical beliefs we take as obvious could change, it is possible that the Shorter Route can improve as those who are habituated in a more advanced society will just come to act in a more civilized way that leads to greater flourishing than past generations thought possible.

The first reason to think the Shorter Route can be affected by applications of the Longer Route is his view of law:

[T36] But the law trains officers for this express purpose and appoints them to determine matters which are left undecided by it, to the best of their judgment. Further, it permits

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<sup>101</sup> It is significant, however, that while he does not have a clear parallel between magnificence in the political sphere, he still appears to have an idea of the extraordinary political actor who is “their own law” and does not obey any of the needs that normal people must obey (*Pol.* III.14 1284a-1285b, IV.2 1289a38-b2; cf. NE VI.6 1150a1-3 and *Laws* 713d). It is exactly because this person is sort of beyond the norm for a political actor that Aristotle alludes to him a number of times but admits it is hard to give a formal account on its own terms. This is found among major commentators as well. Aquinas in his commentary on the *Nicomachean Ethics* (1298-1300 ad 1145a18-25 = p. 409 Litzinger) describes how “the human soul is the middle substance between the higher or divine substances, with which it shares intelligence, and dumb animals with which it shares sensitive powers.” After introducing the allusion to Homer, Aquinas continues: “[This example] is not to be understood [...] in the sense that human nature is changed into divine nature but in the sense that the excellence of virtue exceeds the usual human mode. Obviously, then, there is in some men a kind of divine virtue, and [Aristotle] draws the conclusion that this virtue is the opposite of brutishness,” (tr. Litzinger). Aquinas provides, perhaps unsurprisingly, a more deflated interpretation of these divine people. However, while his discussion of the human soul as being split between the divine and animalistic is true enough, identifying the absolute king of *Politics* III as a member of these divine people would seem to imply that the king’s virtue is beyond “the usual human mode.”

them to make any amendment of the existing laws which experience suggests. Therefore, he who bids the law rule may be deemed to bid God and Reason alone rule, but he who bids man rule adds an element of the beast; for desire is a wild beast, and passion perverts the minds of rulers, even when they are the best of men. The law is reason unaffected by desire. (III.16 1287a21-27)<sup>102</sup>

Notice his description of law as "training" magistrates to make good decisions. He acknowledges that law might need a human element at times, but it is a person who is clearly posterior to the law as law παιδεύσας ("teaches") magistrates to make good decisions when coupled with their own experience. We can make sense of this idea if we consider the intent or goal of the law to be relevant to the interpretation of law. If so, then by investigating the intent of the law we will better understand the goal and why it is worthy to pursue. If the city is flourishing, then looking at the laws that enabled such success would naturally be helpful.<sup>103</sup>

This didactic role for the laws interacts with his argument in *Politics* II.8 in a curious way. We saw in **Chapter 1** that II.8 contains a strong idea of progress in politics and ethics, but Aristotle worries about what to do with this realization:

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<sup>102</sup> ἀλλὰ μὴν ὅσα γε μὴ δοκεῖ δύνασθαι διορίζειν ὁ νόμος, οὐδ' ἄνθρωπος ἂν δύναιτο γνωρίζειν. ἀλλ' ἐπίτηδες παιδεύσας ὁ νόμος ἐφίστησι τὰ λοιπὰ τῇ δικαιοτάτῃ γνώμῃ κρίνειν καὶ διοικεῖν τοὺς ἄρχοντας. ἔτι δ' ἐπανορθοῦσθαι δίδωσιν ὅ τι ἂν δόξῃ πειρωμένοις ἄμεινον εἶναι τῶν κειμένων. ὁ μὲν οὖν τὸν νόμον κελεύων ἄρχειν δοκεῖ κελεύειν ἄρχειν τὸν θεὸν καὶ τὸν νοῦν μόνους, ὁ δ' ἄνθρωπον κελεύων προστίθησι καὶ θηρίον· ἢ τε γὰρ ἐπιθυμία τοιοῦτον, καὶ ὁ θυμὸς ἄρχοντας διαστρέφει καὶ τοὺς ἀρίστους ἄνδρας. διόπερ ἄνευ ὀρέξεως νοῦς ὁ νόμος ἐστίν.

<sup>103</sup> Aristotle even thinks the politicians themselves can be moral exemplars: *Pol.* VII.12 1331a39-40, cf. *NE* III.8 1116a17-32; IV.9, X.9 1179b7-13. Interestingly, he never disputes a basic characterization offered by the anti-kingship camp that "those who hold political office, on the other hand, do many things out of spite or in order to win favor," (*Pol.* III.16 1287a36-38). He uses this to dispute the idea that politicians are simply craftsmen like a doctor. It is exactly because politicians are vested in the craft in a way unique to them that they need written *nomoi* more than any other expert. While my whole dissertation is geared towards showing Aristotle is optimistic about the capacities of humans to discover truths about ourselves, he is also realistic about the influence of unchecked power.



[T37] “From these considerations, then, it is evident that some laws must sometimes be changed. But to those who investigate the matter in another way this would seem to require much caution. For if the improvement is small, and if it is a bad thing to accustom people to casual abrogation of the laws, then some of the legislators’ or rules’ errors should evidently be left unchanged. **On the other hand, the paradigm involving the crafts is false. For changing a craft is not like changing a law. For the law has no strength to secure obedience except habit, and habit does not develop except over a long period of time. So to change easily from existing laws to new and different ones is to weaken the capacity of law itself.**”

This passage reinforces the notion that Aristotle had a strong notion of progress. In fact, he worries that progress in *politikae*, and the changes in laws that these advances would entail, might proceed so rapidly that laws will lose their coercive and didactic force as citizens will assume they will be changed as well. Because of this, sometimes we even must keep faulty, but established, laws alone. We ourselves may not find this objection very forceful, but it is telling as it shows he is so optimistic about our ability to advance in our understanding of human flourishing that he is worried the knowledge could get too good, too quickly!<sup>104</sup>

This yields the following possible scenario: 1) A politician constructs a fine law using the Longer Route and loads of scientific information. 2) That law proves successful enough that the principles about the good society which underlie that legislation may become consensus or

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<sup>104</sup> II.8 in general is a fascinating passage as it contains some of Aristotle’s longest meditations on changing currently existing laws. He sadly only raises the question of whether different constitutions should variously amenable to changing their laws or if the prescription to be extremely cautious with alterations applies to all forms (and maybe even all instances) of constitutions. He never returns to this question in the extant *Politics*, but it is surely relevant to considering the role of increased knowledge of human flourishing.

“common sense” to many. 3) Applications of the Shorter Route would then take place in the context of a *polis* run by these superior laws. Because 4) our virtue is at least partially product of our upbringing and the *polis* we live in, our subsequent applications of the Shorter Route will be at least partially influenced by an application of the Longer Route.<sup>105</sup> Even if one thinks the Longer Route is not useful in individual cases of practical deliberation, the Longer Route is useful architectonically for making the deliberations about those individual cases better over time in a population. We then have a defense of scientific politics for the sake of unscientific ethics.

#### §4 – Conclusion/Transition

The above passages, particularly [T34], reinforce what I argue for in **Chapter 1, §2.2** on the basis of [T4]. I grant that, with regards to individual ethical decisions such as whether to run away from something frightening, a “Longer Route” is unnecessary and may even be a distraction. But politics is complicated and furthermore can be dangerous, even deadly, as political decisions affect far more than the person making the decision. Such exactness of knowledge, as problems in society become ever more intricate, might be necessary as even a minor failure in designing policy may have disastrous effects on any number of citizens: mistakes on health policy can mean people

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<sup>105</sup> To provide an example of law doing something like this in contemporary American society: since the passage of the Civil Rights Acts and Voting Rights Acts of the 1960s, intentional, explicit endorsements of segregation and overtly racist behaviors are widely seen as bad, current political debates notwithstanding, and part of the reason is that the inscribing of this sort of social inclusion “into the books of law” served as a signal that American society as a whole considered these practices to be bad. Certainly, this rejection of racism was (and is) only partially appreciated by white Americans, yet 50 years on many more white Americans will generally have a “gut reaction” against state actions which clearly differentiate on the basis of race including acts of segregation, even if many fail often times to recognize a particular action as an instance of racism. This “gut reaction” is clearly not enough to stop all racist behaviors in society, but it is a sign of some sort of habituation, a habituation that was not present in many white Americans in 1960. In fact, the popular view from 2022 of the Jim Crowe South and its past supporters as “simple-minded and barbaric” in a way parallels how Aristotle considers the beliefs of the “earth-born” or certain, highly socially conservative societies. This is of course not to say law was the only factor which led to this change; Aristotle could also emphasize the role of observing moral exemplars such as Parks, King, or Lewis along with individual actions by many others. It was, however, an important one nonetheless that altered the nature of the Shorter Path many Americans take on responding to racist actions or expressions.

do not get the treatments they need to survive; mishaps on tax policy can lead to shortfalls in crucial social welfare programs and infrastructure projects which seriously impact peoples' material wellbeing and drive inequality; and errors in education policy can result in uneducated citizens who are not properly prepared for the virtuous political life and who corrupt the constitution and elect ignorant, demagogic leaders. These are also all issues Aristotle worries about at length in Books VII and VIII of the *Politics*. It would seem if there is any place we want to make sure our answers are airtight, it is in the realm of politics.

So the objections some take from [T1]-[T3] detailed in **Chapter 1** and this chapter work only for individual ethics. The upshot is that, to draw several lessons from these chapters together, Aristotle thinks we are up to the task for an exact politics for multiple reasons: 1) His endoxic method shows a trust in a wide variety of sources for reliable opinion yet can produce informative, exact results. 2) His psychology and theory of perception suggest we are able to extract very rich content from observing individual objects, including their form and τέλος. 3) We not only see this content but want to as we naturally desire to know it, and this desire makes our *ἔνδοξα* worthy of consideration. 4) Lastly, due to our social natures, even if the politician does not have enough years in their life to obtain exact knowledge on some political problem they can easily consult those who have the exact knowledge on the related scientific fields and these experts have a clear incentive to provide such knowledge.

However, asking whether politics can draw on exact material in a rigorous way is different from asking whether the assertions of political knowledge itself are of a form that is capable of scientific reasoning. Afterall, Aristotle describes the propositions of ethics and politics as being true only “for the most part,” and that seems to make the knowledge obtained through ethics to have a different content than the *ἐπιστήμη* which is universally true. However, as I will expand in

**Chapter 3**, I propose there is another way to understand how a statement can be true “for the most part.” If we think the phrase “for the most part” [now abbreviated as ‘FTMP’] has a more robust metaphysical flavor to it, then perhaps the similarity to natural science is stronger than we might believe. To be sure, “for the most part” statements would still not be of the same sort as the claims made in geometry or arithmetic, but they would still be demonstrable. It is determining what “for the most part” means for the most part in Aristotle’s system, and what this means for the codification of ethics, which will occupy the next couple chapters.

In **Chapter 3**, I will argue that Aristotle ultimately works with a truthmaker semantics with an isomorphic correspondence theory of truth. While other scholars often attribute a correspondence theory to Aristotle, few realize the idiosyncratic nature of his theory of truth and how it renders possible worlds semantics unfeasible. Most interpretations of FTMP statements operate under a possible worlds semantics, giving rise to an interpretation that does violence to his ontology. I hope to correct this interpretation and show what makes FTMP statements true is something more interesting and metaphysically informative than that they obtain more often than not. Instead, FTMP statements – and thus the stuff of ethical knowledge – are made true because they pick out a capacity in a type of object and relate its actualization to the state of some impediment. This is the interpretation that best takes into account how thoroughly object-based his metaphysics and epistemology truly are.

Further, since science is also about objects’ natures, this shows how similar ethics and politics can be to “hard” science, because they both make statements about objects, their capacities, and what affects the realization of those capacities. From **Chapters 1-4**, then, we will establish the following:

1. There is nothing inherently inexact or unscientific about *ἔνδοξα*, even if many specific *ἔνδοξα* are inexact at a given point in history.
2. The Longer Route from science to ethics is not inherently unfeasible and can usefully lead to exercises of *πολιτική*.
3. Ethical knowledge has a semantics very similar to natural science.
4. The propositions of ethical knowledge are demonstrable for a reason analogous to why propositions in the natural science are demonstrable

The task of this dissertation is to determine to what extent Aristotle thinks politics can be a science and why. While none of the above says that one must use the Longer Route over the Shorter Route, nonetheless my arguments suggest that if political knowledge can look just like a scientific knowledge and can quack just like scientific knowledge, then we should just say it is a type of scientific knowledge and believe the Longer Route is much more sustainable than Scott and others think.

## Chapter 3

### §1 –An Introduction, for the most part:

As seen in the previous two chapters, there is nothing about practical philosophy, *qua* practical philosophy, that should preclude us from pursuing a scientific underpinning for them according to Aristotle’s philosophic commitments. Further, given the special status of the **PNC** and how it is reached *via* the endoxic method, there is nothing in the endoxic method to suggest the ethics grounded by this “longer” route is inexact.

However, there appears to be a problem because, while it seems the method is able to theoretically yield exact results (given a sufficient number of iterations), the method as applied to practical philosophy specifically only yields beliefs that are true “ὡς ἐπὶ τὸ πολὺ ,” which is translated variously as “more or less,” “usually,” “generally,”/ and, most commonly, “for the most part” [subsequently abbreviated as ‘FTMP’] These include assertion about both ethics (e.g. “Wealth is beneficial”) and politics (e.g. “Democracies redistribute wealth”), so their status has major consequences for the possibility of demonstrable, scientific political knowledge. However, FTMP assertions also possess the following features, features that appear to lie in tension with each other:<sup>106</sup>

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<sup>106</sup> If I were to crudely sum up the difference between the statistical and metaphysical models it would be this: the statistical model sees “for the most part” operator as a quantifier while the metaphysical view sees it as a modality. It is a modality (in the general sense of being an intensive operator) instead of a quantifier because it conveys more information about the object than about how many times the assertion is true. “For the most part” instead implies a certain connection to an object’s nature (especially their capacities) in a way analogous to the way true statements about category memberships are necessarily true and not simply true in all cases which obtain up to now.

- 1) They are weaker than universal claims as it allows for things to be otherwise in particular cases. (*De Int.* §9 19a35-9, esp. 18-22; *Top.* I.6 112b1-10; *PA* I.1 641b22; *Phys.* II.5 196b10-12; *Met.* E.2 1026b27-30, Z.7 1032a12, Λ.3 1070a6)
- 2) However, Aristotle just as often contrasts what comes about for the most part with what comes about “from chance,” suggesting it is stronger than chance events (*GC* II.6 333b7, *DC* II.8 283a33, *Po. An.* I.30 87b19; *EE* I.4 1247a32; [*Prob.*] 91b31; *GA* IV.8 777a19-21).<sup>107</sup>
- 3) Despite not using one of the two syllogistic quantifiers (and thus counting as an indefinite),<sup>108</sup> Aristotle repeatedly affirms that these propositions are “demonstrable,” meaning deductive syllogisms can be performed on them like those described in the *Posterior Analytics* (*Po. An.* I.29 87b17-25) and *Metaphysics*. He even believes immediate first principles can be discerned with what holds for the most part (*Po. An.* II.12 96a17-19).
- 4) While the claims of ethics and politics are said to be true only “for the most part,” there are some ethical beliefs that are always true, so statements in ethics and politics can have statements which never fail to hold and yet are only described as being true “for the most part,” (e.g. *NE* I.2 1094a20, II.2 1104a12, II.6 1107a12, IV.16 1145a1-13).

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<sup>107</sup> This last passage is especially interesting in its combination of “for the most part” and “according to nature”, [κατὰ φύσιν], suggesting already a tension between aspect 1) and aspect 2) of the semantics of τὸ ὡς ἐπὶ τὸ πολὺ. “τοῦτο δ’ ἤδη παρὰ φύσιν· ἐν γὰρ τοῖς μὴ ἀδυνάτοις ἄλλως ἔχειν ἀλλ’ ἐνδεχομένοις τὸ κατὰ φύσιν ἐστὶ τὸ ὡς ἐπὶ τὸ πολὺ.

<sup>108</sup> *Pr. An.* I.13 32b4-17; cf. Alex *Pr. An.* 162.13-164.14, who understands the indeterminate nature of FTMP to be reflected in the contingency of material form, so the truthmaking conditions for a FTMP assertion relies on what must obtain in matter.

These four aspects stand in tension with each other because we do not associate certain, scientific knowledge about the world with the quantified indefiniteness and contingency connoted by the phrase “for the most part.”

So what is going on here? There seems to be three ways forward to resolve this tension: 1) Just admit Aristotle’s “for the most part” operator is incoherent; 2) Weaken the strength of what it means to be “demonstrable” and thus considerably dilute the status of scientific knowledge; 3) Show how the “for the most part” operator need not be considered “imprecise” and can acquire the exactness required of an assertion in a scientific syllogism.

I think we should prefer 3) because there is a way to understand Aristotle’s theory of truth that allows for these assertions to be demonstrably true in the same way a universal statement can be demonstrably true. These assertions share a structural similarity: they both talk in terms of some object either being joined with a predicate or separated from it. While universals are able to talk about properties that join to an object’s form (including category relations and essential capacities), FTMP statements are able to talk about how the matter of the object must be conditioned such that the attributes referenced by universal statements are able to be realized in the objects themselves. Both of these statements get their demonstrability because they are about essential attributes of an object; they differ because they address different sides of the same hylomorphic compound.

To provide a quick example of the difference, the following is universally true for Aristotle: Humans are rational animals. This makes the capacity for rational thing constitutive of being a human being. Anything that counts as a human could, if its matter is arranged correctly, be capable



of rationality. Ultimately, this is joining a primary substance with a secondary substance and its predicate.<sup>109</sup>

However, the following is true only for the most part: Wealth is good for humans. If we take “good” in Aristotle’s sense of denoting whatever aides in the realization of our capacities, then we could rephrase the statement as: wealth facilitates the development and actualization of a human’s rational capacities. This claim could be explained in terms of something true about the object’s proximate matter: wealth facilitates relaxation which provides time to contemplate and exercise our rationality. If one is poor and has to subject their body to long, backbreaking labor, they will hardly have the time or energy to read philosophy or be politically engaged, two of the principle sorts of rational activity.

This FTMP statement does not weigh in on whether humans, *qua* humans, possess a capacity for rational thought. It assumes that capacity is constitutive of the form of human; instead it asserts something about the matter through which this capacity might be realized. Perhaps the conditions required for the matter are so difficult to obtain that we never find an individual instance of the FTMP assertion holding (e.g. maybe it takes, implausibly, hundreds of billions of dollars for wealth to be beneficial), but that does not negate the idea behind the FTMP that *if* the matter did obtain those conditions *then* that capacity would be more easily realized.

The statement ‘Humans are rational animals’ is about the form of human, but the statement “wealth is beneficial” is about the matter of the object. In both cases, however, the truth-conditions of the assertion relies on accurately modeling in our speech the object-attribute pairings to which

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<sup>109</sup> Statements about secondary substances can be universally true, but I argue, since secondary substances are parasitic on primary substances, the truth of assertions which predicate secondary substances are ultimately about the secondary substances’ requisite primary substance tokens.

the assertion is meant to correspond. They differ on what “part” of the matter-form structure of the referent object we attach the referent attribute.<sup>110</sup>

## §2 - Roadmap and Anticipated Results:

The above paragraph is a basic description of how I see FTMP statements working, and it is clear that I see them as very rich statements that do more than just track how often the statement happens to be true. However, at least two aspects of my view are in obvious need of defense:

- 1) My interpretation of Aristotle’s theory of truth.
- 2) Why FTMP assertions are true independent of their rate of occurrence and yet are said to be true “for the most part.”

My answer to 1) will provide, the start of an answer to 2) because it will show that the most common alternative interpretation of FTMP (the “statistical interpretation”) relies on the existence of a truthmaker (state of affairs) that Aristotle never actually uses as a truthmaker.

I will show the following:

1. Aristotle adopts an isomorphic correspondence theory of truth.
2. Only mind-dependent entities and assertions are proper truthbearers in that only mind-dependent entities such as assertions are capable of displaying the capacity to take either side of “the full disjunct” of being true or being false.

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<sup>110</sup> This is why I think the FTMP is an intensive operator and thus properly described as a modality, since like the universal modal it is *about* the objects in some way, not just quantifying instances where the assertion is true. Universal assertions are true universally not just because it has never been wrong, but there is something about the ontology of the objects or class referred to in the assertion such that the assertion is necessarily true.

3. Facts and states of affairs are not truthmakers as they possess an unstable ontology inside of Aristotle's system. States of affairs (like possible worlds) are a worthy form of modeling true assertions, but they do not possess the standing to make these assertions true in Aristotelian semantics.
4. Truthmakers for Aristotle are the substances which combine and divide with their predicates.
5. Truth is created in thought by the generation of truthbearers which are isomorphic with their observed truthmakers.
6. Because Aristotle's logic is complete, then given any object-predicate pairing we are able to manufacture an assertion (and thus a thought) that stands isomorphic to the object-predicate pairing and is usable in a syllogism. This allows us to successfully form and scientifically reason about FTMP assertions concerning the material conditions related to the realization of a capacity in an object, no matter how conceptually posterior, practically difficult, or rare the conditions may be.

If I can show the preceding statements are the case, I will have shown that FTMP assertions are very rich and informative indeed. If Aristotle is right that knowledge of politics is composed of assertions that are true FTMP, then knowledge of politics is composed of true assertions about a species of hylomorphic compounds defined as an embodied rational and political animal and its corresponding capacities along with those capacities' impediments. Or, to put it another way:

political science is about human beings, what we are like at our best, and what prevents us from realizing our best. As it turns out, Aristotle's theory of truth provides us the ability to scientifically discover - given enough time to go down the requisite "digressions" - a lot about what it takes to reach our maximum potential as political and rational beings.

### §3 – A Taxonomy of Truth

So first, let us figure out what it takes to be true before we consider what it takes to be true for the most part. The problem is that Aristotle refers to truth in so many different ways, and I list some below. While my main goal for these chapters is to construct a coherent interpretation of the FTMP modality, I will count my effort doubly successful if I can accommodate as many of the following uses as possible.

#### §3.1 The following are all truth-bearers:

**States and acts of beliefs** — *Cat.* §5 4a26-8; *De Int* §14 23a38; *Po. An* I.33 88b32-89a3, II.19 100b5-7; *Top.* VI.2 123a15-19; *SE* §22 178b24-9; *DA* III.3 427b20-1, 428a3-4, a19; *Met* Θ.10 1051B13-14; *NE* III.4 111b31-4, VI.8 1124b6, IV.3 1139b15-18, IV.10 1142b11, VII.10 1151b3-4; *EE* II.10 1226a1-4; *Protrp.* Fr. 73 Gigon 306b7-8, b12; 312a36 (= *Iamb. Protrp.* 44.5-6, 44.9; 59.13-14).

**Assertions** — *Cat.* §5 4a23-26, b8-10; §12 14b14-22; *De Int.* §1 16a9-18; §4 17a1-5; §9 19a33; *SE* §22 178b24-9; *Met.* Θ.10 1051b13-14.

Assertions can come in degrees of truth (*Phys.* III.6 206a13-14; *DC* IV.3 310b1-3). This usage appears especially in the *Politics* as there can be degrees of truth to even some architectonic principles of government such as on the relative value of freedom or on whether government is best when more people are involved or fewer (*Pol.* I.5, 1255a3-I.6 1255a4, VII.3 1325a23-24, and III.11 1281a41-42 respectively).<sup>111</sup>

Some assertions - including meta-ethical ones - are “true most of all” [παντὸς μᾶλλον ἀληθῆ] or are absolutely true: *Protp.* Fr. 43 During (= *F* 58 *R*<sup>3</sup> = *Imb.* *Protp.* 52.16-54.5 Pistelli); *Met.* α.1 993b20-24.

**Arguments** — *Po. An* I.32 88a19-20; *Top.* VIII.13 162b3-22; *SE* §18 176b29-33.

**Perceptions** — *Top.* II.4 111a14-20; *DA* II.6 418a11-16; III.3 427b11-14; 428a3-4, a11, b18-30; III.6 430b29-30.

**Imaginings (φαντασία)** — *DA* III.3 428a1-4, a12-18, b10-17.

**Dreams (ἐνύπνια)** — *Met.* A.29 1024b23.

**First principles:** *Phys.* I.8 191a25; *Met.* A.7 988a19-20; *Rhet.* I.7 1364b7-10.

## §3.2

**The following are also described as being ‘true’ or ‘false,’** (whether these should be understood as proper truth bearers will be discussed later in the chapter)—<sup>112</sup>

<sup>111</sup> *Politics* I.5: Ὅτι δὲ καὶ οἱ τάναντία φάσκοντες τρόπον τινὰ λέγουσιν ὀρθῶς, οὐ χαλεπὸν ἰδεῖν. διχῶς γὰρ λέγεται τὸ δουλεῦν καὶ ὁ δοῦλος. ἔστι γάρ τις καὶ κατὰ νόμον δοῦλος καὶ δουλεύων· ὁ γὰρ νόμος ὁμολογία τίς ἐστιν ἐν ἧ τὰ κατὰ πόλεμον κρατούμενα τῶν κρατούντων εἶναι φασιν. “It is clear, then, that some men are by nature free, and others slaves, and that for these latter slavery is both expedient and right. **But that those who take the opposite view have in a certain way truth on their side, may be easily seen.**”

<sup>112</sup> I separate these off from the main truth-bearers section because, while this usage makes mention of objects, they are all ultimately about the assertions which concern these objects.

**Objects** (including states of affairs, by one interpretation)<sup>113</sup> — *Cat.* §10, 12b5-16; §12, 14b11-22; *De Int.* §9 19a15-16; *Po. An.* I.33 88b32-3; 89a2-3; *Phys.* IV.12 222a3-9; ; Θ.4 1047b12-14; Θ.10 1051a34-1051b6, 1051b18-21; *EN* III.5 1112a21-23; *Rhet.* I.1 1354a27-8.

“**False things**” - *Met.* Δ.29 1024b17-28, which are contradictory in definition (i.e. the four-sided triangle).<sup>114</sup>

Some mentions are ambiguous and might read to refer to the objects themselves or the *logos* of the assertion used to discuss the object — *Cat.* §5. 4b8-10; §11, 14a10-14; *De Int* §9, 19a33 *Met.* Δ.7 1917a31-5 (see Charles and Peramatzis 2016: 112 n.13, referred to as “C&P” now).

### §3. 3 ‘Truth’ as a grammatical object in Aristotle’s Greek —

Truth is something to be grasped (*Met.* B.1 996a16-17) observed (*NE* I.7 1098a32 = [T2]), and known — *Po. An.* I.33 88b32-89a3, II.19 100b5-8; *DA* III.3 428a3-5, 428a17-18; *NE* VI.3 1139b15-18, VI.6 1141a3-8, VI.10 1142b10.

Truth is to be applied (*Phys.* VIII.8 263a17), advanced (*DA* I.1 402a5), and combined (*Met.* E.4 1027b18; Θ.10 1051a34-b2).

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<sup>113</sup> Crivelli 2007: 45 n.1

<sup>114</sup> Τὸ ψεῦδος λέγεται ἄλλον μὲν τρόπον ὡς πρᾶγμα ψεῦδος, καὶ τούτου τὸ μὲν τῷ μὴ συγκεῖσθαι ἢ ἀδύνατον εἶναι συντεθῆναι (ὡς περ λέγεται τὸ τὴν διάμετρον εἶναι 1024b.20 σύμμετρον ἢ τὸ σὲ καθῆσθαι· τούτων γὰρ ψεῦδος τὸ μὲν ἀεὶ τὸ δὲ ποτέ· οὕτω γὰρ οὐκ ὄντα ταῦτα), · “We call false (1) that which is false as a *thing*, and that (*a*) because it is not put together or cannot be put together, e.g. ‘that the diagonal of a square is commensurate with the side’ or ‘that you are sitting’; for one of these is false always, and the other sometimes; it is in these two senses that they are non-existent.” See also Pritzl 1997, Charles and Peramatzis 2016: 106-112

“The True” or “The Truth” can also refer to external reality (*Met.* A 3 984b8-11, 16-19; *Phys.* I.5 188b26-30 *PA* I.1 642a13-20, 26-28).

It is one of the types of being something, along with falling under one of the categories, actuality and potentiality, and accidental being (*Met.* Δ.7 1017a31-3; E.2 1026a33-b5).

Examples of Aristotle referencing ‘truth’ in a non-bivalent fashion include truth being — “vague” (*Met.* A.4 985a13-18), “said with a lisp,” (alt: “as a child speaks” A.9 993a13-17), “easy” (α.1 993a30-b4), “confusing,” (M.9 1086a13-14), “obscure” (Z.3 1029b8-12), and “secret” (*Meteo.* I.9 347a6-8).

### §3.4 Truth also possesses an ethical valence at times:

It is possible to act out truth (*EN* IV.7 1127b).

In a different sense from acting out truth, truth is a mean between dissembling (i.e. reducing oneself by falsehood) and boasting (i.e. aggrandizing oneself by falsehood) — *EE* II.3 1221a6, III.4 1233b38-1234a3; *EN* VI.2, 1139a26-27.<sup>115</sup>

Truth is linked to goodness and falsity to badness, especially if we construe truth as “success” and falsity as “failure” — *DA* III.7 431b10-12; *EE* I.8 1217b25-1218a1, II.4 1121b29-30; *EN* I.4

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<sup>115</sup> *EE* III.4: ὁ δὲ ἀληθὴς καὶ ἀπλοῦς, ὃν καλοῦσιν ἀθέκαστον, μέσος τοῦ εἴρωνος καὶ ἀλαζόνοιο. ὁ μὲν γὰρ ἐπὶ τὰ 1234a.1 χεῖρω καθ' αὐτοῦ ψευδόμενος μὴ ἀγνοῶν εἴρων, ὁ δ' ἐπὶ τὰ βελτίω ἀλαζών, ὁ δ' ὡς ἔχει, ἀληθὴς καὶ καθ' Ὅμηρον πεπνυμένος· καὶ ὅλως ὁ μὲν φιλαλήθης, ὁ δὲ φιλοψευδής. “The sincere [lit. true] and simple, or, as he is called, straightforward man, is a mean between the dissembler and the boaster. For the man who knowingly and falsely depreciates himself is a dissembler; the man who exalts himself is a boaster; the man who represents himself as he is, is sincere, and in the Homeric phrase honest; in general the one loves truth, the other a lie.”

1096a25-341, III.4 1111b33-4, 1112a5-7, IV.13 1127a28-30, VI.2 1139a27-9, VI.2 1139b12-13, VI.10 1142b8-11; [MM] I.34 1196b35-6; *Met.* α.1 993b19-21; *Rhet.* I.1 1355a21-22; *Top.* I.15 107a3-12; *Protrp.* Fr. 73 (Gigon); 305b25-306a2; cf. *Met.* E.4 1027b26-27.<sup>116</sup>

These are some of the uses of truth that I know of, and there are likely more. The point is that Aristotle uses truth in many different ways. Of course, some of these may be poetic or conversational liberties and do not reflect anything about his considered semantics, but it is also clear that there are certain distinct uses of “truth” which do reveal deeper commitments. How do we expect to provide a unified theory of truth from such a scattershot that is not hopelessly focal? I sadly do not have the space in which to more fully develop a theory, but I will be able to survey a few candidates and consider how readily they might be able to capture as many uses as possible while also respecting Aristotle’s ontology. I will ultimately argue for an isomorphic correspondence theory of truth.

#### §4 - Aristotle as a Correspondence Theorist

Why would one consider Aristotle to have a correspondence theory of truth? First consider the

*Metaphysics*:

[T38] That nothing can be in the middle of a contradictory pair, but it is necessary either to affirm or to deny any one thing about one thing] is clear to whoever defines what truth and falsehood are. For, to say that what is is not, or that what is not is, is false; to say that

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<sup>116</sup> Aquinas (*Comm. Met.* §§1230, 1234, 1239) also takes truth as a sort of success and thinks this is one of Aristotle’s primary uses of truth. See also Crivelli (2007: 63, n.62).



what is is, and that what is not is not, is true. So also what is said be or not be is true or false.” (Γ.7, 1011b25-29)<sup>117</sup>

There is also *De Interpretationes* §6:

[T39] Since it is possible to assert that what holds does not hold, that what does not hold holds, that what holds holds, and that what does not hold does not hold, and similarly for times outside the present, whatever one affirmed it is possible to deny, and whatever one denied it is possible to affirm.”<sup>118</sup> (De Int. §6 17a26-9)

If one takes the view that *De Interpretationes* is an early work and that the *Metaphysics* is later, then Aristotle seems committed throughout his philosophic “career” to defining truth as a correspondence. But what sort of correspondence? There are at least two (perhaps three)<sup>119</sup>

<sup>117</sup> δῆλον δὲ πρῶτον μὲν ὀρισσαμένοις τί τὸ ἀληθές καὶ ψευδός. τὸ μὲν γὰρ λέγειν τὸ ὄν μὴ εἶναι ἢ τὸ μὴ ὄν εἶναι ψευδός, τὸ δὲ τὸ ὄν εἶναι καὶ τὸ μὴ ὄν μὴ εἶναι ἀληθές, ὥστε καὶ ὁ λέγων εἶναι ἢ μὴ ἀληθεύσει ἢ ψεύσεται.

<sup>118</sup> ἐπεὶ δὲ ἔστι καὶ τὸ ὑπάρχον ἀποφαίνεσθαι ὡς μὴ ὑπάρχον καὶ τὸ μὴ ὑπάρχον ὡς ὑπάρχον καὶ τὸ ὑπάρχον ὡς ὑπάρχον καὶ τὸ μὴ ὑπάρχον ὡς μὴ ὑπάρχον, καὶ περὶ τοὺς ἐκτός δὲ [17a.30] τοῦ νῦν χρόνους ὡσαύτως, ἅπαν ἂν ἐνδέχοιτο καὶ ὁ κατέφησε τις ἀποφῆσαι καὶ ὁ ἀπέφησε καταφῆσαι.

<sup>119</sup> I quickly mention the third possibility of a fact-based view here as it is both a) somewhat distinct from states of affairs and b) was a prevalent and influential theory of truth for many years (particularly in 20<sup>th</sup> Century Anglophone thought). There are some reasons to think Aristotle might use facts as truthmakers. There are passages which some (esp. Barnes’ *Complete Works*) use ‘fact(s)’ as a rendering of πράγματα: *Pol.* I.15 1299b14-20; *GC* I.8 325a16-325a23, esp. 16-19; *Po. An.* II.15 64b7-13. Besides ‘πράγματα’, ‘τὸ ὅτι’ has several as well such as: *Po. An.* I.6 75a14-16; II.1 89b23-27; *EN* I.7 1098a32-b3 (cf. *Meteo* I.7 344b20-22: “δῆλον γὰρ ὅτι”). Some other places where 21<sup>st</sup> Century English-speakers might be tempted to use ‘fact’ when translating includes *Met.* A.3 984a16-21; *Phys.* VIII.8 263a15-18; *SE* I.1 165a6-11; *Rhet.* I.1, 1354a21-24. There is also *Pr. An.* II.4 57a37-b18, which if we understand as discussing facts would go the furthest to making it a truthmaker: “Φανερόν οὖν ὅτι ἂν μὲν ἢ τὸ συμπέρασμα ψευδός, ἀνάγκη, ἐξ ὧν ὁ λόγος, ψευδῆ εἶναι ἢ πάντα ἢ ἕνια, ὅταν δ’ ἀληθές, οὐκ ἀνάγκη ἀληθές εἶναι οὔτε τί οὔτε πάντα, ἀλλ’ ἔστι μηδενὸς ὄντος ἀληθοῦς τῶν ἐν τῷ συλλογισμῷ τὸ συμπέρασμα ὁμοίως εἶναι ἀληθές· οὐ μὴν ἐξ ἀνάγκης.” Ross argues that we should take ‘ἐξ ἀνάγκης’ as referring to a necessity between one fact and another, which he glosses as saying, “The same fact cannot be a necessary consequence both of another fact and of the opposite of that other,” (1997: 436). This sense of ‘ἀνάγκης’ is not identical to a causal or metaphysical necessity between things (or states of affairs) or to a logical necessity between propositions. However, in none of the passages cited above would we do any violence to the meaning of the text if we translated these phrases as “states of affairs,” suggesting a more robust concept such as facts would be unnecessary. Further if we adopt something like

different sorts of correspondences that we may want to attribute to Aristotle, but only the isomorphic model does the job.

#### §4.1 - Correspondence to “States of Affairs”

When it comes to their place in contemporary analytics metaphysics and philosophy of language, states of affairs need no introduction. And indeed, they have certainly proven useful for modeling various problems in philosophy, including serving as the basis for Lewisian modal realism.<sup>120</sup> Further, there is some reason to believe Aristotle himself worked with a notion of states of affairs. States of affairs provide a straightforward solution for how to interpret the *De Interp.* §4 17a26-9 and *Metaphysics* Γ passages introduced in §2. While *Met.* Γ and *De Int.* §4 provide only sketches of a correspondence theory, one textual point in favor of a state of affairs-based approach is these passages’ repeated use of ‘ὑπάρχον,’ especially in *De Int.* There are a number of ways to translate this verb, including “to begin”<sup>121</sup> and “be already in existence.”<sup>122</sup> However, likely the best translation would be “obtains” here, and along with the preceding passages can also be found in *De Int.* §3 16b13 where he discusses indefinite verbs:

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Menzel (2016)’s definition of how atomic facts work as truthmakers – [“Objects  $\mathbf{a}_1, \dots, \mathbf{a}_n$  exemplify  $n$ -place relation  $\mathbf{R}$  IFF there is the fact  $\mathbf{a}_1, \dots, \mathbf{a}_n$ 's exemplifying  $\mathbf{R}$  ( $[\mathbf{R}, \mathbf{a}_1, \dots, \mathbf{a}_n]$ , for short).”] – then we have an additional kind in Aristotelian ontology that Aristotle simply never mentions (see also Sprigge 1970, Correia & Mulligan 2021). His ontology is fundamentally object-based where individual things are primary *ousia* and “most supreme” (‘κυριώτατά’, *Cat.* §4 2a11-13, §5 2b6). This is a problem for the fact-based theory as facts are usually understood as the specific entities which make truth-bearers true, not as mere composites of objects which are involved in composing the fact, something Menzel’s definition ably illustrates. Given the exhaustiveness of the categories (*Cat.* §4 1b25-27; *Top.* I.9 103b29-35; Ammon. *Cat.* 32,10 *ad* 1b20), this is a fatal objection to making facts a truthmaker. Ammonius also points out (*de Int.* 17,27 ff.) that Aristotle opposes the imposition of an independent entity between the thought expressed and the objects that thought is about, making my interpretation consistent with the ancient commentary tradition (cf. Dexippus I.12.13-18).

<sup>120</sup> By which I mean for Lewis it is not just that there exists a possible world that makes a statement possible but that the indexed possible world manifests the particular state of affairs described by the possible statement.

<sup>121</sup> Hdt. 1.5, 4.1; Thuc. 2.74

<sup>122</sup> A. Ag. 1656; Hdt. 7.144

[T40] Does not recover’ and ‘does not ail’ I do not call verbs. For though they additionally signify time and always obtain in something, yet there is a difference – for which there is no name. Let us call them indefinite verbs, because they hold indifferently of anything whether existent or non-existent.<sup>123</sup>

This language of obtainment has in fact a long heritage in European metaphysics as obtainment is a common way of describing the condition that allows a truth-maker to make a truth-bearer true in 20<sup>th</sup> Century Anglophone metaphysics.<sup>124</sup>

Further, there are texts which appear to attest to a states of affairs style theory, including *Metaphysics* Δ.7 1017a31-5, where Aristotle introduces some of the principal uses of ‘is’:

[T41] Further, “being” (*to einai*) or “is” (*to estin*) signify that something is true, and “not to be” (*to me einai*) that it is not true but rather a falsehood – similarly, in the case of affirmation and denial. For example, “it is” (*esti*) that Socrates is musical signifies that this is true, “it is” (*esti*) that Socrates is not pale, that this is true; whereas “it is not” that the diagonal is commensurable signifies that this is false.<sup>125</sup>

There is no awkward prefixing of “the fact that” to “Socrates is musical” in this passage. Rather, being true is having a correspondence between a state of affairs and the state of affairs depicted by

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<sup>123</sup> *De Interpretatione*: τὸ δὲ οὐχ ὑγιαίνει καὶ τὸ οὐ κάμνει οὐ ῥῆμα λέγω· προσσημαίνει μὲν γὰρ χρόνον καὶ αἰεὶ κατὰ τινος ὑπάρχει, τῇ διαφορᾷ δὲ ὄνομα οὐ κεῖται· ἀλλ’ ἔστω ἀόριστον ῥῆμα, [15] ὅτι ὁμοίως ἐφ’ ὅτουσιν ὑπάρχει καὶ ὄντος καὶ μὴ ὄντος.

<sup>124</sup> See for instance Sommers 1969: 267; Gaskin 2015; Glock 2006: 347; Glock 2007: 380; David 2015: §3

<sup>125</sup> ἔτι τὸ εἶναι σημαίνει καὶ τὸ ἔστιν ὅτι ἀληθές, τὸ δὲ μὴ εἶναι ὅτι οὐκ ἀληθές ἀλλὰ ψεῦδος, ὁμοίως ἐπὶ καταφάσεως καὶ ἀποφάσεως, οἷον ὅτι ἔστι Σωκράτης μουσικός, ὅτι ἀληθές τοῦτο, ἢ ὅτι ἔστι Σωκράτης οὐ λευκός, ὅτι ἀληθές· τὸ δ’ οὐκ ἔστιν ἢ διάμετρος σύμμετρος, ὅτι ψεῦδος.

the sentence. Falsity would be a failure to correspond. Following this interpretation, Aristotle would be capable of provide something akin to a Tarskian T-schema, giving the following T-sentence:

“All humans are mortal” is true iff all humans are mortal

We are affirming that reality is arranged such that one attribute adheres to a particular thing, and if reality is composed in that way, then the statement which affirms that state of affairs is true. A proponent of this interpretation can also point out that this would be a natural translation of ‘τὸ ὄτι.’ Under this interpretation, ‘τὸ ὄτι’ refers to the assertion that picks out a specific state of affairs. This assertion is produced after the state of affairs has been “placed in number” and becomes truth-evaluable under a semantic interpretation of truth. Truth itself would have no independent understanding, and this is consistent with Ammonius’ interpretation of Aristotle as not having anything “between” thought and reality. This interpretation would be asking us to take that claim literally, that truth itself is not some independent state or being but merely a semantic state.

#### **§4.2 – The Problem with having Affairs, in Aristotle’s Ontology**

All of the above are reasons to think states of affairs are truth-makers for Aristotle. However, the ultimate problem for this interpretation is that the ontology of ‘states of affairs’ is ambiguous and unstable. If we make states of affairs too robust and independent as entities, then they threaten to just become atomic facts (whose conceptual woes are described in the note above). On the other hand, if we make states of affairs just an aggregate of particular arrangements in the world, then

“states of affairs” are not ungrounded truth-makers, making the objects prior to the state of affairs by formulation and the actual truthmakers.

Adopting the latter, deflationary account of states of affairs (i.e. as mere constellations of things in the world) makes sense of *de Int* §6 ([T37]), but it undermines the truth-making role of states of affairs *qua* state of affairs. When we make true assertions we do not make it about the entire collage of the world and all the permuted arrangements but rather one specific part of it, isolating one property or relation. What this suggests, then, is that the “collage” is not the truth-maker but the specific objects the assertion is about and how those objects, specifically, are materially conditioned.<sup>126</sup>

To see more why they do not obtain truth-maker status, it is helpful to consider some features of Aristotle’s theory of assertion. *SE* I.1 165a6-8 says we use symbols because we ultimately want to bring in the objects themselves, implying their priority. He does not say we try to bring in the state of affairs:

[T42] It is impossible in a discussion to bring in the actual things discussed: we

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<sup>126</sup> Crivelli does think states of affairs are included as both a part of Aristotle’s ontology and as something that can also be truth-bearers (Crivelli 2007: 6, 45 ff. esp. 52-53; See also De Rijk 2002: I.37). I ultimately agree with Charles and Peramatzis, however, that states of affairs do not properly belong as truth-bearers (2016: 101 ff.) either. While I focus on the unstable definition of states of affairs, they focus on how they do not belong as truth-bearers. The main passage offered for states of affairs as truth-bearers is from *Metaphysics* Δ.29: “One way in which what is false is spoken of is by being a false object. This can happen, on the one hand, because it is not combined or it is impossible for it to be composed (the diagonal’s being commensurable and your being seated are spoken of in this way, for one of these is false always and the other sometimes, for it is in this sense [*sc.* in the sense of being false] that these are non-beings), and, on the other hand, in the case of such items that...Objects are then called ‘false’ in this way, either because they themselves are not or...” (tr. Δ.29 1024b17-21; 24-25; Crivelli 46). While he is right that states of affairs (as these collages of objects and attributes) can sometimes bear the label of being ‘true’ and being ‘false,’ these labels ultimately refer to only the assertions that would attempt to mirror the form of these collages. A “false” state of affairs then is just a state of affairs that never obtains, thus (under the isomorphic model I offer later) any assertion that attempts to be isomorphic to that state of affairs will be automatically false. As C&P put it, it is assertions which bear the “full disjunct” of being true or false.

use their names as symbols instead of them; and we suppose that what follows in the names, follows in the things as well, just as people who calculate suppose in regard to their counters.<sup>127</sup>

Along the same lines here is what the last part of *De Interpretatione* §1 says:

[T43] Just as some thoughts in the soul are neither true nor false while some are necessarily one or the other, so also with spoken sounds. **For falsity and truth have to do with combination and separation. Thus names and verbs by themselves—for instance ‘man’ or ‘white’ when nothing further is added—are like the thoughts that are without combination and separation;** for so far they are neither true nor false. A sign of this is that even ‘goat-stag’ signifies something but not, as yet, anything true or false—unless ‘is’ or ‘is not’ is added (either simply or with reference to time).<sup>128</sup>

Names themselves, such as “goat-stag,” are not proper truth bearers, even as they are able to denote a particular object, but combining that name with an “is” and some sort of predicate will create a truth-apt assertion. This shows the priority of hylomorphic things and predicates in both priority in formula and priority of existence since objects are what predicates rely on for obtainment while states of affairs (to the extent they exist in his ontology) merely supervene on object-predicate pairings.

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<sup>127</sup> ἐπεὶ γὰρ οὐκ ἔστιν αὐτὰ τὰ πράγματα διαλέγεσθαι φέροντας, ἀλλὰ τοῖς ὀνόμασιν ἀντὶ τῶν πραγμάτων χρώμεθα ὡς συμβόλοις, τὸ συμβαῖνον ἐπὶ τῶν ὀνομάτων καὶ ἐπὶ τῶν πραγμάτων ἡγούμεθα συμβαίνειν, καθάπερ ἐπὶ τῶν [a10] ψήφων τοῖς λογιζομένοις.

<sup>128</sup> ἔστι δέ, ὡσπερ ἐν τῇ ψυχῇ ὅτε μὲν νόημα ἄνευ τοῦ ἀληθεύειν ἢ ψεύδεσθαι ὅτε δὲ ἤδη ᾧ ἀνάγκη τούτων ὑπάρχειν θάτερον, οὕτω καὶ ἐν τῇ φωνῇ· περὶ γὰρ σύνθεσιν καὶ διαίρεσιν ἔστι τὸ ψεῦδος τε καὶ τὸ ἀληθές. τὰ μὲν οὖν ὀνόματα αὐτὰ καὶ τὰ ῥήματα ἔοικε τῷ ἄνευ συνθέσεως καὶ διαίρεσεως νοήματι, οἷον τὸ ἄνθρωπος ἢ λευκόν, ὅταν μὴ προστεθῇ τι· οὔτε γὰρ ψεῦδος οὔτε ἀληθές πω. σημεῖον δ' ἔστι τοῦδε· καὶ γὰρ ὁ τραγέλαφος σημαίνει μὲν τι, οὐπω δὲ ἀληθές ἢ ψεῦδος, ἐὰν μὴ τὸ εἶναι ἢ μὴ εἶναι προστεθῇ ἢ ἀπλῶς ἢ κατὰ χρόνον.

### §4.3 – Indefinite Verbs and Ambiguous States of Affairs

His treatment of “indefinite verbs” in *De Int.* §3 16b13 ([T38]) above deserves special comment here because that passage can be helpfully paralleled with a comment in *Cat.* §10 13b27-35:

[T44] But with an affirmation and negation one will always be false and the other true whether he exists or not. For take ‘Socrates is sick’ and ‘Socrates is not sick’: if he exists it is clear that one or the other of them will be true or false, and equally if he does not; for if he does not exist ‘he is sick’ is false but ‘he is not sick’ true. Thus it would be distinctive of these alone – opposed affirmations and negations – that always one or the other of them is true or false.”<sup>129</sup>

If we utter the assertion “Socrates is not sick” and know that Socrates does not exist, Aristotle is declaring that this assertion is true. A state of affairs proponent, however, would appear to have a difficult time describing this sentence. Consider the T Sentence for this assertion:

“Socrates is not sick” is true IFF Socrates is not sick.

This T-Sentence is unhelpful because the existential state of Socrates is ambiguous. Is the satisfying state of affairs one where there is a Socrates who does not hold the property of being sick, or is it a state of affairs where there is no thing called a Socrates that is able to hold the property of being sick? This T Sentence can result from at least two different T-schema then. If

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<sup>129</sup> ἐπὶ δὲ γε τῆς καταφάσεως καὶ τῆς ἀποφάσεως αἰεὶ, ἐάν τε ἢ ἐάν τε μὴ ἢ, τὸ μὲν ἕτερον ἔσται ψεῦδος τὸ δὲ ἕτερον ἀληθές· τὸ γὰρ νοσεῖν Σωκράτη καὶ τὸ μὴ νοσεῖν Σωκράτη, ὄντος τε αὐτοῦ φανερόν ὅτι τὸ ἕτερον αὐτῶν ἀληθές ἢ ψεῦδος, καὶ μὴ ὄντος ὁμοίως· τὸ μὲν γὰρ νοσεῖν μὴ ὄντος ψεῦδος, [30] τὸ δὲ μὴ νοσεῖν ἀληθές· ὥστε ἐπὶ μόνων τούτων ἴδιον ἂν εἴη τὸ αἰεὶ θάτερον αὐτῶν ἀληθές ἢ ψεῦδος εἶναι, ὅσα ὡς κατάφασις καὶ ἀπόφασις [35] ἀντίκειται.

one is a Russellian, then you could just pick the former state of affairs and translate the sentence as:

[There exists a] Socrates [who] is not sick.

What is Aristotle's answer? He notes that indefinite verbs can be truly predicated of both non-existent objects ("Harry Potter does not die") and existent objects ("Cats do not bark"). However, the point behind this passage is that what makes indefinite verbs distinct is that they do not properly "attach" themselves to any particular substance (either primary or secondary). Rather, they only signify a separation, a lack of attachment. The meaning of a sentence with an indefinite verb comes from communicating that the predicate does not "belong to" the subject, and it is indeed the case for a nonexistent thing that predicates are usually separated from them.<sup>130</sup> Ammonius ultimately has the right view on this:

[T45] For nothing prevents something being truly predicated [κατηγορεῖσθαι...ἀληθῶς] even of what is not, as not belonging to it or not being such as to belong <to it> - as when I say 'The hippocentaur is not healthy' or '...is not ill' – but it is impossible for something to belong to what is not [ὑπάρχειν δέ τι τῷ μὴ ὄντι ἀδύνατον]. (*in De Int.* 52,13-16, tr. Blank 1996: 59-60).<sup>131</sup>

Ammonius notices that 'ὑπάρχον' denotes a "relationship" with an external object, yet he thinks it is a substance involved in the predicative relation (and not a composite state of affairs) that is the referent external object. This interpretation thus makes [T38] an analysis of statements with indefinite verbs and their truth-conditions related to their isomorphism with their referent object(s).

<sup>130</sup> I speak in terms of joining and dividing as a way to discuss how I see his isomorphism functioning since this is the language used in much of the current literature on this issue. However, if it makes my meaning clearer or more obviously Aristotelian, one may read the schema sentence "Predicate X is separate from Object Y" as "Object Y is joined with the contradictory of Predicate X" or "Object Y is deprived of Predicate X."

<sup>131</sup> κατηγορεῖσθαι μὲν γὰρ ἀληθῶς τι καὶ τοῦ μὴ ὄντος ὡς μὴ ὑπάρχον αὐτῷ μηδὲ πεφυκὸς ὑπάρχειν οὐδὲν κωλύει, οἷον ὅταν εἶπω 'ὁ ἵπποκένταυρος οὐχ ὑγιαίνει ἢ οὐ κάμνει', ὑπάρχειν δέ τι τῷ μὴ ὄντι ἀδύνατον.



If “cats do not bark” is true, then this is affirming a cat will not be found which is combined with the capacity to bark.<sup>132</sup> So Aristotle could provide a different T Sentence:

“Socrates is not sick” IFF the state of being sick is divided from any object named Socrates.

Which can be translated to:

“Socrates is not sick” IFF the state of being sick is not joined with a Socrates.

By making truth reliant on the isomorphism of the dividing/composing, we are able to avoid making existential statements about any object. So long as a Socrates does not combine with a disease (even if that’s because Socrates does not exist), then the sentence “Socrates is not sick” is true.

As one last note on states of affairs, I mentioned above that one way to translate ‘ὕπαρχον’ is as “obtain.” There are alternate, more literal translations: “to fall under” or “to belong to.” This usage of ‘ὕπαρχον’ denoting being “at hand” in various contexts can accommodate the above uses along with other contemporary uses. The substance, as the most “controlling” category, is in a priority relationship to any attributes which attach to them. While translating ὑπάρχον as “to fall under” would be awkward in English, it does hint at this priority relationship.<sup>133</sup>

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<sup>132</sup> As a final point on this passage, and as oblique support for my *endoxa* thesis in Chapter 1, this distinction between indefinite and definite verbs according to how they deny or affirm a ὑπάρχον relation with an object is a distinction we work under in our natural language, yet (until the grammarians) we did not have a word to mark the difference itself. However, despite the lack of a name, Aristotle believes we already operate with this fairly sophisticated metaphysical distinction in our normal assertions. It is just that the “fathers of names” skipped them (cf. Amm. in *Int.* 52,9).

<sup>133</sup> E.g. Demosthenes (*Third Olyn Or.* Cap. 15), Euripides (*Hec.* 1229), and Herodotus (7.144). De Rijk (2002: I.37) provides a helpful focal definition for these uses: “to be <already> there <as an underlying element>.”

So now that we have taken a closer look at states of affairs, we realize they are not the whole story. This can be most starkly observed by considering Aristotle's analysis of indefinite verbs. These result leads immediately to my preferred alternative for a theory of truth.

### §6 - The Isomorphic Correspondence Theory of Truth

The third theory is interpreting truth as the presence of an isomorphic correspondence between truthmaker and truthbearer, and I offer the following definition for this sort of correspondence:

**Isomorphic Definition of Truth (IDT):** Given arbitrary proposition  $X$ ,  $X$  is equivalent to a domain of predicates  $\{Y_1, Y_2, \dots, Y_m\}$  with a surjective correspondence to a codomain of objects  $\{Z_1, Z_2, \dots, Z_n\}$ , and  $X$  is true iff  $X$ 's set of ordered pairs has a one-to-one correspondence with the set of ordered pairs established by  $\{A_1, A_2, \dots, A_m\}$  and  $\{B_1, B_2, \dots, B_n\}$  where  $A$  is an attribute and  $B$  is an object that  $A$  is said of.

This is similar to Crivelli's interpretation, and (with a couple of tweaks) is ultimately the one I side with as well.<sup>134</sup> What would this look like in practice? The isomorphic theory is different from the other correspondence theories because its main truthmaker is the attribute-holding object, not a state of affairs or a fact.

Because of this, the ontology of the **IDT** is relatively unproblematic as primary and secondary substances are capable of serving as grammatico-logico subjects and form the core of his categorialism, too. Under the isomorphic view, truth is the result of the primitive arrangement of reality which we can directly experience lining up with and "having the same form as" the

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<sup>134</sup> The main change comes from specifying the two types of correspondences required, which I think allow for better recognizing 1) the grammatical and ontological priority of objects and 2) allows for one grammatical subject to be predicated multiple times/ways in a true sentence.

statements we make about the objects in those arrangements and how they are arranged. For Aristotle, we do not pluck truth from “out there;” we forge it by our assertions and observations.

### §6.1 *Metaphysics Iota.1* and Isomorphism

There are a number of passages to support this isomorphic interpretation. First, I would argue is that his belief in isomorphism is so fundamental that it tailors his theory of perception. If perception is affected by mind-external objects. and yet this affected perception still seems to somehow “work” with regard to navigating this external world, then we could believe that we receive some sort of especially rich information about the world. Indeed, it would be a miracle that we have seemingly gotten by in the world as well as we have if we did not have some sort of extra content in our perception beyond a raw sense experience. We are able to navigate not just because we can sense a blur of visual, auditory, and tactile information but because we can carve up that blur into definable packets, and these “packets” seem to be predictable and correspond to how we would expect to perceive them. Given the remarkable ability of sense organs to perceive any object, Irwin (2002: 307 ff. = §161-2) notes this led some Presocratic materialists to affirm that organs become truly like the objects they observe. While Aristotle in contrast reduces the explanatory role of matter itself to explain this feature of human perception, he still in the *De Anima* holds to an idea that there is some sort of correspondence between the perceiving organ and the object perceived.

This is shown elsewhere in the *Metaphysics Iota* when he says, also in response to Protagoras:

**[T46] The measure is always homogeneous with the thing measured;** the measure of spatial magnitudes is a spatial magnitude, and in particular that of length is a length, that of breadth a breadth, that of articulate sounds an articulate sound, that of weight a weight, that of units a unit. (*Met.* Iota.1 1053a24-27)<sup>135</sup>

This is reflected all throughout the *De Anima*, and I think Marmodoro (2014) gets it right in her interpretation. Marmodoro divides this assertion into three possible strengths:

**F1** - The perceiver becomes “like” the object (II.5 417a18, 418a5).

**F2** - The perceiver that was potentially F (e.g. white) becomes actually F when it perceives the actually F object (II.5 418a3; II.9 422a7, b15; II.11 423b30, 424a2)

**F3** - The perceiver acquires the form, but not the matter, of the object (II.12 424a18-24; III.2 425b23, III.8 431b29 ff). This explains why plants cannot perceive, because they have no way of perceiving the form in the way animals and humans can (see II.12 424a32-b3).

**F3** seems to represent Aristotle’s considered opinion. The actuality of an object is the same with the actuality of the perceiver, and it is in the perceiver not the object,<sup>136</sup> and this follows from his more general metaphysical claim that the actuality of a change is in the patient rather than the agent.<sup>137</sup> In other words: we take on the form, not the matter. Thus, we do not take on the proper

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<sup>135</sup> ἀεὶ δὲ συγγενὲς τὸ μέτρον· μεγεθῶν μὲν γὰρ μέγεθος, καὶ καθ’ ἕκαστον μήκους μήκος, πλάτους πλάτος, φωνῆς φωνή, βάρους βάρος, μονάδων μονάς.

<sup>136</sup> *DA* III.2 425b26-426a6; cf. *PN* 439a13-16

<sup>137</sup> *Phys* III.3 202a13, V.1 224b4, 25-6; *GA* II.6 742a30-2, *Met.* Θ.8 1050a29

object itself but we do take on the properties which attaches to the *hypokeimomen*, including both the form and any attributes which might fall into an accidental property.

We do not, then, perceive the object itself but the properties of that object. However, because Aristotle can assume that underlying individual objects exist that accidental and essential attributes to instantiate in, we deduce that we are perceiving attributes as they subsist in a particular enmattered object. This observation enables us to make a true assertion. I never perceive - in the strong, transformative sense Aristotle and other classical writers employ - the object itself, meaning the form *and* matter, and thus the attributes and understanding them as being either attached (or not attached) to some *hypokeimomen* are the only things I am able to directly perceive.

This is reflected in the definition used above. The truth-making aspect of referent hylomorphic compounds comes from their one-to-one correspondence between the ordered pairs  $\{Y_m, Z_n\} - \{A_m, B_n\}$  engendered by the utterance of the assertion. It is not sufficient to correspond in just objects or just predicates. This is also why he says in *De Int* 10 that ‘is’ is required to be appended to an subject in order for either an affirmation or denial to be expressed, as it is the ‘is’ which unites the predicate and subject into an intelligible assertion (cf. §1 16a16-18; §5 17a11-12). Even if one takes ‘is’ here to refer only to a bare sort of existence,<sup>138</sup> and not denoting some sort of category membership,<sup>139</sup> it is still saying that a particular form has joined with matter without qualification.

Given Aristotle’s epistemic logic treats knowledge as true,<sup>140</sup> scientific knowledge appears to denote the success of some proposition successfully “measuring” against certain combination

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<sup>138</sup> Ackrill (1994: 142); Pearson (2005: 203 n.3)

<sup>139</sup> Cf. *Met H* 2 1042b7-8; Whitaker (1996:135-7); Owen (1967: 79 ff.); Thorp (1982: 6).

<sup>140</sup> *Po. An.* I.13 88b32-89a3; II.19 100b5-8; *DA* III.3 428a3-5; 42a1718; *EN* VI.3 1139b15-18; VI.6 1141a3-8; VI.10 1142b10.

and divisions of objects.<sup>141</sup> Philoponus provides an appropriate analogy for this theory (*Cat.* 81, 31-34 *ad* §5 4a22):

[T47] For just as the act of strapping on a shoe is observed neither in the foot alone nor in the shoe, but rather in the fitting of the shoe to the foot, so also truth resides in the fitting of a statement to the things.” (tr. Sirkel, Tweedale, Harris p.116-117)<sup>142</sup>

Truth is not in the object or the statement but in the “fitting” between the two. Aquinas’ formulation of truth as an *adequatio intellectus et rei* captures the same idea.<sup>143</sup> Because truth is between two distinct things, this description would rule out seeing Aristotle as an identity theorist where at least some truth-bearers can be identical with their truth makers.<sup>144</sup> This view that truth is not “in” anything particularly is backed up in the commentators’ tradition<sup>145</sup> and has good backing today as well (e.g. Miller 1971: 11-16).

## §6.2 – Isomorphism and Completeness

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<sup>141</sup> With the type of knowledge perhaps being indexed to what attribute about the objects we are speaking on. Scientific knowledge, for instance, is true when it successfully “measures” against attributes about the secondary substance of the primary substance being studied.

<sup>142</sup> ὥσπερ γὰρ ἡ ὑπόδεσις οὔτε ἐν τῷ ποδὶ μόνῳ θεωρεῖται οὔτε ἐν τῷ ὑποδήματι, ἀλλ' ἐν τῇ ἐφαρμογῇ τοῦ ὑποδήματος πρὸς τὸν πόδα, οὕτω καὶ ἡ ἀλήθεια ἐν τῇ ἐφαρμογῇ τῶν λόγων πρὸς τὰ πράγματα.

<sup>143</sup> *Disp. Que. Ver.* (tr. Mulligan 1952: QI, art. 1-2).

<sup>144</sup> e.g. McDowell (1996: 27–8, 179–80; 2005: 84); Gaskin (2015); Hornsby (1997: 2; 1999 *pace* Candlish 1999a, Dodd 1999); Dodd (2008); Sullivan (2005: 56–7 n. 4). Aristotle also avoids a number of the problems facing identity theories as well such as the “right fact” problem (Candlish 1999a: 238–9; 1999b: 202–4; Cartwright 1987: 74–5) where the theory is unable to give non-arbitrary selection criteria for picking out which fact to which the true proposition is identical. I suspect this “right fact” problem applies to Crivelli and others’ view that objects can serve as truthbearers in Aristotle’s theory of truth.

<sup>145</sup> Ammonius (*de Int.* 18,3-14, esp. 4) describes truth as arising from the “weaving” of a noun and verb together to match reality.

But we might want to understand the nature of this isomorphism a bit more closely and consider its potential. Consider especially *Metaphysics* E4, 1027b17-23, which shows how truth-evaluations are dependent on a successfully corresponding “combination or division”:

[T48] Let us, then, leave to the side the enquiry into that which is accidentally (for it has been sufficiently discussed); **but that which is true and which is not as false, since they depend on combination and division [ἐπειδὴ παρὰ σύνθεσιν ἔστι καὶ διαίρεσιν], both taken as a whole are about the distribution of contradictory propositions;** for the true takes the affirmation in the case of what is combined, and the denial in the case of what is divided, while the false takes the contradictory of this distribution. (*Met.* E4 1027b17-23, tr. Charles and Peramatzis 2016: 105)<sup>146</sup>

I ought to resolve a textual controversy on this text, as it has some significance on understanding Aristotle’s theory of truth-making. The most authoritative critical texts,<sup>147</sup> best manuscripts,<sup>148</sup> and our most extensive ancient commentary all have ‘παρὰ σύνθεσιν’ at b19.<sup>149</sup> However, the commentator Asclepius has ‘περὶ σύνθεσιν’ in his own commentary;<sup>150</sup> Bekker, Christ, Jaeger, and Schwegler use this version in their printings as well.

Why does this matter? Because only ‘παρὰ σύνθεσιν’ fully captures the causal element that Aristotle is getting at here, that their status on “being true” and “being false” is directly determined

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<sup>146</sup> Περὶ μὲν οὖν τοῦ κατὰ συμβεβηκὸς ὄντος ἀφείσθω (διώρισται γὰρ ἰκανῶς)· τὸ δὲ ὡς ἀληθὲς ὄν, καὶ μὴ ὄν ὡς ψεῦδος, ἐπειδὴ παρὰ σύνθεσιν ἔστι καὶ διαίρεσιν, τὸ δὲ σύνολον [20] περὶ μερισμὸν ἀντιφάσεως (τὸ μὲν γὰρ ἀληθὲς τὴν κατάφασιν ἐπὶ τῷ συγκειμένῳ ἔχει τὴν δ' ἀπόφασιν ἐπὶ τῷ διηρημένῳ, τὸ δὲ ψεῦδος τοῦτου τοῦ μερισμοῦ τὴν ἀντίφασιν·

<sup>147</sup> Bonitz, Ross (1997: I.112), Tredennick, Crivelli 2007: 63

<sup>148</sup> Using Ross’ sigla: Parisinus 1853 (E); Vindobonensis phil. Gr. C (J); Laurentianus 87.12 (A<sup>b</sup>); Gulielmi de Moerbeka translation (Γ).

<sup>149</sup> [Alex] in *Met.* 456,31; 457.20-2, 25-27, 38-9; 458.4-5.

<sup>150</sup> Ascl. in *Met.* 373, 32.

by combination or division. Using ‘περὶ σύνθεσίν’ would render the thought as “since they concern [alt. are about/deal with] combination and division,” and this would leave the precise relationship between the concepts underdetermined. Using ‘παρὰ’ and interpreting it causally establishes that falsity and truth follow from the combination and division, not alongside it and are not just merely “concerned” with them. This specifies the priority relation and is most compatible with what comes soon after in the text:

[T49] But since the combination and the separation are in thought and not in the things, and that which is in this sense is a different sort of being from the things that are in the full sense (**for the thought attaches or removes [συνάπτει ἢ ἀφαιρεῖ ἢ διάνοια] either the ‘what’ or quality or quantity or one of the other categories**), that which *is* accidentally and that which *is* in the sense of being true must be dismissed. For the cause of the former is indeterminate, and the cause of the latter is some affection of the thought, and both are related to the remaining genus of being, and do not indicate any separate class of being. (*Met.* E4 1027b34-1028a1)<sup>151</sup>

There are two things to note about this passage, now that I have made my view on b19 clear. First, this is one of the most explicit descriptions of how combination and division work when placed in categorical terms: They attach or remove the “what” (*ti*) or one of the other categories from the subject. The language of thought attaching and breaking apart various categories from each other

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<sup>151</sup> – ὅσα μὲν οὖν δεῖ θεωρῆσαι περὶ τὸ οὕτως ὄν καὶ μὴ ὄν, ὕστερον ἐπισκεπτέον· ἐπεὶ δὲ ἡ συμπλοκὴ [35] ἐστὶν καὶ ἡ διαίρεσις ἐν διανοίᾳ ἀλλ’ οὐκ ἐν τοῖς πράγμασι, τὸ δ’ οὕτως ὄν ἕτερον ὄν τῶν κυρίως (ἢ γὰρ τὸ τί ἐστὶν ἢ ὅτι ποιὸν ἢ ὅτι ποσὸν ἢ τι ἄλλο συνάπτει ἢ ἀφαιρεῖ ἢ διάνοια), τὸ μὲν ὡς συμβεβηκὸς καὶ τὸ ὡς ἀληθὲς ὄν ἀφετέον – τὸ γὰρ αἴτιον τοῦ μὲν ἀόριστον τοῦ δὲ τῆς [a1] διανοίας τι πάθος, καὶ ἀμφοτέρω περὶ τὸ λοιπὸν γένος τοῦ ὄντος, καὶ οὐκ ἔξω δηλοῦσιν οὐδ’ ἂν τινα φύσιν τοῦ ὄντος.



is very evocative and helps show how he sees thought as this very active process meant to engage in metaphysical distinction through our normal language. When we say something as mundane as “this apple is red” we are joining numerous categories together into a single primary substance in our mind in order to say that, making the relation “συμπλοκή” in *Categories* (§2 1a17-18) and *On Interpretation* is the ontic parallel to the assertory operator σύνθεσίν.<sup>152</sup> The *Categories* passage is informative here:

[T50] Of things that are said, some are according combination and others are said without combination. Examples of those involving combination are ‘man runs,’ ‘man wins,’ and of those without combination ‘man,’ ‘ox,’ ‘runs,’ ‘wins.’<sup>153</sup>

Because any truth-evaluable assertion must combine a noun and verb for Aristotle, it is only those things said which track the combination of categories [**“κατὰ συμπλοκήν”**] that can be evaluated. These two functions track each other closely. However, there is no question about priority between these functions. A true statement can only σύνθεσίν if a primary substance is συμπλοκή with a predicate, so Aristotle is certainly no idealist.

Second, Aristotle appears to be committed to the following completeness theorem, expressed in terms of how I understand Aristotle’s theory:

<sup>152</sup> See also De Rijk (2002: I.197)

<sup>153</sup> Τῶν λεγομένων τὰ μὲν κατὰ συμπλοκήν λέγεται, τὰ δὲ ἄνευ συμπλοκῆς. τὰ μὲν οὖν κατὰ συμπλοκήν, οἷον ἄνθρωπος τρέχει, ἄνθρωπος νικᾷ· τὰ δὲ ἄνευ συμπλοκῆς, οἷον ἄνθρωπος, βοῦς, τρέχει, νικᾷ.

**Isomorphic Completeness Theorem (ICT):** The maximal set of well-formed mind-dependent affirmations and denials is in a surjective correspondence with the maximal set of possible combinations and divisions among the categories.

I phrase **ICT** in terms of “mind-dependent affirmations and denials” instead of just “assertions” because affirmations and denials can take place in more than just stated assertions including wishes and dreams. This is also why I think the **ICT** establishes a surjective (and not one-to-one) correspondence. The qualifier “mind-dependent” foreshadows my endorsement of C&P and Pearson’s shared position that only these objects are able to properly fulfill both horns of the true-false disjunct as described in the *Philosophic Lexicon*. Furthermore, some later commentators provide helpful points here. David the Invincibles’ commentary on the *Prior Analytics* (1.4.15; Topchyan 2010: 35 n.21) lists five capacities we cognize with: perception, imagination (including dreams), opinion, thought and reason. Perception and imagination are concerned with particulars; opinion, thought, and reason are concerned with universals and particulars, with thought and reason knowing the causes of these universals, too. These are all different capacities that specialize in different this, but causes, universals, and particulars are all comprehensible inside his theory of assertion and thus cognitions (even dreams) about them can be made potentially truth-evaluable.

Aspects of his psychology, categorialism, and theory of perception all support Aristotle being committed to **ICT**. We saw some of the proof of this on the psychological and perceptual side in Chapters 1 and 2 with his extraordinary faith in the power and potential of *endoxa* to discover first principles. It underlies both **PR** and **IR** approaches to the method as well, since regardless of the source of the opinion it is only because we cannot observe or anything that would

escape being assertible by either normal people or the elite that we feel confident that their assertions.

*Met.* E4 1027b34-1028a1 ([T46]) also offers (albeit somewhat oblique) support for ICT when Aristotle establishes a genus relation between accidental being and being true/false. It is because both are ways of being defined by an object composed or divided in some way. In the case of being something accidentally, the object will sometimes be joined with the relevant accidental property (“sitting”) and sometimes will not. Likewise, this will motivate thoughts that will either join that predicate with a subject or divide it. We cannot quite express the object and its state of division with the attribute itself, so we use the negation to represent this division, which is in keeping with the general principle of what language is meant to represent.

On this, ‘being true’ and ‘being false’ are ways of being resulting from “some affection of the thought” and are not a function of mind-independent, external reality. This is why accidental being and truth-evaluable being are only members of the same genus, not the same species: while both can be characterized in terms of contingent joining and dividing, they are different sorts of contingent compositions and divisions, and the causes of each are given by Aristotle as sufficient evidence of their distinction.

However, if 1) any proposition about either *epistemae* or knowledge of a particular possesses some truthbearer,<sup>154</sup> and 2) if these are the only types of epistemic content allowed, and 3) if being something accidentally tracks being true/false in the way described above, then 4) there appears to be no space for a hypothetical truthmaker whose metaphysical or phenomenological

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<sup>154</sup>1) Assertions concerning class-relations and *differentia* for the secondary substances are convertible (*Top.* II.1 109a14-19, esp. a6-19: “ἀπὸ μὲν γὰρ τοῦ ὅρου καὶ τοῦ ἰδίου καὶ τοῦ γένους ἀναγκαῖον ἀντιστρέφειν.”); 2) both sorts of indefinite propositions are treated as total convertible even as he thinks indefinite propositions that are true due to chance are not very helpful for science (*Pr. An.* 1.2.5 ff.).

content is so strange and ineffable that it lacks some isomorphic truthbearer. Thus, **ICT** is true by affirmation of the disjunct in 1).

There are other works which support the **ICT**. Consider this passage from *Posterior Analytics* I.16-17:

[T51] Ignorance – what is called <ignorance> not in virtue of a negation but in virtue of a disposition – is error coming about through deduction. In the case of what belongs or does not belong primitively this comes about in two ways: **either when one believes *simpliciter* that something belongs or does not belong, or when one gets the belief through deduction.** (I.16 79b24-29)<sup>155</sup>

Notice how he defines ignorance. Ignorance is believing in a conclusion that is not isomorphic to the referent object-attribute pairs. If I affirm an arbitrary combination or division between object and predicate, then the only reasons for that affirmation to be false is if I have a faulty observation or if I have a faulty deduction. That these are the only provided sources for ignorance in this passage implies he precludes a third option: there is something about which we cannot make truth-preserving assertions.

The Gentzen-style proof Aristotle presents later in I.16 operates on the hypothesis that when a conclusion reached *via* a deduction is known to be false it must be because one of the premises is false, so he searches for what legal step can be taken from a false premise to a faulty conclusion.<sup>156</sup> By revealing the fault to always lie in the premise and not the deductive rules (i.e.

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<sup>155</sup> ἄγνοια δ' ἢ μὴ κατ' ἀπόφασιν ἀλλὰ κατὰ διάθεσιν λεγομένη ἔστι μὲν ἢ διὰ συλλογισμοῦ γινομένη ἀπάτη, [b25] αὕτη δ' ἐν μὲν τοῖς πρώτως ὑπάρχουσιν ἢ μὴ ὑπάρχουσι συμβαίνει διχῶς· ἢ γὰρ ὅταν ἀπλῶς ὑπολάβῃ ὑπάρχειν ἢ μὴ ὑπάρχειν, ἢ ὅταν διὰ συλλογισμοῦ λάβῃ τὴν ὑπόληψιν.

<sup>156</sup>Lear 1980: 91

showing that all structural inferences are truth-preserving), he establishes the consistency of his system. However, while a conclusion does not preserve content from the middle term itself, a false premise generally entails a problem with the middle term. Aristotle's shows an awareness of what is now called "logical cut" in syllogistic deduction because he thinks any error in deduction must be in the content of the middle term that is missing in the conclusion.<sup>157</sup> While the deduction may be valid, the invisible middle term still effects the truth-value of the conclusion. Considering Aristotle thinks a middle term can express any of the four causes, including the Final cause, this suggests the syllogism is able to capture virtually any sort of explanation we need to have about the world because any error in our thinking can be in either that cut middle term or in a faulty observation.

His error theory in *Po. An.* I.16-17 even applies to deductions that make use of indefinite assertions as premises. Since the indefinite premises' middle term will not occur "by nature," so too the conclusion of such a syllogism (while valid) does not express anything relevant to *epistemae*. A conclusion that is understood to occur "by nature" – though really occurs solely by chance - is a false conclusion, yet we can only know that by looking at the middle term in the indefinite premise. Thus, while the formal structure of the syllogism does not provide these thicker causal explanations, the content of the terms do, and it is the content we can observe. Thus, even with particulars that possess no scientific *logos* we can perform informative (though not *scientifically* informative) deductions about them, and when we go wrong in our deduction we can find out where we went wrong instead of chalking the mistake up to just some unknowable and unreliable bedrock flux in nature.

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<sup>157</sup> Cut =<sub>df</sub> for formulae  $P_1, P_2, Q_1, Q_2, R, (P_1 \rightarrow Q_1, R) ; (R, P_2 \rightarrow Q_2) | (P_1, P_2 \rightarrow Q_1, Q_2)$  Formula 'R' is "cut" out from the conclusion. R is relevant to the premises, however, and its truth-value does determine whether the conclusion holds. The middle term in a syllogism often acts in this same way.

All the above would also provide an explanation for what ‘τὸ ὅτι’ is meant to be after we have determined whether something is τὸδε ἢ τὸδε and after we have “put it into number” [εἰς ἀριθμὸν θέντες], a phrase which likely means predicating the object in question. ‘τὸ ὅτι,’ as the formalized stating of the relevant object-predicate being εἰς ἀριθμὸν θέντες, seems to be the understanding among both the medieval and ancient commentators,<sup>158</sup> and it also has wide support today.<sup>159</sup> The sentence ‘The sun is eclipsed’ is putting the “this” referred to in ‘τὸδε ἢ τὸδε’ in the form of an assertion that is able to serve as a minor premise. Specifically, the assertion takes the form of affirming that object ‘sun’ is paired with the accidental state ‘being eclipsed.’ If that is the case, then any well-formed premise in Aristotle’s syllogistic will be based on these sorts of relations, and since no predication relation in Aristotle’s ontology possesses a form that is obviously unanalyzable to this object-predicate pairing, then all the combinations under the sun can be “placed into number.” This means a corresponding ‘τὸ ὅτι’ will be able to express any arrangement of categories over an object, affirming **ICT**.

Why spend all this time on the **ICT**? It shows there is no substance-predicate pairing which escapes our ability to make isomorphic assertions about, so there is no observable phenomenon that is beyond our ability to contemplate and explain. If I want an Aristotelian politics to be capable of receiving a highly detailed, exact account, the **ICT** gives me reason to hope this is possible because it implies some phenomena in politics, no matter how complex, could be talked about in terms of assertions that properly combine subject and predicate. That includes pairings or

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<sup>158</sup> Cf. *Po. An.* I.1 71a11-16; For similar interpretations see Alexander (*apud* Eustra. *In Po. An.* 18,32-19,4, Moraux 1979: 88-89, Goldin 2011: 169); Anonymous (in *Po. An.* 563,20 ff.); Aquinas (2007: 232 §2), Eustratius (*In Po. An.* 121,32-122,20)

<sup>159</sup> Hintikka (1999: 793 ff.), Miller (1971: 59), Ross (2001: *ad ibid*), Barnes (1994: 203-4), Crivelli (2007: 100) but *pace* Demoss and Devereux (1988: 134)

separations which hold only “for the most part,” since multiple texts affirm their demonstrability (*Po. An.* I.29 87b17-25, II.12 96a17-19).

## §7 – Mind-External Objects as Truth-bearers?

*Metaphysics* E4 (especially [T46] and [T47]) has proven very fruitful for us so far, but one last upshot is it also provides an independent reason not to make states of affairs (even when weakly defined) into truthbearers as there is no distinct sense of being as “being a state of affairs.” Division and combination apply to truth and falsehood, but only mental actions and assertions (not states of affairs) are defined in terms of dividing and combining. Thus, states of affairs cannot be truthbearers, and it does not look like anything except mind-dependent entities can be.

### §7.1 – *Metaphysics* Δ 29

But what about that *Metaphysics* Δ 29 passage that discusses “false objects”? I included this passage in the taxonomy of Aristotle’s uses of truth values, and it does not seem to yet fit into the **IDT** if objects can be truthbearers and not just assertions and non-mind-independent objects, this would make my definition above at least incomplete if not inaccurate. Here is the passage:

[T50] We call false (1) that which is false as a *thing*, and that (a) **because it is not put together or cannot be put together, e.g. ‘that the diagonal of a square is commensurate with the side’ or ‘that you are sitting’; for one of these is false always, and the other sometimes; it is in these two senses that they are non-existent.** (b) There are things

which exist, but whose nature it is to appear either not to be such as they are or to be things that do not exist, e.g. a sketch or a dream; for these are something, but are not the things the appearance of which they produce in us. (*Met.* Δ.29 1024b17-26, esp. 17-21)<sup>160</sup>

Note the example that he provides as a universally false statement, something that is false “as a thing.” If the object [the diagonal of a square] is such that it never joins with that predicate [being commensurate with the side of the square], then any statement which joins these two in thought [“the diagonal of a square is commensurate with the side”] will not find any object that is isomorphic to the proposition’s subject.<sup>161</sup>

Further, while an object might be described as a “false object” in the sense that its *logos* is contradictory, it is hard to think of a corresponding meaning for “true object.” Perhaps it is an object whose *logos* is a tautology or an analytic truth, yet that would make every existent object a “true object” because the corresponding assertion would just take the form:

“[object] + is + [*logos* for that object]”

So for example:

“That bachelor is an unmarried man.”

This assertion form would always be true under the isomorphic theory at the point of utterance by Aristotle’s definition of what it means to be a *logos* which requires a type of correspondence:

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<sup>160</sup> Τὸ ψεῦδος λέγεται ἄλλον μὲν τρόπον ὡς πρᾶγμα ψεῦδος, καὶ τούτου τὸ μὲν τῷ μὴ συγκείσθαι ἢ ἀδύνατον εἶναι συντεθῆναι (ὥσπερ λέγεται τὸ τὴν διάμετρον εἶναι [20] σύμμετρον ἢ τὸ σὲ καθῆσθαι· τούτων γὰρ ψεῦδος τὸ μὲν ἀεὶ τὸ δὲ ποτέ· οὕτω γὰρ οὐκ ὄντα ταῦτα), τὰ δὲ ὅσα ἔστι μὲν ὄντα, πέφυκε μέντοι φαίνεσθαι ἢ μὴ οἷά ἐστιν ἢ ἄ μὴ ἔστιν (οἷον ἢ σκιαγραφία καὶ τὰ ἐνύπνια· ταῦτα γὰρ ἔστι μὲν τι, ἀλλ’ οὐχ ὅν ἐμποιεῖ τὴν φαντασίαν).

<sup>161</sup> Some other passages from *Metaphysics* which show this object-centeredness, but which I do not have time to fully cover, include: Γ 5 1010b30-1011a2; Δ 15 1021a29-b2; Θ 10 1051b6-9; Iota 6 1057a7-12.



[T51] [...] a definition is a formula, and every formula has parts, and as the formula is to the thing, so is the part of the formula to the part of the thing[...]<sup>162</sup>

(*Met. Z.10 1034b20-24*, tr. Deslauriers)

Interpreting Δ.29 and similar passages as making some objects truthbearers would appear to confuse truthmakers and truthbearers as conceptual roles, and we can see why when we consider what a strange, tautological concept a “true object” would be if we use “true” here in the way E4 does.

Because objects do not obviously capture each part of the disjunctive of being both ‘true’ or ‘false,’ it is a stretch to ascribe them the role of truthbearer if Aristotle affirms **LEM**.<sup>163</sup> If he further affirms the Rule of Contradictory Pairs [**RCP**] (as he does)<sup>164</sup> or even just supports **PB** for non-future-tensed contingent truthbearers,<sup>165</sup> then the situation is particularly bleak. Thus, only mind-dependent objects like assertions can “truly” be true and false.

## §7.2 – *Metaphysics a.1*:

<sup>162</sup> Ἐπει δὲ ὁ ὀρισμὸς λόγος ἐστὶ, πᾶς δὲ λόγος μέρη ἔχει, ὡς δὲ ὁ λόγος πρὸς τὸ πρᾶγμα, καὶ τὸ μέρος τοῦ λόγου πρὸς τὸ μέρος τοῦ πράγματος ὁμοίως ἔχει, ἀπορεῖται ἤδη πότερον δεῖ τὸν τῶν μερῶν λόγον ἐνυπάρχειν ἐν τῷ ὅλῳ λόγῳ ἢ οὐ. The rest of this passage is about the question of whether a definition must state every part of the object or merely be compatible with every part of the object. But he says this is a controversy only because he accepts the above formulation of a definition as true.

<sup>163</sup> *Met.* Γ.7 1012a26-8; Γ.8 1012a31-3, b3-4; *Po. An.* I.1 71a14; *Pr. An.* I. 13 32a27-8; I.46 51b32-3; *Top.* VI.6 143b15-16. See also Cavini (1998: 5-7); Crivelli (2007: 229; App. VI pp. 266, 266 n. 2, 281); Frede (1985: 79-80).

<sup>164</sup> “Of every contradictory pair, one member is true and the other false.” *Cat* 10 13b2-3, *De Int.* 6 17a33; cf. *Met* Γ.7 1011b23-9; For commentary see C&P (2016:105; 105 .10); Pearson (2005: 203); Whitaker (1996: 79); Alexander (*in Met.* 328,6-13) *ad* 1011b23-4; Ammonius (*in Int.* 81,13-26; *in Cat* 100,17); Theoph. *Peri Aph.* (*apud Alex. in Met.* 328,15-18). These suggest he affirmed **RCP**, but see Jones (2010; 64 *contra* Whitaker *ibid*) who - adopting a super-valuationist account (28 n.4) - argues Aristotle does not affirm **RCP**, **PB**, or **LEM** for future contingent statements (30). Jones may be right **RCP** is not being true for all classes of propositions, but it does seem to be true for the sorts of assertions I am concerned with. Ultimately, Jones’ view does not contradict that E4 is only fulfilled by mind-dependent truthbearers.

<sup>165</sup> Whether he supports bivalence for future-tensed contingent assertions – and thus holds to the classical formulation of **PB** - is a different question and is one of the fundamental issues of the Sea Battle Problem.

[T50] is in fact consistent with the **IDT**, and this is the case for a number of other uses. Another passage which only superficially references things as truthbearers is *Metaphysics a.1* 993b26-31:

[T52] So that what is more true is always the cause of truth in what is posterior. Therefore, the principles of eternal beings must be always the most true, for they are not sometimes true, nor is there some cause of being for these, but they are the cause for the others. So that as each stands in respect of being, so it stands also in respect of truth.<sup>166</sup>

Some (e.g. Halper 2009: II.219) take what is “most true” to refer to things as the most true truthbearers, but there is little reason we have to make this inference. Certainly, Aristotle generally has a correlation between causal priority and axiological priority; prior things are “greater” in their correlate mode of being than their respective posterior things.<sup>167</sup> He never provides an exact account of this sort of priority in greatness or rank, but it infuses his work such as in the *Categories*, though he acknowledges this sense of priority is “the least proper” (esp. §12 14b3-8, cf. Simp. *On Cat.* 420,20-35):

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<sup>166</sup> καὶ γὰρ τοῖς ἄλλοις τὸ αἴτιον τοῦτο τῆς θερμότητος· ὥστε καὶ ἀληθέστατον τὸ τοῖς ὑστέροις αἴτιον τοῦ ἀληθέσιν εἶναι. διὸ τὰς τῶν αἰεὶ ὄντων ἀρχὰς ἀναγκαῖον αἰεὶ εἶναι ἀληθεστάτας (οὐ γὰρ ποτε ἀληθεῖς, οὐδ' ἐκείναις αἰτίον τί ἐστὶ τοῦ [b30] εἶναι, ἀλλ' ἐκείναις τοῖς ἄλλοις), ὥσθ' ἕκαστον ὡς ἔχει τοῦ εἶναι, οὕτω καὶ τῆς ἀληθείας.

<sup>167</sup> See Peramatzis (2011: 205-208; 251-3; esp. 206; cf. Berti 2008: 130) who discusses this being some of Aristotle's inheritance from Plato who associates ontological priority with axiological priority in the *Republic*, with the Good surpassing substance “to a great extent in seniority and potency” [...ἐπέκεινα τῆς οὐσίας πρεσβεία καὶ δυνάμει ὑπερέχοντος]. (509b6-10). The *Protrepticus* (Fr. 5 Rose = Iamb. *Protr.* 37,22 ff.) operates on this same principle. This explanation also accounts for Fr. 43 During (= *F* 58 *R*<sup>3</sup> = Iamb. *Protrp.* 52.16-54.5 Pistelli) use of “true most of all.” This link between ontological independence and axiological superiority is found elsewhere in books *a* and *B* (e.g. 999a16-23; cf. Asclep. *In Met.* 183,10-16; Alex. *In Met.* 210,20-1; Syri. *In Met.* 35, 27-9).

[T53] Further, besides the ways mentioned what is better and more valued is thought to be prior by nature; quite ordinary people are wont to say of those they specially value and love that they 'have priority'. This fourth way is perhaps the least proper.<sup>168</sup>

While Halper forwards compelling arguments against interpreting “most true” in *Met. a.1* as denoting the principles that cause other statements to be true, there is another interpretation: What is most true are those assertions that are reliant on the fewest number of other assertions also being true. If I said, “Socrates is walking,” that would depend upon Socrates being alive, having the capacity to walk, and him walking at the point of utterance. All of these are within the nature of Socrates to be, or not be, at any one time. Further, we must assume there is some proximate matter that is able to take the form of Socrates for the state “walking” to combine. It is only once I can truthfully affirm all those conditions are present that I can then truthfully assert “Socrates is walking.”

In contrast, “ $2+2=4$ ” is eternally true. No matter what substances there are in the universe, no matter which accidental properties hold or do not hold, 2 units when combined with 2 units will yield 4 units. Eternal truths are prior to contingent truths because not as many conditions are required to make them true.<sup>169</sup> It is “simply true” that  $2+2 = 4$  compared to the conditional truth of “Socrates is walking.”<sup>170</sup> Additionally, it is not necessary that the truthbearers which are “most

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<sup>168</sup> – ἔτι παρὰ τὰ εἰρημένα τὸ βέλτιον καὶ τὸ τιμιώτερον πρότερον εἶναι τῇ φύσει δοκεῖ· εἰώθασι δὲ καὶ οἱ πολλοὶ τοὺς ἐντιμότερους καὶ μᾶλλον ἀγαπωμένους ὑπ’ αὐτῶν προτέρους φάσκειν εἶναι· ἔστι μὲν δὴ σχεδὸν ἀλλοτριώτατος τῶν τρόπων οὗτος.

<sup>169</sup> That truths about eternal things are “greater” than truths of perishable things is supported by Alexander (*in Met.* 147,1 ff. *ad a.1* 993b24, esp. 147,13-17; cf. 131,16-20). He connects this idea with the concept that truth is being, so truth that is “greater” in its being will be more true. The truth about the objects they refer to in their sentences will always hold isomorphic, so the assertion will never change in its being, even as every other contingent statement eventually does. These statements are thus true “before” any contingent assertion: “Hence eternal things are beings in the greatest degree, and knowledge of them is the greatest degree of truth – if it is indeed [philosophic] knowledge,” (p.22; on [philosophic] knowledge see 22 n.39).

<sup>170</sup> Cf. *Top.* II.21 67a16-21.

true” are also those that cause the “most true” truthbearers to come about, those that do the most amount of explanatory work for us. Instead, “more true” truthbearers rely on the fewer number of properties to hold about their respective truthmakers. Truthbearers that do a lot of work in our science are often “more true” truthbearers as well, but they need not be identical sets in a science. A corollary here (for both Halper and me) is that the **PNC** would be the “most true” assertion since (as shown in **Chapter 1**) it is impossible for it to be false. There is no greater cause to it being true, and even a negation affirms it such as in the case of Heraclitus. Thus, it can be safely used as an axiom, and sure enough Aristotle also provides the **PNC** with a certain priority of rank by referring to it as the most controlling *archae*.<sup>171</sup>

As a final point, this interpretation plays well with the **PR** as there is a way to translate the security of these “most true things” into the *endoxic* method: these are the truths that are the most authoritative and thus will be the most controlling through the considerations of other appearances and *endoxa*. If somebody tries to state a position *via* a denial of **PNC**, that would be a sufficient reason to discard that *endoxa*. These “most true” things, to make use of Quinean imagery, would occupy the very core of an Aristotelian scientist’s web of beliefs, so there is no reason to take *α.1* to refer to things. In fact, on closer inspection, we see the object-focused nature of this passage that supports my own interpretation.<sup>172</sup>

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<sup>171</sup> *Met.* Γ.4 1005b32-4, 1006a8-11; Wedin 2004: 228-229, 233-234, see also Ch. 1

<sup>172</sup> I say that non-mind-external objects are the truthbearers in Aristotle, but which one of these is the ultimate, primary truthbearer? Assertions, or thoughts? It appears thoughts should serve as the ultimate truthbearers, since we try to represent what we think through speech. Further, as thought is what is described as doing this joining and separating - and because thought works with at least a symbol of the object rather than a verbal expression of that mental symbol - this makes thinking the prior activity that generates a proper truthbearer. This is also consistent with the commentary tradition, with thoughts being affirmed as the primary truthmaker in Ammonius (*in Int.* 18,2-12; 84,30-85,3), Boethius (*in Int.* 49,23-32), and Dexippus (*in Cat* I 10,1-10). Dexippus (10,7-9) even says that “all deceptions which arise in speech come about by virtue of there **being a multiplicity of objects of thought, since one’s thought lights upon one or another of them.**” (tr. Dillon 29) *πᾶσαι ὅσαι περὶ τὴν λέξιν ἀπάται γίνονται τῶ νοήματα πλείω γίνεσθαι συμβαίνουσιν, ἐπειδὴ ἐπ’ ἄλλο καὶ ἄλλο ἢ διάνοια πίπτει·*

## §8 – Possible Worlds as Model

So where are we at? Well, we have shown that:

1. Aristotle adopts an isomorphic correspondence theory.
2. Only mind-dependent entities and assertions are proper truthbearers.
3. Facts and states of affairs are not truthmakers.
4. The only truthmakers are the substances which combine and divide with their predicates.
5. Truth is created in thought by the generation of truthbearers which are isomorphic with their observed truthmakers.
6. By the **ICT**, we are able to fashion an assertion (and thus thought) that is isomorphic with any given object-predicate relation.

Not bad! However, if we accept that Aristotle held an isomorphic correspondence theory, then this theory of truth does not play well with a possible world semantics. This is crucially important to understand because it affects the way we understand what makes something true “for the most part.” The Greek for the modal express – ὡς ἐπὶ τὸ πολὺ – appears to operate in terms of quantity with the use of ‘τὸ πολὺ,’ and this would lend itself to a possible worlds interpretation.

Further, states of affairs lend themselves well to serving as a truthmaker in possible world semantics because you can define the possible worlds in terms of global states of affairs which obtain, where the state of affairs that serves as a truth-maker for your proposition holds some mereological relation to that global state of affairs. This is, for instance, how Kripke (1980) appears

to define possible worlds, as do Platinga (1974: 44–6, Pollock 1985b) and Pollock (1985a: 57).<sup>173</sup> We saw, however, that Aristotle does not obviously have room for states of affairs as an independent concept that is able to serve as the primitive truth-makers. If so, then defining successive worlds (and by extension timelines) in terms of states of affairs does not seem very Aristotelian. Granted, it is possible to define a world as some configuration of objects arranged in a particular way (Lewis 1986: 69-70). This seems to be what Armstrong (1986, 1991, 1997) does.

Is Lewis' approach a promising way of introducing possible worlds? Yes! But this is just not how Aristotle approaches things. Specifically, a possible worlds model does not capture the conceptual richness of hylomorphic compounds, and this can be shown in how Aristotle would deal Lewis' problem of "intrinsic accidents" (199-201). This problem grants that a possible world can be defined merely as a configuration of objects in a particular way and then asks: how is it possible that I could deviate on some essential property and still remain the same individual I was? I could be born with three hands if we were to define humans as two-handed animals, but defining possible worlds in such material terms is to suggest three-handed Andy is not the same piece of raw stuff arranged two-handed-wise and referred to as 'Andy' in another world. However, we in fact treat these two as different tokens of the same Andy-type, just one with an extra hand. If possible worlds are meant to express certain important aspects about necessity, contingency, and identity, then that we consider these Andys to be the same "individual" contrary to what this world theory says entails the theory is incomplete.

One could try respond to Lewis' worry by redefining composition relations in possible worlds as encompassing more than just mereological relations. Armstrong (1991: 190 ff.) tries this solution out, but he only applies it to states of affairs by saying mereological relations do not

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<sup>173</sup>Pollock defines a possible world as follows: *w* is a possible world if, and only if, *w* is a nontransient possible state of affairs and for any nontransient state of affairs *S* if it is possible that *w* and *S* both obtain, *w* includes *S*.

exhaust all the relations in a state of affairs. Armstrong thus defines these extra-mereological types of composition “up” to constituting the world (or some part of it).<sup>174</sup> In contrast, Aristotle defines these extra-mereological composition relations “down” to being constitutive of an individual substance’s unity, that substances have a more intensive unity in its form than a simple combination of parts.

Additionally, Aristotle prohibits the sort of quantitative, purely mereological property Lewis has in mind from being properly constitutive of a species’ definition. Allowing such properties would entail the acceptability of “P-Series” species (Lloyd 1962), a species whose definition (e.g. “Human is a two-footed animal”) contains terms which denote a priority relationship to other species.<sup>175</sup> The most important result from Lloyd for my argument here is that a P-Series species cannot have a properly formulated genus.<sup>176</sup> Lewis’ offered “two-footed animal” implies the prior definability of a one-footed animal and the posterior definability of a three-footed animal. This is a series of species being defined in terms of each other by some priority (thus “P-Series”), and a genus over this species series would have to capture both:

- 1) A common property apart from the individual (and definitionally indivisible) species *differentia*<sup>177</sup>
- 2) The priority relation among the species *logoi*

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<sup>174</sup> This gives rise to a variation trope theory and other approaches as it deflates the importance of a stable underlying subject that is able compose in ways that are not mereological.

<sup>175</sup> *Cat.* §12 14b3-8, *apud* Alex. *In Met.* 20934-210,11. Cf. *Prot.* Fr. 5 Ross = Iamb. *Prot.* 37,22 ff. see also Peramatzis, Lloyd, Berti (2009: 130 in Crubellier and Laks *Met. Bet Symp.* Arist.)

<sup>176</sup> *Met.* B3 999a9-13 [after listing P-Series such as numbers and shapes]: “and if the genera of these things do not exist apart from the species, the genera of other things will scarcely do so; for the genera of these things are thought to exist if any do. But in the indivisible species one member is not prior and the other posterior.” For more on this see Alex. *In Met* 209, 9-14

<sup>177</sup> *Met.* B3 999a13.

This is a dual role that a genus *logos* cannot obviously accomplish while maintaining a *logos* in proper subject-predicate form.

This move from identifying a priority relation between separate species to denying a common genus is a (logical and/or metaphysical) principle he uses in a variety of context such as philosophy of mathematics,<sup>178</sup> metaethics,<sup>179</sup> psychology,<sup>180</sup> and political theory.<sup>181</sup> If additional material attached to a species token is not enough to make that token switch species for Aristotle, a species change must have some sort of further, extra-material component to it, and this component is constitutive of underlying subjects, not worlds or states of affairs.

While Lewis' objection does not hold for Aristotle, the ontological baggage Aristotle takes on to avoid this objection (e.g. hylomorphic compounds, essences, multivocal being) would imply either:

A) Aristotle is operating with an exotic notion of world such that it is concrete but certainly not merely the configuration of all objects; or

B) Aristotle is not operating with possible worlds at all and his semantics are based on some primitive truth-maker that is not a state of affairs.

I think we should prefer B). All the above is relevant to understanding FTMP claims because what is called the "statistical interpretation" operates on a possible world semantics such that FTMP

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<sup>178</sup> *De Ideas* Fr. 4 Ross (= *Alex In. Met.* 85, 18 ff); *Met.* B3 999a6-9;

<sup>179</sup> *EN* I.7 1096a17-29; *EE* I.8 1218a2-8 ff

<sup>180</sup> *DA* I.1 402b5-8, II.3 414b19-33

<sup>181</sup> *Pol* III.1 1275a33-b13, esp. a33-39.



assertions are true just because the timeline has a majority of possible worlds in which the respective proposition is true.

However, the isomorphic theory of truth, and the associated truthmaking semantics based on corresponding with a single primitive, offer an alternative interpretation. These FTMP assertions are true because the propositions are about a substance's capacities and relevant impediments to the actualization of those impediments. FTMP statements are made true by being isomorphic to the relation between these impediments and the substance's full state of actualization (which in the case of humans would be *eudaimonia*). It is not just that the world "sometimes turns out some way" due to the fickleness of matter. Rather, I will argue, the nature of the substance itself "pushes" towards a particular activity or acquiring a particular state.

Crivelli appears to rely on a possible worlds semantics with his discussion of time trees in Appendix 6 where he formally lays out the failure of bivalence under Aristotle's semantics.<sup>182</sup> His notion of possible worlds semantics has a major defense inside of Aristotle: how Aristotle defines time as an indexical.<sup>183</sup> Time tracks changes in substances such that without change (or substances) there would be no time. Time would appear to shake out in Crivelli's analysis as meaning tracking the change in the world-state overall (222 ff.), yet Aristotle would say these changes would have to occur on the level of primary substances. Thus, it would be more precise to measure time according to objects combining and dividing with predicates, yet if this is how we determine time, then a larger construct such as a possible world or a state of affairs is unnecessary.

So we have seen that Aristotle's theory of truth is, like the rest of his metaphysics,

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<sup>182</sup> From Appendix 6: "Another important feature is that none of the many forward routes is privileged in the sense that it represents the future which will be realized: all forward routes are on a par. Times are conceived of as intimately tied to the possible world-states obtaining in them: for this reason, we speak of different future possible times rather than of possible future events or states at the same time." (270-271).

<sup>183</sup> *Phys.* IV.10-14, esp. IV.10 220a24-26

resolutely object-focused. Given this, it is high time we consider what it is about objects that make assertions not just “true” but “true for the most part.”

## §9 - The Semantics of “True for the Most Part”

### §9.1 - The Statistical Interpretation

There appears to be two basic interpretations of what makes FTMP assertions true. On one side is the “statistical” model of modality,<sup>184</sup> arguing Aristotle’s theory of modality can be demarcated on the basis of the statistical likelihood a property manifests or an event occurs. Necessary statements are about things which always or never occur while contingent statements are about things which sometimes occur. Because Aristotle defines FTMP assertions as claims about things which may turn out otherwise, the statistical model interprets these claims as Aristotle saying something occurring “for the most part” is identical to that thing occurring at a rate greater than its contrary. So given the statement “Humans for the most part live in cities” that may be translated into the statement “Odds are an arbitrary human will live in a city.”

The major evidence that might support a statistical interpretation of FTMP assertions is *Rhetoric* 1.2 1357a35, which Barnes translates as:

[T54] A probability [τὸ...εἰκός] is a thing that happens for the most part—not, however, as some definitions would suggest, anything whatever that so happens [οὐχ ἀπλῶς δὲ καθάπερ ὀρίζονταί τινες], but only if it belongs to the class of what can turn out otherwise,

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<sup>184</sup>e.g. Crivelli (2004: 60, 208); Hintikka (1973: ch. 8, 1977); Fine (1984: 34-35; 45 n.36); Chadwick (1981: 158-9), Ferejohn (1991: 7, 119-123, 129-30) cf. Malink & Rosen 2013.

and bears the same relation to that in respect of which it is probable as the universal bears to the particular.”<sup>185</sup>

Translating τὸ εἰκός as “probability” does lend the statistical interpretation a decent amount of force, especially since we usually interpret non-ideal probability based on statistical occurrence. For instance, the probability a President’s party will perform well in Congressional midterm elections is low, partially because the party never does well then. In fact, since the Civil War the incumbent President’s party has gained seats in the House of Representatives only twice in the midterms, in 1934 and 1996. Statistics inform our determination of probability in this case, so it would not be odd to hear somebody (whether a trained political scientist or a loud pundit on the television) to state that “for the most part the President’s party loses seats in midterm elections” because they could simply point out that only in 5% of cases has this not obtained.

Yet, while statistics may help justify why one would make an FTMP assertion, they do not explain the truth of the assertion. [T53] analogizes the relation between what is “probable” to the particular outcome to the universal-particular relation. As shown above, I understand Aristotle as possessing a metaphysics (and attendant theory of truth) that privileges primary substances to a great degree. However, this does not have to result in a corresponding demotion in secondary substances or universals to just Ockhamist mental heuristics and representations. Instead, I read this passage as implying that an event is probable if there is something essential to the primary substances involved that made the event probable. The “universal” in this case of the probable event is the description of how the primary substances’ capacities will play out and interact with

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<sup>185</sup> τὸ μὲν γὰρ εἰκός ἐστι τὸ ὡς ἐπὶ τὸ πολὺ γινόμενον, οὐχ ἀπλῶς δὲ καθάπερ ὀρίζονται τινες, ἀλλὰ τὸ περὶ τὰ ἐνδεχόμενα ἄλλως ἔχειν, οὕτως ἔχον πρὸς ἐκεῖνο πρὸς ὃ εἰκός ὡς τὸ καθόλου πρὸς τὸ κατὰ μέρος· τῶν δὲ σημείων τὸ μὲν οὕτως ἔχει ὡς τῶν καθ’ ἕκαστόν τι πρὸς τὸ καθόλου, τὸ δὲ ὡς τῶν καθόλου τι πρὸς τὸ κατὰ μέρος.

each other under a given set of conditions; this universal is constructed from considering the essential properties of the primary substances themselves, especially their capacities, while under the statistical model this universal would be a picture that becomes progressively less fuzzy as more events are recorded and the distribution of outcomes stabilizes enough to state what event is most probable.

Instead, to continue the example with elections, there are strong causal reasons for why the President's party does poorly in the midterms. There is, for example, Abramowitz' "time for change" model, that the American electorate possesses a very strong distaste for one-party dominance at the federal level, regardless of party, and this distaste for dominance is highly determinative of voting outcome. While trends for Congressional majorities, state legislative majorities, and presidential electoral vote share are used to demonstrate the truth of his claim, the reason his hypothesis is compelling is because it also relies on arguments about American political culture, constitutional structures, and other properties. This hypothesis has so far proven highly effective in predicting elections, as Abramowitz' Time for Change model predicted the outcomes of the 2000 election of George W. Bush over Al Gore (despite Gore's close association with the then highly popular President Bill Clinton), the 2008 election of Barack Obama, the Tea Party-fueled Republican House majority in 2010, and the election of Donald Trump in 2016.<sup>186</sup>

These (among others) are reasons that appeal to the nature of either the United States' constitutional system or its electorate. Regardless of which (or how many) of these causes are true, they do not simply rely on statistics. In these explanations, the cause is rooted in something considered quintessential to political culture in the United States. I posit that whenever Aristotle

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<sup>186</sup> A clarification on this last prediction: Abramowitz himself incorrectly predicted the 2016 presidential election, but his model did correctly predict it. He thought the 2016 election violated the assumptions of the model as it did not factor in what he believed to be Donald Trump's uniquely polarizing image (Abramowitz 2016).

says something is ‘probable’ (as in *Rhet.* I.2) or occurs “for the most part” (as elsewhere) we should be thinking in terms of these essential properties, including in ethics and politics.

I am going to argue for a highly substance-oriented understanding of FTMP assertions, and one of my primary lines of attack will be that only my interpretation is able to fully explain formal difference between things that hold by chance (even if they hold greater than 50% of the time) and things which hold the most part. Let us start with a major piece of text which shows Aristotle thinks FTMP claims are demonstrable:

[T55] There is no understanding through demonstration of what holds by chance. For what holds by chance is neither necessary nor for the most part, but what comes about apart from these; and demonstration is of one or other of these.<sup>187</sup> (*Po. An.* I.30 87b19)

This is probably the most important passage for demonstrating a distinction in the realm of logic and dialectic, though there are others.<sup>188</sup> Further, this distinction is seen in the discussion of good luck and talent in the *Eudemian Ethics* (a passage also discussed in the **Appendix**):

[T56] But, on the other hand, nature is the cause of what is always or for the most part so, fortune the opposite. If, then, it is thought that unexpected success is due to chance, but that, if it is through chance that one is fortunate, the cause of his fortune is not the sort of cause that produces always or usually the same result—further, if a person succeeds or fails

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<sup>187</sup> Τοῦ δ' ἀπὸ τύχης οὐκ ἔστιν ἐπιστήμη δι' ἀποδείξεως. [b20] οὔτε γὰρ ὡς ἀναγκαῖον οὔθ' ὡς ἐπὶ τὸ πολὺ τὸ ἀπὸ τύχης ἐστίν, ἀλλὰ τὸ παρὰ ταῦτα γινόμενον· ἢ δ' ἀπόδειξις θατέρου τούτων.

<sup>188</sup> Some others that establish a distinction of some sort between what occurs FTMP and what occurs by chance: *Phys.* II.5 196b10-13, 196b20; 197a19-20, 32; *DC* I.12 283a32-283b1; *GC* II.6 333b3-7; *Rhet* I.10 1369a32-b5; *Top.* II.6 112b1-20.

because he is a certain sort of man, just as a man sees badly because he is blue-eyed, then it follows that not fortune but nature is the cause; the man then is not fortunate but rather naturally gifted.<sup>189</sup> (*EE VII.14 1247a32*)

This is the passage which leads me to respectfully part with Crivelli and the statistical interpretation more broadly. Notice in this passage that good outcomes can come from fortune or nature: somebody succeeds because of either fortune or nature. However, it is possible for a mediocre person to be highly lucky, while an excellent person with average luck may end up with similar results. These are two different sources of good outcomes, and in [T55] the difference is not delineated here on the basis of statistical commonality but what properties about the person and the situation at hand resulted in that good practical outcome. If the reason is the presence of an essential property, then the reason is due to the person's nature and the result (assuming other circumstances are kept basically constant) can occur for the most part. If it has nothing to do with the nature of the person, then while it may occur many times it still does not occur for the most part. I will consider the question of luck in the context of Aristotle's practical philosophy more extensively in the next chapter. For now, I mention this passage to argue against Crivelli's position as he forwards the most sophisticated version of the statistical interpretation.

## §9.2 - The Sea Battle Problem and the Relevance of the Realist Solution

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<sup>189</sup> ἀλλὰ μὴν ἢ γε φύσις αἰτία ἢ τοῦ ἀεὶ ὡσαύτως ἢ τοῦ ὡς ἐπὶ τὸ πολὺ, ἢ δὲ τύχη τοῦναντίον. Εἰ μὲν οὖν τὸ παραλόγως ἐπιτυγχάνειν τύχης δοκεῖ εἶναι, ἀλλ' εἴπερ διὰ τύχην εὐτυχῆς, οὐκ ἂν τοιοῦτον [a35] εἶναι τὸ αἴτιον, οἷον ἀεὶ τοῦ αὐτοῦ ἢ ὡς ἐπὶ τὸ πολὺ. Ἔτι εἰ, ὅτι τοιοσδί, ἐπιτυγχάνει ἢ ἀποτυγχάνει, ὥσπερ, ὅτι [ὁ] γλαυκός, οὐκ ὄξυ ὄρα, οὐ τύχη αἰτία ἀλλὰ φύσις· οὐκ ἄρα ἐστὶν εὐτυχῆς ἀλλ' οἷον εὐφρῆς. ὥστε τοῦτ' ἂν εἴη λεκτέον, ὅτι οὓς λέγομεν εὐτυχεῖς, οὐ διὰ τύχην εἰσὶν. οὐκ ἄρα εἰσὶν εὐτυχεῖς· [b1] τύχης γάρ, ὅσων αἰτία τύχη ἀγαθῆ ἀγαθῶν.

Crivelli's main piece of evidence to support such a model is *De Interpretatione* 9, citing 18b8-9, 19a9-10, 19a18-22, and 19a35-9 as support for this understanding. He ultimately formulates an understanding of modality in *De Int.* 9 as follows, which is more sensitive to the non-statistical side of FTMP assertions:

[T57] For every time  $t$  and every non-zero interval  $i$ , at  $t$  it is necessary (impossible, possible), that  $i$  later it should be/going to be the case that  $a$  just in case in the infinite course of time up to  $I$  before  $t$ , every (no, some) time when the total state of the world resembled in relevant respects the total state of the world at  $t$  was followed  $i$  later by a time when it was the case that  $a$ .

He disclaims that this is only able to cover diachronic modalities with non-zero intervals towards the future, and he further argues that these formulations, even if they do not have ironclad texts to support them, are reasonable enough to show that it is not enough to rule out a statistical interpretation of modality purely on the basis of *De Int.* 9. Alternate interpretations of *De Int.* include Ackrill (1963: 136), Frede (1985: 65), and Gaskin (1995: 38). Gaskin's argument is the most forceful and appears to run as follows:

1) the statistical interpretation is able to make sense of 18b9-9 [with ἔχει ἢ ἔξει glossing μάλλον οὕτως ἢ μὴ οὕτως) and 19a18-22 describing ὡς ἐπὶ τὸ πολὺ as one “[of the outcomes] happens rather [more often] than the other [τὰ δὲ μάλλον μὲν]” in isolation from the rest of the chapter (brackets in original).

2) this conflicts with 19a32 ff. because, when it is also translated with a statistical sense, it denies that a contingent temporally indefinite sentence about the present or past is always true or always false.

3) This establishes a modal symmetry between the past and present on one side and the future on the other. This is peculiar because it implies the statement “There was a sea battle yesterday” is no more necessarily true than the statement “there will be a sea battle tomorrow.”

4) This contradicts Aristotle, who believes the past is set already and non-contingent (*DC* I.12 283b8-10, 13-14; *Met.* E.3 1027a32-1027b14; *Rhet.* I.3 1358b3 ff.).

However, Crivelli curtailing contingency only to those events which occur in a non-zero *i* recognizes this asymmetry and avoids Gaskin’s objection. The truth of future statements is indeterminate, necessary, or occurring for the most part. What justifies these claims, in part, is whether one can identify true instances of that assertion to have held in the past, so the past is already assumed to be set in his definition. An assertion that is true FTMP would be true if, after surveying the infinite expanse of the past, it is true more times than not. A necessarily true assertion is true at every point in the past. This is how Crivelli’s interpretation seems to run.

However, there is a problem: Aristotle says some FTMP statements are always true. Murder is always bad. But there are also statements which are universally true and, in Aristotle’s usage, not true for the most part. Mathematical theorems are examples here along with statements about category relations. Statistics will back the claim a triangle is a three-sided figure 100% of the time, for instance. But then we run into a problem: If we take a FTMP assertions to only be a



statement that is true “more often than not,” then all universal statements would be true for the most part as well, including about category relations, and thus the universal quantifier would be just a special case of FTMP quantification. Aristotle clearly distinguishes these two modalities, thinks they are mutually exclusive, and thinks statistics are more than what explains their distinction. However, if we think FTMP is merely a quantification than with certain ethical statements like “murder is wrong in itself,” we end up with saying the rather bizarre claim that “murder is always wrong, more times than not.”

What gives? Perhaps we could consider what it takes a FTMP statement to not obtain in a particular case. Here, statistical interpretations tend to fall silent, with the explanation usually being given because Aristotle agrees with Plato about the instability and changing nature of individuals. This is what Anagnostopoulos does for instance as we shall see. There is no particular, formalizable reason for why FTMP statements can be false in particular cases other than this indeterminacy. Saying “Donating to charity is good” could be true under this interpretation, but it is only true because the way objects are arranged in the world right now will more likely than not lead to a charity donation being good for somebody. Yet the indeterminacy of matter robs this true statement from being necessarily true. The statistical interpretation’s error theory then relies on brute metaphysical facts about *ulae*, specifically that it is in a primitive state of constant flux, that this makes material things unpredictable to a degree, and reasoning about them becomes correspondingly fuzzy.<sup>190</sup>

While there are strengths to this approach, I think there is a more interesting error theory than just simple “flux” as this interpretation seems unable to explain why some FTMP statements

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<sup>190</sup> This position of material indeterminacy makes interpreting Aristotle in a possible worlds semantics appealing as this flux can serve to decide between which of two adjacent worlds we end up in, such that we end up in a world where the FTMP statement does not hold in our particular case. The statistical interpretation could describe a result occurring FTMP as that result which obtains in the majority of worlds adjacent to ours.

are always true. Let us consider how one might use this idea of material instability to explain FTMP assertions' demonstrability

### **§9.3 - Not a Function of Material Instability**

One way to approach this question would be to consider the nature of the subject matters that have FTMP assertion and explain them *via* some common property. One could, like Reeve, draw a distinction between "Pure Science" and "Plain Science," (1992: 13, 16, 18-21). Pure science would be the study of what is unconditionally necessary and not enmattered. The various fields of mathematics would be the archetypal example of this type of pure science. Plain science, on the other hands, is a much wider category and studies whatever is not unconditionally necessary. Botany, anthropology, and physics all seem to be dramatically different fields of study, but they all ultimately study particular. enmattered things and their properties. This is the root of a certain "bedrock" inexactness which makes universally true statements more difficult to produce. Instead, we can at best discuss what these things are like for the most part: a plant may not grow in a certain way, a human society might develop in an unexpected fashion, and a rock may not fall to the ground.

The stuff of pure science is the more natural candidate for the type of syllogistic thinking that Aristotle develops in the *Analytcs*. However, if necessity is the characteristic feature of science, and we reject the statistical view, then what sort of necessity do we give to FTMP assertions such that they are suitable for syllogisms yet still allows for the necessity to "slip" and produce a different outcome? Reeve introduces the modal expression "probabilized" to solve this,

which guarantees that a certain pair of contradictory assertions will always lean towards realizing one side of its contradictory pair more often.<sup>191</sup>

Probabilization reflects a modal “weight” to an expression, and that weight that will always hold. The issue is that while this operator accounts for the *Topics*’ expression of the exceptions to a FTMP assertion as “always comparatively rare,” what motivates this weight to necessarily hold is not determined. Conversely, while it is described as a “law-like relation” between universals that will make the proposition “for the most part” true, this provides no theory on what would bring about a failure for the relation to obtain in a particular case, only that this relation is primitively defined as one that can only guarantee for a class of assertions to hold only for the most part.

I admit there are some strong points to this approach. The first is that this interpretation would at least work better under truthmaker semantics than the statistical approach. Every FTMP assertion of the form “X is Y” would be describable as asserting:

- I)** there is a substance belonging to the species/genus X that is paired with the attribute Y
- II)** substance X possesses attribute Z (“flux”) such that sometimes X is not Y.

Claim **II)** could be used to capture Reeve’s “probabilization” concept as well; if we were to consider **II)** to hold true for any subject whose attributes and species membership can be discussed through syllogism, then **II)** can be built into the logic itself instead of being treated as just any other

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<sup>191</sup> He defines it as follows: “Unconditional necessity is a necessary, law-like relation between universals that guarantees the truth of the corresponding universally quantified proposition: if F and G are thus related, “All Fs and Gs” is necessarily true. Probabilizing is a necessary, law-relation between universals that guarantee that the corresponding universal quantified proposition will be for the most part true: if F and G are thus related, “All Fs are Gs” will necessarily hold for the most part.” (Reeve 1992: 16)

predicate. However, while this works better with Aristotle's ontology, the nature of this probablization still seems under supported.

But even if more definition were given to this bedrock inexactness or flux, it would appear to still violate the **ICT**. This interpretation would imply some fifth cause (this "flux") existed that was irreducible to just a sort of material cause. However, if according to the **ICT** causes can be reduced in explanation down to their separate categories, then this fifth one must be similarly reducible, yet it seems difficult to provide a such an account. In order to preserve the consistency of Aristotle's metaphysics, we ought to reject this explanation. Rejecting such a hypothesis on the basis that it provides an unexplained primitive volatility to matter is not a product necessarily of post-Enlightenment bias towards mechanistic accounts of causation either. John Duns Scotus, commenting on *Metaphysics E.2*'s account of accidental causes, also says that while an accidental cause (because it is a function of the matter) is not knowable "scientifically speaking," as in an account can be given that derives from the essential properties and species relations of the objects in question, it "is knowable absolutely speaking" because a complete causal account can still be given that will reduce to the four causes, providing meteorological events such as raining over the sign of Canis as an example of this difference.<sup>192</sup>

There seems to be two ways to better define this operator if we do not want to accept this flux/probabilization thesis. The first would be to try and work inside the distinction of two different sciences and provide a consistent account that better explains that modal operator, why it is "law-like" that a certain disproportionate weight in probability holds for certain occurrences. The second approach would be to find the basis of FTMP assertions' demonstrability in distinguishing between

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<sup>192</sup> And he intends for it to be complete: "For nothing natural is an accidental being with respect to something else or to other concurrences, which is not its (or their) *per se* effect," (Scotus *Comm. Met.* VI. Q2. §30 = Vol. 2, p. 50-51 tr. Etkorn and Wolter)

two different notions of demonstration where one form of demonstration is “looser” than the other. Looser demonstrations can accept premises which may turn out otherwise and only hold for the most part. This second approach is the one that I shall consider next.

#### **§9.4 - No Difference in Demonstrability for FTMP Statements**

Anagnostopoulos is the main proponent of this second approach and argues that the subject class of FTMP assertions can be reformulated as "All Xs other than Y" where X ranges over the subject and attribute of some FTMP assertions and where Y designates the exceptional cases. This makes FTMP propositions “almost true” as it is equivalent to 'Almost all Bs are A.' (277). “All Xs other than Y” would strictly speaking be true universally for the predicate once the exceptions are taken out. These create universally true statements that still have non-universal scope over a species or genus. If demonstrability in scientific syllogism requires universal truth, then this route provides a way to construe FTMP statements to meet that threshold.

In order to show why we need to treat FTMPs as universals only in the syntax, consider the following valid syllogism. We have a FTMP major, a universal minor, and a FTMP conclusion:

[For the most part] Fissipeds produce many offspring.

Hares are fissipeds.

∴ [For the most part] hares produce many offspring.<sup>193</sup>

But this does not mean all syllogisms of the form above are valid. Consider the following:

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<sup>193</sup> see *GA* 734a34.

[For the most part] fissippieds produce many offspring.

Elephants are fissippieds.

∴ [For the most part] the elephant produces many offspring.

Here the major premise is a true FTMP with a true universal minor and a false conclusion. If the form of a syllogism when two propositions are paired is supposed to guarantee the truth of a resulting conclusion, then there appears to be an issue with using FTMP assertions as a formal quantifier in syllogism. Aganostopoulos' solution is to rewrite the first, true syllogism in the following form:

[For the most part] Fissippieds – except for the elephant - produce many offspring.

Hares are fissippieds.

∴ [For the most part] the hare produces many offspring.

The FTMP assertions in a statement that reads “For the most part Xs are Ys” would then be rewritten with an ‘except for Zs’ clause inside the description of the subject class where Z represents the members of Xs that are not Y. The invalidity of the second syllogism becomes more obvious

[For the most part] fissippieds - except for elephants - produce many offspring.

Elephants are fissippieds.

∴ N/A

We cannot derive a conclusion from this syllogism, and the form of the syllogism shows why there cannot be a valid deduction. The two premises do not have the same middle term as the major is the class [fissipeds- except for elephants -] and the minor is the class [fissipeds], and if they did have the same middle then the resulting minor premise “Elephants are [fissipeds - except for elephants -],” would be shown by the syntax to be false (and absurd). While the middle term in the minor premise seems somewhat artificial, it still ultimately has the proper form of a syllogism with a clearly defined subject and predicate.

However, there is a gap between the syntax and semantics as this form cannot adequately explain why the conclusions that result from these properly formulated syllogisms still turn out to be false on occasion. Sometimes, a rabbit does not have any offspring and an elephant has a large number. Thus, FTMP demonstrations are logically incomplete, making them “looser” overall.

The problem, again, with this syntactic interpretation of the FTMP modality is that Aristotle thinks that certain propositions in ethics are universally true, and it is important to see the language he uses to express this idea (*NE* 1107a12):

[T58] But not every action nor every passion admits of a mean; for some have names that already imply badness, e.g. spite, shamelessness, envy, and in the case of actions adultery, theft, murder; for all of these and **such like things imply by their names [λέγεται τῷ] that they are themselves bad, and not the excesses or deficiencies of them.**<sup>194</sup>

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<sup>194</sup> οὐ πᾶσα δ' ἐπιδέχεται πρᾶξις οὐδὲ πᾶν πάθος τὴν μεσότητα· ἔνια γὰρ εὐθὺς ὀνόμασται συνειλημμένα μετὰ τῆς φαυλότητος, οἷον ἐπιχαιρεκακία ἀναισχυντία φθόνος, καὶ ἐπὶ τῶν πράξεων μοιχεία κλοπὴ ἀνδροφονία· πάντα γὰρ ταῦτα καὶ τὰ τοιαῦτα λέγεται τῷ αὐτῷ φαῦλα εἶναι, ἀλλ' οὐχ αἱ ὑπερβολαὶ αὐτῶν οὐδ' αἱ ἐλλείψεις. I do not have enough space in order to discuss this passage at length, but I want to forward my interpretation of this claim according to my construal of what it means to be true FTMP. My argument for why some statements can be universally true is that the statements make reference to definitions that are relevant to our capicital development. Murder is always bad because by definition it implies a killing contrary to the laws and customs of the political society (killings that are in accordance with the *nomoi* might be described as an execution or a battle). Murder is

Here are some others:

We harm our flourishing by excess and deficiency (1104a12);

*Eudaimonia* is the ultimate end of human activity (1094a20);

Someone has *phronesis* if and only if someone possesses all of the moral virtues (1145a);

Somebody is a human only if they are capable of living in a *polis* by nature (*Pol.* I.2)

This set of truths range from meta-ethical propositions to specific prohibitions on murder and several other crimes. This seems to undermine the idea that fluctuation and inexactness is all-pervasive in ethics as these are bedrock notions that an ethics can be built on. And since Anagnostopoulos' distinction between different proofs is based on whether the principles can turn out differently, and it turns out statements such as that *eudaimonia* is the ultimate end of human activity are universally true, then either ethics is not solely in the domain of this looser demonstration or the distinction between the two methods is not as strong as Anagnostopoulos presents it.

Secondly, this syntactic approach robs us of the ability to discern causal relationships and teleology. A part of the point of science is to discover relations between natural kinds, to discover essential features of these species and genus memberships. In other words, we want to know why it is that elephants are the only species of fissipeds who do not produce many offspring, not just

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thus an anti-political act, undermining the stability and self-sufficiency of the *polis*. Because the *polis* is prior to the individual and necessary for them to realize their capacities, the murderer is thus inadvertently undermining the conditions for his own (and others') flourishing. Even if the murder (say if perpetrated by a mob kingpin during a turf war) results in apparent happiness due to the mobster acquiring the money and power he desired, Aristotle would reject such a utilitarian approach and say that their real happiness (as a political actor, not just one who accumulates wealth) has still been undermined.



restrict the subject class used in the specific syllogism so statements about fissioned remain "strictly" true. It is exactly because we realize that the statement "fissioned give birth to many offspring" is not universally true, and to find out that it has nothing to do with having a cloven foot, that motivates discovery about elephants. Simply reformulating the subject class to remove this issue is to undercut one of the aims of Aristotelian science. In this case, he thinks elephants have few offspring due to a feature about them quite independent of their genus membership: their size (*GA* 771b6). That is certainly a useful and informative piece of information, but we would not know that if we just fiddled with the subject class so as to generate safe, universally true statements.

### **§9.5 - FTMP as a type of Predication**

So it would appear as though we are caught back in the same dilemma as before: We want to provide an account of how these claims can be meaningful yet contingent statements about genus and species and still can be used in a way to accord with Aristotle's term logic. On the one hand attempting to qualify the modality results in metaphysical incompleteness and suffers from a lack of textual support (Reeve), while on the other hand treating the modality as modifying the scope of subject class renders these statements unable to do what Aristotle thinks they should do (Anagnostopoulos).

One way out of this impasse is to recall his belief in essential properties extends directly from his affirmation of the **PNC**. If essential characteristics derive from the notion of something being a stable subject of discourse at all (as shown in **Chapter 1**), then demonstrations about these subjects that are necessarily true are made possible by essential properties as well.

This is one sort of predicative necessity that is readily representable in Aristotle's term logic. But essential properties do more than just pick out class membership. They also can denote what a subject can become and do. A human is a rational animal, but it is also a political animal. In the case of "political animal" we have a strongly implied notion that to be a political animal is to have the capacity to be political. "All things being equal, a human will engage in political relations" is what this statement appears equivalent to. The essential property picks out something about the species of humans, but its predicate is based on a contingent, future-oriented statement. However, this property also shows that such an activity is motivated by being a particular of that species itself such that it is not just "more likely" to occur but will just occur barring nothing else happening.

Instead of dividing FTMP modals from universal modals along the sort of necessity used (e.g. Reeve), it should be along the sort of essential predication referenced instead. If we break down the sort of demonstrations Aristotle performs based on what essential property is being examined, then we might be able to find a way to demonstrate with FTMP assertions.

#### §10 - **Criteria for any account of FTMP**

Winter (1996: 177) notes that there should be five basic ideas explained by an adequate interpretation of these relations. He lists them as follows:

"1. Our intuition that "*hos epi to polu*" involves some component in virtue of which it is weaker than simple necessity.

2. Our intuition (and textual support for the idea) that “*hos epi to polu*” should be stronger than mere chance.
3. Aristotle’s use of “*hos epi to polu*” should correspond to things that happen with some degree of regularity in the world.
4. *Hos epi to polu* propositions involve some type of inexactness.
5. Textual support for the idea that propositions that express “*hos epi to polu*” relations are demonstrable (*Po. An.* 87b20; *Met.* 1027a25, 1065a)”

In addition to these, I would include a sixth:

6. Propositions with “*hos epi to polu*” relations are legitimate for science but not contingent, indefinite assertoric propositions despite identical conversion rules (*Pr.An.* I.13 32b18 ff.; Alex. in *Pr. An.* 164,23-26)

In a way, we can see how different accounts have comprehended some of these intuitions. Reeve’s approach tried to account for FTMP assertions by focusing on answering #1- 3 and #5 but ultimately failing to find what lies between simple necessity and pure chance (#4, #6). Anagnostopoulos focuses on explaining #4, #5, and #6 but seems to provide an account that is inadequate for capturing 4 and its implication of causality. #6 is not fully accounted for either as his solution is kept at the level of syntax. When we provide an account that focuses on Aristotle’s

understanding of essential predication and how things can have *dunaemai*, we will be able to satisfy all these desideratum and see how such an understanding impacts our ability to be exact in politics.

### §10.1 – The Dunamis Principle

I mentioned above how one of the strongest objections against a statistical interpretation of FTMP assertions is that a statistical account is not able to hint towards a reason why something occurs the way it does. Aristotle clearly thinks it is by nature that FTMP assertions turn out a way, that nature “pushes” towards a certain outcome, but I argue these outcomes are favored because there was something about the subjects themselves which made those things more likely to happen. This is a capacity for a given action or outcome, a *dunamis*. FTMP assertions seem to identify and predicate some *dunamis* in a subject, and I think this is the key to demonstrating FTMP assertions.

In fact, an ironic outcome of my interpretation is that something can barely ever occur for the FTMP assertions to still be true and demonstrable. My interpretation points out instances when a statement about a *dunamis* is true; the *dunamis* might contingently experience all sorts of external and internal impediments to its realization. However, because nature is “pushing” the *dunamis* to happen to absence of impediments, it is the presence of this “pushing” which the FTMP assertions captures, not the success of the pushing. Just because everybody is miserable at a given time does not make Aristotle’s statements about what makes a person happy any less true.

But how do we represent this idea of a *dunamis*? We might, given these texts from Aristotle, consider things that happen for the most part are things that, things being normal and equal, will occur just according to “nature.” One might even generalize this idea to the metaphysical principle that the action or property which corresponds with the FTMP assertions

will be realized barring anything going against nature. Winter (178) formalizes this notion and calls it the **Principle of Non-Interference (PNI)**:

$$\mathbf{R} \rightarrow (\sim\mathbf{I} \ \& \ \sim\mathbf{I}^*)$$

Where ‘R’ is the realization of *dunamis*; ‘I’ represents internal impediment to realization (so something wrong with the creature itself like its structure; and ‘I\*’ represents external impediments to realization. Verbalized, the **PNI** says that, in the absence of internal and external impediments, a certain *dunamis* will be realized.<sup>195</sup>

The problem is the **PNI** does not take into account the role of the efficient cause, and this is important because a substance can have a variety of *dunamai*. Gold is incredibly ductile, malleable, and conductive. These qualities all denote distinct capacities of the noble metal: the ability to be stretched into a wire, pounded into a sheet, and conduct electricity/heat respectively. But pure gold in a lab with no impediments will obviously not be acting out these capacities all simultaneously. It is only if the appropriate cause is applied to the kind, and when no relevant impediment. This leads to the introduction of the **Strong Causal Principle (SCP)**:

$$(\mathbf{E}_n \ \& \ \sim\mathbf{I}_n \ \& \ \sim\mathbf{I}_n^*) \leftrightarrow \mathbf{R}_n$$

Where ‘I’ and ‘I\*’ retain their meanings but ‘E’ is the presence of some appropriate efficient cause and  $\mathbf{R}_n$  represents some *dunamai* with **n** indexing one of the genus/species’ relevant *dunamai*.<sup>196</sup>

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<sup>195</sup> The contrapositive of the **PNI (PNIC)** would be:  $(\mathbf{I} \vee \mathbf{I}^*) \rightarrow \sim\mathbf{R}$ .

<sup>196</sup> This is a strengthening of Winter’s SCP which does not include an indexical. Aristotle might also insist on including notation (e.g.  $\mathbf{R}^*$ ) that denoted a natural kind’s corresponding *erga* for its *telos*. For humans it may be political involvement or rational thought.

When electricity [E] is present and there is nothing impeding the gold either internally (such as being impure,  $I^*$ ) or externally (being wrapped in a resistant material,  $I$ ), the gold will realize its capacity (very readily conducting electricity,  $R$ ).

A final refinement is necessary as, while kinds can have many *dunamai*, only non-rational kinds require an appropriate efficient cause to realize their capacity. Rational *dunamai*, however, require no such causal antecedent (*Met.* IX.5 1048a5-7). This is not a problem, however, as I can make the absence of impediments only a necessary condition for rational capacities and eliminate the efficient cause while affirming the rest of the **SCP**. The **SCP** is then amended to:

**The Dunamis Principle (DP):**

$$(R_r \rightarrow \sim I_r \ \& \ \sim I_r^*) \ \& \ ((E_n \ \& \ \sim I_n \ \& \ \sim I_n^*) \leftrightarrow R_n)$$

Where ' $R_r$ ' is a rational *dunamis*, ' $I_r$ ' and ' $I_r^*$ ' are internal and external (respectively) impediments relevant to the rational *dunamis*, and the right hand of the conjunction retains the same meaning as the SCP (though with  $R_r$  no longer in the domain of  $R_n$ ). However, there is an issue in *Met.* IX.5 as well at lines 1048a13-21:

[T59] And it has the potentiality in question when the passive object is present and is in a certain state; if not it will not be able to act. To add the qualification 'if nothing external prevents it' is not further necessary; for it has the potentiality in so far as this is a potentiality of acting, and it is this not in all circumstances but on certain conditions, among

which will be the exclusion of external hindrances; for these are barred by some of the positive qualifications.”<sup>197</sup>

If this passage is taken on its face, it seems a *dunamis* is predicated on the external impediments around it. All the principles above, however, define the *dunamis* independently of its respective impediments. A species’ essential properties ought not be defined on contingent circumstances, so this passage forces us to take one of three routes:

- 1) Make *dunamis* not a capacity that derives from ones species membership, deflating its metaphysical importance.
- 2) Render the **DP** trivial by making it just say a *dunamis* is just whatever comes about given the arrangement of impediments (internal and external) do not change, a change that does not even adequately capture the left hand of the conjunction.
- 3) Distinguish between “essential” capacities and “practical” capacities.

We should choose number 3). Note the difference between the types of impediments in this passage. An individual with particular impediments will only have the capacity to aim for certain things, but the potentials that an individual has *qua* token of a species are the capacities most characteristic of that species. The latter capacities are definitional while the former are “pragmatic” capacities and predicated on the specific arrangement of impediments the individual faces. This is

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<sup>197</sup> ὥστε τὸ δυνατὸν κατὰ λόγον ἅπαν ἀνάγκη, ὅταν ὀρέγηται οὗ ἔχει τὴν δύναμιν καὶ ὡς ἔχει, τοῦτο ποιεῖν· ἔχει δὲ παρόντος τοῦ παθητικοῦ καὶ ὡδὶ ἔχοντος [ποιεῖν]· εἰ δὲ μή, ποιεῖν οὐ δυνήσεται (τὸ γὰρ μηθενὸς τῶν ἔξω κωλύοντος προσδιορίζεσθαι οὐθὲν ἔτι δεῖ· τὴν γὰρ δύναμιν ἔχει ὡς ἔστι δύναμις τοῦ ποιεῖν, ἔστι δ' οὐ πάντως ἀλλ' ἐχόντων πῶς, ἐν οἷς ἀφορισθήσεται καὶ τὰ ἔξω κωλύοντα· ἀφαιρεῖται γὰρ ταῦτα τῶν ἐν τῷ διορισμῷ προσόντων ἔνια).

why impediments are relevant to defining their potentialities as 1048a13-21 discusses. Kevin the class clown is, by definition, capable of comprehending profound eternal truths like the gods themselves. However, given his specific character of skipping school all the time, he should probably aim for just not failing Spanish.

Winter argues that the **SCP** plays a major role in Aristotle's natural science, and he appears right, but - if we consider rational action to be the realization of our capacity and we recognize all the complex ways in which emotions, upbringing, and material conditions can impede this realization – it would appear the **DP** can apply to both ethics and natural science. A FTMP assertions is just predicating some factor (**E**, **I**, **I\***, and/or some **R**) in an instance of the **DP**.

Take the example “Wealth is beneficial” to see how this works. The subject “wealth” is predicated as being “beneficial.” However, Aristotle's metaphysics of the good require us to read this as elliptical, so “wealth is beneficial” is understood to mean “wealth is beneficial [to humans].”<sup>198</sup> But ‘beneficial’ denotes also some good in relation to humans. Aristotle considers realizing your most distinctive *dunamis* through a corresponding action is the ultimate good for a given species, so if wealth is truly beneficial then it has some relation to this distinctive *dunamis*' realization. The **DP** allows us to determine what specifically wealth affects. In this case, wealth provides us leisure and material security. Because the need for time-consuming toil is absent, the wealthy person's rational capacities are free of at least some external impediments. So the statement “wealth is beneficial” predicates an instance of **I<sub>r</sub>\*** by saying wealth contributes to **~I<sub>r</sub>\*** obtaining.<sup>199</sup>

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<sup>198</sup> This is assuming that to be beneficial is to be good, but you have to be good to/for something, so to be beneficial is to be good to/for something, requiring an understood object. Given context, [human] is the likely object.

<sup>199</sup> I say contribute as **I\*** (and **I**) can also stand in for a set of impediments that are all relevant to the *dunamis*. One could easily iterate applications of **DP** for specifying when some aspect of a *dunamis* would be fulfilled. For example, lack of leisure is one impediment to contemplation as it impedes the ability for the person to spend time devoted to contemplation, but that is not the only impediment. Lack of access to a good school is a serious



### §10.2 - Plenty of Possibility, for the most part:

There does seem to be a problem with my interpretation. Under my view, if Aristotle operates under a truthmaker semantics as I argue for in Chapter 3, then what makes FTMP statements true is something about the corresponding objects. This is in contrast to a possible worlds semantics where what makes FTMP assertions true is that it obtains more times than not. However, this would make it possible under my interpretation that a FTMP statement could be true while rarely (or even never) obtaining in a particular case. However, Aristotle describes in the *Topics* that FTMP statements *in fact* do obtain more times than not, something not strictly entailed by my interpretation. How do I deal with this passage?

The main reason is that Aristotle believed in a steady-state universe with an infinite amount of time in the past and in the future. We may not have practical access to all these past times (especially before the periodic cataclysms Aristotle thinks befall humanity), but many assertions are made true by these past events. In an infinite period over history there is plenty of room for this these statements to come out as true. Given they are about capacities and objects naturally wish to realize these capacities, we in fact have good reason to believe that if we were to observe this infinite course of history and we could find our FTMP statements obtaining more times than not. This would then make the statement “it is possible that all true FTMP statements obtain more times than not” true.

However, while the cosmological and metaphysical beliefs discussed above inform his position on FTMP statements, these doctrines are cleanly separable from the semantics of FTMP

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impediment as well to acquiring the sort of cultivation and *epistemae* necessary for leading a contemplative life. Both of these are external impediments, but they apply to different aspects of the *dunamis* (lack of leisure impeding the *dunamis* in the primary sense of possessing a capacity, with lack of schooling impeding the *dunamis* in the secondary sense).

statements. The result is that the statistical interpretation for FTMP statements still “works out” as true in that it is the case that in Aristotle’s complete system all FTMP statements are true more times than not, but it is not statistical occurrence *simpliciter* which makes these FTMP statements true. Rather, their regular occurrence is only taken as a sign of their truth, that there is some nature pushing for these statements to be true in particular cases. It is once we identify the element of that nature which pushes these FTMP statements to occur that we identify what makes FTMP statement true.

This point is also relevant for a more fundamental point for thinking about the *Politics*. Aristotle is writing at a specific time in history, observing Greek *poleis* and other societies around our time. The specific assertions he makes about constitutions are of course ones he makes believing he has the necessary evidence to establish. However, what ultimately grounds these assertions and what makes them true “for the most part” is that they ultimately do track some essential characteristic of human beings under a given set of conditions (or impediments), and he happens to analyze humans under a set of conditions (including impediments) which predominated around his time in Classical Athens. If he is incorrect about something being true “for the most part,” it is because his assertion is not isomorphic to how human capacities actually developed under that set of conditions. But, to further apply Aristotle’s dictum that science is about what is most general and not what is particular, an Aristotelian political science is not just about how human beings develop under some fairly common, but still particular, set of conditions. An Aristotelian political science is about how human beings’ capacities develop under general types of conditions, far beyond the scope of the Greek *polis*. Aristotle’s *Politics*, then, can be seen as his attempt to see “through” the impediments Greeks specifically faced and to establish these more general assertions on a basis that tracks what is essential to the species of human beings. It is this

much more ambitious goal which makes him most relevant to later political theorists, which I hope to establish more in my last chapter.

## Chapter 4

**“Unconditionally, though, luck is not the cause of anything.”**

### **§1 – Introduction – The Importance of Spontaneity**

As discussed in **Chapter 1**, there are a number of grounds one may wish to point to in order to argue that Aristotle imposes conceptual or metaphysical limits on the level of precision possible in political science. These grounds include his reliance on *endoxa* and his claim that an exacting account in ethics or politics would go down “too many digressions.” A third ground is that the true statements in practical science are only true “for the most part” (FTMP). **Chapter 1** and **Chapter 2** have been spent arguing that his use of *endoxa* should not make us think his practical philosophy is unable to achieve a high level of explanatory precision and that his remark about digression amounts to a prudential disclaimer.

However, answering the argument over the way practical science can only be true for the most part has been more difficult as this can in fact amount to a metaphysical limitation. If the subject of practical science is such that any true statement about the subject can only be mostly true, then that would be a strong argument that Aristotle is committed to making practical science’s maximally precise account inferior to the accounts one can find in natural science (let alone mathematics). It is not only a good idea to be content with an imprecise account of ethics (because otherwise it would be too hard to make decisions) but such precision is not even theoretically possible. Under this interpretation, when Aristotle says it is a “mark of cultivation” to be aware of this imprecision in practice ethics, he means the cultivated person recognizes that ethics simply cannot be scientific instead of thinking it would be merely tedious or not practically worthwhile to make it scientific.

**Chapter 3** provided the first part of my answer. To provide a quick recap of the last chapter: **1)** it seems as though Aristotle adopts an isomorphic correspondence theory of truth and **2)** operates with a truth-maker semantics (as opposed to a semantics compatible with a Lewisian possible worlds model). With these results in hand, we were able to establish a general understanding of **3)** what it means for an assertion to be true “for the most part” (‘FTMP’). I understand a statement is true FTMP if **4)** the assertion’s content is isomorphic to the development of an object’s capacities under some given set of impediments. The constellation of impediments may be understood in the context of uttering the statements; for example, the statement “wealth is beneficial” can be understood as referring to what is beneficial to human beings since the statement will be uttered in the context of a work about politics or human ethics. However, whether the impediments are expressly given or not, **5)** statements can ultimately be translated as an instance of the **Dunamis Principle (DP)**, a general metaphysical statement that describes how the capacities of a substance actualize in the world.

To review, I define **DP** as  $(R_r \rightarrow \sim I_r \ \& \ \sim I_r^*) \ \& \ ((E_n \ \& \ \sim I_n \ \& \ \sim I_n^*) \leftrightarrow R_n)$ , where ‘**R<sub>r</sub>**’ is a rational *dunamis*, ‘**I<sub>r</sub>**’ and ‘**I<sub>r</sub><sup>\*</sup>**’ are internal and external (respectively) impediments relevant to the rational *dunamis*, **R<sub>n</sub>** represents some *dunamis* with **n** indexing one of the genus/species’ relevant *dunamai*, **I<sub>n</sub>**’ and ‘**I<sub>n</sub><sup>\*</sup>**’ represent internal and external (respectively) impediments to the specified non-rational *dunamis*, and ‘**E**’ is the presence of some appropriate efficient cause for the specified non-rational *dunamis*. Any statement which may be described as true “for the most part” can be translated into talking about some instance of **DP**, dealing with either a **R<sub>r</sub>** or an **R<sub>n</sub>**.

Verbalized, **DP** says that the realization of rational capacities only requires the lack of impediments and that non-rational natural capacities realize if and only if there are no impediments along with the presence of an appropriate efficient cause. This covers the conditions for the

realization of any capacity found in a natural kind, and statements which are true FTMP can be given a demonstration because these demonstrations are about the predictable realization of capacities under given conditions.<sup>200</sup> This interpretation, while against influential interpretations,<sup>201</sup> is basically in line with Irwin (1988: 522, n.17, 523 n.20), Mignucci (1981, and some older interpretations, including no less that Paulus Vallius (*Logica* vol. 2: 255) and Galileo (*de Dem.* [= MS Gal. 27] 2.7.6 and 3.1.17 ).<sup>202</sup>

However, while the previous chapter was able to provide a general understanding of FTMP assertions, it remains to be seen how my interpretation is able to capture a number of important aspects of Aristotle's practical philosophy. Most of all, I will have to account for the role of spontaneity in light of **DP**.

Why does getting a handle on spontaneity matter so much to how we consider Aristotle's political philosophy? It depends on which exactly sort of chance we are talking about. "The spontaneous" can be broadly divided into two different sorts:

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<sup>200</sup> This is true as well of the soul-heat as described in *de Motu* 10, since even the deflationary interpretation that soul-heat is just a sort of hot air agrees that this heat just naturally triggers contraction or expansion of the cardiac muscles when conditions (*de Motu* §10 703a11-16, 19-22; cf. *DA* III.7 431a8-17; Gregoric (2020: 427-38, esp. 434, in Rapp & Primavesi 2020). Even if one takes Gregoric's position and finds my argument in **Chapter 5** to be unconvincing, **DP** is still able to capture Aristotle's discussion of the connate *pneuma* and soul heat.

<sup>201</sup> Barnes (1977: 186), Chadwick (1981: 158-9), Crivelli (2007: 60, 208), Fine (1984: 34-35; 45 n.36), and Hintikka (1973: ch. 8, esp. 96; 1977). These authors are, of course, not necessarily all in accord with each other. Barnes' (1977) review departs sharply with Hintikka's (1977) main argument by rejecting that Aristotle ascribed to a **Principle of Plenitude (PP)**. If Aristotle did ascribe to **PP**, that would provide a metaphysical principle to motivate the statistical interpretation. Barnes rightly points out that there is no passage that contains an affirmation of **PP**. I am skeptical of Barnes' own conclusion, which I think still collapses Aristotle's theory of modality down to equating uniformity and omnitemporality, but much of that is based on me rejecting their mutual assumption that Aristotle's semantics are compatible with a broadly Lewisian possible-worlds model based on states of affairs instead of a Finean truthmaker model, as discussed in **Chapter 3**.

<sup>202</sup> Vallius: "The third - [for the most part] - is when the predicate can be truly present, and, if impediments that rarely occur are taken away, is always present; of this kind are practically all meteorological propositions, as that it will rain or snow at such and such a time, for although this takes place almost always it can nonetheless at some time be impeded" [tr. Wallace 1992b: 202, n.21, see also Wallace 1992b 27-37 on Vallius as the source and model of MS 27].

#1. The spontaneous as something that is not up to us, lacking a final cause. For example, it is not up to a person that they were born with particular gifts or to particular parents. These situations possess a material, formal, and efficient cause, but they lack a final cause. They are situations we can understand but which were not intentionally created for our benefit nor situations we consciously chose.

#2. The spontaneous as something that has no material cause, arising from an inherent causal instability in matter. It can be interpreted as a negative quality of the material world (i.e. that it lacks stability) or can be interpreted as a positive but unexplainable force in the universe that disrupts material causal links. Miraculous occurrences, things “just happening,” are examples of this sort of spontaneous action.<sup>203</sup>

This seems fairly reasonable as a division, but which one(s) Aristotle endorses the existence of leads to radically different consequences for the potential of Aristotelian political science.

The significance concerns whether we think Aristotle believes political science is primarily a predictive enterprise or whether it is primarily a practical enterprise. If it is a predictive enterprise, then it can be thought of as very similar to other sciences. We try to determine stable definitions and track the durable natures according to which the studied objects act, in this case humans and societies; this provides us a knowledge that allows us to make predictions about how the objects will behave when acted on in some way. Our goal for this predictive enterprise is to obtain ever more *epistemae* about the objects studied. If it is primarily a practical enterprise, however, then it is different to the other sciences because the goal is not just the establishment of a body of

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<sup>203</sup> Examples of this position (which Schillinger (2019: 31) refers to as the “causal realist” account of luck) include Allen (2015: 45-65); Dworkin (1981: 293); Freeland (1991: 62, 68-71); Judson (1991b: 73-74); Matthews (1982: 223-40); Meyer (1992: 793-803); and Nussbaum (1986: 334).

*epistemae*. Instead, it is the collection of knowledge that enables us to make practically wise decisions so as to achieve what we see as good. Perhaps scientific knowledge will help, but it is not the ultimate goal of a practical science. The ultimate goal of a practical science is to be able to reliably act well.

What I take to be so distinctive about Aristotle is that his model of political science is *both* predictive and practical. It is predictive in the sense that it tries to understand how political systems function, evolve/devolve, and what various natural or artificial conditions do to affect a system's functioning. The *polis* is a natural system that is an extension of our nature as political animals, so he thinks one can get a handle on what makes it tick, just like any other natural system. We can, indeed, achieve scientific knowledge about both humans and political societies. However, it is also practical because a politician is going to find themselves in charge of one of these political systems, and if they have a powerfully predictive science then they can make decisions confident in how the decision will play out and forward the politician's concept of the good. After a while, the marginal value of ever greater precision in political science may decrease, but the predictive element aids in the practical element for him. Aristotle is additionally interested in finding ways to cultivate superior *politikae* in citizens so they may lead better, flourishing lives. The *Politics* accommodates all these concerns.

Consider now the version #1 of the spontaneous: "what has no final cause." This is the type of chance that I think we can take on board and inform our political science as a practical endeavor. It is not up to Sparta that it is near mountains and lacks access to water-based trade, and it is not up to a person that they were born with particular gifts or disabilities. However, given that those features are there, what does a politician do? Taking this sort of chance into account is indeed critical for any sort of politician faced with a real-world political society. We cannot start from a



clean slate at year 0, so we have to deal with things that we could not control. Given as well that Aristotle criticizes Plato for assuming too neat a starting point for his Kallipolis in *Politics* II and stating that we need to study what is actually obtaining, it seems admitting for this version #1 of the spontaneous would be entirely consistent with his political science.

In contrast, version #2 of the spontaneous – what has no material cause - is a big problem for me because it undermines an important element of what makes a statement true for the most part. Ultimately I see a conditional underlying what makes something true for the most: if there are no impediments and there exists an efficient cause (whether soul or something else), *then* the natural capacity of a hylomorphic compound will express itself.<sup>204</sup> Version #2 of chance, however, disrupts this conditional because a capacity's particular expression (or non-expression) becomes further reliant on this sort of chance not obtaining in a given event. If version #2 of chance exists, then after a while you really can only predict so much of what is going to happen; there is just some X factor that throws your predictions through a loop and which is an irreducible part of the material world. Further, if version #2 of chance exists, then the statistical interpretation gains a new life because it may be the only interpretation of Aristotle's theory of modality that properly takes that causal indeterminacy into account. The statistical interpretation could point to this causally volatile chance as an explanation for why things true "for the most part" sometimes fail to turn out true on occasion. If this sort of chance can always interfere in the realization of a substance's capacities, even when there are no impediments, then **DP** is false, making it unable to serve as a proper way to understand the semantics of "for the most part."

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<sup>204</sup> As with my formulation of **DP**, I acknowledge that there is a real questions whether Aristotle accommodates material conditionals in his logic. If not material conditionals, what sort of connective links the premises of a syllogism to its conclusion? I hope to investigate this more in further research.

## §2 – Roadmap –

I want to abolish version #2 from Aristotle’s system, but I run into a big issue. At *Physics* II.5 196b10-17 he seems to call it cause:

[T60] In the first place, then, since we see that some things always come to be in the same way, and others do so for the most part, it is evident that luck or what is by luck is not the cause of either of these—either of what is by necessity and always or of what is for the most part. **But since there are other things beyond these that come to be, which everyone says come to be by luck, it is evident that there is such a thing as luck and as chance. For we know that things of this third sort are by luck and that things that are by luck are things of this sort.** (*Physics* II.5 196b10-17, tr. Reeve)<sup>205</sup>

On an initial reading of this *Physics* passage, one might think he is committed to the existence of an independent cause called “luck,” meaning it is a cause independence of the material cause yet still efficacious in matter. In other words, he is committed to the existence of version #2 of chance. Further, it seems like throughout his practical philosophy he provides a substantial role to this “luck,” most of all in his account of external goods such as wealth. But statements about wealth

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<sup>205</sup> Πρῶτον μὲν οὖν, ἐπειδὴ ὁρῶμεν τὰ μὲν αἰεὶ ὡσαύτως γιγνόμενα τὰ δὲ ὡς ἐπὶ τὸ πολὺ, φανερόν ὅτι οὐδετέρου τούτων αἰτία ἡ τύχη λέγεται οὐδὲ τὸ ἀπὸ τύχης, οὔτε τοῦ ἐξ ἀνάγκης καὶ αἰεὶ οὔτε τοῦ ὡς ἐπὶ τὸ πολὺ. ἀλλ’ ἐπειδὴ ἔστιν ἃ γίγνεται καὶ παρὰ ταῦτα, καὶ ταῦτα πάντες φασὶν εἶναι ἀπὸ [b15] τύχης, φανερόν ὅτι ἔστι τι ἢ τύχη καὶ τὸ αὐτόματον· τὰ τε γὰρ τοιαῦτα ἀπὸ τύχης καὶ τὰ ἀπὸ τύχης τοιαῦτα ὄντα ἴσμεν.

and other external goods are exactly the sorts of statements that are true “for the most part.” One of the most distinctive features of Aristotle’s thought, especially in comparison to Plato and Stoicism, is the relative importance of these external goods, so any worthwhile account of his theory of truth in practical philosophy will have to explain how statements about external goods can be true FTMP and also be subject to spontaneity. Finally, and as yet another seeming point against my position, Aristotle does not develop a stable list of external goods. Throughout his practical works, ranging from *Rhetoric* I.5 to the *Eudemian Ethics*, he provides multiple lists of sometimes quite divergent character. Why, an opponent may ask, would Aristotle be so uncertain about this list if he thought practical philosophy could be so exact and predictable? Surely, they could say, if he really thought that he would have settled on a particular list of goods that all humans, *qua* humans, should possess for the good life.

This chapter will focus on getting a general understanding of Aristotle’s theory of the spontaneous and what ramifications this has in his political science. Despite what the above passage may lead one to think, I that only version #1 of the spontaneous is functional in his system; he does not allow for events lacking a material cause. This allows us to still establish FTMP statements which obey the **DP**, making it unnecessary to default to the statistical interpretation. Aristotle distinguishes good luck as something which happens spontaneously and which is good for us, and I suggest version #1 is the best light in which to understand his statement at *Physics* II.5:

[T61] Also, it is correct to say that luck is something beyond reason [τι παράλογον].

For a reason is what always is or for what for the most part is, and luck is found in what is beyond these. And so, since the causes in such cases are indefinite, [197a20] luck too is indefinite. Nevertheless, in some cases one might raise a puzzle as to

whether any random thing might be a cause of what is [by] luck—for example, of health, the wind, or the heat of the sun, but not having had a haircut. For some accidental causes are more relevant than others [ἔστιν γὰρ ἄλλα ἄλλων ἐγγύτερα τῶν κατὰ συμβεβηκὸς αἰτίων]. (II.5 197a17-24, Reeve with revision)<sup>206</sup>

It would be a category mistake to think that the spontaneous is something liable to scientific demonstration, since the event does not obtain always or FTMP. However, Aristotle follows that up with the important observation that some accidental causes are more relevant (ἐγγύτερα, alt. “nearer”). I would posit that one can obtain greater understanding about these ἐγγύτερα causes. While the specific obtainment of “good luck” (and spontaneity more generally) may not possess a demonstrable explanation – lacking as it does a final cause and not occurring either always or for the most part – it would be a fallacy of division to infer that any step in what caused the good luck is beyond reason.

These ἐγγύτερα causes could run the gamut, as Aristotle’s own examples illustrate. However, despite their diversity, the effects of getting a haircut or being exposed to the heat of the sun would have material causes. Every step in the lucky occurrence would have a material explanation, forming an unbroken chain to the occurrence. The chain, it must be granted, may be unimaginably long, but it is also unbroken. There is no place for something like version #2 of spontaneity (and by extension an equivalent version of good luck) in this chain. Subsequently, because there does not exist in Aristotle’s ontology any sort of event which lacks a material cause

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<sup>206</sup> καὶ τὸ φάναι εἶναι τι παράλογον τὴν τύχην ὀρθῶς· ὁ γὰρ λόγος ἢ τῶν ἀεὶ ὄντων ἢ τῶν ὡς ἐπὶ τὸ πολὺ, ἢ δὲ [a20] τύχη ἐν τοῖς γιγνομένοις παρὰ ταῦτα. ὥστ' ἐπεὶ ἀόριστα τὰ οὕτως αἰτία, καὶ ἡ τύχη ἀόριστον. ὅμως δ' ἐπ' ἐνίων ἀπορήσειεν ἂν τις, ἄρ' οὖν τὰ τυχόντα αἴτι' ἂν γένοιτο τῆς τύχης· οἷον ὑγείας ἢ πνεῦμα ἢ εἴλησις, ἀλλ' οὐ τὸ ἀποκεκάρθαι· ἔστιν γὰρ ἄλλα ἄλλων ἐγγύτερα τῶν κατὰ συμβεβηκὸς [a25] αἰτίων.

which might interrupt a capacity's actualization under proper material conditions, **DP** remains inviolate.

Regarding the metaphysics of spontaneity, that is my basic argument. How does this relate to my position about our ability to understand FTMP statements in political science? To adopt the language of this *Physics* passage, for Aristotle it is the business of the politician and political scientist to study these ἐγγύτερα causes behind the accidental events which befall a *polis*. While all sorts of misfortunes can happen during a politician's term, it is still within the politician's power to understand the conditions under which the "nearest" causes of a bad event can arise. An economic crisis can happen spontaneously, but the politician can identify the rampant speculation in some market which could give set the conditions for that crisis. However, the scope of what is "nearest" here is just a pragmatic one, that we would "go down too many digressions." With greater technology, more evidence, and superior investigative techniques a politician could have at their disposal explanations for many more remote causes. There is, I would posit, no non-arbitrary criteria for what is truly the furthest cause for which a politician could possess and explanation, no digression we simply could not go down.

This chapter will be mostly about when things happen unusually. However, the unusual is conceptually posterior to the usual. I will thus begin this chapter by thinking about Aristotle's understanding of events which happen usually. In the **Appendix**, I consider a an additional sort of "spontaneous" event in the form of spontaneous generation, providing a theory of Aristotle's hylozoism which fits well with **DP**. In **Chapter 5**, however, I consider the legacy of **DP** and Aristotle's material principle, building off material found in this chapter and previous ones to show the many directions a "scientific politics" in the Aristotelian traditional can take.

## §2.1 – Aristotle’s *contra* Empedocles – The Winter Rain Argument

As noted in the previous chapter, Aristotle usually associates FTMP assertions with things which come about by nature.<sup>207</sup> While he acknowledges that things can turn out otherwise, something other than just random chance explains why something predominately turns out a particular way. Secondly, he several times explicitly contrasts FTMP assertions from claims about things that come about by accidentally.<sup>208</sup> *Metaphysics* Epsilon provides perhaps the most straightforward distinction on a metaphysical basis.

*Met.* E.2 1026b27-30:

[T62] Since, among things which are, some are always in the same state and are of necessity (nor necessity in the sense of compulsion but that which means the impossibility of being otherwise), **and some are not of necessity nor always, but for the most part, this is the principle and this the cause of the existence of the accidental; for that which is neither always nor for the most part, we call accidental.** For instance, if in the dog-days there is wintry and cold weather, we say this is an accident, but not if there is sultry heat, because the latter is always or for the most part so, but not the former.<sup>209</sup>

This distinction between the always, the for the most part, and the accidental is a bedrock for his metaphysics, and he employs it through his works.

<sup>207</sup>GA 777a19-21; 727b29-30; PA III.2 663b28-9; *Met.* E.2 1027a8-28.

<sup>208</sup>GC 333b7; DC 283a33; *Po. An.* 87b19; *EE* 1247a32; *Met.* 1026b27-30; *Phys.* 196b15-21.

<sup>209</sup> – ἐπει οὖν ἐστὶν ἐν τοῖς οὖσι τὰ μὲν αἰεὶ ὡσαύτως ἔχοντα καὶ ἐξ ἀνάγκης, οὐ τῆς κατὰ τὸ βίαιον λεγομένης ἀλλ’ ἠνυλόμεν τῷ μὴ ἐνδέχεσθαι ἄλλως, τὰ δ’ [b30] ἐξ ἀνάγκης μὲν οὐκ ἔστιν οὐδ’ αἰεὶ, ὡς δ’ ἐπὶ τὸ πολὺ, αὕτη ἀρχὴ καὶ αὕτη αἰτία ἐστὶ τοῦ εἶναι τὸ συμβεβηκός· ὁ γὰρ ἂν ἦ μήτ’ αἰεὶ μήθ’ ὡς ἐπὶ τὸ πολὺ, τοῦτο φαμεν συμβεβηκός εἶναι.

Now, a possible response from the thoroughgoing proponent of the statistical view is that this distinction is intelligible by breaking the distinction down according to defined bounds of statistical occurrence. Things which always occur occur at 100% frequency, for the most part between 50% ~ <100% frequency, and accidental <50% frequency. Basically, “*p* is uniformly true” can be reduced to saying “*p* is true at all times,” while “*p* is true for the most part” can be reduced to “*p* is true more often than not-*p*.” This is the position offered, for instance, Hintikka (1973) in his analysis of *De Int.* 9.

The problem with this response is it ultimately does not square with his criticisms of the Presocratics elsewhere. In *Generation and Corruption* he advances the claim that it is impossible for “complete disorder” to exist as it would in the extreme state of Empedocles universe when Strife is totally dominant. The occurrence of a “completely disordered” universe is something that happens as often in Empedocles’ cosmic cycle as any, more “ordered” cosmic state. However, Aristotle takes disorder to refer something occurring “contrary to nature,” and Aristotle makes it clear that the nature of bodies is what is present in them for the most part.<sup>210</sup> It is in the nature of the cosmos to enter a “completely disordered” state regularly, meaning he thinks it is not so disordered or random after all. He extends these criticisms to the Atomists as well as they try to present random motion as the natural state of the universe.<sup>211</sup>

Further, Empedocles assumes the existence of no stable cosmic state either, only transitory ones in the never-ending struggle between Love and Strife.<sup>212</sup> This raises a possible contradiction. The particular compounds (such as natural kinds, including humans) are able to reliably develop

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<sup>210</sup> *Phys* II.8 198b34-199a3; *DG* II.6 333b4-7; *PA* III.2 663b27-29; *Met.* E.2 1026b27-1027a28; cf. Cherniss 1964: 193; Lennox 2001: 248 *ad PA*

<sup>211</sup> see *DC* I.7 275b29-276a4; III.2 300b31-301a11);

<sup>212</sup> B8 (= Plut. *Cont. Col.* 1111F; Aet. P 1.31.1; 1, 3-4; Aris. *Met.* 1015A1-3), B13 (= Arist. [MGX] 976b22-27), and B17.6.

along certain lines and there is only a certain portion of the cycle where this reliable development is possible (as Empedocles himself admits),<sup>213</sup> then Empedocles appears to have a third power that actualizes over the material principles once the ratio between Love and Strife stay within particular bounds (cf. B17.27-31). Empedocles, however, does not seem to posit such a third power, prompting Aristotle's following remark:

[T63] And it is far more difficult for [Empedocles] to account for the *coming-to-be* which occurs in nature. For the things which come-to-be by natural process all do so either always or for the most part in a given way; while any exceptions—any results which occur neither always nor for the most part—are products of chance [τύχης] and spontaneity.” (GC II.6 333a35-333b11)<sup>214</sup>

While this is not the full blown *phusis* of Aristotelian metaphysics, one is able to detect its trace in Empedocles. This is enough to sink Empedocles description of the cosmos as possessing precisely two primitive powers and four material principles.<sup>215</sup> The statistical model, without any sort of further connection to his prior concepts of essence and nature doing “nothing in vain,” is unable to explain why Aristotle makes these arguments, why he thinks Empedocles fails for not realizing that the reliability of the temporal duration of human formation under particular material

<sup>213</sup> B21.9-14: “Ἐν δὲ Κότῳι διάμορφα καὶ ἄνδιχα πάντα πέλονται, σὺν δ' ἔβη ἐν Φιλότητι καὶ ἀλλήλοισι ποθεῖται. Ἐκ τούτων γὰρ πάνθ' ὅσα τ' ἦν ὅσα τ' ἔστι καὶ ἔσται, δένδρεά τ' ἐβλάστησε καὶ ἄνδρες ἠδὲ γυναῖκες, 21.15 θῆρές τ' οἰωνοὶ τε καὶ ὕδατοθρέμμονες ἰχθύς, καὶ τε θεοὶ δολιχαίωνες τιμῆσι φέριστοι. **Αὐτὰ γὰρ ἔστιν ταῦτα, δι' ἀλλήλων δὲ θέοντα γίνεταί ἀλλοιωπά· τόσον διὰ κρήσις ἀμείβει.**” B22.3 also describes the celestial bodies as separating from terrestrial bodies “by nature”: ἄρθμια μὲν γὰρ ταῦτα ἑαυτῶν πάντα μέρεσσιν, [10] ἠλέκτωρ τε χθῶν τε καὶ οὐρανὸς ἠδὲ θάλασσα, **ὅσσα φιν** ἐν θνητοῖσιν ἀποπλαχθέντα πέφυκεν.

<sup>214</sup> “Πολὺ δὲ χαλεπώτερον ἀποδοῦναι περὶ γενέσεως τῆς κατὰ φύσιν. Τὰ [b5] γὰρ γινόμενα φύσει πάντα γίνεται ἢ ἀεὶ ἢ ὡς ἐπὶ τὸ πολὺ, τὰ δὲ παρὰ τὸ ἀεὶ καὶ ὡς ἐπὶ τὸ πολὺ ἀπὸ ταυτομάτου καὶ ἀπὸ τύχης.”

<sup>215</sup> Fragments A28 (= *Met.* 984A8-11; cf. *Simp. Phys* 25.21-31) and B17.18, while B6 (= *Aetius P* 1.3.20; 1-3; *SE Cont. Math.* 9.362, 10.315; *Stob.* 1.10.11; *Hipp. Ref* 7.28.4, 10.7.3; *Eus. PE* 14.14.16; 2-3; *DL* 8.76) describes these material principles in terms of gods, which Aristotle takes as describing water, air, fire, and earth.



conditions is a sign of an additional power. Aristotle lays out this argument most of all in *Physics* II.8. He posits the following problem from an Empedoclean opponent at *Phys.* II.8, 198b16-32:

[T64] And there is a puzzle: **what prevents nature from not acting for the sake of something nor because it is better ... So what prevents it from being like this for the parts in nature too, for instance, that the front teeth by necessity come up sharp, fit for tearing and the molars flat and useful for grinding food, since they did not come to be for the sake of this, but it happened accidentally?** And similarly for the other parts as well, in as many as being for the sake of something seems to be present. **So, then, wherever all things happened accidentally just as they would have if they came to be for the sake of something (ὡσπερ κἂν εἰ ἔνεκά του ἐγίγνετο), these were preserved, having been fittingly (ἐπιτηδείως) constituted by spontaneity; but as many as were not so (οὕτως) [constituted] perished and perish, just as Empedocles says the man-faced ox-kind did. (tr. Kress)<sup>216</sup>**

In response to this Empedoclean opponent, Aristotle forwards his (in)famous Winter Rain Argument. Here is the argument:

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<sup>216</sup> ἔχει δ' ἀπορίαν τί κωλύει τὴν φύσιν μὴ ἔνεκά του ποιεῖν μηδ' ὅτι βέλτιον, ἀλλ' ὡσπερ ἔπει ὁ Ζεὺς οὐχ ὅπως τὸν σίτον ἀξίησι, ἀλλ' ἐξ ἀνάγκης (τὸ γὰρ ἀναχθὲν ψυχθῆναι δεῖ, καὶ τὸ ψυχθὲν [b20] ὕδωρ γενόμενον κατελθεῖν· τὸ δ' ἀξιάνασθαι τούτου γενομένου τὸν σίτον συμβαίνει), ὁμοίως δὲ καὶ εἰ τῷ ἀπόλλυται ὁ σίτος ἐν τῇ ἄλλῳ, οὐ τούτου ἔνεκα ἔπει ὅπως ἀπόλλυται, ἀλλὰ τοῦτο συμβέβηκεν – ὥστε τί κωλύει οὕτω καὶ τὰ μέρη ἔχειν ἐν τῇ φύσει, οἷον τοὺς ὀδόντας ἐξ ἀνάγκης ἀνατεῖλαι τοὺς [b25] μὲν ἐμπροσθίους ὄξεϊς, ἐπιτηδείους πρὸς τὸ διαίρειν, τοὺς δὲ γομφίους πλατεῖς καὶ χρησίμους πρὸς τὸ λεαίνειν τὴν τροφήν, ἐπει οὐ τούτου ἔνεκα γενέσθαι, ἀλλὰ συμπεσεῖν· ὁμοίως δὲ καὶ περὶ τῶν ἄλλων μερῶν, ἐν ὅσοις δοκεῖ ὑπάρχειν τὸ ἔνεκά του. ὅπου μὲν οὖν ἅπαντα συνέβη ὡσπερ κἂν εἰ ἔνεκά του ἐγίγνετο [b30], ταῦτα μὲν ἐσώθη ἀπὸ τοῦ αὐτομάτου συστάνα ἐπιτηδείως· ὅσα δὲ μὴ οὕτως, ἀπώλετο καὶ ἀπόλλυται, καθάπερ Ἐμπεδοκλῆς λέγει τὰ βουγενῆ ἀνδρόπρωρα.

[T65] So the argument, at which someone might be at a loss, is this one, and any other one of this sort; but it is impossible that things be like this. **For these things and all the things that are by nature come to be in this manner (οὕτω) always or for the most part, but none of the things that are by chance and spontaneity do. For it seems that it is not by chance or as it happens that it rains frequently in the winter, but rather in the dog-days of summer; nor [do] heatwaves in the dog-days [seem to be by chance or as it happens], but rather in the winter. (i) So if things seem to be as it happens or for the sake of something, (ii) if it is not possible that these be as it happens or by spontaneity, (iii) they would be for the sake of something. But all things of this sort are by nature, as even the very people saying these things would assert.** So being for the sake of something [is present] among the things that come to be and are by nature.<sup>217</sup>

Under most conventional interpretations, Aristotle's goal in the Winter Rain Argument is to say that things which happen always or for the most part occur according to nature and for a particular *telos*. The argument is a disjunctive syllogism: 1) The Empedoclean thinks that things happen only by accident or for a goal, 2) such regular occurrences cannot happen by accident, 3) thus they happen for a goal. If this is how we understand the Rain Argument, though, the Aristotle has really gone off the rails.

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<sup>217</sup> ὁ μὲν οὖν λόγος, ὃ ἂν τις ἀπορήσειεν, οὗτος, καὶ εἴ τις ἄλλος τοιοῦτός ἐστιν· ἀδύνατον δὲ τοῦτον ἔχειν τὸν τρόπον. ταῦτα [b35] μὲν γὰρ καὶ πάντα τὰ φύσει ἢ αἰεὶ οὕτω γίγνεται ἢ ὡς ἐπὶ τὸ πολὺ, τῶν δ' ἀπὸ τύχης καὶ τοῦ αὐτομάτου οὐδέν. οὐ [199a] γὰρ ἀπὸ τύχης οὐδ' ἀπὸ συμπτώματος δοκεῖ ἕναι πολλάκις τοῦ χειμῶνος, ἀλλ' ἐὰν ὑπὸ κῆνα· οὐδὲ καύματα ὑπὸ κῆνα, ἀλλ' ἂν χειμῶνος. εἰ οὖν ἢ ἀπὸ συμπτώματος δοκεῖ ἢ ἐνεκά του εἶναι, εἰ μὴ οἷόν τε ταῦτ' εἶναι μήτε ἀπὸ συμπτώματος [a5] μήτ' ἀπὸ ταυτομάτου, ἕνεκά του ἂν εἴη. ἀλλὰ μὴν φύσει γ' ἐστὶ τὰ τοιαῦτα πάντα, ὡς κἂν αὐτοὶ φαῖεν οἱ ταῦτα λέγοντες. ἔστιν ἄρα τὸ ἕνεκά του ἐν τοῖς φύσει γιγνομένοις καὶ οὕσιν.

First, the Empedoclean opponent offers something (the growth of teeth) as something that occurs by spontaneity. Why would Aristotle, in trying to convince the opponent that teeth grow for the sake of the animal (a plausible thesis), try to make the much more radical conclusion that even weather patterns occur for the sake of something?

Secondly, why would the opponent accept the move at (ii) where Aristotle denies that regularly occurring things cannot happen accidentally? One can entirely imagine scenarios where an antecedent chance event results in other things regularly occurring. Enough stardust bound together to form a planet just far enough away from the Sun so as to maintain a temperature where liquid water can exist and, due to gravitational forces, Earth rotates with a tilted axis so that heat is added to the meteorological system in such a way that seasons and precipitation can occur, aided by a large satellite that can generate tidal forces with its gravity. The chance event is the stardust congealing at a particular distance from the Sun, and it just happened to establish a fairly stable meteorological system.

In this passage he seems to have made a great leap from observing that it is remarkable it rains so often in winter to saying that it is for a particular goal (a *telos*) that it rains more during the winter. He appears to beg the question against the Empedoclean, making the argument appear remarkably poor for Aristotle despite the importance of the point.

However, Kress (2019: 322-323, 327 ff.) forwards a much more plausible interpretation that does not saddle him with these blunders. The Winter Rain Argument is not intended to make the case that things which occur regularly occur for the sake of something. Rather, Kress argues the Winter Rain Argument tries to establish a more modest conclusion, one which the Empedoclean could accept: that regularly occurring things do not merely happen by chance. I mentioned the example of how seasons could arise due to the initial chance event of the Earth

forming a particular distance from the Sun. The event that sparked this cycle of seasons occurred accidentally. However, it seems to be a stretch to say it just happens to be that this winter has rainfall, that it just so happened that last winter had rainfall, and that it just so happened every other winter in the past has rainfall. When there is this high stability in the manner in which an event occurs, then perhaps there is a further explanation to be given; we can say something about the nature of meteorological systems as meteorological systems. This does not amount to saying it rains for the sake of something, only that there is something about the nature of the weather system that it rains. When regularity occurs, there is a causal mechanism; that mechanism does not have to exist for the sake of something.

We can see that the Empedoclean would accept this basic level of reasoning from the above discussion of Love and Strife. That animals occur in a particular matter regularly at a point in the cycle is not explained merely by chance; it is explained by Love being just dominant to allow for animals to arise. After a point, Love wears out its dominance, resulting in Strife bouncing back to restore equilibrium, with Strife eventually becoming dominant itself and setting the stage for Love's comeback. There is no posited teleology here, but there is also something more than chance as well. It is not by dumb luck animals occur so often at a point in the cycle; it happens by nature as a result of Love and Strife predictably acquiring some dynamic.

The goal of the disjunctive syllogism in the Winter Rain Passage is not to immediately skip to declaring rainfall in Winter has a *telos*. It is to remind the Empedoclean that they think things can happen according to nature, and things which happen according to nature either happen by spontaneity or happen for the sake of something. The Empedoclean will acknowledge that, when Love and Strife are at a particular balance in the cosmic cycle, teeth regularly grow in such a way that they are fitting to eat with, but they would say it is only apparent that Love and Strife reach a

balance *so that teeth fit for eating with may grow*. It is the Empedoclean, in Aristotle's presentation of their position, who assumes the exclusive disjunctive between being an accident and having a *telos*, and they just happen to think the teleological explanation does not occur much. The belief that regular causal patterns imply something about the nature of the objects involved in the event is an important piece of common ground Aristotle shares with the Empedoclean. At the very least, Aristotle and Empedocles are not radical causal Humeans.

It is at this point he moves to the "Manners Argument." The Winter Rain reaches a fairly modest conclusion, but that is because it does the main argumentative spadework necessary for the Manners Argument to make the more powerful claim: Things which happen "fittingly" regularly occur because their nature is to be "fitting," a conclusion which would bring the Empedoclean over to his side by saying nature is teleological. This does not mean the Empedoclean has endorsed a larger, more cosmic sense of "fitting," that the cosmos is developing all together

for some grand end or for a particular nature kind's benefit.<sup>218/219</sup> They have, however, endorsed at least the idea that "fittingness" can be seen in the operating and internal structuring of natural kinds (Broadie 1982: 80 n.29).<sup>220</sup>

The clever element of the argument is this: Aristotle puts the teleological attribute of being "fitting" into the same class as more ordinary attributes like "red" or "scaly" or "wet" or "in wintertime." Since all the other attributes occur along the principle that regular occurrence implies causation by nature, then they have to accept the attribute "fitting" obeys that same principle.<sup>221</sup> If

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<sup>218</sup> There is indeed a very serious debate about whether Aristotle even intends to have the cosmos lead all to one end or if he thinks *teloi* are restricted to the benefit of their respective natural kinds. Those who think there is a cosmic teleology include Broadie (1982: 80), Cooper (1982), Furley (1985, 1989), G.E.R. Lloyd (1985, cf. Byl 1987: 417) Owens (1951: 159 n.173), Kahn (1985) Rist (1965: 340-49), and Sedley (1991). Those who think there is not a cosmic teleology include Charlton (1970: 120-3 *ad Phys.* II.8, 198b16-32), Gotthelf, (2012b), Irwin (1988: 102-7, 522-3 n.18), Nussbaum (1978: 59-106), Randall, (1960), and Wardy (1993). Some evidence that there is some sort of cosmic teleology include *Met.* Λ.10 1075a11-25, *Pol.* I.8, 1256b10-22, and some reports of the lost *De Philosophia* such as in Cicero, (*de nat. div.* I.13.33 = F 26 R<sup>3</sup>). Sedley (1991) makes the case (using the *Politics* passage among others) that there is a specifically anthropocentric cosmic end, but I think he does not adequately address Sauve's objection that *Met.* VI.2 1026b32-5 contains an example of something happening for the most part (stifling heat in Summer) that is not very beneficial for human life (see Sedley 1991: 186 n.14). Moreover, besides Sauve's example, there is the more dramatic case of the great "cataclysm" which Aristotle thinks occurs periodically and does not seem especially beneficial to humans: Censorinus, (*de die natali* XVIII 11 = F25 R<sup>3</sup>) provides the most straightforward testimony -

There is, further, the year which Aristotle calls greatest (rather than great), which the spheres of the sun, the moon and the five wandering stars complete when they return together to the same point where once they were all together; the winter of such a year is a great cataclysm or flood, the summer an ecpyrosis or conflagration of the world; for at these alternate periods the world seems now be consumed in fire, now to be covered in water. [tr. Revised Oxford]

<sup>219</sup> There is a basic distinction to be made between two senses of *telos* in Aristotle. The first means what one aspires to realizing; for examples see *Phys.* II.2, 194a33-6; *Met.* A 7, 1072b1-2; *DA* II.4, 415b2-3, 20-1; *EE* VIII.3, 1249b15-16; Kullman 1985, Sedley 1991: 180. The other sense of *telos* "being done for the sake of", as in for something's benefit such as god's (*DA* 415b1-3, and cf. *Met.* 1072b1-3) for humans at (*Phys.* 194a33-6, Sedley 1991) This distinction is one that Aristotle establishes in his *De Philosophia* (*Alex.*, *apud Simp. on de Caelo* 289.1-15 = F15R<sup>3</sup>) and can be found elsewhere (*DA* II.4, 415b2-3, 20-1; *EE* VIII.3, 1249b15-16; *Met.* A.7, 1072b1-2; *Phys.* II.2, 194a33-6). The distinction may also motivate Aristotle's discussion of the disastrous reaction to Plato's public lecture *On the Good* (*Artx, Elem. Harm.* II 30-31; *Philp on DA* 75.34-76.1).

<sup>220</sup> Sarah Broadie: "Aristotle need not share the Empedoclean view that the descent of rain etc. is not for an end. He concentrates on the end-directedness of organisms because they are the most obvious examples, not necessarily because they are in his view the only ones."

<sup>221</sup> Kress (2019: 334) has this to say: "The lesson is that the Winter Rain Argument turns crucially on a claim about the manner in which a proceeding happens. In the case of tooth development, this manner is *happening fittingly*, but in the case of winter rain, it is *happening in winter*. In fact, this is the real trick of the argument: by assimilating happening fittingly to other manners in which things happen regularly, such as in winter, Aristotle brings his opponent to acknowledge that things that happen." (emphasis in original)

scaly red animals in water occurs so regularly when Love and Strife are about equal, then there is something in their nature that causes them to arise at that point. But if the scales also predictably *are fitting for that red scaly thing such that they can readily move around*, then by nature the scales are so fitting.

Now, there are ways for Empedoclean to still get out of this, but they would all take much more development and would go beyond the surviving evidence we have for Empedocles. They could say it is only the case that the scales so regularly *seem fitting to us*, that we supply the goal that we want scales of that sort to accomplish. More generally, they could deny “fitting” is like other attributes such as “in winter” or “red.” Perhaps they could deny nature provides goals at all. These are all possible counterarguments, but all of them would require more philosophic footwork. None of these would imply Aristotle begged the question or was fundamentally unfair to the Empedoclean.

## §2.2 – Significance of Empedoclean Debate

For the purposes of this chapter, all I have to show is that Aristotle does not define “for the most part” purely in terms of statistical bounds.<sup>222</sup> Instead, those statistical bounds imply whether there is something about the nature of the things which occur. A high frequency of occurrence in some conditions implies nature is at work; “for the most part” is ultimately about something according to nature, with statistical prevalence serving as a distinctive mark of that sort of occurrence. This can be shown in both Aristotle’s direct critiques of Empedocles along with his argument against an Empedoclean opponent in *Physics*.

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<sup>222</sup> Aristotle reaches the argument that the regular rainfall in winter is for a goal by saying the months of cool, wet weather is regularly fitting for having plants grow.

However, to be clear, while statistical commonality may be over a long enough period of time a sufficient condition for something to happen according to nature, I do not think Aristotle makes it a necessary condition, and this is how I most clearly break with the statistical interpretation. As I write **DP**, the necessary and sufficient conditions for the realization of a natural, non-rational capacity are the removal of impediments and presence of an efficient cause:  $((E_n \& \sim I_n \& \sim I_n^*) \leftrightarrow R_n)$ .<sup>223</sup> Some impediments may rarely be removed, resulting in possibly a low rate of statistical occurrence, but that does not mean on the times the impediments are lifted that the capacity is realizing by total accident and not by nature.

Now, from the above it looks as though Aristotle was committed to the idea that nature drives events which predominately occur, especially as they relate to predictable processes of generation and decay such as in animal life. However, this does not cover unusual occurrences, and it is here that the Atomists might gain have a toehold. They could remark that, while nature might be able to capture large-scale and especially complex processes, it is not able to account for more sporadic occurrences: animal life's development might proceed by nature, but what caused the animal to be born on a Tuesday instead of a Wednesday? What caused it to grow slightly larger than its sibling? Why did the animal decide to hunt a mouse instead of a chipmunk on Thursday? What causes accidental occurrences? Aristotle (and myself) could end up in a bind here: he wants to avoid determinism by saying all events whatsoever are directed and have a goal, but he also wants to provide a more robust causal account than just randomness. Democritus could challenge him to identify what cause might exist for accidental events if not pure spontaneity. This is perhaps why the bishop of Alexandria Dionysius attributes to Democritus the statement that he would

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<sup>223</sup> As a reminder  $E_n$  can be the animal's soul itself instead of an external force. *De Motu* raises the question of whether, since animals are sensitive and not rational beings, whether the source of animal motion is from the stimulant itself and not a self-moving element of the soul [SYMPOSIUM ARISTOT ARTICLE]



“rather discover one causal explanation than rule the entire Persian Empire,” (Bsp. Diony. *apud* Eus. *Prep. Ev.* 14.7.4 = DK 68 B118). Aristotle must, then, account for these apparently spontaneous events. I, too, then must account for these events if my interpretation of “for the most part” is to succeed.

### §3.1 – Aristotle’s Theory of Spontaneity – The Stakes

Section §2 was about how to think about events which regularly occur. What about the diversions, flukes, one-offs, and irregular? What, then, is Aristotle’s understanding of chance? This is a crucial question to answer, and not just so he can adequately respond to the rebuttal Democritus could hypothetically pose. Answering this question also has monumental ramifications for his ethics. In his ethics external goods are conditions for achieving the fullest measure of flourishing,<sup>224</sup> but they are usually reliant on circumstances which occur by chance.<sup>225</sup> Further, Aristotle includes a lot of different things under the title of ‘external good’ across his attributed ethical works. There does not seem to be a systematic account of these external goods as the sole primary unifying characteristic of the very different lists found in the *Nicomachean*

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<sup>224</sup> *NE* I.9 1099b26-28 (see also I.10 1100b27); *Pol* I.8 1256b35; VII.1 1323b7-8. He describes them as necessary supplements to virtue *NE* I.8 1098b22-26; I.8 1099a31-32, b6-7; *EE* VI.13 1153b17-21.

<sup>225</sup> *NE* I.8 1099 b6-8; I.10 1100 b22; *Pol*. VII.1 1323 b21-29; *EE* VI(=NE VII).13 1153 b21-22; [*MM*] II.8 1206 b30-34.

*Ethics*,<sup>226</sup> *Eudemian Ethics*,<sup>227</sup> *Rhetoric*,<sup>228</sup> and *Magna Moralia*<sup>229</sup> is that Aristotle does not describe any of them as approaching exhaustiveness. This is demonstrated by all of these passages using some sort of indefinite reference such as in *EE VIII* where he wonders which of the listed external goods are the greatest or whether the greatest is “ὅν ἄλλων ἀγαθῶν” (“one of the other goods”). Wealth and political power are, after all, only examples of external goods the happy could possess as he appends these lists with “οἷον (*NE I.8 1099b1-3*, [*MM*] *I.3 1184b*).

This may pose a major problem for me. If we take luck or chance here to refer to a sort of volatility in matter lacking an identifiable material cause, then a vital condition of achieving flourishing is held hostage to that volatility, meaning instituting through laws progressively more precise scientific accounts of human flourishing will only go so far to actually achieving flourishing in the society. If the complete list of external goods for complete flourishing is especially broad and encompassing, then that is even worse for me as this only widens the chasm between what is needed to encourage flourishing in all citizens and what our political science (and subsequent legislation) is capable of effecting.

<sup>226</sup>*NE I.8 1099b1-3*: “πολλά μὲν γὰρ πράττεται, [b1] καθάπερ δι' ὀργάνων, διὰ φίλων καὶ πλούτου καὶ πολιτικῆς δυνάμεως· ἐνίων δὲ τητῶμενοι ῥυπαίνουσι τὸ μακάριον, οἷον εὐγενείας εὐτεκνίας κάλλους;”

<sup>227</sup>*EE VIII.3 1249b16-19*: “ἥτις οὖν αἴρεσις καὶ κτήσις τῶν φύσει ἀγαθῶν ποιήσει μάλιστα τὴν τοῦ θεοῦ θεωρίαν, ἢ σώματος ἢ χρημάτων ἢ φίλων ἢ τῶν ἄλλων ἀγαθῶν, αὕτη ἀρίστη, καὶ οὗτος ὁ ὅρος κάλλιστος;”

<sup>228</sup>*I.5 1360b14-29*: “ἔστω δὴ εὐδαιμονία εὐπραξία μετ' ἀρετῆς, ἢ αὐτάρκεια *1360b.15 ζωῆς*, ἢ ὁ βίος ὁ μετὰ ἀσφαλείας ἡδιστος, ἢ εὐθενία κτημάτων καὶ σωμάτων μετὰ δυνάμεως φυλακτικῆς τε καὶ πρακτικῆς τούτων· σχεδὸν γὰρ τούτων ἐν ἡ πλείω τὴν εὐδαιμονίαν ὁμολογοῦσιν εἶναι ἅπαντες. εἰ δὴ ἐστὶν ἡ εὐδαιμονία τοιοῦτον, ἀνάγκη αὐτῆς εἶναι μέρη [b20] εὐγένειαν, πολυφιλίαν, χρηστοφιλίαν, πλοῦτον, εὐτεκνίαν, πολυτεκνίαν, εὐγηρίαν· ἐτι τὰς τοῦ σώματος ἀρετάς (οἷον ὑγίειαν, κάλλος, ἰσχύν, μέγεθος, δύναμιν ἀγωνιστικῆν), δόξαν, τιμῆν, εὐτυχίαν, ἀρετήν [ἢ καὶ τὰ μέρη αὐτῆς φρόνησιν, ἀνδρείαν, δικαιοσύνην, σωφροσύνην]· οὕτω γὰρ ἂν αὐταρκέστατος <τις> [b25] εἴη, εἰ ὑπάρχοι αὐτῷ τὰ ἐν αὐτῷ καὶ τὰ ἐκτός ἀγαθὰ· οὐ γὰρ ἐστὶν ἄλλα παρὰ ταῦτα. ἔστι δ' ἐν αὐτῷ μὲν τὰ περὶ ψυχῆν καὶ τὰ ἐν σώματι, ἔξω δὲ εὐγένεια καὶ φίλοι καὶ χρήματα καὶ τιμῆ, ἐτι δὲ προσήκειν οἰόμεθα δυνάμεις ὑπάρχειν καὶ τύχην· οὕτω γὰρ ἀσφαλέστατος ὁ βίος;” Compare also with *Rhet II.12 1388b36-1389a2* which name noble birth, wealth, and political power as external goods that are specifically described as fortuitous (τύχη).

<sup>229</sup>[*MM*] *I.3.1.1-5*: “Μετὰ τοίνυν τοῦτο ἔχει τὰ ἀγαθὰ ἄλλην διαίρεσιν. ἔστι γὰρ τῶν ἀγαθῶν τὰ μὲν ἐν ψυχῇ, οἷον αἱ ἀρεταί, τὰ δὲ ἐν τῷ σώματι, οἷον ὑγίεια κάλλος, τὰ δ' ἐκτός, πλοῦτος ἀρχὴ τιμῆ ἢ εἴ τι ἄλλο τῶν τοιούτων;”

However, I think there is a way to construe chance in Aristotle that is consistent with what I provided in the previous chapters and can make us more optimistic about achieving a thoroughly scientific politics. What I argue is that Aristotle never sees chance as the result of some sort of in-built “randomness” or instability in causation or the material substrate. When his system is taken in its most developed form, instances of chance can be explained as other things. Chance is something of a “dummy” term, applying to any sort of accidentally obtaining variable to explain why a causal chain does not result as intended under some hypothetical set of conditions, or (on the other side of the coin) to explain why a causal chain resulted in something good for us without us intentionally aiming at the good result. The things which “just happen” can be accounted for, as he makes clear in *Metaphysics Zeta*:

[T66] Everything which is generated [πάντα δὲ τὰ γινόμενα] is generated by something [ὑπὸ τέ τινος γίγνεται] and from something and becomes something [γίγνεται τί]. (*Met* VII.7 1032a13-14)<sup>230</sup>

A statement he reiterates in *Generation of Animals*:

[T67] That which is generated must of necessity be out of something, by something, into something. (*GA* II.1 733b25-26)<sup>231</sup>

I suggest we take Aristotle’s phrasing ‘πάντα δὲ τὰ γινόμενα’ at its word: everything that is generated comes from something else, something we can point to and identify as a cause. Aristotle is not some crypto-Heraclitean in his view of material flux, but as we shall see his explanation for certain types of spontaneous occurrences do not commit him to determinism either. Some things

<sup>230</sup> πάντα δὲ τὰ γινόμενα ὑπὸ τέ τινος γίγνεται καὶ ἔκ τινος καὶ τί·

<sup>231</sup> ἀνάγκη [b25] γὰρ τὸ γινόμενον καὶ ἔκ τινος γίγνεσθαι καὶ ὑπὸ τινος καὶ τι.

which appear to occur by mere chance do not necessarily occur due to just chance. We can understand these spontaneous occurrences and control them for ourselves. To see why, it would be helpful to understand the different sorts of spontaneous actions, as he uses several terms (“luck,” “chance”) which may seem confusingly close in meaning.

### §3.2 – Intelligence as the Difference between Spontaneity and Chance

Aristotle has a number of terms for different types of spontaneous events that (in English) may denote very similar ideas. What distinctions does he make between “the spontaneous,” the “by chance,” and the “lucky,” and how are we to make use of these distinctions?

As a general point about these distinctions, it is important to see that he introduces the idea that chance is the cause by the phrase “ἐγεται οὐδὲ τὸ ἀπὸ τύχης.” One of Aristotle’s habits is to use “ὅσα λέγομεν” (“that which we say”) or verbs such as λέγεται (“it is said”) to introduce some idea held by either the average person or previous intellectuals. As discussed in **Chapter 1**, he takes the opinions of his predecessors and the common person seriously as all having legitimate claims to the truth, and he uses this phrasing to refer to these beliefs which he wants to consider and refine. So, the first move here is to realize that he does not mean to simply say chance is a cause in a naïve sense. He wants to give a more precise understanding, one which ultimately accords with my position.

Aristotle disambiguates “chance” and “spontaneity” at *Physics* II.6. The spontaneous are events which do not occur with a final goal. Chance are a species of the spontaneous:

[T68] [Chance and spontaneity] differ in that spontaneity is the wider. Every result of chance is from what is spontaneous, but not everything that is from what is spontaneous is from chance. Chance and what results from chance are appropriate to agents that are capable of good fortune and of action generally. Therefore necessarily chance is in the sphere of actions. (197b1-2)<sup>232</sup>

This is an important limitation to consider as it restricts chance to a quite narrow class of beings, just those that are capable of action, with *πραξις* being understood in the full sense of voluntary and being guided by reason. He makes this limitation very clear a few lines later:

[T69] Thus an inanimate thing or a beast or a child cannot do anything by chance, because it is incapable of choice; nor can good fortune or ill fortune be ascribed to them, except metaphorically, as Protarchus, for example, said that the stones of which altars are made are fortunate because they are held in honor, while their fellows are trodden under foot. (197b7-12)<sup>233</sup>

The distinction between chance and spontaneity appears to boil down to whether some rationality is involved in the act. Animals, inanimate objects, and children all are unable to commit “chance events” because they do not possess rationality. The example from Protarchus is informative on this point, too. The talk is metaphorical as he notes, but the

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<sup>232</sup> Διαφέρει δ' ὅτι τὸ αὐτόματον ἐπὶ πλείον ἐστι· τὸ μὲν γὰρ ἀπὸ τύχης πᾶν ἀπὸ ταυτομάτου, τοῦτο δ' οὐ πᾶν [197b1] ἀπὸ τύχης· ἢ μὲν γὰρ τύχη καὶ τὸ ἀπὸ τύχης ἐστὶν ὅσοις καὶ τὸ εὐτυχεῖσαι ἂν ὑπάρξειεν καὶ ὅλως πραξις· διὸ καὶ ἀνάγκη περὶ τὰ πρακτὰ εἶναι τὴν τύχην

<sup>233</sup> καὶ διὰ τοῦτο οὔτε ἄνυχον οὐδὲν οὔτε θηρίον οὔτε παιδίον οὐδὲν ποιεῖ ἀπὸ τύχης, ὅτι οὐκ ἔχει προαίρεσιν· οὐδ' εὐτυχία οὐδ' ἀτυχία ὑπάρχει τούτοις, εἰ μὴ καθ' ὁμοιότητα, ὥσπερ ἔφη [197b10] Πρώταρχος εὐτυχεῖς εἶναι τοὺς λίθους ἐξ ὧν οἱ βωμοί, ὅτι τιμῶνται, οἱ δὲ ὁμόζυγες αὐτῶν καταπατοῦνται.

metaphor assumes some human-like qualities are necessary features for referring to certain events as occurring from chance or fortune. The stones are personified as the stepped on stones are referred to as the alter stone's "ὁμόζυγες." The presence of nature or intelligence as a necessary condition for "chance" events is also confirmed at II.6 197b17-b36, though in strikingly capacital terms:

[T70] Hence it is clear that events which belong to the general class of things that may come to pass for the sake of something, when they come to pass not for the sake of what actually results, and have an external cause, may be described by the phrase 'from spontaneity'. **These spontaneous events are said to be from chance if they have the further characteristics of being the objects of choice and happening to agents capable of choice [τοῖς ἔχουσι προαίρεσιν]. (197b17-b36)**<sup>234</sup>

Now, the above distinction does not harm the position of those who think Aristotle incorporates (wittingly or not) some notion of causal indeterminacy in his material ontology. They could say that Aristotle is tracking an important conceptual distinction. However, they could say this only covers the relevance of intelligence to what we call events that arise due to this material instability. It does not preclude the possibility of version #2 spontaneous events obtaining and something happens without an identifiable material cause. What is needed is a further elaboration of the relationship between the causes in a chance/spontaneous event in order to show version #2 is un-Aristotelian. We know intelligence is a necessary part in the spontaneous|chance distinction, but what part does it

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<sup>234</sup> ἔσθη μὲν γὰρ τοῦ καθῆσθαι ἔνεκα, ἀλλ' οὐ τοῦ καθῆσθαι ἔνεκα κατέπεσεν. ὥστε φανερόν ὅτι ἐν τοῖς ἀπλῶς ἔνεκά του γιγνομένοις, ὅταν μὴ τοῦ συμβάντος ἔνεκα γένηται [b20] ὧν ἔξω τὸ αἴτιον, τότε ἀπὸ τοῦ αὐτομάτου λέγομεν· ἀπὸ τύχης δέ, τούτων ὅσα ἀπὸ τοῦ αὐτομάτου γίγνεται τῶν προαιρετῶν τοῖς ἔχουσι προαίρεσιν.

play? He provides these details near the end of the chapter, straightforwardly enough at first by saying intelligence is always involved but that there can be an indefinite number of additional causes:

[T71-1] We have now explained what chance is and what spontaneity is, and in what they differ from each other. Both belong to the mode of causation ‘source of change’, for either some natural or some intelligent agent is always the cause; but in this sort of causation the number of possible causes is infinite.<sup>235</sup> (II.6 198a1-198a5)

One of these additional causes besides intelligence could be material instability, so more refinement is still necessary. However, in the next lines he provides the actual priority relationships intelligence holds with the other aspects of a chance event:

[T71-2] But since chance and luck are causes of things of which either understanding or nature might have been the cause, whenever something comes to be a coincidental cause of these same things, and as nothing coincidental is prior to what is intrinsic, it is clear that neither is the accidental cause prior to the intrinsic one. Accordingly, chance and luck are posterior to understanding and nature. And so however true it may be that chance is the cause of the heaven, understanding and nature must be prior causes both of many other things and of this universe.<sup>236</sup>

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<sup>235</sup> τί μὲν οὖν ἐστὶν τὸ αὐτόματον καὶ τί ἡ τύχη, εἴρηται, καὶ τί διαφέρουσιν ἀλλήλων. τῶν δὲ τρόπων τῆς αἰτίας ἐν τοῖς ὄθεν ἡ ἀρχὴ τῆς κινήσεως ἐκάτερον αὐτῶν· ἡ γὰρ τῶν φύσει τι ἢ τῶν ἀπὸ διανοίας αἰτίων ἀεὶ ἐστὶν· ἀλλὰ τούτων τὸ πλῆθος ἀόριστον.

<sup>236</sup> ἐπεὶ δ' ἐστὶ τὸ αὐτόματον καὶ ἡ τύχη αἰτία ὧν ἂν ἡ νοῦς γένοιτο αἰτιος ἢ φύσις, ὅταν κατὰ συμβεβηκὸς αἰτιὸν τι γένηται τούτων αὐτῶν, οὐδὲν δὲ κατὰ συμβεβηκὸς ἐστὶ πρότερον τῶν καθ' αὐτό, δηλον ὅτι οὐδὲ τὸ κατὰ συμβεβηκὸς αἰτιὸν πρότερον τοῦ καθ' αὐτό. ὕστερον ἄρα τὸ [198a.10] αὐτόματον καὶ ἡ τύχη καὶ νοῦ καὶ φύσεως· ὥστ' εἰ ὅτι μάλιστα τοῦ οὐρανοῦ αἰτιὸν τὸ αὐτόματον, ἀνάγκη πρότερον νοῦν αἰτιὸν καὶ φύσιν εἶναι καὶ ἄλλων πολλῶν καὶ τοῦδε τοῦ παντός. ]

We may not gain firm, demonstrable understanding of these unusual events. But we can still gain understanding that allows us to precisely identify the difference in the causal chain that gives rise to the unusual occurrences. We can only understand unusual events in a posterior sense, how they deviate from usual events. However, we should not underestimate how practically useful this understanding about unusual events actually can be, even if it does not formally count as *epistemae*. I mentioned above that political science manages to be both a predictive and practical, and we can see this duality here too. While the actual *epistemae* of political science must take a certain demonstrable form (one which FTMP statements are able to meet), it is possible to gain enough *epistemae* to reasonably chart out all the various anomalies and chance events which could occur in a natural process.

### §3.3 – Intentionality as the Difference between Chance and Luck (τύχη)

Essential causes are rather special, then, and he thinks essential causes bottom out to really just two things: either intellect or nature (*Phys* II.6 198a5-13, cf. *Alex. De Fato* 173.14, 174.28), with both of these also being capable of acting as efficient causes. As Dudley (2012: 28) notes, ‘nature’ is capable of denoting any of the four canonical causes in his metaphysics (material, formal, efficient, and final), but in the context of explaining what causes the generation or movement of something (accident, essence, or chance) nature serves the role of an efficient cause. Nature has its own aims (*telos*) and matter assumes various forms, but these final and formal causes are actualized *via* some efficient cause.

So much for essential causation. What is accidental causation? Basically, everything else (II.3 195a26-195b6; II.5 196b24-29). As a general rule, an accident is just whatever is not part of



a substance's essence (*Met* IV.4 1007a31-33, *Top.* I.5 102b4-26; I.8 103b17-19; IV.1 120b34-3). An accidental cause can be defined in the negative, just whatever causes are not part of something's essential cause. Accidental causes, while they are not the essential cause of an action, are things that can coincide with the essential cause.

The reason chance is described as a cause is because we, as rational agents, supply to that occurrence a level of relevance to our own goals. Chance causes are thus still accidental causes, but because they are relevant to a *telos* they are a special sort of accidental cause that is especially important to us. Chance occurrences are thus a subset of accidental occurrences, ones which are meaningful and relevant to our goals. There is no mysterious, primitive causal agent here in chance, no "randomness" or "lady luck;" there are just our own goals and the goals of nature which are then projected onto a relevant nonessential cause. This is why Aristotle claims in *Physics* II.5 that **"thought and luck are concerned with the same things**, for deliberate choice does not occur without thought."<sup>237</sup>

This distinction between chance and luck, with the difference being found in the presence of intentionality, is found expressed most effectively in the *Physics* II.5 (196b30 ff.) example of the man going to the market and encountering somebody who owes him money on the way:

[T72] For example: The man would have come for the sake of getting back his money when a debtor was collecting contributions for a feast, if he had known about it. But in fact he did not come for the sake of this. On the contrary, it was a coincidence that he came, and did so for the sake of getting back his money—this provided that he neither for the most part nor of necessity went. The end, however, namely, getting back his money, although it is not one of the causes present in him, is among the things that can be

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<sup>237</sup> δῆλον ἄρα ὅτι ἡ τύχη αἰτία κατὰ συμβεβηκὸς ἐν τοῖς κατὰ προαίρεσιν τῶν ἕνεκά του. διὸ περὶ τὸ αὐτὸ διάνοια καὶ τύχη· ἡ γὰρ προαίρεσις οὐκ ἄνευ διανοίας.

deliberately chosen and are a result of thought. And in this case he is then said to have come there by luck. But if he had deliberately chosen, and for the sake of getting back his money, either always or for the most part to come to the place, then it was not by luck that he did so.<sup>238</sup>

The luckiness of the man running into the person who owes him money depends on the man's intention, not any sort of fates going his way or another mysterious force. This is how Schillinger (2019: 33, 36-38) interprets luck in Aristotle, and so do I. It is ultimately a phenomenon of intentionality rather than a phenomenon of natural causation, a pragmatic explanation rather than a bona fide cause. Because human beings think intentionally, we might try to assume that the capriciousness of our everyday life were due to an actual cause, like how all the things we actually *can* control are also subject to identifiable causes.<sup>239</sup> It is, exactly, however, because luck is so fickle that it is impossible to provide a stable characterization of luck as its own cause. This is how I interpret the next few lines of *Physics* II.5:

[T73-1] The cause of things that might come to be by luck are of necessity indefinite. That is why luck too seems to be something indefinite and unclear to human beings, and why it

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<sup>238</sup> οἷον ἔνεκα τοῦ ἀπολαβεῖν τὸ ἀργύριον ἦλθεν ἂν κομιζόμενου τὸν ἔρανον, εἰ ἦδει· ἦλθε δ' οὐ τούτου ἔνεκα, ἀλλὰ συνέβη αὐτῷ ἐλθεῖν, καὶ ποιῆσαι τοῦτο τοῦ κομίσασθαι ἔνεκα· τοῦτο δὲ οὐθ' ὡς ἐπὶ τὸ πολὺ φοιτῶν εἰς τὸ χωρίον οὐτ' ἐξ ἀνάγκης· ἔστι δὲ τὸ τέλος, ἢ κομιδῆ, οὐ τῶν ἐν αὐτῷ αἰτίων, ἀλλὰ τῶν προαιρετῶν καὶ ἀπὸ διανοίας· καὶ λέγεται γὰρ τότε ἀπὸ τύχης ἐλθεῖν, εἰ δὲ προελόμενος καὶ τούτου ἔνεκα ἢ αἰεὶ φοιτῶν ἢ ὡς ἐπὶ τὸ πολὺ [κομιζόμενος], οὐκ ἀπὸ τύχης.

<sup>239</sup> This is why tragic reversals which happen coincidentally but which, due to their timing and dramatic circumstances, look like there is real purpose to them (*Poetics* 1452a1-10). The example Aristotle offers is when a statue of Mity's crushes Mity's murderer. The toppling of the statue was just due to its structural instability and being around a bustling festival (what Barnes would call a "contingent explanation" and which others would call an "accidental cause"), but in the context of the drama it appears as a spectacular example of what we might now call "poetic justice" that makes the plot an intelligible whole. This explanation of luck, and how it is ultimately a form of explanation with our projected intentions rather than a brute force itself, is able to explain why he describes a good tragic reversal as events, "occurring because of one another yet departing from expectation," ["ταῦτα δὲ γίνεται καὶ μάλιστα [καὶ μᾶλλον] ὅταν γένηται παρὰ τὴν δόξαν δι' ἄλληλα."].

might seem that in a way nothing comes to be by luck. For all these things are said quite correctly, that is, reasonably. For things do in a way come to be by luck, since they come to be coincidentally, and luck is a coincidental cause.<sup>240</sup> **Unconditionally, though, luck is not the cause of anything.**

Aristotle then even goes so far as to relate luck to FTMP statements:

[T73-2] Also, it is correct to say that luck is something beyond reason. For a reason is what always is or for what for the most part is, and luck is found in what is beyond these. And so, since the causes in such cases are indefinite, luck too is indefinite.<sup>241</sup>

#### §4 – Luck, External Goods, and “Reference” Impediments

The above is able to explain why Aristotle talks about chance as a sort of cause; the distinction is one we make ourselves even if there is no deep metaphysical distinction between events by chance and just other contingent events. This interpretation thus can explain a notion of luck (*τύχη*) – chance as it refers to human actions specifically – and especially good luck (*εὐτυχία*). When somebody has good luck, they are surrounded by accidental properties and causes which aid their goals. When somebody has a lot of good luck, they encounter these goal-aiding accidental causes

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<sup>240</sup> ἀόριστα μὲν οὖν τὰ αἴτια ἀνάγκη εἶναι ἀφ' ὧν ἂν γένοιτο τὸ ἀπὸ τύχης. ὅθεν καὶ ἡ τύχη τοῦ ἀορίστου εἶναι δοκεῖ καὶ ἄδηλος ἀνθρώπῳ, καὶ ἔστιν ὡς οὐδὲν ἀπὸ τύχης δόξειεν ἂν γίνεσθαι. πάντα γὰρ ταῦτα ὀρθῶς λέγεται, εὐλόγως. ἔστιν μὲν γὰρ ὡς γίγνεται ἀπὸ τύχης· κατὰ συμβεβηκὸς γὰρ γίγνεται, καὶ ἔστιν αἴτιον ὡς συμβεβηκὸς ἡ τύχη·

<sup>241</sup> καὶ τὸ φάναι εἶναι τι παράλογον τὴν τύχην ὀρθῶς· ὁ γὰρ λόγος ἢ τῶν ἀεὶ ὄντων ἢ τῶν ὡς ἐπὶ τὸ πολὺ, ἢ δὲ τύχη ἐν τοῖς γιγνομένοις παρὰ ταῦτα. ὥστ' ἐπεὶ ἀόριστα τὰ οὕτως αἴτια, καὶ ἡ τύχη ἀόριστον.

a lot. The ultimate goal of all humans, however, is to be happy, to experience *eudaimonia*. Because good luck aids in our goals, good luck ultimately can be understood as aiding in our *eudaimonia*.

This is why Aristotle so commonly says that the lucky are generally happy.<sup>242</sup> The lucky possess so many accidental causes which enable their flourishing. Aristotle acknowledges that it is tempting to think of chance as some basic property that applies to things and is inexplicable; some people are just “born lucky” as we might say (*EE* VIII.2 1247a11). The person may, in fact, be rather stupid but they somehow continually make the right decisions and succeed anyway (*EE* VIII.2 1247a13-23), a phenomenon I will cover in §7. There is no basic attribute of being lucky, nor does Lady Luck or divine favor exist for Aristotle as its own, “unconditional” cause. In the language of **DP**, the lucky are not those who possess some inexplicable property of “luck” or “divine favor;” it is just that they do not in fact face many impediments (**Is**, in the notation of **DP**) in their life.

We can now apply this understanding of chance to Aristotle’s discussion of external goods. External goods are said to be subject to *τύχη* because 1) they are accidental causes and 2) they are accidental causes which are relevant to aiding our goals. External goods are not subject to *τύχη* in Aristotle’s system because they are things which the capriciousness of divine favor or material flux have domain over. They are just accidental properties, which we can theoretically control, and which are practically relevant to us, thus making our possession or privation of these goods a matter of good or bad luck.

This provides a straightforward explanation for Aristotle’s pluralism about external goods. Some external goods seem relatively uncontroversial such as the desirability of wealth, honor,

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<sup>242</sup> For example: *Phys* II.6 197b5; *NE* I.8 1098b20-22; *NE* I.8 1099b7-8; cf. *EE* V.2 (= *NE* VI.2) 1139a32-35; *EE* VI.13 (= *NE* VII.13) 1153b21-23, *Rhet* I.5 1360b14

political power, and many good friends.<sup>243</sup> Wealth can relieve one from the wage labor necessary to procure basic necessities, enabling more time for activities which actually aid in flourishing like philosophy. If I suddenly went broke, that would be very bad luck indeed, because it would completely foil my goal of doing philosophy. Likewise, honor, political power, and having friends are things which aid in our endeavors as political animals. If we suddenly lost all of our friends, however, and were completely defamed, then these would be very bad luck as it would destroy our political goals. It seems that in a wide variety of contexts, these possessions would set the stage for flourishing.

He also lists some other external goods, ones that are more particular. Moreover, he identifies some we might consider vulnerable to objection such as listing a long stride and possessing a deep voice as external goods (*NE* I.8 1099b1-3). However, I would offer that the reason we find it dubious to describe these as external goods is not because we doubt there are any circumstances where they can have relevance to our happiness. If one lives in a deeply misogynistic culture which favors properties associated with a particular conception of masculinity, such as having a baritone voice, then possessing this accidental property is indeed an external good for that person and an example of good luck. With a strong, baritone voice the person can command respect in that society and more likely to accomplish their endeavors. The reason, it seems, we find him listing these as external goods objectionable is that we interpret Aristotle as saying here *that it is a good thing* that these external features have the impact they happen to have on a person's happiness. Expressed in another way: we object because we do not think it is a mark of a properly ordered society to have a deep voice matter for one's happiness in that society.

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<sup>243</sup> *EE* VIII.3 1249b18; *NE* IX.9 1169b10; *Rhet.* I.5 1360b27

There is no doubt that Aristotle's own opinions, and the most common opinions in both Classical Athens and Mycenae, were deeply misogynistic. He would have lost little sleep over living in a society that prizes people with qualities traditionally associated with masculinity and disparages those who possess characteristics considered more traditionally feminine. However, I do not think the fundamental commitments of Aristotelian practical philosophy leads one to necessarily believe the valorization of these qualities is constitutive of a well-ordered society, and I additionally think there is a charitable and philosophically informative way to read his enumeration of these as external goods that fits well with my interpretation. He is not enumerating the external conditions that aid a person's flourishing in an ideal society, as if to imply a society fails in some important respect if having a deep voice does not benefit you in that society. Instead, he is describing what conditions seem, based on observation, tend to commonly have an impact on a person's happiness in the societies which are actually obtaining, as flawed as they are. Cashed out in the terms of **DP**, a long stride and deep voice are beneficial in the context of the impediment of living in a highly sexist society because they increase your likelihood of being successful in politics. That Aristotle thinks these might be good for an individual in the Greek *polis* is separate from the claim that it is good for a Greek *polis* (*qua polis*) to make these qualities external goods for its citizens. His list of external goods is objectionable, but that is ultimately because the society in which these properties are rendered beneficial are themselves are also objectionable and impediment laden.

Aristotle's practical philosophy is ultimately pluralistic about the identity of the external goods since what lifts impediments for flourishing is dependent on what impediments are already existing. However, he is also open about the relative importance of any given external goods. This squares with my rendering of **DP** as the identity of the various impediments (denoted by **I** with

requisite sub- and superscripts) does not specify what configuration of impediments exist. A philosopher and a politician will have different constellations of impediments and assets, and it does not seem necessary to think that a particular external good will, in each application of **DP**, always assume greater importance in obtaining some **R** *via* the alleviation of some impediment (and so making  $\sim\mathbf{I}_x$  true) than another external good. An impoverished philosopher surrounded by many good friends is not obviously better off than the materially comfortable philosopher with a couple of good friends, even though Aristotle seems to consider friends to generally be a greater external good than wealth.

This is also why some external goods can turn into external harms. Consider again the possession of wealth. Aristotle repeatedly contends wealth is beneficial, but that is because in most societies lacking wealth means one must work to procure basic necessities. However, wealth can also serve as a corrupting influence for a person that hurts their flourishing, and it is not difficult to imagine societies where this might occur. I have two in mind, the first being rather extreme: in a highly unstable, violent, and impoverished society, possessing wealth could make you a very tempting target for robbers or a revolution. Going about your life, constantly looking over your shoulder and being distrustful of your fellow member of the *polis* makes possessing wealth in that *polis* rather costly. Spending your time worrying about hired security or devising of ways to keep your wealth are activities seemingly far removed from philosophizing, political involvement, or cultivating virtues such as charity and bravery. True, you are likely still living a happier life than a desperately poor person in that society, but just being less utterly miserable than somebody does not mean you are actually flourishing. The unhappiness this very wealthy person is experiencing is, most certainly, different from the very poor person, but the presence of extreme wealth in an unstable, pre-revolutionary society does stunt your ability to flourish in its unique ways. These are

an extreme set of external impediments, but we see how possessing wealth under this set of impediments does not necessarily lift every impediment and may even introduce new ones. Being born to very wealthy parents, in most other societies, is an example of good luck because it is an accidental occurrence which aids your goals. However, if anything, being a child to very wealthy parents in this unstable society could be considered an example of bad luck. Being born to aristocrats in late 18<sup>th</sup> Century Paris turned out not to be a great blessing.

But we can also conceive of a less extreme, more complex set of circumstances to demonstrate external goods are not unconditionally good. Consider a stable, but highly individualistic society which considers individual material wealth to be what matters most for judging a person's virtue, embracing an illusory form of meritocracy. Great wealth in this society could lead this person to become quite vicious in his dealings with others and lacking any sort of notion of political connection to his fellow, poorer citizens. This person, after all, is just acting in accordance with his habituation and presiding conception of justice. This bad habituation would manifest itself in excessive actions, and one could imagine a few ways this might happen. They might be very stingy or avaricious, which would represent a failure to demonstrate the virtue of generosity. Just as plausibly, they may flaunt their wealth for all to see, spending lots of money on big expenditures in bad taste which do not serve the public, demonstrating gaudiness and tackiness (excesses of the virtue of magnificence). While this wealthy person may see themselves as pursuing the good and being happy, and they might have all the material luxuries they want, Aristotle would deny that this human being - *qua* human being and not just *qua* profit-maximizing economic actor or *qua* hedon receptacle - is flourishing as they demonstrate a number of internal impediments through their bad habits.



In both cases different internal and external impediments exist, and it is entirely possible these impediments are interlocked and mutually informing. For example, the vicious wealthy person in the highly individualistic, wealth-obsessed society has this internal impediment of bad habituation both 1) because of the presiding view of equality in the society he was raised in and 2) because he possessed an external item which denotes his apparent superiority in that society (wealth). If he did not possess such wealth, however, then he likely would not have been habituated to look down on those less wealthy than him, making him more likely to act virtuously. The political scientist would still be able to untangle how these different impediments inform each other, but recommendations about what will lift a particular impediment will have to take place in the context of the other impediments presiding. Wealth is beneficial, but in the context of some impediments presiding it is only beneficial to a degree.

Aristotle's pluralism and context-sensitivity with external goods ties in with his denial that adding more of a good thing necessarily results in more overall good, but he also can still confidently say "wealth is beneficial for the most part" because, *other things being held equal*, wealth clearly helps procure resources which relieve the need for manual labor. What does he hold equal, and where does he hold these conditions? This might be considered the reference set of conditions that operate in the background of the FTMP statement. For Aristotle, his reference set of conditions is what would be found in the typical Classical Greek *polis*. He stipulates (or takes as understood) those conditions and then he imagines what effect wealth would have in that set of conditions. So, "wealth is beneficial" in Aristotle's *Politics* means something like "in the set of conditions and impediments which exist in a Classical Greek *polis*, wealth lifts impediments towards your philosophizing and political activity." In the 21<sup>st</sup> Century, however, we could stipulate a different set of reference conditions (say, a liberal democratic and capitalist nation-

state) and then see whether wealth is beneficial and understanding how it lifts impediments in that set of conditions.<sup>244</sup>

If there are other, additional impediments involved beyond our “reference” set of conditions, then things get more complicated, but then the FTMP statement would then no longer be “wealth is beneficial” but something like “Only a little bit of wealth in an impoverished, unstable society is beneficial.”

As discussed in **Chapter 3**, I take Aristotle to have an isomorphic correspondence theory of truth, and this shows how one may apply that theory to his discussion of external goods. A FTMP statement about external goods or external bads is true if and only if the relationship between the external object and the realization of a species’ capacities under some stated (or understood) array of impediments is isomorphic to how the relationship exists between that species’ capacities under those impediments in reality. Determining whether the statement actually is isomorphic to reality, however, requires constant empirical investigations and contextualization of findings. The reference set of conditions allows for a type of paraphrase of Aristotle’s statements. To recall Philoponus’ evocative definition of truth as the fit that exists between a shoe and foot, the reference conditions assumed in asserting a FTMP statement are the shoelaces we have already tied.

## **§5 – External Goods and the Role of the Politician**

As seen above, when Aristotle makes FTMP statements, he operates with an understood set of reference conditions that he controls for. This is highly important to grasp because it allows

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<sup>244</sup> It is probably very beneficial in this other set of conditions, but Aristotle might have further work to do in specifying what forms of wealth are beneficial and exactly which impediments those forms of wealth lift.

Aristotle's methodology to be adaptable to politicians in a wide variety of other contexts; we do not have to consider the array of conditions found in Greek *poleis* to be the only set of conditions we might want to take as our reference. All true FTMP statements, however, in political science will ultimately be isomorphic to reality.

There is a difference between something as a source of happiness and something as a condition of happiness, and external goods only affect the conditions for happiness.<sup>245</sup> Money does not buy happiness, but it does make doing the things that bring happiness much easier. Secondly, there is a difference between somebody who acts virtuously and somebody who enables those actions. I would argue the Aristotelian politician (*qua* politician) occupies the role of the person who enables virtuous actions because, in their ability to rule, they can affect the conditions that encourage or impede their happiness. The actual source of flourishing (indeed, a "part" of flourishing) is an activity - whether physically acting virtuously or philosophic contemplation – that is guided by our reason,<sup>246</sup> but this source of happiness is ultimately dependent on the conditions in whose context the activity occurs.

When it comes to the specific array of impediments and advantages one may possess, that is indeed to a large part beyond that individual's control, insofar as we are only talking about that single individual *qua* individual and not also *qua* citizen or *qua* politician. However, inside a political society we can mitigate how much this should matter. The politician is not able to ensure individual citizens act virtuously or engage in philosophy, but they can provide the best possible conditions inside the *polis* so that these virtuous actions become much easier for the citizen to

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<sup>245</sup> Places where Aristotle establishes the difference between a source and a condition of flourishing include *EE* I.2 1214 b 24-27. Cf. *MM* I.1 1182 a 7-9 and *Pol.* VII.1 1323 b26-29.

<sup>246</sup> Aristotle describes happiness as an activity in a number of places: *NE* I.7 1098 a16-18; I.8 1098 b15-19, 30-1; 1099 a29-31; I.9 1099 b26; I.10 1100a14, b10; *NE* I.13 1102 a 5-6, a17; IX.9 1169 b 29; X.6 1176 b 1-5; X.7 1177a 12-18; X.7 1177 b26-31; *EE* I.3 1215 a 12-19; II.1 1219 a27-39; *Pol.* VII.8 1328 a 37-38; *Met.* Θ.6 1048 b26-28.

carry out (and thus more likely to be properly habituated). Aristotle can grant that an individual *qua* individual looking after their own *eudaimonia* is able to achieve supreme happiness if they have good luck, but he can also affirm a human *qua* politician can possess the ability to bring about these conditions in a way this person would not be able to if they were considered in isolation their political relations.

Also, as made clear above in previous sections, there is a distinction between luck as something that possesses no final cause and luck as something that possesses no material cause. I suggested that we consider the first to be a better way for interpreting how external goods can be reliant on chance. If I were curious, I could give a complete causal account of how I came to acquire a great sum of wealth. Perhaps it was due to me having a good idea which filled a niche in a particular market, and I entered that market at a particularly opportune time when my major competitor had just left. However, I can hardly control a customer deciding they like my product, buying it, and then spreading good opinions about my product. In this way, my wealth was not up to me. If I came into my wealth due to inheritance, then the causal picture might be quite easy, but it was (hopefully) not up to me whether the person I inherited the money from died. The story behind my wealth, no matter how far-fetched, can still be hashed out in this way. If I were digging a ditch in my back yard and came across buried treasure, it was lucky that I came across it in that it was an event far outside my intended goals and actions, but there is still a coherent causal story for how that treasure ended up in my back yard.

There are, however, things which do possess a causal story that are plausibly beyond the control of not just an individual but any group of agents. The fact that Greece is temperate is totally beyond our control politically, just as being born in Greece is beyond the control of the individual. The basic terrain on which a *polis* is founded is reliant on chance, and there is nothing Sparta can

do about coming into existence near several mountains. A *polis* cannot choose its neighbors, either, and so its international relations and trade relations are reliant on chance, too.

However, even in these cases a causal picture can be readily available. There is the possibility for a political or economic history of a *polis* and its neighbors,<sup>247</sup> and because of that a *polis* can still make rational decisions to a high level of precision. In the case of terrain, a skilled politician can still provide a highly precise account of how a *polis* can survive and flourish if one holds a terrain's nature as a constant in the explanation. When we make FTMP assertions, the implication is that the statement predicates a relationship between a capacity and the conditions for that capacity to be actualized in a substance. It seems entirely possible to provide an account of the relationship between a human capacity and a ruggedly mountainous and resource rich country, of a flat and resource poor country. Both terrains introduce particular impediments to realizing a flourishing *polis*, and it is plausible to think we can understand in a precise way how these geographic impediments affect the development and success of a society.

Indeed, Aristotle appears to do almost exactly that in Book VII of the *Politics* as he considers how best to design a city for some non-ideal constitution (democracy, oligarchy, aristocracy, monarchy):

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<sup>247</sup> This is in fact something Aristotle's Lyceum was particularly noteworthy for having created for every Greek *polis*, with the *Politics* forming a sort of research abstract of the much larger empirical work tracing the developmental lines of various constitutional arrangements, a political scientific equivalent of Darwin's *On the Origin of Species*.

[T74] As to strongholds, what is suitable to different forms of government varies: thus an acropolis is suited to an oligarchy or a monarchy, but a plain to a democracy; neither to an aristocracy, but rather a number of strong places. (1330b17-21)<sup>248</sup>

In a flat environment the constitution most likely to last is the democratic one. While he never elaborates upon this in Book VII, this association likely comes from the idea that democracies are by essence (not accident) rule by the poor.<sup>249</sup> Being poor often brings with it a very broad notion of equality. Because the democratic constitution is reliant on broad feelings of community and solidarity across citizens, it would be undemocratic to have high, privileged spots for the wealthy to occupy, causing the space of the *polis* itself to become unequal. The citizens (i.e., the ones who count as equal under the law, III.1 1275b17-20) are the material causes of the polis,<sup>250</sup> so saving them is to save the constitution itself.<sup>251</sup> That, along with a suspicion of overly prominent people as a threat to democratic government,<sup>252</sup> encourages the literal flattening of a society as the best conditions to ensure democratic governance.

The monarchy and oligarchy positions are more straightforward, since oligarchies usually collude as a tyrannical whole (V.8 1312b34-38). Residing near the top of this mountainous terrain would maintain their exclusivity, power, and impregnability from the *demos*, but it would also provide the ability for the oligarchic citizens to still engage in politics. In the case of aristocracies, they are made up of several truly virtuous people governing independently, so it is important to provide special attention to their separate families and social spheres (IV.11293b1-23). In general,

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<sup>248</sup> περὶ δὲ τόπων ἐρμυνῶν οὐ πάσαις ὁμοίως ἔχει τὸ συμφέρον ταῖς πολιτείαις· οἷον ἀκρόπολις ὀλιγαρχικὸν καὶ μοναρχικόν [b20], δημοκρατικὸν δ' ὁμαλότης, ἀριστοκρατικὸν δὲ οὐδέτερον, ἀλλὰ μᾶλλον ἰσχυροὶ τόποι πλείους.

<sup>249</sup> *Pol.* IV.6 1291b7-8, 1292b23-27; cf. 1275b34-7, VII.6 1327a40, *Ath. Con.* §27.1

<sup>250</sup> *Pol.* II.1 1261a18; III.1 1274a38-41; 1275b20; VII.14 132638-41

<sup>251</sup> For the entire *demos* as the material cause of democracies specifically see *Pol.* IV.5 1293a7-11, 1297a35-40.

<sup>252</sup> *Pol.* 1284a17-37, b20-24; 1288a24-29; 1302b15-19; 1308b10-19

this picture follows a principle where the shape of the terrain corresponds with who counts as equal for the purposes of distributive justice (III.9 1280a7-22): prominent terrain for a democracy; some hills for an aristocracy; and a mountain for a monarch.<sup>253</sup>

## §6 - FTMP Assertions about *Poleis* and about Citizens

With the above examples in mind, it seems *prima facie* possible to apply the **DP** to considering what is required for a *polis* to realize all its capacities. The question of how *poleis* develop and flourish is different from the question of how individual citizens flourish, but they do inform each other. Aristotle's admonitions about the importance of having a large class of moderately happy, successful people is good proof of that. Having a wide amount of people broadly happy with their lives means that the constitution is less likely to be overthrown.

However, the peculiar social ontology of the *polis* poses a problem: it is neither a hylomorphic compound nor entirely reducible to its constituent hylomorphic compounds, and so far, **DP** has been only been applied to understanding the development of hylomorphic compounds. We saw this ambiguity arise in other ways with the discussion in Chapter 1 about the scope of permitted sources for *endoxa*. I made the case there that under my **Inclusive Reading (IR)** the

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<sup>253</sup> On a related note, and as a reflection of his empiricism here, Sparta is cited as the best sort of existing (though still non-ideal) aristocracy at Book IV as their criterion for being virtuous relies on honor and is open to common citizens. In fact, while Aristotle does not mention this, their geography generally supports his recommendation for an aristocracy as the city is surrounded by three mountains (Mt. Taygetus in the West, the Parnon ranges in the East, and the Arcadians to the North) that made great strongholds for Sparta throughout Greek history, while their relative inland nature made Southern advance from the sea difficult (and because the beach is particularly rocky and terrible for boats). Now, these mountains would not have been sufficient to hide the (far more populous) population of *perioikoi* and the state-owned slaves the helots, but they were not citizens and Aristotle would not consider them a part of the state and thus not properly part of the material cause, as brutal as that sounds, according to his social ontology. I bring this example up because the physical circumstances of Sparta are not up to the Spartans or anybody. No Spartan asked to be born in inland Greece. However, given those circumstances, Spartan politicians made use of those circumstances as much as possible (through for instance strict land distribution laws) in order that the constitution may continue to last and its citizens can have a flourishing life.

prevailing political values and priorities in other Greek *poleis* would count as relevant *endoxa* as well. The exact grounding these *endoxa* have – whether it be found through a continuity in policy enactments, commonly expressed platitudes among politicians, etc. – is beyond the scope of this dissertation. However, it is not clear (at least at this moment) if there is just one source for a *polis*-level *endoxon*, and that owes to the *polis* being neither a hylomorphic compound nor an aggregated heap. If it were a hylomorphic compound, that would enable us to associate the *endoxa* with the *polis* itself like we would with a person. If it were a heap (i.e., non-sorted or weakly sorted aggregate) we could associate the *endoxa* with individuals or some sufficiently sorted subset of people in the heap.

The ambiguity appears again when thinking about **DP** if we consider the following question: Is the realization of a *polis*' capacities a matter of rational capacities or natural capacities? **DP**'s principle operator makes it so that a human being could have multiple *dunamai* (both rational and natural) realizing at the same time, but it is often possible to identify any particular *dunamis* in a human as either **R<sub>r</sub>** or **R<sub>n</sub>**.

In contrast, with the **DP** how would one describe constitutional development in a *polis*? On the one hand, the *polis* is not natural since it is brought into being by a lawgiver.<sup>254</sup> However, it is not an artifact as Aristotle makes it clear it exists prior to us by nature,<sup>255</sup> is self-sufficient,<sup>256</sup> and the *polis* also has a mereology akin to that of an organism.<sup>257</sup> If on the one hand it were merely an artifact, then we would be able to discuss an application of **DP** for the *polis* in terms of an extension of **DP** for humans: A human being will train in politics and eventually - given their particular set of **I<sub>r</sub>** and **I<sub>r</sub>\*** holding - craft the entirely artificial *polis* like a craftsman does, realizing

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<sup>254</sup> *Pol.* II.12 1273,32-3, 1274b18-19; VII.4 1325b40-1326a5

<sup>255</sup> *Pol.* I.2 1253a18-33 cf. *Meteo.* IV.12 390a10-13 and *Met.* VII 10 1035b23-25

<sup>256</sup> *Pol.* I.1 1252b27-1253a1, VII.5 1326b29-30; cf. *EN* I.5 1097b14-15, *Rhet* I.7 1364a8-9

<sup>257</sup> *Pol.* IV.4 1291a24-8, V.3 1302b33-1303a2; cf. *EN* IX.8 1168b31-3



their rational *dunamis* and making  $\mathbf{R}_r$  obtain.<sup>258</sup> If, on the other hand, the *polis* were entirely a non-rational natural organism, then we could just apply the right hand side of  $\mathbf{DP}$ 's conjunction in a similar fashion: Given a set of  $\mathbf{I}_n$  and  $\mathbf{I}_n^*$ , such as geography and climate, along with a group of people (e.g. a founding group of citizens/lawmakers) for an efficient cause  $\mathbf{E}_n$  (cf. III.6 1278b8-10), the constitution will develop and spread in a particular way

To a large extent, I am unable to give a definitive answer on this, as Aristotle's social ontology is not developed enough textually to provide a systematic account. Trying to account for the ontology of a political society has been an important topic for Aristotelians from Aquinas to Kit Fine, and I think it would be possible to adopt one of their approaches to an Aristotelian political project that still adopts  $\mathbf{DP}$  as well. However, I would like to provide the beginnings of a solution. It begins by realizing we could trivially expand  $\mathbf{DP}$  as follows

### **DPE**

$$[\mathbf{R}_r \leftrightarrow (\sim \mathbf{I}_r \ \& \ \sim \mathbf{I}_r^* \ \& \ \mathbf{E}_r)] \ \& \ [(\mathbf{E}_n \ \& \ \sim \mathbf{I}_n \ \& \ \sim \mathbf{I}_n^*) \leftrightarrow \mathbf{R}_n]$$

The inclusion of  $\mathbf{E}_r$  on the left conjunct can stand here to represent the relevant "rational efficient cause" that is required for the rational *dunamis* to realize in the absence of impediments. The reason  $\mathbf{E}_r$  is not included in  $\mathbf{DP}$  is because it is assumed the primary substance capable of fulfilling  $\mathbf{R}_r$  will be identical with the primary substance that fulfills  $\mathbf{E}_r$ . For simplicity's sake,  $\mathbf{E}_r$  is not formally represented in  $\mathbf{DP}$ , but that is because it is assumed to always present when considering an  $\mathbf{R}_r$ .

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<sup>258</sup> In this scenario there would be assumed that there existed an identifiable lawmaker or lawmakers who first fashioned the *polis*.

However, once  $E_r$  is included in **DPE** the two biconditionals forming the horns of **DPE**'s principle conjunct mirror each other. This is significant because the efficient cause of the realization of a *polis*' capacities, under both an artifact-based or an nature-based view of the *polis*, will be the same: the citizens of the *polis* themselves. This identity of  $E_{r/n}$  seems straightforward, then, and this makes the ambiguity less immediately pressing because, however one sees the precise development of a *polis*' constitution, it is going to involve humans as the efficient cause. A solution then is that one can fit a particular *dunamis* of the *polis* into either **R** under **DPE**,<sup>259</sup> and that would mostly depend on whether the efficient cause is an expression of human beings' non-rational animal nature (represented as  $E_n$ ), or their rational nature (represented as  $E_r$ ).

Further, there are textual points that shed enough light on the *polis*' social ontology which support the truth of **DPE**. Consider this line from *Politics* VII:

[T75] The happy city is the one that is best and acts nobly. But it is impossible for those who do not do noble things to act nobly, and there is no noble action of a man or a city without virtue and wisdom. **And the courage, justice, and wisdom of a city have the same capacity and form as that which each human being shares in when he is called just, wise, and temperate,**" (1323b30-36).<sup>260</sup>

<sup>259</sup> While Aristotle does not explicitly list relevant *dunamai* for the *polis*, they would seemingly include things like making sure all citizens have stable paths to necessary material goods, that citizens are roughly secure in the *polis*, that there is a stable constitution, and other things. While the distinguishing capacity of a *polis* is to provide the best conditions for citizens to flourish, the *polis* can have plenty of non-distinguishing *dunamai* and which other social structures could imitate (a village, for instance, can provide security to its people under certain conditions, see *Pol.* I.1-2).

<sup>260</sup> ἐχόμενον [b30] δ' ἐστὶ καὶ τῶν αὐτῶν λόγων δεόμενον καὶ πόλιν εὐδαιμόνα τὴν ἀρίστην εἶναι καὶ πράττουσαν καλῶς. ἀδύνατον δὲ καλῶς πράττειν τοῖς μὴ τὰ καλὰ πράττουσιν· οὐθὲν δὲ καλὸν ἔργον οὔτ' ἀνδρὸς οὔτε πόλεως χωρὶς ἀρετῆς καὶ φρονήσεως· ἀνδρεία δὲ πόλεως καὶ δικαιοσύνη καὶ φρόνησις <καὶ σωφροσύνη> [b35] τὴν αὐτὴν ἔχει δύναμιν καὶ μορφήν ὧν μετασχὼν ἕκαστος τῶν ἀνθρώπων λέγεται <ἀνδρεῖος καὶ> δίκαιος καὶ φρόνιμος καὶ σώφρων.

This passage attributes the possibility of intentional action on the part of the *polis* as well as the individual citizens. However, he even says the virtues of the *polis* themselves possess the same “capacity and form” as those of individuals. Since the expression of the virtues through reason-guided action is essential for human flourishing, it would seem as though a *polis* must be able to actualize its virtues through some sort of reason-guided action as well in order to be considered a properly flourishing *polis*. How do these *polis*-virtues manifest themselves in reality? One can imagine a wide variety of ways in which a political society can express or fail to express a particular virtue, whether it is through legislature-passed statute, the actions of that society’s police or military powers, or the results of a referendum. The citizens are the efficient cause for an *polis*’ virtue, and the efficient cause can come from the citizens acting out of very rational deliberation (such as debating laws and amendments) or through something far less deliberative (such as being in the middle of combat). Ultimately it is these citizens (or subset of them) that “push” a *polis* towards expressing a virtue, so the **DPE** seems plausible in its identification of **E<sub>r</sub>** and **E<sub>n</sub>** along with treatment of personal virtue and *polis* virtues as comparable forms of capacity realization (whether rational or natural) under some set of impediments.

With all the above, we have a principle in practical philosophy that would seem to capture well what it means for something to be good for something else “for the most part.” The advantages of this proposal I believe are that it is able to provide a systematic account of Aristotle’s use of FTMP that accommodates as much of his ontology as possible. Further, it proceeds from a (I think) already sound theoretical basis thanks to Crivelli’s work, which **Chapter 3** builds on in ways. While I disagree with Crivelli’s interpretation of FTMP statements, I think this is an inessential aspect of his deeper theory, so my interpretation amounts to a friendly amendment. **DP** provides a

way to understand several important features of Aristotle's ethics, including how it can be both "rule of thumb" and make assertions that are demonstrable. I think this provides a powerful tool to understand several aspects of his political philosophy.<sup>261</sup>

Before moving on to the next chapter, however, it is helpful to recognize just how much more practically and deliberately liberating this view of chance (and by extension, good luck) becomes. The Aristotelian universe does not possess some semi-mystical force that disrupts our plans and intentions. It is just causes we had not fully understood coming to fruition and making themselves known to us. There is a way in which Aristotle's dismissal of luck as an independent cause puts him somewhat in league with the Atomists and Empedocles, as Aristotle himself acknowledges (*Phys.* .II.5 197a12). This might make us feel as though there were no possibility of truly free action, if everything just resulted from the four causes, associations and conclusions

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<sup>261</sup> To perhaps demonstrate a final benefit of my interpretation, let us revisit a passage discussed earlier in **Chapter 2, *Politics* VII.10**. This is where he seems to offer an philosophy of history:

The separation of the multitude of citizens according to kind, on the other hand, originated in Egypt. For the kingship of Sesostris extends much further back in time than that of Minos. **We should take it, indeed, that pretty much everything too has been discovered many times, or rather an unlimited number of times, in the long course of history. For our needs themselves are likely to teach the necessities, and once they are present, the things that contribute to refinement and abundance quite reasonably develop.** So one should think that, where matters pertaining to constitutions are concerned, things hold in the same way. (VII.10 1329b22-31)

This passage becomes richer on second reading. First, we see his idea of a steady state universe at work with his claim that these features of civilization are discovered again and again, implying an indefinite number of cycles in the past. Secondly, we see **DP** very much at work. He mentions that the progression by which we discover what can accommodate our most basic bodily needs to fulfilling our other capacities by technology and experience is actually quite "easy." What is especially interesting here is that **DP** may also provide an explanation for his constitutional conservatism, despite what appears to be a rather progressive theory of history. While in the *Ethics* Aristotle says a good man would choose a short life of living finely over a long but undistinguished life (*NE* IX.8 1169a24-26) he holds the opposite sentiment with regards to constitutions (*Pol.* IV.1 1288b28-30, V.1 1302a2-4, V.7 1307a26-27, VI.5 1320a1-3). We might be inspired by the example of dramatic, short-lived political experiments such as the Paris Commune, but Aristotle would encourage us to instead look towards constitutions which muddle along yet prove themselves highly stable such as the British monarchy. Because the *polis* in these cases (or the UK or Egypt) have had an opportunity to develop and "mature" more, Aristotle could see these as ones that are particularly "successful" and worthy of consideration exactly because they have been providing stable conditions under which more humans grow conditioned to and can flourish. These citizens are, perhaps, not living the absolute best life, living as they do under imperfect constitutions. However, because these are ones that have developed under real conditions and have lasted, they are worthy of consideration as a source of *endoxa* as they seem to have had the greatest success in realizing their citizens' various **Rs** under various **Is**.

which Cicero reaches as well (*De Fato* 39).<sup>262</sup> On the contrary, it shows that everything which happens in the universe is actually intelligible and thus yieldable to human intelligence. If everything is predictable in the Aristotelian world, then the society which is able to anticipate these causal chains will be a great place to flourish. The rugged mountains of Sparta and the fertile fields of the Nile may be features of geography whose existences are beyond the practical powers of human beings to change dramatically (at least back in Classical Greece), but the wise political scientist knows the ramifications of these geographic features on the society they govern and can in a sense “get ahead” of those developments. Politicians cannot control the weather, but they can anticipate the weather that comes and plan for the societal impact the weather brings, particularly regarding material resources such as food. While Aristotle’s view of nature is highly teleological, it is also disenchanting, fully open to human examination. Aristotle in *Politics* I.8 1256a20-26 (also *HA* VIII.1 588a17-20) makes this clear:

[T76] There are many kinds of food. Therefore [διὸ], there are also many ways of life, both of animals and of men. Since there is no living without food, differences with respect to food make the ways of life of animals different. Of the beasts, some are gregarious, and some are scattered, in accord with what conduces to getting their food, for some are carnivorous, some granivorous, and others omnivorous (tr. Depew 168).<sup>263</sup>

The task of the politician is to truly understand the dimensions of the διὸ that links food (and other material resources) with society. The presence of those resources is up to chance – and some

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<sup>262</sup> “Ac mihi quidem videtur, cum duae sententiae fuissent veterum philosophorum, una eorum, qui censerent omnia ita fato fieri, ut id fatum vim necessitatis adferret, in qua sententia Democritus, Heraclitus, Empedocles, Aristoteles fuit, altera eorum, quibus viderentur sine ullo fato esse animorum motus voluntarii, Chrysippus tamquam arbiter honorarius medium ferire voluisse, sed adplicat se ad eos potius, qui necessitate motus animorum liberatos volunt; dum autem verbis utitur suis, delabatur in eas difficultates, ut necessitatem fati confirmet invitus.”

<sup>263</sup> ἀλλὰ μὴν εἶδη γε πολλὰ τροφῆς, διὸ καὶ βίοι πολλοὶ καὶ τῶν ζώων καὶ τῶν ἀνθρώπων εἰσὶν· οὐ γὰρ οἶόν τε ζῆν ἄνευ τροφῆς, ὥστε αἱ διαφοραὶ τῆς τροφῆς τοὺς βίους πεποιθήκασιν διαφέροντας τῶν ζώων. τῶν τε γὰρ θηρίων τὰ μὲν ἀγελαῖα τὰ δὲ σποραδικὰ ἐστίν, ὁποτέρως συμφέρει πρὸς τὴν τροφήν αὐτοῖς διὰ τὸ τὰ μὲν ζωοφάγα τὰ δὲ καρποφάγα τὰ δὲ παμφάγα αὐτῶν εἶναι,

particularly suitable or unsuitable resource distributions may appear as an act of luck – but there is no stage magic going on. It is simply meteorology, ecology, and geography.<sup>264</sup>

### §7 Looking Ahead:

However, this is not the end of Aristotle’s luck. Aristotle also seems to make reference to luck in practical deliberation. There are, it seems, people who continually succeed in their affairs yet do not possess great skills at deliberation. Somebody might be fortunate in their endeavors on occasion, but what do we make of the person who is constantly fortunate, who acts on “gut feelings” that so often seem to work out for them? This is not the same as the sort of luck discussed in this chapter, dealing with events and conditions which were not up to us but which are relevant to our endeavors. With the case of the lucky person who follows their gut, this seems a different sort of luck, and it would pose a big problem for my position if it were to be the case that somebody was “born lucky” or “possessed luck by nature.” This is an issue he attempts to deal with in the *Eudemian Ethics*, and it will be addressed in the next chapter.

I also mentioned at the beginning of this chapter that Aristotle also seems to make use of spontaneity in his biology with his notion of “spontaneous generation.” This phenomenon, on first sight, seems to posit that some animals can just randomly generate in wet, muddy conditions or in rotting flesh. If so, then “Lady Luck” might still be around his system, and there would be a high degree of imprecision in biology. It would seem very strange to say Aristotle’s practical philosophy

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<sup>264</sup> Indeed, this connection between resources and the political or social structures humans form is expanded on at length in *Politics* I and II, describing how humanity arose after catastrophe, and the unstable and harsh lands left only supported the barest forms of life, like those of the Cyclops who live on the small and barren islands described in the *Odyssey* (*Pol.* I.2 1252b16-23, I.8 1256a23-35, II.8 1269a4-7; cf. *Pl. Laws* 676a-680e; *Critias* 109d).

less subject to this sort of luck than his biology, especially given I think his practical philosophy is so informed by his biology.

**Chapter 5** will explore both issues, and we shall see that in fact there is not really anything “spontaneous” about spontaneous generation at all and that it obeys **DP** like any other event that occurs according to nature under particular conditions. So, too, the preternaturally lucky individual is not simply lucky. Additionally, as explored most in his zoological writings, there is something material and explainable that unites both of these phenomena in his system.

Showing this, however, requires delving deep into Aristotle’s material ontology, psychology, and theology. Aristotle does not posit a primitive causal indeterminacy or a positive force known as “luck.” In fact, he posits something much stranger and more interesting: soul-heat, an entity that leads Aristotle to espouse a highly refined version of Thales’ hylozoism. This hylozoism in fact does a tremendous amount of work in his metaphysics, ultimately forming the foundation for **DP** efficacy, and in **Chapter 6** I show how this hylozoic materialism can even be seen as an ancestor of the materialisms of both Karl Marx and Murray Bookchin.

# Chapter 5

## §1 – Introduction

From the **Chapter 4**, I showed how instances of chance, including good luck, can be accounted for by appeals to forms of accidental and hypothetical necessity. These additional causal factors confound a scientific explanation, since they are sorts of causation which arise only in particular circumstances, the sort of circumstances away from which scientific explanations are supposed to generalize. These confounding factors, however, themselves can be given rational explanations, just ones which go beyond what a scientist is able to provide in their investigation. Luck is something which occurs by accident, but it gives results which are relevant to our goals. The tripod falling in just the right way so we can sit is an example of good luck, as is the man meeting a debtor by chance while they were both in the market. Moreover, things that are the subject of luck relevant to a politician such as external goods and a society's surrounding geography are capable of being given a causal explanation and even expressible in the **Dunamis Principle**.

This chapter examines another instance of chance which I want to square with my interpretation: the phenomenon of spontaneous generation. Aristotle provides a way to unify all of these instances of chance together, and I think they are all compatible with **DP**. Indeed, what unites these two phenomena also reveals the ultimately theological basis for **DP**. As we shall see, it is also incidentally able to account for some complaints of Aristotle's system (such as those given by Cicero) that he makes the divine too imminent and performing far too many tasks compared to the more transcendent god of Plato (ND I.13.1-9 = Arist. Fr 26R3). My interpretation is that Aristotle posits a sort of hylozoism through the existence of a "soul-heat" that is responsible for



the driving the realization of each natural kind's capacities, and he treats this soul-heat as being analogous to the divine. This soul-heat suffuses all enmattered natural kinds, and this otherwise underappreciated entity in his system leads to a fascinating material ontology.

This chapter closes out the other major occurrences of true "randomness" in Aristotle's system. In this way, I will have fulfilled my plan discussed in **Chapter 1** and **Chapter 2** to examine the ways the Longer Route may face permanent levels of uncertainty and imprecision in its path. In the process, however, this interpretation opens up a whole new view of Aristotle's concept of matter. Matter is not merely passive. It is not just a degenerate form of being with shaky causal reliability, nor is it also not simply a soup of bare indivisibles. It is a frothing and thriving, yet intelligible and controllable, primordial base for all mortal life and suffused with the divine itself.

## **§2 - Spontaneous Generation – The Dunamis Principle at Work**

This role of the divine goes much further than in just his psychology. One of the most common beliefs in antiquity was in the spontaneous generation of life. Pre-theoretically, this can be seen in Greek mythology in various respects with the idea of Gaia. Similar ideas can be found further east, such as in Vedic verses which describe either a "Golden Womb" or the "Cosmic Egg."<sup>265</sup> In all these cases, the mythology takes as a brute fact some raw source from which life

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<sup>265</sup> *Hiranyagarbha Sukta* in the *Rig Veda*, the *Vayu Purana*, *Bhagavata Purana* and *Brahmanda Purana* mention the golden womb, the *Hiranyagarbha* or *Brahmanda*, the *Cosmic Egg*, see "The golden womb and the cosmic egg." *Times of India*, 31 Oct. 2009. Gale In Context: Environmental Studies, <https://link.gale.com/apps/doc/A210878533/GRNR?u=northwestern&sid=GRNR&xid=37a62eff>. Accessed 13 Dec. 2020.

springs with no need for a further causal explanation. Why does Gaia create life? Because she wants to; no further explanation is ever really necessary in these mythologies.

However, this theory was just as common among Aristotle's intellectual contemporaries and predecessors: Thales,<sup>266</sup> Anaximander,<sup>267</sup> Anaximenes,<sup>268</sup> Xenophanes,<sup>269</sup> Pindar,<sup>270</sup> Anaxagoras,<sup>271</sup> Archelaus,<sup>272</sup> Parmenides,<sup>273</sup> Empedocles,<sup>274</sup> Leucippus,<sup>275</sup> Democritus,<sup>276</sup> and Diogenes of Apollonia<sup>277</sup> are all attested to believing in spontaneous generation of some form or another. Plato deserves special mention here as he mentions the idea in numerous dialogues,<sup>278</sup> including in the *Phaedo*, with Anaxagoras' insufficient discussion of it even serving as the impetus for Socrates' own philosophical investigations (*Phaedo* 96b1-3).<sup>279</sup> Belief in the existence of spontaneous generation seems to have been the common sense in Archaic and Classical Greece.

<sup>266</sup> DK11 A1 (DL 1.24-27); A13 (= Simp. *Phys.* 23.21-29); Aetius P 1.3.1, S 1.10.12; Hippoly. *Ref. Her.* 1.1.2-3

<sup>267</sup> DK12 A11 (Hippoly. *Ref. Her.* 1.6.1-7), A12 (= Herm. *Irris.* 10 D.653); A13 (= Cic. *Ac.* II.37.118); A17 (= Cic. *Nat. Div.* 1.10.25, on birth of gods); A30 (= Aet. P 5.19.4); Aug. *De Civ. D.* 8.2; Censor. 4.7; cf. Aet. P 3.16.1 and A27 (= Arist. *Meteo* 353b6-11) with Thales testimonies as Anaximander appears to carry on tradition of water as primeval for life.

<sup>268</sup> DK13 A5 (= Simp. *Phys.* 24.26-25.1 = Theoph. Fr. 226A Fortenbaugh); A10 (= Cic. *Nat. Div.* 1.10.25; cf. To A23 = Philop. *De Psych.* 9.9.10 along with Aet. [P.1.7.13] S 1.1.29b); B2 (= Aet. P. 1.3.4, S 1.10.12), Aug. *De Civ. D.* 8.2

<sup>269</sup> DK21 B29 (= Simp. *Phys.* 188.32); B31 (= Heracl. *Alleg. Hom.* III.44); B33 (= SE *Adv. Math.* X.314)

<sup>270</sup> *Olymp.* 7.55-60

<sup>271</sup> Theophrastus *Enquiry into Plants* I.162

<sup>272</sup> 60A16a (= Sen. *NQ* VI.12.1ff); A18 (= Philop. *DA* 71.17); 12A29 (= Aetius P 4.3.2, S 1.49.1b);

<sup>273</sup> 28A1 (= DL 9.22); A7 (= Alex. *Met.* 31.7-14, esp. 11-14); B 15 (= Plut. *De fac. Lun.* 16.6.929A)

<sup>274</sup> 31A31 (= Hippoly. *Ref.* 1.3.1-3); A48 (= Pl. *Laws* 889b1-c6); A70 (Aet. P 5.26.4); A72 (= Aet. P 5.19.5); A78 (= Aet. 5.22.1); B8 (= Plut. *Ant. Col.* 1111F = Aet. P 1.30.1, 1,3-4 = Arist. *Met.* 1015a1-3); B9 (Plut. *Ant. Col.* 1113A-b) B21 (= Simp. *Phys.* 159.13); B17 (= Simp. *Phys.* 158.1-159.4); B23 (= Simp. *Phys.* 160.1-11); B26 (= Simp. *Phys.* 33.19-34.3); B35 (= Simp. *De Caelo* 529.1-15, *Phys.* 32.1-2); B57 (= Simp. *De Caelo* 586.12, 587.1-2); B59 (= Simp. *De Caelo* 587.20-23); B61 (= Ael. *De Zoo.* 16.299); B62 (= Simp. *Phys.* 381.31-382.3); B67 (= Gal. *Epid. VI Hipp.* 17a.1002.1-3); B71 (= Simp. *De Caelo* 530.1-4); B98 (= Simp. *Phys.* 32.3); B138 (= Arist. *Poet.* 1457b13-14); [Arist.] *On Plants* 815a20-21, 817b35-38; Strasbourg Papyrus a(i) (= F20.30-42 Graham)

<sup>275</sup> 68B5.1 (= Diod. Sic. 1.1-6, esp. 4-6); B5.2 (= Joannes Catt. *Hermippus* 2.1.5-13); cf. A69 (= Arist. *Phys.* 196a24-34)

<sup>276</sup> 68A139 (= Censorius 4.9)

<sup>277</sup> 64A32 (= Theo. *Hist. Plants* 3.1.4)

<sup>278</sup> *Menex* 237d-238a; *Rep* III 414d-e; *Polit* 269b, 271a-e

<sup>279</sup> As Dudley (2012: 173 n.56) points out, there really is no instance in our extant record of any writer (whether in philosophy or medicine) denying its existence either.

However, all these figures offered dramatically different accounts of exactly how spontaneous generation takes place along with what its metaphysical basis is.

Broadly speaking, there are at least two broad sort of accounts for how spontaneous generation can occur in nature according to the authors above. Some see it as life springing from non-life; soul can be defined as just the obtaining of some element in a proper proportion with other elements of their cosmology. Soul may just be air or water. Life, under these accounts, spring from something that is definitively not life.

However, there is a second broad account, which is that spontaneous generation is just life arising without the need for *spermos*. More generally, this spontaneous generation does not require any external efficient cause for it to occur. Anaxagoras' concept of *nous* is the most prominent example of this, as *nous* acts of its own accord to split up the primordial matter eventually leading to the creation of life through *nous* predominating in some region. The reason *nous* decided to split up the primordial mixture is not provided but is assumed by Anaxagoras that *nous* acted of its own accord to do this.

There is another, even older philosopher who held this view: Thales. While usually presented as a strict material monist, his biology and theology do not quite square with this traditional portrayal. First, Diogenes Laertius ascribes to him the view that many inanimate objects such as magnets and amber possessed soul along with the general claim that “the world was animate and full dieties,” (DK11 A1 = DL 1.24, 27). Hippolytus also makes a distinction in his metaphysics between the *archae* of water which constitutes the “beginning and end of the world”<sup>280</sup> and god, “who has neither beginning nor end.”<sup>281</sup> Most importantly, according to

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<sup>280</sup> “οὗτος ἔφη ἀρχὴν τοῦ παντὸς εἶναι καὶ τέλος τὸ ὕδωρ.”

<sup>281</sup> “τὸ μήτε ἀρχὴν μήτε τελευτὴν ἔχον.” (Hippoly. *Ref. Her.* 1.1.1-4, not recorded by Diels-Kranz, though included in Graham Fr. 20)

Hippolytus the water derived things of the world “travel and flow as they are carried around by the nature of the first agent of their coming to be. And this is God.”<sup>282</sup> Cicero, too, states that “water is the source of things, and god is that which formed all things from water,”<sup>283</sup> implying a baseline distinction between the *archai* of water and the divine.<sup>284</sup>

While Simplicius and Aristotle both describe Aristotle as a material monist, both accounts only try to provide an account of the *archae* of material composition.<sup>285</sup> They are thinking of Thales as he compares to those who are more pluralistic in what the ultimate ingredients of the world are such as Empedocles. This does not preclude the idea Thales had a principle for motion separate from water. Aristotle in fact at several points seems to say that Thales had a separate efficient *archae* located in the divine, first at *DA* 405a19-21 (=A22) where he repeats Thales’ belief that magnets had souls to explain their apparent self-movement and then again at *DA* 411a7-8 (not in Diels-Kranz) where he says “Some say that [soul] is mixed in the totality; this is perhaps the reason Thales thought all things are full of gods.” This belief that life permeates throughout all of material reality was common among the Greeks, and it goes by the name hylozoism.

He also provides a fascinating last comment at 983b27-984a3, immediately after the passage usually pointed to in order to support a strict monist interpretation of Thales. Here Aristotle provides a theoretical gloss on a common theogony. The traditional theogony was that Oceanus and Tethys were the primordial source of life and that they had the other gods swear oaths by water, specifically the river Styx. Styx was “the most elder” of the children Oceanus and Tethys

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<sup>282</sup> “καὶ τὰ πάντα φέρεσθαι τε καὶ ρεῖν, τῇ τοῦ πρώτου ἀρχηγοῦ τῆς γενέσεως αὐτῶν φύσει συμφερόμενα. θεὸν δὲ τοῦτ’ εἶναι.”

<sup>283</sup> “Thales enim Milesius qui primus de talibus rebus quaesivit, aquam dixit esse initium rerum, **deum autem earn mentem, quae ex aqua cuncta fingerer.**” (*ND* 1.10.25 = DK11 A23)

<sup>284</sup> See also Aetius P 1.7.11 (= 37 Graham)

<sup>285</sup> Smp. *Phys.* 23.21-29 = DK11 A13; Arist. *Met.* 983B6-13, 17-27 = DK11 A12

created, and so water takes pride of place in the created world. Aristotle discounts the credibility of the myth but then says, “Thales, however, is said to have made this explicit statement about the first cause.” The gods create all things, including water, but water takes a foundational role in the creation of the non-divine. These fragments provide important evidence for answering the question of what causes movement in a material ontology. Water is often associated with the emergence of life in various Presocratic writings, but their position is not that water just “makes” life all of a sudden out of random chance. There is a separate principle which, being postulated as possessing intelligence and agency, decides of its own accord to move water-based material. Life does not spring from water but is implanted into water *via* an additional principle. In this way, Thales anticipates Anaxagoras to a remarkable extent.

Thales also, I think, anticipates Aristotle. ‘*Automatos*’ means something like “of its own accord,” and Aristotle uses a noun-form of it in the *Physics* to refer to instances of accidental occurrences which result in something which could come about through teleological action but did not, the “chance” occurrence. For example, the tripod in *Physics* II.6 which was thrown and by chance fell in a way so that a person could sit is an example of τὸ αὐτόματον, because a person could have also simply taken the tripod and set it down *so that they may sit*. For his part, Aristotle uses *automatos* all over his biological works to refer to spontaneous generation. For examples, some animal eggs hatch *automata* without requiring the female to incubate them (*HA* VI.2 559a30-b6), and crickets get pregnant *automatoi* without the aid of a male (*HA* X.6 637b18);<sup>286</sup> Animals which *automata ginesthai* (“generate of their own accord”) operates as one of Aristotle’s taxonomic divisions at *HA* V.1 539a22, with lagoon oysters, cockles, clams, razor-fishes, scallops, and pinna all growing spontaneously out of the ground in different water-adjacent environments

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<sup>286</sup> There has been some doubt over whether Aristotle wrote *HA* X (also known as *On Sterility*). I am assuming here that it is. At the very least, his discussion of crickets here does not clearly contradict ideas found in I – IX.

(*HA* V.15 547b17-19); the same goes for the sea-lung (*HA* V.15 548a10-11) and various insects (*GA* II.1 732b12).

So how might we think of spontaneous generation in Aristotle? I immediately encounter one problem, which is that if I think spontaneous generation is describable under **DP** then one can point to a glaring inconsistency between spontaneous generation and the spontaneous as described in the *Physics*. At one level, spontaneous generation is spontaneous or chance-like by the standard of the *Physics* as the material conditions for spontaneous generation could easily have not occurred; the presence of sufficient wet earth and the proper amount of heat can all clearly be accidental properties. However, it seems the idea of spontaneity in the *Physics* further requires some sort of lack of teleology driving the result, not just the presence of accidental properties accomplishing something. If spontaneous generation were truly analogous to the case of the horse moving or the tripod being positioned into a position suitable for sitting, then it would be possible for these spontaneously produced animals to be created through intentional sexual acts as well, just as it would be possible for the horse could have detected danger and intentionally sought safety instead of just being lured to a safe spot by a carrot. Similarly, a person could just decide to position the tripod themselves in order to sit.

But Aristotle makes it clear that these insects and aquatic animals can *only* arise through spontaneous generation. Accidental causes are meant to be indefinite (*Phys.* II.5 196b27-28, 197a8-15, 21-24), yet Aristotle feels confident in enumerating precisely which conditions give rise to which species of animals. There are four broad sets of conditions which allow for spontaneous generation: **1**) putrefaction of wet, earthy stuff that is heated by the sun,<sup>287</sup> **2**) in living plants or

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<sup>287</sup> *GA* III.11 762a10–12, 763a28–34; *HA* V.1 539a23–24, V.15 547b 12–14, 18–20, 547b35–548a3, V.19 551a1–2

animals,<sup>288</sup> 3) in animal excrement,<sup>289</sup> or 4) in the dead remains of plants and animals.<sup>290</sup> This does not seem to be a case of a process triggered by accidental properties just happening to accomplish the same outcome as the goal-directed behavior. Nature “does nothing in vain” for Aristotle, and spontaneous generation seems to be a predictable thing which occurs from nature regularly. Recalling the discussion of the Empedoclean opponent in **Chapter 4**, this uniform occurrence implies it happens due to the natures of the objects involved, not merely by random chance, thus entailing for Aristotle there is something in the nature of the objects involved in these regular occurrences. Further, recalling the Manners Argument, since this generation results regularly in a way “that is fitting” to these species, “creating a fitting result” is part of the natural phenomenon, implying the existence of a teleology to it. Thus, spontaneous generation seems to not be very spontaneous at all.

How to explain this apparent inconsistency between the term for the process and its nature? One way to resolve the contradiction is to notice that the cases he cites are examples where he thinks efficient cause arises from the intentional parts of an animal’s soul. These species do not arise because of an intentional sexual act but because certain conditions (e.g. some proportion of water, earth, and heat) obtained to allow nature to carry out its ends. There was no expression of desire or even response to stimuli involved in this generation, just a sort of chemical or mechanical causation. As noted above, Aristotle uses phrases such as “ὅσα λέγομεν” (“that which we say”) or verbs such as λέγεται (“it is said”) when he denotes a popular idea which he wants to further refine. He does exactly this when first considering what it means to “γίγνεσθαι ἀπ’ αὐτομάτου” (“to occur simultaneously”) in *Physics* II.4 before he introduces his more theoretically specific

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<sup>288</sup> *GA* I.1 715b29–30; *HA* V.1 539a24–25, V.19 551a6–10; *Meteo.* IV.1 379b6–7, IV.3 381b10–13

<sup>289</sup> *HA* V.19 551a5–7

<sup>290</sup> *GA* I.1 715a25, 716b5, III.11 762a11–18; *HA* V.19 551a5). See also Zwier 2017: 366

idea of (“the spontaneous”) in *Physics* II.5.<sup>291</sup> The contexts of the phrase ‘γίγνεσθαι ἀπ’ αὐτομάτου’ show that it can be understood to cover any sort of non-intentional action, and his use of ‘λέγεται’ and ‘ὅσα λέγομεν’ in these contexts make it clear that he takes the common usage to also apply to non-intentional causation in general, too. If so, his use of γίγνεσθαι ἀπ’ αὐτομάτου in his biological and meteorological works seem to not be meant as some innovative usage either.<sup>292</sup> These animals do indeed arise “by themselves,” meaning requiring no additional intentional cause to obtain.

Despite the name, spontaneous generation is thus not an actual case of “the spontaneous.” It is instead its own regular process, with its own causes.<sup>293</sup> Most importantly, however, *is that spontaneous generation has its own teleology just like every other process in nature.* In other spontaneous actions (e.g. the falling of the tripod), there was no teleology at all in the result, but in spontaneous generation for animals there is nature’s teleology acting out. There may have been no *telos* behind the specific occurrence of that ratio of water, earth, and heat; maybe it obtained just due to a negligent farmer poorly irrigating their crops, causing runoff to accumulate, stagnant, and get heated by the sun. However, once those conditions exist (however they may come about), nature is able to “break through” and produce life according to its designs.

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<sup>291</sup> See *Phys.* II.4 195b31, II.4 196a2, 12, 26; II.4 196b3; II.5 196b30; II.6 197b35

<sup>292</sup> And he likes to use it, from *HA*: 539a18, 539b7, 547b19, 548a11, 569a25; from *GA*: 732b12, 743a35, 758a30, 758b7, 759a31, 761a18, 761b26, 762a1, 762b18.

<sup>293</sup> One piece of evidence which might leveraged here is the reference to spontaneous generation in the Pseudo-Aristotelian *Problems* Book X. At X.65 898b4-11 the author considers how some animals are able to spontaneously generate while others require intercourse. The phrasing used in the offered explanation: “Is it due, if to no other cause, at any rate to the fact that” [“ἢ κἂν εἰ καὶ μὴ δι’ ἑτέρας αἰτίας...”] that the spontaneously generated animals have a very short period of generation such that it appears they generate spontaneously, the implication being here that animals generated through intercourse require long enough gestation times that we are able to observe the process. But what is interesting here is that there is an assumption that, if no other cause can be found, then this is the likely explanation. It is not an acceptable answer here that matter is unpredictable and unstable enough that it may be able to randomly give rise to life; the *Problems* proceeds on the assumption that some series of causes can be identified.



Aristotle uses the term “spontaneous generation” to refer to animals generating simply when certain conditions accidentally occur, not because he thought it was an example of “the spontaneous” from the *Physics* properly speaking.<sup>294</sup> As a matter of accessibility and epistemology, however, Aristotle could understandably want to use the term “spontaneously generate” to refer to this phenomenon in animals. As seen above, the belief in the existence spontaneous generation was an extremely common idea even as its description took on different flavors. Further, to recall **Chapter 2**, Aristotle’s general commitment to the *endoxa* method forces him to give an endoxic description of spontaneous generation as well, that this is what many of his respected citizens and colleagues describe it as. That is the sense in which I interpret “we” in ‘ὅσα λέγομεν.’ For all these reasons, Aristotle had justification for describing spontaneous generation as “spontaneous.”

### §3 - Aristotle’s Refined Hylozoism and the Theology of DP

#### §3.1 – *Endoxa* about soul-heat under IR

But what, exactly, does Aristotle think is the efficient cause of spontaneous generation, if not sperm as in his accounts of non-spontaneous intercourse? Ultimately, Aristotle is a theoretically refined hylozoist as he thinks the efficient cause of spontaneous generation is “soul-heat,” and he describes it this way in the *Generation of Animals*:

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<sup>294</sup> Zwier (2017: 379-380) makes the interesting suggestion that likely Aristotle’s reception of the everyday idea of spontaneous occurrence is what influenced his desire to give the more precise and theoretical notion of “the spontaneous,” since he sensed that inside of that catch-all phrasing there existed several types of accidental causation.

[T78] Animals and plants are formed in the earth and water, because in earth water is present, and in water *pneuma* is present, and in all *pneuma* soul-heat is present, **so that in a way all things are full of soul.** [GA III.9 762a18-21]<sup>295</sup>

While Thales and the myth of Oceanus and Tethys express the idea inarticulately, Aristotle thinks Thales is ultimately correct in crucial ways. All things are full of gods, whether that be in animals, magnets, or warmed up mud. Some separate principle exists alongside matter, suffuses it, and, in proper conditions, the matter comes to life. Even when it comes to the most basic element of water, there exists some version of the soul, some iteration of the divine within it, as *pneuma* is produced from the heating of any liquid.<sup>296</sup> This “soul-heat” truly is everywhere for him, and the only difference in what life forms emerge is what the surrounding material happens to be present during the heating process (762a25-b17).

An overarching belief Aristotle holds throughout his treatment of his predecessors, as was clearly shown in **Chapter 1**, is that he holds the opinions of poets, philosophers, and scientists in great esteem and proceeds to consider their beliefs with the presumption that they must contain at least some semblance of truth.<sup>297</sup> This is common ground between my and Kraut’s **Inclusive Reading (IR)** and the conventional **Privileged Reading (PR)**. Thales, as one of the Seven Sages, is not somebody Aristotle takes lightly, so he is acknowledging here that the Thalesian view of the material world is highly compelling and correct to a great degree.

<sup>295</sup> Γίνονται δ' ἐν γῆ καὶ ἐν ὕδατι τὰ ζῷα καὶ τὰ φυτὰ διὰ τὸ ἐν γῆ μὲν ὕδατι πνεῦμα, ἐν δὲ τούτῳ παντὶ θερμότητα ψυχικὴν, ὥστε τρόπον τινὰ πάντα ψυχῆς εἶναι πλήρη.

<sup>296</sup> GA II.2 735b14–16, II.6 742a15–16; *Meteo.* IV.9 387a24–25

<sup>297</sup> NE I.8 1098b27-29; *Rhet* II.9 1387a16-17; see especially *Pol.* VII.9 1329b33-35 and Kraut (2009: 112 *ad ibid*) where he compares this sentiment with Burkes’ comment in *Reflections on the Revolution in France* on why we should be cautious with throwing traditional beliefs overboard too easily. This passage from the *Politics*, by referencing an entire society and not just its esteemed members, is good evidence for the truth of **IR**, see **Chapter 1**.

This quasi-pantheistic idea is found in multiple contexts. The first is biological and found in a discussion in *History of Animals* V on “animalcules”:

[T79] A creature is also found in cheese long laid by, just as in wood, and it is the smallest of animalcules and is white in color, and is designated the mite. In books also other animalcules are found, some resembling the grubs found in garments, and some resembling tailless scorpions, but very small. **As a general rule we may state that such animalcules are found in practically anything, both in dry things that are becoming moist and in moist things that are drying, provided they contain life.**

(V.32 557b6-13)<sup>298</sup>

Additionally, there is this passage from *De Mundo* 6 397b13-19, which also makes an oblique comparison to Thales:

[T80] **Therefore some of the ancients went so far as to say that all those things are full of gods** which are presented to us through the eyes and the hearing and all the other senses, **thus propounding a theory which, though it accords with the divine power, does not accord with the divine nature. For God is in very truth the preserver and creator of all that is in any way being brought to perfection in this universe;** yet he endures not all the weariness of a being that administers and labors,

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<sup>298</sup> Γίνεται δὲ καὶ ἐν χιτῶνι ὁ σκώληξ οὗτος. Καὶ ἐπὶ κηρίῳ δὲ γίνεται παλαιουμένῳ, ὡσπερ ἐν ξύλῳ ζῆλον, ὃ δὴ δοκεῖ ἐλάχιστον εἶναι τῶν ζῴων πάντων καὶ καλεῖται ἀκαρί, λευκὸν καὶ μικρόν. Καὶ ἐν τοῖς βιβλίοις ἄλλα γίνεται, τὰ μὲν ὅμοια τοῖς ἐν τοῖς ἱματίοις, [b10] τὰ δὲ τοῖς σκορπίοις ἄνευ τῆς οὐράς, μικρὰ πάμπαν· **καὶ ὅλως ἐν πᾶσιν ὡς εἰπεῖν, ἐν τε τοῖς ξηροῖς ὑγραιομένοις καὶ ἐν τοῖς ὑγροῖς ξηραιομένοις, ὅσα ἔχει αὐτῶν ζώην.**

but **exerts a power which never wearies; whereby he prevails even other things which seem far distant from him.** *De Mundo* 6 397b13-19<sup>299</sup>

As seen above, for Aristotle to believe in some sort of corporeal basis for life would have placed him well within the mainstream of Greek thinking, and he arrives at these ideas through the consideration of myth from poets as well. In other words, **IR** allows us to read Aristotle's belief in soul-heat to be the result of him weighing *endoxa* and realizing the extent to which so many "reliable opinions" center around this notion.

Now, at this point one may be tempted to call foul on me here in at least two respects. The first respect is that there is a lot of controversy on whether *De Mundo* is even from Aristotle. I have to acknowledge this is still a live debate, and so one could reasonably not be swayed by the passage above if one thinks it a spurious work.

The second respect is that it appears too quick to say that this "soul-heat" is quite the same thing as Thales' divinized *hylozoism*. Might it, rather, be just a special type of heat distinct from ordinary heat, as Zwier (2017: 365, see n.14) and Freudenthal (1995: 110) argue? Aristotle does, I agree, indeed distinguish soul-heat from normal heat and fire (*GA* II.3 737a1-3, 6-8). However, one must still contend with the following passage:

[T81] In all cases the semen contains within itself that which causes it to be fertile – what is known as the "hot" substance, which is not fire nor any similar substance, but the *pneuma* and is enclosed within the semen or foam-like stuff, and the natural

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<sup>299</sup> Διὸ καὶ τῶν παλαιῶν εἰπεῖν τινες προήχθησαν ὅτι πάντα ταῦτά ἐστι θεῶν πλέα τὰ καὶ δι' ὀφθαλμῶν ἰνδαλλόμενα ἡμῖν καὶ δι' ἀκοῆς καὶ πάσης αἰσθήσεως, τῇ μὲν θεῖα δυνάμει πρέποντα καταβαλλόμενοι λόγον, οὐ μὴν τῇ γε οὐσίᾳ. Σωτήρ μὲν γὰρ ὄντως ἀπάντων ἐστὶ καὶ γενέτωρ τῶν ὅπωςδῆποτε κατὰ τόνδε τὸν κόσμον συντελουμένων ὁ θεός, οὐ μὴν αὐτουργοῦ καὶ ἐπιπόνου ζῶου κάματος ὑπομένων, ἀλλὰ δυνάμει χρώμενος ἀτρύτῳ, δι' ἧς καὶ τῶν πόρρω δοκούντων εἶναι περιγίνεται.

substance which is in the *pneuma*, **and this substance is analogous to the element which belongs to the stars.** (GA II.3 736b33-737a1)<sup>300</sup>

This seems to directly compare soul-heat with celestial material. In fact, because soul-heat is self-moving, the comparison seems to be to the Prime Mover itself, something Solmsen notes (1957: 122-123). Zwier, however, brackets this passage, saying she prefers the middle of the road interpretation. While I believe this passage to be genuine (along with *De Mundo*), one might still reasonably desire further evidence that Aristotle's doctrine of soul-heat is properly describable as refinement of hylozoic belief.

How about this: In *De Caelo* II.12 292a27-31 he describes the entire universe as ἔμψυχος, literally “ensouled.”<sup>301</sup> As Verdenius (1983: 102) points out, this is probably inspired by the *Timaeus* (30b6-8) describing the *kosmos* as ζῶον ἔμψυχον,<sup>302</sup> but Aristotle refines this since ζῶον is meant to refer to specifically animal life in Aristotle. The terminological difference aside, however, Aristotle definitely sees the *kosmos* as being moved by something more than mechanical laws, stating that the heavenly bodies possess “πράξεως καὶ ζωῆς,” (II.12 292a20-22).<sup>303</sup> However, while heavenly bodies are not moved mechanically, he is confident in the conclusion that we can deduce the movement is due to ensoulment instead of some unanalyzable brute causation which we cannot understand. When we understand them this way, then “none of the facts appear to be beyond reason.”<sup>304</sup> All of *DC* II.12 is intriguing because Aristotle is acknowledging here the lack

<sup>300</sup> πάντων μὲν γὰρ ἐν τῷ σπέρματι ἐνυπάρχει ὅπερ ποιεῖ γόνιμα εἶναι τὰ σπέρματα, τὸ καλούμενον [b35] θερμόν. τοῦτο δ' οὐ πῦρ οὐδὲ τοιαύτη δύναμις ἐστίν ἀλλὰ τὸ ἐμπεριλαμβανόμενον ἐν τῷ σπέρματι καὶ ἐν τῷ ἀφρώδει πνεῦμα καὶ ἢ ἐν τῷ πνεύματι φύσις, **ἀνάλογον οὖσα τῷ [737a1] τῶν ἄστρον στοιχείῳ.**

<sup>301</sup> Ἡμῖν δ' ἐπεὶ διώρισται πρότερον ὅτι ἐν τοῖς ἔχουσιν ἀρχὴν κινήσεως αἱ τοιαῦται δυνάμεις ἐνυπάρχουσιν, ὁ δ' οὐρανὸς ἔμψυχος [a30] καὶ ἔχει κινήσεως ἀρχὴν, δῆλον ὅτι ἔχει καὶ τὸ ἄνω καὶ τὸ κάτω καὶ τὸ δεξιὸν καὶ τὸ ἀριστερόν.

<sup>302</sup> οὕτως οὖν δὴ κατὰ λόγον τὸν εἰκότα δεῖ λέγειν τόνδε τὸν κόσμον ζῶον ἔμψυχον ἐννοῦν τε τῇ ἀληθείᾳ διὰ τὴν τοῦ θεοῦ γενέσθαι πρόνοιαν.

<sup>303</sup> δεῖ δ' ὡς μετεχόντων ὑπολαμβάνειν πράξεως καὶ ζωῆς· οὕτω γὰρ οὐθὲν δόξει παράλογον εἶναι τὸ συμβαῖνον

<sup>304</sup> οὐθὲν δόξει παράλογον εἶναι τὸ συμβαῖνον

of current information available to him and other Classical Greeks, but he considers the ensoulment of the bodies to be the best available explanation at the time which provides a *logos* to the evidence and accords with other metaphysical commitments. He does leave the door open that perhaps, upon discovery of more evidence, the celestial bodies are not ensouled because of the small amount of available information,<sup>305</sup> but it is a conclusion he considers entirely reasonable and so takes it on as any other explanation falls into numerous difficulties. But if this is the best explanation, then “we must think of the action of the stars to be like the motion of animals and plants.”<sup>306</sup> Describing celestial objects as ensouled is not some poetic device here for him but a scientific conclusion which he thinks (based on the evidence available to him) is the most compelling. He is circumspect about the conclusion, not metaphorical about it.

There are further considerations to think that Aristotle is serious about describing celestial objects as alive; he ascribes life to material reality *writ* large. Beyond even celestial objects, he considers one of the principal distinctions between natural objects and artifacts to be that artifacts do not “ὄρμην ἔχει μεταβολῆς ἔμφυτον,” which literally means artifacts do not possess “an innate impulse towards change,” (*Phys.* II.1 192b18-19). When he opens Book VIII of the *Physics*, he considers whether the *kosmos* had some chronological beginning to its motion which, over a period of time, will eventually run out. This is not the conclusion he ultimately sides with, instead taking the position that the generation and motion of “things that are” [ὑπάρχει τοῖς οὓσιν] is something that is “neither possessing becoming nor perishing, but always was and always will be, and even an immortal and never failing.”<sup>307</sup> But if so, then he describes it as “a sort of life which infuses all things,” (VIII.1 250b10-14)<sup>308</sup> This “unfailing cause of motion” is the Prime Mover (VIII.10

<sup>305</sup> ... μικρὰς ἔχοντας ἀφορμὰς

<sup>306</sup> Διὸ δεῖ νομίζειν καὶ τὴν τῶν ἀστρῶν πράξιν εἶναι τοιαύτην οἷα περὶ ἢ τῶν ζώων καὶ φυτῶν.

<sup>307</sup> ἢ οὐτ' ἐγένετο οὔτε φθείρεται, ἀλλ' αἰεὶ ἦν καὶ αἰεὶ ἔσται, καὶ τοῦτ' ἀθάνατον καὶ ἀπαστον

<sup>308</sup> οἷον ζωὴ τις οὓσα τοῖς φύσει συνεστῶσι πᾶσιν

267b9-26). When we think about the Prime Mover, a natural view to have here is of a rather deistic being or perhaps some rationalized version of the Abrahamic god. At some point, we might think, the Prime Mover decided to set things in motion and then operates at some level of removal. This makes the Prime Mover a rather remote being, giving rise to the pejorative idea that it was a deity only a cold, hyper-logical philosopher could love. However, such a tempting view does not quite track Aristotle's actual position in *Physics* VIII as that notion would be somewhat closer to the first (rejected) position that there was an initial point of efficient causation. The Prime Mover instead is "first" in an explanatory sense, not a chronological sense; all explanation for a created being's motion ultimately bottoms out to the idea that there exists this "continuous motion" in matter, "for it always remains the same so that its relation the things it moves also remains the same and continuous," (VIII.10 267b16-17).<sup>309</sup>

Now, how does this Prime Mover's "same and continuous" motion in matter actually manifest itself in Aristotle's actual natural philosophy? This driving motion by the Prime Mover which infuses the activities of all "ὑπάρχει τοῖς οὐσίαις" is none other than a thing's nature, its *phusis*. Consider this passage from *Posterior Analytics*:

[T82] For there are many things like this, particularly among things which are constituted by nature or are being so constituted; for one, nature, makes this with some aim, but the other by necessity. Necessity is two: one, is in accordance with nature and impulse; the other is by force and contrary to impulse, just as a stone travels both up

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<sup>309</sup> ἀεὶ γὰρ ὁμοίως ἔχον καὶ πρὸς τὸ κινούμενον ὁμοίως ἔξει καὶ συνεχῶς,

and down from necessity, but not because of the same necessity. (*Po. An.* II.11 94b34-95a3)<sup>310</sup>

The reference to a stone here is significant because he considers the downward movement of a stone to have a different necessity than the upward movement of a stone. While not stated explicitly in this passage, in the *Physics* he affirms that the natural resting place of earthy material is downwards towards the ground, ultimately towards the center of the universe (*De Caelo* II.14 296b6-296b24). This is the “natural place” of a stone, and every stone has a natural impulse towards this motion (296b25-27). If, however, somebody was to take the rock and chuck it into the air, it would indeed move up in the air, but it would only do so for a time. Eventually, the continuous, all-pervading motion from the Prime Mover will force it back down to the ground. Eventually, the nature of the stone wins out and the impulse towards moving downwards gains dominance. The *phusis* of a stone here then is ultimately hashed out in terms of describing this impulse towards motion, something that is made clear elsewhere in *Met* IV.23 1023a9 and *EE* II.9 122418. It is the nature of a stone to have the impulse to be at the center of the universe (the result of its motion), and it also possesses an impulse to move towards the center of the universe. If there is nothing stopping the rock’s motion such as it being on a table or somebody holding it, it will do exactly that. He describes *phusis* as both the principle of movement and the principle of rest (*Phys* II.1 192b13-14), but this *phusis* of rest is its own impulse to change, *an impulse to change so that it may reach its proper resting place*. When understood this way, a table resting on the table is not “truly” resting; it still has the impulse to fall in accordance with the Prime Mover’s direction and will once it is positioned close enough to the edge of the table so that it may tip over. Even with

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<sup>310</sup> πλεῖστα [b35] δὲ τοιαῦτ' ἔστι, καὶ μάλιστα ἐν τοῖς κατὰ φύσιν συνισταμένοις καὶ συνεστῶσιν ἢ μὲν γὰρ ἕνεκά του ποιεῖ φύσις, ἢ δ' ἐξ ἀνάγκης. ἢ δ' ἀνάγκη διττὴ· ἢ μὲν γὰρ κατὰ φύσιν [95a] καὶ τὴν ὀρμὴν, ἢ δὲ βίᾳ ἢ παρὰ τὴν ὀρμὴν, ὥσπερ λίθος ἐξ ἀνάγκης καὶ ἄνω καὶ κάτω φέρεται, ἀλλ' οὐ διὰ τὴν αὐτὴν ἀνάγκην.



something as inert as a rock on a table, then, there is force and motion just waiting to realize itself once some impedance (in this case either the table or a person tossing it), some **I**, is removed.

From the above, the idea that there is a life (the Prime Mover) ultimately underlying the nature of all things starts to look more plausible in his system. The world is alive and dynamic at all times, even in something as inert as a rock on a table. But, we might say, while there may be some sort of life-form directing all things, there is some clear distinction between things that are alive and things that are not alive. The rock may have a life-form “behind” it, but it is not alive itself. A human or a fish, however, is alive, and it is obviously and fundamentally different from what is not alive, right? Not so fast:

[T83] Nature advances little by little in such a way that it becomes impossible to determine the dividing line, nor decide on which side a middle form should lie. Thus, after lifeless forms come the plant, and of plants one will differ from one another as to which appears to have more life, and, basically, the whole genus of plants, while it displays more life than other corporal beings, it appears lifeless compared to animals. Indeed, there is a continuous shifting from plant to animal life, as we previously said.

(*HA* VIII.1 588b4-12)<sup>311</sup>

This *History of Animals* passage is crucial, and it is almost never covered in the literature. While one may be able to point to a particular species as obviously alive, the line between life and non-life is permeable for Aristotle. It is relatively straightforward to account for this passage, however, if we consider Aristotle to hold to some refined version of the hylozoism that Thales propounds.

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<sup>311</sup> Οὕτω δ' ἐκ τῶν ἀνύχων εἰς τὰ ζῶα μεταβαίνει κατὰ μικρὸν [b5] ἢ φύσις, ὥστε τῇ συνεχείᾳ λανθάνει τὸ μεθόριον αὐτῶν καὶ τὸ μέσον ποτέρων ἐστίν. Μετὰ γὰρ τὸ τῶν ἀνύχων γένος τὸ τῶν φυτῶν πρῶτόν ἐστιν· καὶ τούτων ἕτερον πρὸς ἕτερον διαφέρει τῷ μᾶλλον δοκεῖν μετέχειν ζωῆς, ὅλον δὲ τὸ γένος πρὸς μὲν τᾶλλα σώματα φαίνεται σχεδὸν [b10] ὥσπερ ἔμψυχον, πρὸς δὲ τὸ τῶν ζῴων ἄψυχον. Ἡ δὲ μετάβασις ἐξ αὐτῶν εἰς τὰ ζῶα συνεχῆς ἐστίν, ὥσπερ ἐλέχθη πρότερον.

His more advanced metaphysics can account for a lot of the ambiguities and difficulties that Thales faces. Additionally, postulating some sort of omnipresent life force throughout the universe has a certain level of philosophic economy as it can explain not only the permeable boundaries of life but also celestial motion and the idea of natural place.

It also can explain spontaneous generation as it is an example of life “peeking out” into reality through sufficiently conditioned matter; it is not “random” but an example of **DP**. Zwier (2017: 382), after considering the apparent inconsistency between spontaneous generation and the spontaneous, notes that Aristotle’s first step in his scientific methodology is to attempt to uncover regularity in any sort of phenomenon. The *Posterior Analytics* does state that one cannot gain *epistemae* from accidental events (I.30 87b19-27), but that means we cannot gain *epistemae* from events which *are, in fact, accidental* as there is a vast distance between initially not detecting a pattern in something and there not being a pattern in something. The underlying order of a phenomenon may be extraordinarily difficult to detect for any number of reasons. What is significant is that the *Posterior Analytics* is only discussing truly accidental events, not just apparently so, and so is tracing out ideal categories of phenomenon and the levels of knowledge fit for continuous contemplation, not the messy, incomplete, and constantly revised levels of knowledge scientists in fact work with. This is not a criticism of Aristotle as the *Posterior Analytics* never purports to represent the working scientist’s actual knowledge. When considering all the various properties holding in each event, one could be presented with an obscuring causal fog. What caused the Category 5 hurricane in the Gulf Coast: the high temperature, the humidity, or a butterfly flapping its wings in Western Africa and making a tiny change in air current? In a sense, all of these can be said to have had a causal effect. However, while any event may have

innumerable accidental properties holding, some accidental properties are in a sense “nearer” to the causes of the natural process:

[T84] In some cases one might raise the question whether *any* chance fact might be the cause of the chance occurrence, e.g. of health the fresh air or the sun’s heat may be the cause, but having had one’s hair cut *cannot*; for some accidental causes are more relevant to their effect than others. (*Phys.* II.5 197a21-24)<sup>312</sup>

When seen this way, his description of generation of animals from the heating of material infused with soul-heat as “spontaneous generation” is a reference to the fact that this generation *appears* to be totally spontaneous and without any sort of predictable order. This is one reason why so many people believed in it. Yet, upon further inspection, these apparently random events are not random at all and in fact reveal something profound about the nature of material reality itself.

What causes maggots to grow in a carcass? Is it the decaying material of the animal containing water, is it the carcass being exposed to air and sunlight, or is it because the animal was already weak from disease and was finished off by a predator? In a way, these all have something to do with the growth of the maggots, and they all could have happened differently. The carcass could have been picked clean by vultures; there could be a snowstorm that freezes the carcass; the animal could have escaped their predator. But, while the predator may have caused the animal to die and start the putrefaction process, being killed by a predator is not what is nearest to influencing the growth of maggots nor is it the most frequent accidental property during this generation. The accidental causes that seem to very regularly occur around instances of spontaneous generation include things like animals undergoing putrefaction or wet earth being heated by the sun, and what

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<sup>312</sup> ὅμως δ' ἐπ' ἐνίων ἀπορήσειεν ἂν τις, ἄρ' οὖν τὰ τυχόντα αἴτι' ἂν γένοιτο τῆς τύχης· οἷον ὑγιείας ἢ πνεῦμα ἢ εἴλησις, ἀλλ' οὐ τὸ ἀποκεκάρθαι·

makes this event truly occur “by nature” is that these accidental properties set the conditions by which soul-heat (and ultimately the divine) may finally actualize its capacities and cause the matter to move. The grub or shellfish is just a small instance of the divine permeating all matter peeking out. Spontaneous generation is, then, an excellent example of a notion in Aristotle’s system which seems riddled with chance and imprecision but which nonetheless has an underlying logic rooted in the material cause.

The apparent uncertainty and randomness of spontaneous generation was only apparent, and once we control for the various conditions and impediments holding across many instances of spontaneous generation we find an entirely predictable capacity expressing itself in matter. Therefore, spontaneous generation can be studied scientifically. It does not always occur, but it does occur for the most part.

Even here, **DP** can be seen, with **E** here being the soul-heat and **~I** and **~I\*** being the presence of the proper amount of moisture, earthy material, *pneuma*, and heat from the sun. If the sunlight were not there, for instance, there would be an impediment as the material would not become “frothy.” If there were no soul-heat, there would be nothing to spur the “frothy” material into actualizing the self-motion that is the fundamental capacity of all ensouled things. This willingness to see divinity imminent in so many aspects of the world (instead of as a more materially transcendent force) led Cicero to criticize Aristotle several times in his works such as in *ND* I.13.1-9 (= F26R<sup>3</sup>):

[T85] Aristotle, in the third book of his *On Philosophy*, creates much confusion by dissenting from his master Plato. For now he ascribes all divinity to mind, now he says that the world itself is a god, now he sets another god over the world and ascribes to

him the part of ruling and preserving the movement of the world by a sort of backward rotation. Then he says that the heat of the heavens is a god, not realising that the heavens are a part of the world, which he has himself elsewhere called a god. (cf. *Ac.* I.7.26; *Tusc. Disp.* I.10.22).<sup>313</sup>

When we hear the phrase “spontaneous generation,” we might at first suspect Aristotle is introducing a notion of random chance into his biology. The worst case, at least for me, would be that this idea introduces some bedrock level of causal arbitrariness into answering a fundamental question of his biology: what is the cause of life? However, we see that is not the case and he postulates a separate, scientifically analyzable soul principle which exists all throughout matter, especially in the element of water. Instead of providing simply providing a gloss to Gaia, he expands upon Thales, explaining why Thales was to an extent correct, and attempts to derive even more far-reaching conclusions than that. The divine principle is not just something that condescends to matter on occasion but otherwise stays distinct from it and transcendent. On the contrary, for him the divine is constantly pushing the entire universe towards life and the realization of material capacities. The divine is, as *De Mundo* 6 puts it, “the creator of all that is in any way being brought to perfection.”

We also find here at last the final, ultimately theological, bedrock of the **Dunamis Principle** and FTMP assertions. I present **DP** as a conjunction containing two conditionals, with rational *dunamai* presented as fully actualizing so long as no impediments are presented. But what is curious about **DP** is that the matter involved is assumed to be in possession of these capacities

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<sup>313</sup> Aristotelesque in tertio de philosophia libro multa turbat a magistro suo Platone dissentiens; modo enim menti tribuit omnem divinitatem, modo mundum ipsum deum dicit esse, modo alium [5] quendam praeficit mundo eique eas partis tribuit ut replicatione quadam mundi motum regat atque tueatur, tum caeli ardorem deum dicit esse non intellegens caelum mundi esse partem, quem alio loco ipse designarit deum.

and they are just waiting to come out; all that is required is the lifting of hurdles. This bursting “powerfulness” can characterize the entire universe for Aristotle, and that includes the activities of humans, both individually and collectively.<sup>314</sup>

Because this all-encompassing divine power pushes all things to “perfection,” one has to find a way to acknowledge and incorporate this principle into our true assertions about the world. When we interpret statements that are true “for the most part” as merely statistical occurrence, we elide how all-encompassing this divine power is for Aristotle. My interpretation of FTMP assertions, backed by **DP**, is able to adequately integrate this power. Certain amounts of wealth are beneficial to humans for the most part because they introduce conditions for the divinely-driven capacities of humans to come to their full realization. Humans create political societies for the most part because, as enmattered beings, we need each other in order to lift our own internal and external impediments blocking the realization of our capacities. We are “by nature,” which is to say ultimately by an element of the divine in us, driven to establish political society in order to live our life out to the fullest, to reach “perfection.” With this Aristotle seems to abolish the existence of a primitive “Lady Luck” in his system, leaving nothing in his system to seemingly threaten the soundness of **DP**. Everything which happens in enmattered objects has a material cause. Further, he replaces a material ontology which incorporates an element of causal instability with a material ontology which posits a form of power to explain a number of seemingly “random” biological phenomena. Lastly, we saw as well that this conclusion is reached by Aristotle taking *endoxa* seriously.

#### **§4 – Conclusion: The Afterlife of Hylozoism**

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<sup>314</sup> This is a point where Aristotle also agrees with Anaxagoras, at least as Marmodoro (2018) interprets him, as they both have a metaphysics of powers.

This view of matter as constantly developing, suffused with divine power and activity at all times, does much to motivate Aristotle's commitment to **DP**, and I hope to have shown it has far-reaching implications throughout his whole system. Such a positive view of matter fell by the wayside in Europe in later centuries, first due to commentators attempting to reconcile Aristotle and Plato and, later, due to the rise of a version of Christianity which favored Plato's pessimistic view of the material world and the divine's transcendent relation to it.

However, as we shall see in the final chapter, this exalting view of matter lived on. Indeed, even in Medieval Europe it never truly went away either, as can be seen in the writings of the Giordano Bruno - somebody who held heterodox theological views but who was explicitly Aristotelian in his commitments – when he writes of matter:

[T86] “Thus, we arrive at a more dignified view of divinity and this mother Nature, in whose womb we are produced, preserved, and taken back again, and in the future we will no longer believe that any body can exist without a soul, or indeed, as many falsely claim, that *matter is nothing more than a cesspool of chemical stuff*.”<sup>315</sup>

With the Enlightenment, many of the same intuitions which guided Aristotle's conception of matter also provide the foundation of some of the greatest materialist theorists on the political left. Marx, to mention just one figure covered in my final chapter, viewed matter as constantly in motion and dialectically developing, and it comes to undergird even his vision of communist society. Likewise, Bookchin's anarchism is explicitly motivated by his appreciation of Aristotle's enriched view of the material world, believing it overcomes the limitations of both Enlightenment

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<sup>315</sup> Bruno (1998: 81), tr. Goldman and Thompson 2019: 61, emphasis from Bloch in his German rendering of Bruno

materialism and Classical Chinese process ontology (which was influential in anarchist thought at the time).

Of course, none of these later philosophers postulated the existence of “soul-heat,” but both saw matter as far more than just passive, inert material, just a “cesspool of chemical stuff,” to borrow from Bruno. Bookchin and Marx’s materialisms are not the dull, mechanistic ones of the Enlightenment. Thales, compared to Aristotle, presents a mystified and rudimentary theory of matter, but in a sense Aristotle thought it was fundamentally correct, and he incorporates those underlying insights into a far greater project. Compared to Marx and Bookchin, Aristotle’s theory of matter looks primitive and also full of mystification, but in a sense Marx and Bookchin thought it was fundamentally correct, and they incorporate those insights into their projects. It is on this note that I will now proceed to consider the radical afterlife of the **Dunamis Principle** and Aristotelian matter in the final chapter.



# Chapter 6

## §1 – Introduction

The last few chapters have attempted to provide the metaphysical and ontological grounding for FTMP statements. We saw that it relies on what Winter calls the **Dunamis Principle (DP)**. To review, I express **DP** as following:

$$(\mathbf{R}_r \rightarrow \sim \mathbf{I}_r \ \& \ \sim \mathbf{I}_r^*) \ \& \ ((\mathbf{E}_n \ \& \ \sim \mathbf{I}_n \ \& \ \sim \mathbf{I}_n^*) \leftrightarrow \mathbf{R}_n)$$

Where ‘ $\mathbf{R}_r$ ’ is a rational *dunamis*, ‘ $\mathbf{I}_r$ ’ and ‘ $\mathbf{I}_r^*$ ’ are internal and external (respectively) impediments relevant to the rational *dunamis*,  $\mathbf{R}_n$  represents some *dunamas* with  $n$  indexing one of the genus/species’ relevant *dunamai*,  $\mathbf{I}_n$ ’ and ‘ $\mathbf{I}_n^*$ ’ represent internal and external (respectively) impediments to the specified non-rational *dunamis*, and ‘ $\mathbf{E}$ ’ is the presence of some appropriate efficient cause for the specified non-rational *dunamas*. Any statement which may be described as true “for the most part” can be translated into an instance of **DP**. As an example, consider the statement “wealth is beneficial,” which Aristotle considers to be true for the most part. We can perform the following argument:

1. ‘Wealth of beneficial’ is understood to mean ‘Wealth is beneficial to humans.’
2. ‘Beneficial to humans’ means aiding the actualization of a human’s *dunamis*.
3. Having to work in order to procure basic resources in order to live is an impediment to at some of a human’s *dunamai*, particularly their rational *dunamai* like political activity and philosophizing ( $\mathbf{R}_r$ ).

4. Manual wage labor is thus an external impediment to a rational *dunamis* ( $\mathbf{I}_r^*$ ).
5. Wealth alleviates the need for manual wage labor, thus helping negate the presence of an  $\mathbf{I}_r^*$ .
6. With wealth,  $\sim\mathbf{I}_r^*$  becomes realized, establishing one of the necessary conditions for the realization of a human's *dunamis* for philosophizing ( $\mathbf{R}_r$ ).
7. Further, if a human being possesses wealth from birth, they are also able to be habituated towards viewing philosophizing as good for them as they are never required to engage in wage labor to satisfy basic needs and are not at as great a risk for forming habits which do not aim towards philosophizing.
8. This makes the human being more desiring of the philosophical life and to express this  $\mathbf{R}_r$
9. This proper habituation thus alleviates an internal impediment ( $\mathbf{I}_r$ ) towards  $\mathbf{R}_r$ ,
10. From 9, the second necessary condition towards the the realization of  $\mathbf{R}_r$  is fulfilled ( $\sim\mathbf{I}_r$ ), making the full expression of  $\mathbf{R}_r$  in the person truly possible.

Winter showed how his version of **DP** can be applied in the context of individual ethics, raising the possibility of a “codification” of ethics. I then developed **DP** so that it is applicable in a political context, justifying this on the basic Aristotelian assumption that ethics is ultimately an “introduction” to politics. Much of the last chapter was an attempt to further develop **DP** in this larger political context. What we saw is that **DP** actually yields a number of highly helpful results for understanding Aristotle's political project along with how some of his other theoretical ideas play out in the context of the *polis*. This is especially true for 1) understanding the role of chance

in political deliberations, 2) the importance of external goods, and 3) several of his considerations in his construction of a “realistic” ideal *polis* in the latter books of the *Politics*.

So, it seems as though there is a way to understand and formulate assertions about both humans and the communities they form, including the *polis*. Now, throughout this dissertation I have generally avoided providing an actual set of positive set of political propositions that would be true according to **DP**. The first reason I do this is because, like Aristotle’s own pluralism here on external goods, I do not think I have one sufficiently determined yet. But secondly, I do not need to have a set of propositions determined from my vantage place. It could turn out that privately held wealth is good, but that may be under a particular set of impediments, while it may in fact be that (once enough impediments are lifted) private property is sub-optimal compared to commonly held property. However, it could also turn out that in a sufficiently flourishing society with an overabundance of resources the best idea is to allow people to pursue profit relatively unrestricted. These vastly different possibilities - communism on one hand and *laissez-faire* markets on the other - are both possibly true FTMP, and we’d be able to understand either of these assertions according to **DP** and evaluate them according to whether individual humans in fact do flourish more under the new set of impediments.

Each side of the **DP** is a conditional describing the realization of a capacity, so one can test whether the condition holds. One can debate what belongs as an **I** or **I\*** with regard to some capacity **R**; one can dispute what belongs as an **R<sub>n</sub>** instead of an **R<sub>r</sub>**. One could also debate whether certain **R**s are privileged in a respect (e.g. contemplation). My and Winters’ rendering of **DP** leaves the existence of a special capacity under determined. These special or “characteristic” capacities of course are of course an important part of Aristotle’s ethics as he posits we possess a *telos* and with that a corresponding *ergon*. But I argue that Aristotelian politics need not assume such a

special capacity, only that maximization of citizens' capacities is constitutive of flourishing and success in politics. The **DP** as I write it here is prior in definition to an instance of **DP** that assumes there also exists a set of special case assertions dealing with some particular **R**.

I argue throughout this dissertation against an interpretation of Aristotelian capacital development (and its attendant error theory) as involving some sort of primitive "indeterminacy." However, while I resist that intuition which drives a number of the most influential interpretations of his methodology, the fundamental principle I take to underlie his assertions (**DP**) is still relatively open and pluralistic in important respects. While Aristotle thinks the questions which drive this pluralism could be solved according to science, acquiring the requisite *epistemae* to evaluate which applications of **DP** are true may take an extremely long time. To recall the arguments of **Chapter 1** and **Chapter 2**, when I describe Aristotle as providing a "pragmatic" warning about pursuing too much precision in politics and ethics, this is how I understand that remark in light of **DP**.

However, while we should heed his pragmatic warning, that does not mean we have to completely stop at it. Theorists and philosophers can still imagine political programs and various utopias, and Aristotle himself does so in trying to describe the "first city" (*Pol.* VII 4 1326b6). If one asserts a set of applications of **DP** about our rational and natural capacities and evaluates these in a normative light, then one can generate some ethics or politics, even if it looks very different from Aristotle's particular project.

This principle is what I think allows for so much of Aristotle's legacy for political theorists, most especially on the political left such as social democrats, anarchists, and Marxists. In this chapter I will be examining three thinkers – Martha Nussbaum, Karl Marx, and Murray Bookchin

– whom Aristotle deeply influenced in their philosophies. All three, we shall see, hold to some form of **DP**, despite the radically different projects they propose.

To make reference back to a discussion in the beginning of **Chapter 1**, a simple contrast made between Plato and Aristotle is that Plato is the more “utopian” thinker. I argued there that this is unfair to both, and I especially took issue with the idea that Aristotle is necessarily less utopian. Perhaps the philosopher himself was not particularly interested in enacting larger political designs, but that is mostly irrelevant to identifying what his specific philosophical commitments were. With the establishment of **DP** and showing how this principle has a deep structure to it, ultimately forming the semantics of his only apparently imprecise “for the most part” statements, I think I have shown that Aristotle is equipped with the tools to be every bit as “utopian” as Plato. Indeed, with his substance-dominant ontology, attendant metaphysics of capacities, and isomorphic theory of truth, his latent “utopianism” is placed on a much stronger, more practicable foundation. This makes its potential for a real-world political program all the greater.

Further, all the figures I discuss in this chapter take it to be of fundamental importance that the resources of a society are oriented towards human flourishing, not just distributing them in a way that respects some abstract “rights” (such as right of private property) that in reality relegates flourishing to secondary importance. Indeed, a recognition of the importance of external goods in political and ethical theorizing is one of the only uniting features of Peripatetic thinking in later antiquity. In the case of Aristotle, I argue this concern for external goods emerges from both a deep respect for *endoxa* (as shown in **Chapter 1, 2, and 4**) along with certain deep commitments in his metaphysics and ontology (**Chapters 3**). However, as we shall see, the concern with equipping human beings with the external, material goods necessary for these individual humans to fully express their various capacities also serves as a guiding desideratum for their own projects.

## §2 - Martha Nussbaum: Aristotle as Nordic Social Democrat

There are some projects that explicitly take Classical Aristotelian political philosophy as its starting place. Martha Nussbaum's "Aristotelian Social Democracy" is an example of this. Nussbaum begins with the idea that the *polis* makes citizens flourish by maximizing their capacities across various dimensions: physically, mentally, emotionally, sexually, socially, politically, etc. (203-206). Furthermore, concern with facilitating the realization of human potentiality is taken to be of fundamental concern, stating that "the task of political arrangement cannot be understood or well performed without a rather full theory of the human good and of what it is to function humanly. The task of political arrangement is, in fact, defined in terms of such a theory," (208). She proceeds to canvass a number of options offered by both policy experts (such as the **GDP**) and philosophers (in particular utilitarianism) and proceeds to offer a number of objections along Aristotelian lines on how these various metrics for measuring the success of society ignore some aspect or another of human goodness (213-216).

She begins by quoting his recommendations for the distribution of property in his city (VII. 10 1329b39):

[T88] For we do not believe that ownership should all be common, as some people have urged. We think, instead, that it should be made common by way of a use that is agreed upon in mutuality. At the same time, we believe that no citizen should be lacking in sustenance and support. (tr. Nussbaum)<sup>316</sup>

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<sup>316</sup> περί δὲ τῆς διανομῆς καὶ τῶν γεωργούντων, τίνας καὶ ποίους εἶναι χρή, λεκτέον πρῶτον, ἐπειδὴ οὔτε κοινήν φαμεν εἶναι δεῖν τὴν κτήσιν ὥσπερ τινὲς εἰρήκασιν, ἀλλὰ τῇ χρήσει φιλικῶς γινομένη κοινήν, οὔτ' ἀπορεῖν οὐθένα τῶν πολιτῶν τροφῆς.

These lines from the *Politics*, especially that the distribution of property is predicated on ensuring universal sustenance and support to citizens, forms the core of her project. Any form of property distribution which deprives a citizen of that would undermine the *polis*' claim to be a government of "free and equal citizens" (Nussbaum 204; *Pol* 1255b20). It is a matter of both political inclusion and distributive justice that citizens in a free and equal society have that level of material security. And Aristotle even includes two examples of how private property and political inclusion are linked:

[T89] As for common meals, everyone agrees that it is useful for well-arranged cities to have them. Our reason for agreeing with them will be explained later. All of the citizens ought to share in them, although it is not easy for those without resources to contribute the payment from their private holdings and to manage the rest of their household in addition. Furthermore, the expenses for the gods are shared by the whole city. Accordingly, it is necessary to divide the territory into two parts, one held in common and the other private, and each of these must in turn be divided into two. One part of the common territory must be used for public services for the gods and the other for expenditure on the common meals. (1330a4-14, tr. Kraut)<sup>317</sup>

He provides recommendations on the spatial distribution of the private property, and his stated reasons are surprisingly attuned to how space in a city can be politicized:

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<sup>317</sup> περὶ συσσιτίων τε συνδοκεῖ πᾶσι χρήσιμον εἶναι ταῖς εὖ κατεσκευασμέναις πόλεσιν ὑπάρχειν· δι' ἣν δ' αἰτίαν συνδοκεῖ καὶ ἡμῖν, ὕστερον ἐροῦμεν. δεῖ δὲ τούτων κοινωνεῖν πάντας τοὺς πολίτας, οὐ ῥάδιον δὲ τοὺς ἀπόρους ἀπὸ τῶν ἰδίων τε εἰσφέρειν τὸ συντεταγμένον καὶ διοικεῖν τὴν ἄλλην οἰκίαν. ἔτι δὲ τὰ πρὸς τοὺς θεοὺς δαπανήματα κοινὰ πάσης τῆς πόλεως ἐστίν. ἀναγκαῖον τοίνυν εἰς δύο μέρη διηρῆσθαι τὴν χώραν, καὶ τὴν μὲν εἶναι κοινήν τὴν δὲ τῶν ἰδιωτῶν, καὶ τούτων ἑκατέραν διηρῆσθαι δίχα πάλιν, τῆς μὲν κοινῆς τὸ μὲν ἕτερον μέρος εἰς τὰς πρὸς τοὺς θεοὺς λειτουργίας τὸ δὲ ἕτερον εἰς τὴν τῶν συσσιτίων δαπάνην...

[T90] As for private territory, one part must be near the border and the other near the city, so that, since two lots are distributed to each, all will share in both places. For this accords with equality and justice, and creates a more common outlook on wars against neighboring peoples. Where this arrangement does not exist, some think that a feud with neighboring peoples is a small matter, whereas others are over-concerned about it – ignobly so. For this reason, there is a law in some places that those who in proximity with neighboring peoples are not to participate in deliberations about wars against them, because their private interests makes them incapable of deliberating well. It is necessary then, to divide the territory in this way.” (VII.10 1330a14-24, tr. Kraut)<sup>318</sup>

Her own, positive proposal is most of all based upon attempting to enumerate a list of the needs and capacities that a state would attend to, with a basic list of human functional capabilities being given at page 225. There is an admirable thoroughness to Nussbaum’s enumeration of these various capacities. They cover everything from basic housing and food securities to sexual satisfaction and a feeling of fulfilment both as an individual and as a member of a larger collective.

It should be emphasized here that scientific investigation in order to accomplish this task is of vital importance to Nussbaum, so much so that her first source in the *Politics* for her project is VII.1 1330b11 where he says a basic feature of good political planning is a continual concern for public health. As discussed in **Chapter 4**, Aristotle is constantly concerned with identifying the impediments facing a particular *polis* and understanding how technological developments may

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<sup>318</sup> τό τε γὰρ ἴσον οὕτως ἔχει καὶ τὸ δίκαιον καὶ τὸ πρὸς τοὺς ἀστυγείτονας πολέμους ὁμονοητικώτερον. ὅπου γὰρ μὴ τοῦτον ἔχει τὸν τρόπον, οἱ μὲν ὀλιγωροῦσι τῆς πρὸς τοὺς ὁμόρους ἔχθρας, οἱ δὲ λίαν φροντίζουσι καὶ παρὰ τὸ καλόν. διὸ παρ' ἐνίοις νόμος ἐστὶ τοὺς γεινιῶντας τοῖς ὁμόροις μὴ συμμετέχειν βουλῆς <περὶ> τῶν πρὸς αὐτοὺς πολέμων, ὡς διὰ τὸ ἴδιον οὐκ ἂν δυναμένους βουλευσασθαι καλῶς. τὴν μὲν οὖν χώραν ἀνάγκη διηρῆσθαι τὸν τρόπον τοῦτον διὰ τὰς προειρημένας αἰτίας.



relate to the alleviation of these impediments; encouraging good air in his ideal *polis* is just one example of this concern.

Importantly, one upshot of Nussbaum's approach is that it would reject the dominant left-liberal view of the welfare state as a residual system to "catch" those that do badly. The Aristotelian social democratic project would see the welfare system as designed to be liberating and aimed with providing as many resources to individual citizens as will aid in their flourishing. That includes guaranteed material goods, education, health care, food, housing, and so. Where Nussbaum stops in endorsing a fully socialist project is that she affirms the qualified importance of private property, with Nussbaum arguing property is one thing that allows a person to maintain a sense of "separateness" and individual identity in the context of the collective (225).<sup>319</sup>

In several respects my dissertation has been aiming to provide a theoretical basis for just this project. Nussbaum provides a list of basic capabilities that humans have, but much of the task of the neo-Aristotelian politician will be taken up with trying to find ways to encourage the fulfillment of those capabilities, and that includes finding ways to remove obstacles to that fulfillment. This dissertation seeks to show that a consistent Aristotelian could aim very high in attempting to alleviate these impediments because nothing in this Aristotelian's metaphysics, logic, or methodology will introduce any applicable limit to the precision and depth at which we can practically deliberate.

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<sup>319</sup> There is a question here of whether personal property would fulfill the needs of "separateness" and "ownership" which Nussbaum identified while avoiding the harms which come from the existence of value-producing private property, making her and Aristotle's support for non-collective property possibly even more qualified and narrow.

My dissertation is most directly applicable to Nussbaum's project, and hopefully I can show how my project can inform her own. However, I would additionally like to show how **DP** can orient us in thinking about two other political projects.

### §2.1 – Aristotelian social democracy and Rawlsian liberalism

I begin by considering whether, if one thinks **DP** is plausible, one is committed to some sort of political perfectionism. It does seem as though Nussbaum is committed to some sort of perfectionism, but it is not overly prescriptive. Besides laying out her positive project, she also engages with Rawlsian liberalism, specifically by trying to elucidate how the neo-Aristotelian project relates to his distinction between thick and thin conceptions of the good (217). For Rawls, one can divide different conceptions of the good into two basic families. On the one hand are “thick conceptions” of the good. These are the views one might associate with religious belief, to give one example (1999: 410; 2001: 31; 2005: 441-453). The view of the good life in a religious doctrine is usually supported by many other attendant metaphysical, theological, and meta-ethical beliefs. These thick conceptions provide a comprehensive, overarching system to explain why one should follow a particular way of life. One thing to note here is that Rawls would include under a thick conception some secular beliefs, too, such as Marxism. This is because, even as Marx is to an extent vague about what life will be like under communism, he takes on several substantive beliefs about human experience, matter, and the course of history. His lines from the *Critique of the Gotha Program* discussed in my **Introduction** is a good example of this thicker conception at work. Even if he does not fully flesh out life under communism, there is no doubt he does not consider life under capitalism to be good. A thick concept of the good can exist just as much, then, as a negative statement about what modes of life are not good as it can exist as a positive statement about which modes of life are good.

In contrast, a thin concept of the good does not try to bring in extra conceptual baggage to provide a comprehensive picture of what modes of life are good or not. A thin theory of the good begins with a practical realization: there are many thick theories of the good that are mutually exclusive to one another. A proponent of a thick theory will naturally want to extend it to society at large, but with that comes the requirement that other, competing thick theories must disappear or at least not be dominant in the society. This has the makings of violent, continual conflict, and any survey of Medieval and Early Modern European history can demonstrate that in fact occurs. A thin theory, then, takes it as a given that many different modes of life are possible and will obtain in a society, and it proceeds from trying to establish a theory of the good which is able to obtain across this variety of human lives and conditions. The sort of theory established by the hypothetical individual behind the veil of ignorance – totally unaware of their race, gender, or place in society, things which would be relevant for a thick theory – would be an example of this overarching “thin” theory of the good (1999: 160,347-358; 2001: 31-32).

Nussbaum appears to accept such a distinction, but she argues there is a further conception which she calls the “thick vague” notion of the good. This is the one more characteristic of Aristotle’s approach. She explains:

[T91] The basic idea of the thick vague theory is that we tell ourselves stories of the general outline or structure of the life of a human being. We ask and answer a question, what is it to live as a being situated, so to speak, between the beasts and the gods, with certain abilities that set us off from the rest of the world of nature, and yet with certain limits that come from our membership in the world of nature? The idea is that we share a vague conception, having a number of distinct parts, of what it is to be situated in the world as humans, and of what transitions either “up” or “down,” so to speak, would

turn us into beings no longer human – and thus (since on the whole we conceive of species identity as at least necessary for personal identity) into creatures from ourselves. (218)

This is a good description of the Aristotelian project, but notice that there is a level of uncertainty in this conception. She even calls it a vague conception. Is this a problem for my proposal? I do not think so. The reason why the notion is vague is because, other than possibly rationality, Aristotle remains very pluralistic about which aspects of human life are more important than others. As seen earlier in **Chapter 4**, he has a capacious understanding of external goods. The vagueness does not come in understanding how precisely we can understand what it requires to reach that idea of the good life, and that is what I am concerned with. However, there is still a perfectionism at play in some ways since there is a suggestion that, even while any given aspect of human life may be more or less important for a given person, there is still a standard of human that one can rise to meet or fall below, and further this idea is backed by a set of metaphysical beliefs. In this way the conception of the good she possesses is thick in the Rawlsian term, and I think it is the assumption of **DP** in particular that makes the concept of the thick good.

## **§2.2 – Aristotelian *endoxa* and the “thick vague” concept of the good**

One comparative advantage which the Aristotelian model has over the Rawlsian is that the thick vague concept is able to incorporate peoples into deliberation which the Rawlsian would be forced to leave out. Rawls himself acknowledges that there might be “decent” civilizations which have a thick concept of the good yet are able to acknowledge an overlapping consensus with thinner concepts (1999: Preface, 59-62). However, some concepts of the good, and by extension some

peoples, are not able to achieve a sufficient amount of overlap, leaving them out of the Rawlsian conversation (1999: all of §8, but esp. 64-70).

Yet the Aristotelian model can keep these people in the conversation. Nussbaum mentions this with Aristotle's reference to the commonalities one finds among people after wide enough travel (Nussbaum 1990: 217-219; cf. *NE* VIII.1 1155a21-2): "One can see in one's travels to distant countries the ties of recognition and affiliation that link every human being to every other," (tr. Nussbaum).<sup>320</sup> I might also include his repeated references to many societies, including non-Greek ones, as sources for political wisdom (see **Chapter 1**). However, this relative inclusiveness compared to the Rawlsian ultimately extends from Aristotle's endoxic method and the theories of human perception and rationality which underlie it. If I and Kraut's **Inclusive Reading** of his method are right, then Aristotle regularly includes the opinions of vastly different people in his deliberations on basic ethical and philosophical points. Aristotle does not just take it as a matter of fact that people across the world happen to have certain vaguely common beliefs and desires. He thinks it is entirely rational, and these other people's opinions can be just as valuable as the opinion of Hesiod. This thick vague concept of the good is able to accommodate these various notions of a "life well lived," leading to a more pluralistic and inclusive conversation than Rawls is. In a world where liberal deliberative democracy cannot be assured of its dominance and has struggled to reach numerous societies (especially highly religious ones), Aristotelian politics offers a way to include these people in conversation about how to organize society (and the world as a whole) such that all may live a good life.

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<sup>320</sup> ἴδοι δ' ἂν τις καὶ ἐν ταῖς πλάναις ὡς οἰκεῖον ἅπας ἄνθρωπος ἀνθρώπῳ καὶ φίλον.

### §3 - “The Acme of Ancient Philosophy”: Aristotle and Marx

[T92] **The real progenitor of English materialism and all modern experimental science is Bacon. To him natural philosophy is the only true philosophy, and physics based upon the experience of the senses is the chiefest part of natural philosophy. Anaxagoras and his *homoeomeriae*, Democritus and his atoms, he often quotes as his authorities. According to him the senses are infallible and the source of all knowledge.** All science is based on experience, and consists in subjecting the data furnished by the senses to a rational method of investigation. Induction, analysis, comparison, observation, experiment, are the principal forms of such a rational method. **Among the qualities inherent in matter, motion is the first and foremost, not only in the form of mechanical and mathematical motion, but chiefly in the form of an impulse, a vital spirit, a tension — or a ‘Qual’, to use a term of Jakob Böhme’s — of matter. The primary forms of matter are the living, individualising forces of being inherent in it and producing the distinctions between the species.** (Marx and Engels, *The Holy Family*, 128)

We might state a related and more difficult concern about the republican perfectionism of Nussbaum and Aristotle: do thinkers who like to structure their political thinking along the terms of **DP** also have to take on all of Aristotle’s metaphysics? My justification for **DP**’s existence has been based on constant appeals from the Corpus, but I do not think somebody who agrees with **DP** is necessarily committed to full-blown Aristotelian metaphysics. That is because, while this formulation does emerge from Aristotle’s metaphysics, it can actually fit into a range of nearby ontologies.

**DP** could be found in a wide variety of political projects, including some many would consider appalling,<sup>321</sup> but it can also apply to a wide spectrum of far more humane politics including both 1) highly robust social democratic welfare policy programs (e.g. Martha Nussbaum) and 2) decentralized, ecologically-sensitive, and radically democratic communities (e.g. Murray Bookchin, as we shall see). While both would be considered on “the left,” 1) and 2) are clearly very different. However, both still see political society in naturalistic terms and humans as animals who possess a particular set of needs and capacities to be realized. Nussbaum, in titling her article “Aristotelian social democracy” makes the debt obvious, while Bookchin’s appreciation for Aristotelian naturalistic political thinking (particularly its ontology of the *polis*) is motivated much of his desire to escape theoretically thin mode of American anarchism he derisively termed “lifestyle anarchism.”

However, in this section I want to discuss another, even more influential theorist, also known for possessing a healthy respect for both Aristotle and ancient political thinking more generally: Karl Marx. One reason for **DP**’s adaptability is because Nussbaum, Bookchin, and Marx are broadly committed to a sufficiently thick notion of human nature to make the model apply, even if it is in a rather focal sense such as one which may be consistent with Marx’s formulation

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<sup>321</sup> This includes various forms of “scientific” racist nationalism such as Nazism. Like the Aristotelian and Marxist, the racial nationalist would reject the claim the individual interest is separate from a larger collective, in this case some sort of ethnicity, *folk*, or race. One’s capacities develop in accordance with their impediments and nature (determined in large part by that ethnicity/*folk*/race). It is then the aim this nationalism to develop a particular race’s flourishing as much as possible, and they believe only when this group is dominant in all facets of life and society can the individual members of that race truly flourish, too. By Nazi ideology, Germans could not truly flourish until they annexed as much land as possible and brought complete domination (and usually extermination) to those who lived on that land. Then, and only then, did the Nazis think Germans could reach their peak. There is still a discussion of growth and development of abilities here inside a naturalistic and “scientific” framework, even if the ends are heinous and genocidal. This section focuses on Aristotle’s legacy on the political left, but a similar discussion could be written about his influence on the extreme right (for instance, the extent to which he was used to justify chattel slavery in the Antebellum South).

of human nature in his sixth thesis as the “ensemble of all human relations.”<sup>322</sup> What human nature looks like at any one time might fluctuate, but there does not mean there is simply nothing under there to study and understand. Democratic citizens are wildly different from citizens who live under an aristocracy, Aristotle would argue, but there is still a political animal underneath that can be studied. These metaphysical concerns would affect what somebody selects as their **R** or assortment of **Is** in the formulation, but it would not affect the idea that a true proposition for these thinkers (Marx, Nussbaum, Bookchin) will resemble the expression provided, that politics is “about” these capacities and maximizing them.

Now, Aristotle might in fact quibble with my formulation by saying that I do not provide a way to specify that a particular capacity is uniquely characteristic of one’s species. In other words, I do not include an **R\*** that is able to represent rational cognition, for instance (or whatever else one thinks is this especially important capacity). However, this is not an issue for me as it amounts to a conservative extension of **DP**. If one wanted to posit that in a corresponding set of *dunamai* for an arbitrary species there exists some *dunamis* that is especially characteristic of that species, then every species has a special set of applications of **DP** that talks about **R\***; this holds true for humans as well. The statements that concern the realization of our capacity for rational intellect will hold priority for a classical Aristotelian. Such a position may be defensible as an ethical view, but ultimately these special cases of **DP** are still **DP** in form, just an application about an **R** that is particularly important to us. And indeed, any given **R** is an **R\*** if and only if it is a distinguishing feature of that species. A distinguishing feature of a beaver is the ability to build a dam for a dwelling. Dam building would then be a likely **R\*** for beavers. However, humans can

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<sup>322</sup> see Norman Geras “Marx and Human Nature: Refutation of a Legend” pp. 29-58; Marx *ad* Aristotle on human nature at *Capital* I.443-444



build dams too, and ones that look just like the ones beavers build. However, while it would be true to describe humans as possessing a capacity for beaver dam building, as an activity it is not especially important to us.

In contrast, somebody like Marx could still make use of **DP** as is and not posit the existence of a **R\***. Instead, he would like to see somebody maximize their capacities for painting, fishing, and criticism (simultaneously, if one wished to):

**[T93] Further, the division of labour implies the contradiction between the interest of the separate individual or the individual family and the communal interest of all individuals who have intercourse with one another. And indeed, this communal interest does not exist merely in the imagination, as the ‘general interest,’ but first of all in reality, as the mutual interdependence of the individuals among whom the labour is divided. And finally, the division of labour offers us the first example of how, as long as man remains in natural society, that is, as long as a cleavage exists between the particular and the common interest, as long, therefore, as activity is not voluntarily, but naturally, divided, man’s own deed becomes an alien power opposed to him, which enslaves him instead of being controlled by him. For as soon as the distribution of labour comes into being, each man has a particular, exclusive sphere of activity, which is forced upon him and from which he cannot escape. He is a hunter, a fisherman, a herdsman, or a critical critic, and must remain so if he does not want to lose his means of livelihood; while in communist society, where nobody has one exclusive sphere of activity but each can become accomplished in any branch he wishes, society regulates the general production and thus makes it possible for me to do one thing**

today and another tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticise after dinner, just as I have a mind, without ever becoming hunter, fisherman, herdsman or critic. This fixation of social activity, this consolidation of what we ourselves produce into an objective power above us, growing out of our control, thwarting our expectations, bringing to naught our calculations, is one of the chief factors in historical development up till now.”

[*German Ideology*]

Marx does not privilege a particular activity as characteristic of our species-being (in contrast to a bee building a hive for example); our division of labor in society is not “natural.” Indeed, Marx arguably says something even more striking in the 1844 *Manuscripts*: that this lack of a particular defining activity *is* the defining feature of humans. We are universal consumers, creators, and builders. Thus, unlike Aristotle, he would reject the very possibility of a special capacity **R\*** even as maximizing individuals’ capacities for various activities (any given **R**) is still broadly a goal of a communist society. Surely, however, if one wished to engage in philosophic criticism, Marx would want communist society to be structured to allow you to do that criticism well when you desire, for you to be “accomplished” at it. Simply put, he just wants a society that is finally not “thwarting our expectations, bringing to naught our calculations.”

A relevant aspect of my formulation here (and what allows for this pluralism without losing substantive meaning) is that Aristotle makes the primary substances be the truthmaker of **DP**, the individual human themselves, something I emphasize in **Chapter 3**. This allows for somebody who may be persuaded by the relevance of **DP** in ethics and politics but who does not want to take on all of Aristotle’s baggage to take a more nominalist ontology and adopt a corresponding version of **DP** for that ontology. This is because, first, a nominalist would likely reject the same potential

truth-makers that Aristotle would appear to reject (discussed in **Chapter 3**). Second, even the most extreme nominalist would still accept the existence of the same type of truthmaker Aristotle does for his correspondence, even if they do not want to call it a substance: the basic, ungrounded individual.

One could describe capacities for humans with an understanding that the realization of those capacities in any given human are conditioned on all the particular impediments that human faces, and one can avoid too thick a teleology by saying that what we consider to be an “essence” or “nature” is just the set of capacities and attributes that you think you are likely to see expressible in the matter of the object given a particular set of conditions. That sort of understanding of capacity and essence would appeal well to Marx, and it would still serve as a plausible underpinning for his connection between human happiness and not having our goals and capacities stunted. The problem of the division of labor arises when we think that collection of capacities is something that exists independent of us and guides us “by nature” towards particular jobs and lives, whether that is the idea that men by nature are fighters and leaders (and so should be in political power) or that women are “by nature” nurturers (and so should be in the home).

One can find the Marxist notion of a species-being to be a more compelling concept in which to think about the human condition than in the framework of an Aristotelian *ousia* with its distinguishing *erga*. Marx, at any rate, would reject Aristotle’s claim that contemplation must be the activity that leads to flourishing for a human being. However, my point is that they are importantly similar in that both accept **DP**. To see why, compare the reason Marx finds wage labor to be so harmful and alienating to why Aristotle thinks the life of a manual laborer is bad. Both root the harm in a practice that denies some attendant aspect of human capacities as they excessively preclude opportunities to develop one’s other gifts and skills (with a neglect of rational

cognition and political involvement being especially deleterious for Aristotle). Both suppress our “humanity” in some way, a harm that can be clearly seen as motivating in Aristotle’s meta-ethics of *NE I* and can be inferred in Marx the *German Ideology*. This seems to be a clear way to read Marx when, after describing the depths of the wage worker’s alienation in the *Philosophic and Economic Manuscripts* of 1844, he says, “In his human functions he no longer feels himself to be anything but an animal,” (88-89).

My connection between these two thinkers is anything but new. Marx praises the “brilliance of Aristotle’s genius,” declaring that he is “the acme [*Gipfel*] of ancient philosophy,” (MECW I.424) along with being “a giant thinker,” (*Cap.* I.175 n.35),<sup>323</sup> “the greatest thinker of antiquity,” (*Cap.* I.532) and somebody’s whose project in the *Politics* figures his own endeavor in *Capital*. When Marx first introduces the value-form, he highlights how the concrete labor of the tailor becomes abstracted into just “the labour embodied in the linen,” and he says the peculiarities of *this form* “will become still clearer if we go back to the great investigator who was the *first* to analyse the value-form, like *so many* other forms of thought, society and nature. I mean Aristotle,” (I.151). In the Appendix to Volume 1 of *Capital* (p. 1041 [482]) Marx provides a summary of how the production of commodities leads to all eventually transforming into only “dealer[s] in commodities” following the formula of C-M-C and concerned with “money-making,” and he provides a one-word citation for the argument: “Aristotle.” This is likely a reference to the long footnote at I.253 n.6 where he discusses Aristotle’s analysis of chrematistics, mostly found in

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<sup>323</sup> This is couched in a blistering polemic: “Truly comical is M. Bastiat, who imagines that the ancient Greeks and Romans lived by plunder alone. For if people live by plunder for centuries there must, after all, always be something there to plunder; in other words, the objects of plunder must be continually reproduced. It seems, therefore, that even the Greeks and the Romans had a process of production, hence an economy, which constituted the material basis of their world as much as the bourgeois economy constitutes that of the present-day world. Or perhaps Bastiat means that a mode of production based on the labour of slaves is based on a system of plunder? In that case he is on dangerous ground. **If a giant thinker like Aristotle could err in his evaluation of slave-labour, why should a dwarf economist like Bastiat be right in his evaluation of wage-labour?**”

*Politics* I.9 1256b40-1257a28 (though also see *Grund. Ntbk.* I, 160). Aristotle's analysis of chrematistics is taken up again at *Capital* I.267, where Marx extensively quotes *Politics* I.10 1258a38-b8's description of chrematistics as a "double science."

Further, GEM de Ste. Croix, to name just one prominent ancient historian (1981: 55-6, 69 ff, esp. 74 and 77-80, 182-185) has made comparisons between the analysis of parts of the polis and Marxist class analysis (e.g. *Pol.* III.8 1279b34-80a3; IV.4 1290a40-b3, 17-20). JL Stocks (1936: 185, cf. *Pol.* IV.1290a7) at one point proclaims that Book IV's analysis of the parts of the polis "might be a quotation from the *Communist Manifesto*."

Moreover, Marx was just generally deeply interested in the Greco-Roman world. He wrote his dissertation, of course, on ancient philosophy. Moreover, we find numerous instances of his correspondence with Engels where he demonstrates an intense, lifelong interest ancient history. For example, on March 8<sup>th</sup>, 1855 he writes to Engels, "A little time ago I went through Roman history again up to the Augustan era" (*MEW* XXVIII.439); on February 27<sup>th</sup>, 1861 he writes that "As a relaxation in the evenings I have been reading Appian on the Roman civil wars, in the original Greek" (*MESC* 151); on May 29<sup>th</sup> 1861, he describes how he is coping with his precarious living situation by reading Thucydides and that "these ancient writers at least remain ever new" (*MEW* XXX.605-6).<sup>324</sup> We find mentions to Pindar (*Cap.* III.386 n.75), Epicurus (*Grund. Ntbk.* VIII, 858; cf. *Cap.* III.330, 598), among dozens of other authors. There is even a materialist analysis of Antipater of Thessalonica's reference to a water-mill in one of his poems (*Anth. Pal.* IX.418, *Cap.* I.532).

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<sup>324</sup> I owe these examples from the correspondence to De Ste. Croix 1998: 24 ff. De Ste. Croix also finds Marx directly quoting (among others): Aeschylus, Appian, Aristotle, Athenaeus, Democritus, Diodorus, Dionysius of Halicamassus, Epicurus, Herodotus, Hesiod, Homer, Socrates, Lucian, Pindar, Plutarch, Sextus Empiricus, Sophocles, Strabo, Thucydides, and Xenophon.

Further, neo-Aristotelians recognize and make use of the deep affinity. Nussbaum herself uses her project to discuss how we should respond to the picture of Marx's beleaguered and alienated worker, saying that the role of government is to determine how to lift this worker out of their encumbered, stunted state and to make them wholly human (215). She takes it as likely and a perfectly acceptable outcome if this entails a wholesale reorganization of society that goes beyond even a redistribution of resources (215), and throughout the article she explicitly shares with Marx a desire to use the language of capacity to overcome the limitations of liberal theory. I argue that behind these thinkers' radical impulses, there exists a common, uniting principle that forms a key piece of Aristotle's legacy.

The idea that Aristotelian political theory can lead to the endorsement of radical political programs is not a stretch. When Aristotle introduces the basic components of the ideal *polis* (starting with the basic matter itself, the population), he provides the following methodological remark:

[T94] For it is not possible for the best political system to come into existence without equipment in good measure. And so we must presuppose many things that accord with our highest hope, although the existence of none of them must be impossible," (Politics VII.3 1325b37-41).<sup>325</sup>

The ideal state Aristotle designs in *Politics* VII and VIII is not as extreme in some of its solutions as Plato's Kallipolis, but he is still explicit that the ideal state he constructs might be quite different from any existing *polis* and accepts that if the design is properly grounded in *epistemae* and

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<sup>325</sup> οὐ γὰρ οἷόν τε πολιτείαν γενέσθαι τὴν ἀρίστην ἄνευ συμμέτρου χορηγίας, διὸ δεῖ πολλὰ προϋποτεθεῖσθαι καθάπερ εὐχομένους, εἶναι μέντοι μηθὲν τούτων ἀδύνατον·

informed by *emporia* the high hopes found in the design are still ultimately “realistic.” Such rule is based on appeal to one’s understanding of humans as hylomorphic beings with particular arrangements of capacities; it is not rule based on one’s mastery of a single, ontologically suspicious, meta-ethical concept like the good. Aristotle’s dismissal of designs that neglect which conditions would build such a society and that merely affirm ideals would not be out of place in Marx and Engels’ critique of Saint-Simon and the methodologies of utopian socialism (Socialism: Utopian and Scientific, *MECW* 24.285-97).

In fact, the affinities between Aristotle and Marx-Engels go further in terms of their theory of what causes large-scale changes of a society as both affirm that it is due to major changes in class relations. Saint-Simon and the other founders of utopian socialism before Marx and Engels saw the proletariat as “a class without any historical initiative or any independent political movement,” (*Manifesto* §3) and this dim view of the proletariat leads to Saint-Simon, Robert Owen, and others to attempt to make appeals to society *writ large* instead of to the working class itself, leading to a latent elitism and anti-democratic impulse (Fernbach 2019: 25-27). In Aristotle’s case, he noticed that the key factor which led to Athens’ transition to radical democracy was the rapid rise of the ship rower class along with an awareness of their class’s power.<sup>326</sup> Indeed, he describes *stasis* (usually translated as either “civil war” or “revolution”) as what happens when two “parts” of the *polis* (virtually always defined as some economic class such as small-plot farmers, rowers, or creditors) struggle against each other for political dominance.<sup>327</sup>

Further, like Marx and Engels (see *Theses on Feuerbach* I, II, VI), Aristotle recognizes that classes and their relative level of consciousness can be the product of habituation due to the conditions they face, that the material world impacts our contemplation and how we think about

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<sup>326</sup> *Pol.* III.2 1275b34-37, *Ath. Const.* §27.1 cf. VII.6 1327a40

<sup>327</sup> e.g. *Pol.* V.1 1301b28-29, 35; V.2 1302a21-22

the world. He often describes democratic *poleis* as being geared towards redistribution of wealth and a general impulse towards egalitarianism. However, at IV.5 1292b10-17 (cf. Newman IV.184) he acknowledges that this does not always follow:

[T95] These, then, are the kinds of oligarchy and democracy. But one must not overlook the fact that it has happened in many places that constitutions which are not democratic according to their laws are none the less governed democratically because of custom and training. Similarly, in other places, the reverse has happened: the constitution is more democratic in its laws, but is governed in a more oligarchic way as a result of custom and training (tr. Reeve).<sup>328</sup>

A *polis* could develop what, on paper, appears to be a highly democratic structure. However, this democratic structure only accounts for the access to office not being conditioned on wealth, birth, or other clearly anti-democratic tests. The actual property distribution in the ostensibly democratic *polis* may still be highly unequal, and further the *demos* may have existed under highly anti-democratic conditions for generations, leading to a strong habituation against challenging the traditional elites of the *polis*. Even if the constitution is democratic on paper, the actual officeholders could skew aristocratic, leading to an undemocratic constitution in reality. He makes a similar point a few lines later at b17-18 by describing a democracy that rapidly transitions from tyranny; while the *demos* managed to overthrow the tyrant, the habituation of living under tyranny can lead to the democratic constitution acting tyrannically against its own citizens. These ideas can

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<sup>328</sup> ὀλιγαρχίας μὲν οὖν εἶδη τοσαῦτα καὶ δημοκρατίας· οὐ δεῖ δὲ λανθάνειν ὅτι πολλαχοῦ συμβέβηκεν ὥστε τὴν μὲν πολιτείαν τὴν κατὰ τοὺς νόμους μὴ δημοτικὴν εἶναι, διὰ δὲ τὸ ἔθος καὶ τὴν ἀγωγὴν πολιτεύεσθαι δημοτικῶς, ὁμοίως δὲ πάλιν παρ' ἄλλοις τὴν μὲν κατὰ τοὺς νόμους εἶναι πολιτείαν δημοτικωτέραν, τῇ δ' ἀγωγῇ καὶ τοῖς ἔθεσιν ὀλιγαρχεῖσθαι μᾶλλον.



be expressed in terms of **DP** fairly easily with the distorting effects of property inequities and class habituation being expressible as **Is**. While Marx and Engels develop more complex notions of this habituation with their idea of “false consciousness,” the way in which a part of the *polis* may have a mistaken belief about what is good for it due to material conditions and habituation appears to be a clear anticipation of the idea.

#### §4 – “Right-wing” versus “Left-wing” Aristotelianism

**“The great workshop of human and world matter is not yet closed.”**

– Ernst Bloch, *Das Materialismusproblem* (tr. Mohr, 166)

I would like to consider the relation between Marx and Aristotle in another way, one advanced by Ernst Bloch in his book *Avicenna and the Aristotelian Left*. Like this dissertation, Bloch approaches Marx and Aristotle from the direction of their metaphysical affinities. His argument is essentially that Aristotle’s hylomorphism leaves us with a baseline ambiguity about whether form or matter holds metaphysical priority.<sup>329</sup> If form is prior, then the result is that form is what is most responsible for the generation of a primary substance, thus rendering matter as a sort of passive, inert canvas containing mere potentiality, an interpretation Bloch considers to be characteristic of Scholastic philosophers such as Aquinas and which he terms “right-wing Aristotelianism,”<sup>330</sup> However, if matter is prior, then matter is not just “formless” inert stuff but a dynamic, generative

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<sup>329</sup> This is something which has been noticed by scholars since antiquity (e.g., Strato)

<sup>330</sup> Bloch (2019: 16, 25); cf. Aquinas e.g. *De Prin.* 1.20-24, 1.62-71, 2.92-96, *Ques. Disp. Pot.* 3.4 *ad* 7; *Sum. Theo.* 1.45.2 *ad* 2 [on prime matter’s priority], see also Brower (2014: 58, 63 n.13, and 75) for a discussion of Aquinas’ material ontology from a perspective of contemporary analytic metaphysics.

thing which then generates a discernible form. Bloch considers this prioritization of matter to be more characteristic of Aristotle's successor Strato, the Islamic interpreters of Aristotle - especially Avicenna and Avicbron (pp. 17-23)<sup>331</sup> - along with certain heterodox Christian thinkers such as Giordano Bruno (pp. 31-32).<sup>332</sup> It is this alternative interpretation of hylomorphism which Bloch identifies as the ancestor of Marx's own dialectical materialism, labeling it "left-wing Aristotelianism." This is not some bare, mechanical notion of matter as one can find in radical Enlightenment thinkers such as d'Holbach and Diderot, which still takes matter as fundamentally inert.<sup>333</sup> Matter instead is bent towards constant development and actualization (Bloch 1985: 470-478 [tr. in Moir 160-166]). The material world is not bound by a static, pre-given set of forms but develops continually, generating new, hitherto unseen forms (Bloch 1985: 475; Moir 2020: 155-157), an enriched or "speculative" materialism which Bloch felt attracted towards since he was 17 in his first published essay "On Force and its Essence."<sup>334</sup> While Bruno takes this idea in a more cosmic direction with theories of multiple worlds, this can be applied in a political context, too, and Bloch's essential thesis is that it is this view of matter that undergirds Marx and Engel's own, "dialectical" materialism.

One way to think about this ambiguity in Aristotle's hylomorphism, and the divergent interpretative traditions around it, is to consider which of the principles contains activity. Under right-wing Aristotelianism, it is form which imparts activity onto matter. Under left-wing Aristotelianism, matter itself contains the active principle and then adopts a form. While Marx and Engels were engaged in the *Materialismusstreit*, Bloch points to Aristotle as the common ancestor

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<sup>331</sup> Eg. Avicenna, *The Metaphysics of the Healing*, 30, 335-336

<sup>332</sup> See also Hegel *Lect. Hist. Phil.* 3:127. [tr. Haldane and Simpson 1983].

<sup>333</sup> For **d'Holbach** see d'Holbach (1999: 15), Hämäläinen (2017: 64 ff.). For **Diderot**, especially his debt to Epicureans (particularly Lucretius), see Diderot's article 'Epicurisme ou Epicurisme', in his *Encyclopédie* V.782; and his *Lettre sur les aveugles* [Letter on the Blind] in *Early Philosophical Writings* (1916: 111-114); see also Holley (2015: 1107-1124, esp. 1115-1123); Black (2000: 39-58, esp. 40). Cf. Mehlman (1979).

<sup>334</sup> 1902, see Zudeick 1987: 19-20, also Moir 2020: 49-50

of both sides of the debate, with the ambiguity of his hylomorphism as the *ur*-problem that leads to the whole debate.

Bloch derives far reaching political ramifications from understanding matter as that which contains the active principle. Most fundamentally, humans and our various predilections are far more dynamic and malleable than what conservative theorists suppose, and how we organize ourselves (and thus ultimately how we organize our matter) is something that can develop in previously unknown ways, providing a materialist backing for various forms of utopian goals. The *polis* and radical democracy did not always exist in Greece and would have been difficult for Archaic Greeks to even imagine in reality, until one day it did exist. So too, Marx and Bloch would insist, communist society is something difficult to even imagine, until one day it does develop.

This debate over the nature of matter is critical to understanding what Bloch takes to be both distinctive and unifying of Marxism as “scientific socialism” and “critically utopian.” Somebody who only looks at the world with an eye towards scientific classification and analysis does properly place matter at the center of their analysis, but it can lead to mere description, inhumane totalizing, and sterile bureaucratization without any larger goal or motivating *ethos* (the dangers of “cold-stream socialism”). Somebody who only looks at the world with an eye towards pursuing what they consider just and good goals is admirable in intentions, but their inability to look at the material composition can lead to forms of Jacobinism and other overly romantic extravagancies which can do much to undermine their otherwise laudable goals (a pitfall for “warm-stream socialism”). However, when Marx’s non-mechanical materialism is incorporated, one is able to scientifically analyze the world into categories but also comprehend that these classifications are capable of dialectical development, change which we can bring about through our own intellect and actions.

Consider how this sort of dialectical thinking can proceed in the case of Aristotle. Much of the *Politics* does indeed take the form of classification and analysis. Whether this takes the form of enumerating various permutations of certain constitutional forms or tracing possible lines of constitutional development, much of his text is on the cold analysis of the *polis* and its various causes. However, this does not adequately describe what he does in Books II, VII, or VIII of the *Politics*, which appear to consider what would count as “the best” regime, the one we should actually aim for. Specifically, this does not explain his dismissal of Plato’s concept of the Philosopher-king and the designs of other political thinkers. Instead, the danger of Plato’s and Hippodamus’ designs are that they are unable to adjust themselves and develop in response to further developments in technology and adapt itself to the obtaining material world. Both Plato and Hippodamus imagine their designs to begin from complete scratch, treating the material cause of the *polis* (human beings) as merely passive wax to be ordered and grouped in accordance with some pre-conceived idea. This issue is particularly acute in the case of Plato, as what dictates the construction of the Kallipolis is instruction from a transcendent Form [the Good], one beyond “even being in rank and power,” (*Rep.* VI.509b8–10), which the Philosopher-Ruler merely transcribes into decrees.

Bloch’s interpretation of Aristotle’s relation to Marx takes the form of a philosophical genealogy, tracing the development of two divergent lines of thought arising from a puzzle in Aristotle’s metaphysics. It is far beyond the scope of this dissertation to consider the veracity of all of Bloch’s claims about the philosophical history of materialism, particularly as this history progresses through Medieval Christian and Islamic philosophy, but at the least it serves as a helpful complement to the lines I attempt to establish between Aristotle, Marx, and forms of radical politics. Even if one may disagree with Bloch on the exact contours of Islamic philosophy, he

compellingly establishes that Aristotle's metaphysics can be leveraged as a foundation for Marx's own thinking, including his view of communism.

What is distinctive about my approach is that, compared to Bloch, once we consider Aristotle's view of truth and the deep semantics of what establishes true statements in political science, we see a connection between his view of capacital actualization and his various meta-ethical commitments. This connection is neatly expressible in the form of the **Dunamis Principle**, and my position is that **DP** is readily adaptable for Marx and goes some way to explaining his observations on the naturalization of various divisions of labor, his more speculative comments on communist life, and even why we ought to pursue a communist society in the first place. While Bloch concentrates on whether matter is itself active or passive as a way to metaphysically ground utopian desires in general, I concentrate on how the development of capacities in human beings motivates Marx's particular political commitments. Both, I posit, offer valuable portraits of Marx's Aristotelian heritage.

Moreover, in **Chapter 5** I considered Aristotle's remarks on soul-heat, a corporeal basis for vitality in matter and one which appears to contain even divinity. Bloch, in both *Das Materialismusproblem* and *Avicenna and the Aristotelian Left*, focuses on the revolutionary potential of the idea of *entelechy* (Moir 2020: 50, 66, 141-144). However, while he thinks the Aristotelian tradition and its main concepts hold extraordinary potential, he still interprets Aristotle himself as seeing matter as ultimate passive and receiving the "stamp of form" instead of matter possessing some generative force within it to instantiate universals on its own (Bloch 1985: 140).

Bloch, in other words, acknowledges that he is heavily revising Aristotelian ontology, much as Marx, instead of accepting the accusation he had "turned Hegel on his head," claimed to have found Hegel *already* on his head, flipped Hegel put back firmly on his own two feet, and sent

him marching forward. However, given what we examined in **Chapter 5**, and how central a role the material of soul-heat plays in Aristotle's system, perhaps Left Aristotelianism is not quite as revisionary as even its proponents take it to be. At any rate, we have numerous passages from the *History of Animals*, *Generation of Animals*, *De Mundo*, *De Motu Animalium*, and testimonies from ones like Cicero to suggest Aristotle's matter is too dynamic for us to give Right Aristotelians an uncontested claim to developing Aristotle's hylomorphism.

### §5 - Aristotle in the anarchist tradition

[T96] The universe bears witness to an ever-striving, developing — not merely 'moving' — substance, whose most dynamic and creative attribute is its ceaseless capacity for self-organization into increasingly complex forms. Natural fecundity originates primarily from growth, not from spatial 'changes' in location. (Murray Bookchin, *The Ecology of Freedom*, 357)

So, it seems as though Aristotle can work well in a broadly center-left platform that can be described as either social democratic or social liberal. I also suggest that the influence of Aristotle's political philosophy (in the relevant respects I have laid out) has an influence on currents "further" on the political left. We saw how this can occur in Marxism. However, arguably Aristotle's most intriguing (and least studied) impact has been on anarchism, and I will end this dissertation considering perhaps the most original reception of Aristotle: the radical municipalism and eco-anarchism of Murray Bookchin.

To see how Aristotle might relate to anarchism, consider the following hypothetical. Upon further reflection and investigation, it may turn out that (in a properly ordered society with sufficiently advanced technology) the list of things that can help people maximize their capacities is so diverse that society should best be decentralized and let people decide for themselves. This could still recognize political involvement to be a common thing that helps one flourish, but imposing too extensive a list on people may not actually encourage people to flourish. If one considers republican perfectionism to be coercive because of its detailed prescriptions (rooted in a too qualified notion of human nature), then it is difficult to describe this alternate political vision as coercive. However, when paired with an idea that two reasons for this diversity of external goods is because political society and human activity more generally are deeply tied to the environment and humans are capable of an especially wide variety of activities and relations that are fulfilling inside these environments, then we see the scientific character I try to model in this dissertation still quite readily.

Interestingly enough, and as a demonstration of the wide applicability of Aristoteleian politics, this alternative political theory (sensitivity to the environment, endorsement of smaller democratic societies like a Greek *polis*, rejection of coercive teleology) bears a striking resemblance to both Murray Bookchin's post-scarcity anarchism and libertarian municipalism. Bookchin saw utopia as non-repressive and libertarian. His utopian dream would make it so that humanity threw off its alienated, coerced relationships and return to a view of humanity envisioned by Marx in his *1844 Manuscripts*. However, Bookchin (1977) provides a highly important clarification about the role of technology:

[T97] This is not a return to some primitive habitat or nature. We are not talking about primitive communism or prehistoric society as such because human relationships with

nature are necessarily mediated by science, technology, and knowledge; philosophy is thus technics as first philosophy.<sup>335</sup>

Bookchin was open about his admiration of Aristotle's *Politics* and the extent to which the ambiguous social ontology of the *polis* influenced his own eco-politics.<sup>336</sup> He saw this ambiguous ontology as a helpful corrective to the "lifestyle anarchism" dominant among anarchists and more theoretically a rebuttal to Deleuzian theory. It is not, for Bookchin, the mere satiation of our various individual "desiring machines" (*Anti-Oedipus*) that liberates us; he is more committed to the idea that humans can engage in non-repressive relationships and structuring. Bookchin is highly polemical against what he considers to be this vacuous, degenerate form of anarchism which holds superficial appeal for bourgeois young people and not much more. He blisteringly describes this lifestyle anarchism as "finding its principal expression in spray-can graffiti, post-modernist nihilism, antirationalism, neoprimitivism, anti-technologist, neo-Situationist 'cultural terrorism', mysticism, and a 'practice' of staging Foucauldian 'personal insurrections,'" (*Social Anarchism or Lifestyle Anarchism*, p.15).

Further, like Aristotle's own understanding of *technae*, Bookchin sees scientific knowledge and technology as a path to greater and more widespread flourishing along with the elimination of scarcity. The ideal *polis* that Aristotle builds in *Politics* VII and VIII avoids becoming too large and as unwieldy a city as Babylon, but throughout he intends for his smaller *polis* to be built in accordance with the height of Greek science. The chapters he spends discussing the importance of

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<sup>335</sup> Bookchin as well advanced a number of important critiques of certain dominant streams of American Marxist thinking (especially the Maoist-influenced Progressive Labor Party in the Students for a Democratic Society), criticizing it for its economism and overweening faith in technology to solve societal issues instead of the hard work of reconfiguring our relationship with the environment and (by extension, for Bookchin) ourselves. (Bookchin 1971; de Souza 2012: 14-16).

<sup>336</sup> Bookchin (1992, 1995, 1982: Introduction, Chs. 1 – 3).



climate and environment (VII.7 1327b18-1328a17; VII.11 1330a34-b15) for constructing a *polis* is good proof of this, along with his confidence on humanity utilizing our knowledge to acquire happiness in more and more effective ways (*Pol.* II.8). This commitment to the leveraging of technology for human aims, however, brought him into plenty of criticism from other ecological anarchists, who claim that his neo-Aristotelian commitments make his anarchism overly anthropocentric.<sup>337</sup>

Bookchin's embrace of neo-Aristotelian views, however, is not just a product of some prior antiquarianism. He uses it to effect what he saw as a needed intervention in anarchist thought as it existed in the late 20th Century North America and Europe, making ancient Hellenic thought a worthy rival to the influence of Classical Indian and Classical Chinese schools of thought among anarchist activists. To be clear, Bookchin highly appreciated the extent to which these philosophic influences (particularly Taoism) helped counteract the conceptual alienation between humans and nature encouraged by the Enlightenment and its attendant mechanistic materialism,<sup>338</sup> but he also fundamentally wants to maintain the commitment to scientific investigation championed by the Enlightenment along with its embrace of technology as a medium for social progress.

The problem Bookchin sees is that Taoism, while providing a process ontology resistant to the atomizing and repressive forces of capitalism and environmental exploitation,<sup>339</sup> is unable to provide a notion of human progress. While it can acknowledge the interdependence of humans (and really all of reality), it is unable to provide a basis for political struggle. While Bookchin

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<sup>337</sup> Kovel (1997); Rudy and Light (1995: 75-106, esp. 77-81)

<sup>338</sup> Connections which have been further developed by Deep Ecologists, see Sylvan and Bennett (1988), though see Cooper (1994).

<sup>339</sup> A connection between ontology and capitalism that Hall has explored several times, see Hall (1978, 1982, 1983), though also see Ford's criticism (1978) and Hall's response (1979). Ford's criticism is particularly directed towards whether it is accurate to draw so many comparisons between Taoist philosophy and Whitehead's process ontology, but the debunking of these connections leads to a downstream undermining of Hall's optimism about how environmentally sensitive Taoism is.

would disagree with Hegel on many matters, he in essence agrees with Hegel's description of Taoism as merely "the rationality of primitive thought which produces and dominates the universe, just as the mental domination over the body" and that the constant interplay between Dark (Yin) and Light (Yang) are unable to lead to any further development.<sup>340</sup> Hegel argues there is no "direction" to the activity of the universe in Taoism, and Bookchin essentially agrees.<sup>341</sup>

He finds Taoism to have the right start in much of its ontology, but he thinks it is insufficient to motivate a politics. The Enlightenment, in contrast, certainly has proven able to provide numerous and powerful ideas of human progress to drive political struggle, a potency which much impresses Bookchin. The idea of the rights-bearing rational individual coming out of a "self-imposed minority" and gaining "the courage to use [their] own understanding" clearly holds monumental social and political ramifications (Kant, *What is Enlightenment?*). However, he finds the metaphysical background of many Enlightenment philosophers to be utterly insufficient for undergirding this idea of political struggle. Indeed, to the extent that the rational individual is separated from nature in Enlightenment thought, he sees the Enlightenment as quite violent and capable of giving rise instead to various forms of oppression. In this way, he essentially finds himself in agreement with much of the early Frankfurt School's critique of Enlightenment rationality as providing a foundation to modern imperialism, patriarchy, and scientific racism.

Bookchin wants to find a synthesis between these two honorable traditions. This synthesis, seeing humans as both enmeshed in nature and engineers of it, is achieved in Hellenic thought. In "The Concept of Ecotechnologies and Ecocommunities" he argues that:

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<sup>340</sup> *Lectures on the Philosophy of Religion* p. 116, see also Kim (1978: 176-177) and Wong (2011)

<sup>341</sup> It should be noted that, while the connection between Taoism and anarchism is long-standing, the connection has often been assumed and not seriously considered (Ames 1983; Bender 1983; Clarke 2002). Recently, there have been attempts to show how Taoism can lead to non-anarchist, yet still non-authoritarian, forms of governance (Feldt 2010).

[T98] If we must anchor the new quest for a human habitat in philosophical traditions of a pre-industrial era, it would seem that Hellenic rather than Asian thought is more relevant, even if it tends to receive scant attention [in these debates]. The fascinating Hellenic blend of metaphysical speculation with empirical study, of qualitative with quantitative science, and of nature with social phenomena is rarely equaled by Asian thinkers and religious teachers. We still ‘talk Greek’, as it were, when we speak of ‘ecology’, ‘technology’, and ‘economics’. We also ‘think Greek’ when we impute ‘good’ or ‘evil’, ‘just’ or ‘unjust’, ‘human’ or ‘inhuman’ - in short an ethical dimension – to data that conventional science views as hard facts. Although modern science can justly claim its origins in Hellenic philosophy, so too can the new technologists and communitarians who seek a human habitat, perhaps with even greater validity. (p. 75)

Bookchin is putting his finger on the way in which the Greek philosophers saw nature as more than a system of bare mechanical causation. It has an ethical bent to it, one directly relevant to our own wellbeing. As Bookchin puts it, there is a mix of “qualitative and quantitative science” in Greek philosophy. We saw this mixture all throughout **Chapter 4**. First, we saw it with Aristotle’s concept of chance events as something that is not simply a random or accidental event but one relevant to some *telos*, either a human *telos* or a *telos* supplied by nature. Secondly, we saw that this mixture of the quantitative and qualitative was veritable tradition in Aristotle’s predecessors (particularly Thales); Aristotle used these predecessors as a source for *endoxa*, especially as when it came to their shared commitment to an underlying consciousness (either a divine principle or *nous*) which affects all things, intuitions which Aristotle never fully rejects but merely tries to refine and place on a stronger basis, something demonstrated in his zoological works like *History of Animals* Books V (V.32 557b6-13) and VIII (*HA* VIII.1 588b4-12 ). Thirdly, and most radically,

we saw that Aristotle places even his **Dunamis Principle** on a theological basis, claiming that (according to *De Mundo* 6) the divine force in all material reality has an aim towards bringing all things “συντελουμένων,” literally “to perfection.” Aristotle finds this intelligence and goal-directed behavior in the causal relationships of nature itself, in both animate and inanimate objects. Indeed, this quasi-pantheistic belief is what undergirds why he thinks it is impossible to truly draw a distinction between life and non-life.

Now, Bookchin is not attempting to make anarchism pantheistic, but he does want to overcome the respective shortcomings of both Classical Chinese and Enlightenment philosophical traditions as he understood them, and ancient Hellenistic philosophy provides the tools to do that.

What is fascinating is that, although embracing science and technological advancement, he proceeds to provide an argument for much smaller, far more democratic arrangements than Nussbaum does in ways. Nussbaum accepts the existence of a large, Nordic-style social democratic welfare state. It would be a complex state no doubt with plenty of bureaucracy. However, Bookchin sees a different project in Aristotle and his commitment to **DP**. He says that “Despite the high degree of secularism and factual systemization that Greek thought (especially in Aristotle’s extant writings) introduced into the western intellectual tradition, its center was eminently ethical and its orientation was human and social.” What he thinks is especially important to understand is that “human” here means specifically “human-scale,” if it is fit for humans (or, in the language of Aristotle, if it is *kalon*). It is with this use of ‘human’ in mind that he focuses on Aristotle describing the ideal *polis* as being one that “can be taken in at a single view.” (*Pol.* VII.4 1326b14-25). This is the “human” scale for two reasons. The first is that “a single view” (perhaps on top of a hill) can still encompass a society large enough to be self-sufficient and thus provide the basic needs.

However, the primary reason for Aristotle preferring this arrangement is because this smallness of scale allows one to choose the best politicians and try cases most justly, to be truly “well-governed”:

[T99] But in order to decide lawsuits and distribute offices on the basis of merit, each citizen must know what sorts of people the other citizens are, since where this does not happen to be the case the business of electing officials and trying lawsuits is bound to go badly; haphazard decision is unjust in both matters, and this must obviously prevail in an excessively numerous community. (tr. Reeve)<sup>342</sup>

When we vote for somebody to lead, our vote should be more than a drop in a huge ocean. In a large and especially complex governmental system, our vote may not even be that but just be rendered entirely meaningless. Virtually every vote past what gives a presidential candidate a plurality in a state is functionally meaningless, since most states give all electoral votes to whomever wins the most votes, and the electoral votes are what decides who wins the presidency. Further, even if we get our preferred candidate, this person is usually entirely remote to us. Even before becoming a politician they likely came from positions of immense prestige in academia, business, or law, and this politician (despite the gladhanding, selfies, and emails) is likely aware of our existence only insofar as they know we are a vote who helped them achieve a majority in some state or somebody who provided a particularly large donation.<sup>343</sup> They are aware of us, in other words, only insofar as we are an mathematical abstraction or an economic agent.

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<sup>342</sup> πρὸς δὲ τὸ κρίνειν περὶ τῶν δικαίων καὶ πρὸς τὸ τὰς ἀρχὰς διανέμειν κατ' ἀξίαν ἀναγκαῖον γνωρίζειν ἀλλήλους, ποῖοί τινές εἰσι, τοὺς πολίτας, ὡς ὅπου τοῦτο μὴ συμβαίνει γίνεσθαι, φαύλως ἀνάγκη γίνεσθαι τὰ περὶ τὰς ἀρχὰς καὶ τὰς κρίσεις. περὶ ἀμφοτέρω γὰρ οὐ δίκαιον αὐτοσχεδιάζειν, ὅπερ ἐν τῇ πολυανθρωπίᾳ τῇ λίαν ὑπάρχει φανερῶς.

<sup>343</sup> The importance of this familiarity in making certain large political decisions can also be seen in the previous discussion of Aristotle's zoning of private property in the *Politics*, see VII.10 1330a9-24.

Aristotle and Bookchin both take it that our character as political animals must amount to something more than this thin, meagre ritual, and they are intent on building a city that gives us something approaching true political participation. Bookchin's embrace of "libertarian municipalism" is done with Aristotle's framing in mind, because it is the philosophy that aims to promote "individual control over the affairs of the community and the exercise of individual human powers in the social realm." Bookchin credits Aristotle with providing the key alteration to Plato's own utopianism that allows later Hellenic political thinking to grow. After discussing the constitution of Magnesia in Plato's *Laws*, Bookchin goes on to say, "Aristotle is more secular: he replaces Plato's mysticism by strictly ethical premises. But these very premises provide him with his uniquely Hellenic stance – a moral conception of what we (borrowing our social terminology from zoology) designate as a "habitat," (75). The goal of the anarchist to achieve those small, radically democratic societies, a new *polis* (Bookchin uses the Greek word freely) that would all to "realize their humanity, that is to say, to actualize their potentialities for rational judgment." It is this shared goal in a society that is what "clearly unites an Aristotle with a Kropotkin," (76).<sup>344</sup>

**DP** appears in a strong way in Bookchin, as can hopefully already be gathered. There is a "direction" in nature, one that pushes towards greater realization of capacities. Bookchin sees the apparent self-organization of nature as a profound basis on which to build an anarchist life.

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<sup>344</sup> Additionally, Bookchin, unlike many other interpreters (for example, MacIntyre 2007: 153), recognizes that this *polis* would have plenty of room for disagreement. Aristotle allows for diverse opinion in the *polis*, and the presence of disagreement is presumed in several cases such as his proposal to divide land up so that each citizen owned property in town and in the countryside (VII.10 1330a9-22), with the aim being that people may deliberate more wisely when they have material interests across the *polis* and thus achieve "greater unanimity." While Aristotle, like Plato, did not see conflict as intrinsically good, his contentment with just striving for greater unanimity rather than some Platonic level of social unity speaks to his recognition that the presence of dissent is a practically inevitable part of limited human beings deliberating about complex and grave matters. Others who have emphasized Aristotle's acceptance of reasonable dissent in the *polis* include Bickford (1996), Skultety (2006, 2009), and Yack (1985, 1993). One may also add that, even in his ideal *polis* with his stipulations that the citizens are virtuous and well educated, Aristotle still assumes material or economic interests will be a strong factor in any deliberation, even by *phronomoi*. This accords with his general attentiveness (discussed at various places in this dissertation) towards the various material causes of the *polis*.

Importantly, he thinks this drive to cooperate is something especially characteristic of humans, such that we see socializing as part of a life worth living. So, there are two respects in which Bookchin embraces **DP**. The first way **DP** is prominent in Bookchin's thinking is the extent to which he sees the goal of politics, and especially the goal of both communitarians and anarchists, is to maximize human capacity. A political arrangement is good if it lifts as many **Is** as possible for our **Rs** to be realized.

However, **DP** is not only an ethical claim but also says something about nature, too. **DP** assumes that a capacity (especially a rational capacity) will realize itself unless an impediment gets in its way. Nature "pushes" towards the direction of making all things develop. There is a history in anarchist thought of seeing nature in this dynamic, directed way. Kropotkin's ecological writings, including his idea that mutual aid and not predation is the usual course of nature, is likely the best instance. Bookchin, in his endorsement of a Greek concept of "science" as both descriptive and normative makes it likely he adopts **DP** in this respect too, but if there is any doubt, in his *The Ecology of Freedom* (usually seen as his *magnum opus*) Bookchin adopts a description of nature that bears an unmistakable echo of *De Mundo*:

[T100] The universe bears witness to an ever-striving, developing — not merely 'moving' — substance, whose most dynamic and creative attribute is its ceaseless capacity for self-organization into increasingly complex forms. Natural fecundity originates primarily from growth, not from spatial 'changes' in location (357).

We have now seen three different main sorts of afterlives of the **Dunamis Principle** in political philosophy. None of these authors take on **DP** completely uncritically as I hope to have demonstrated, yet in all three we see both their quite explicit debts to Aristotle and (in the cases of

Marx, Bloch, and Bookchin) an understanding of the connection between humanity and the natural world which is fundamentally consonant with the hylomorphism of **DP**.



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