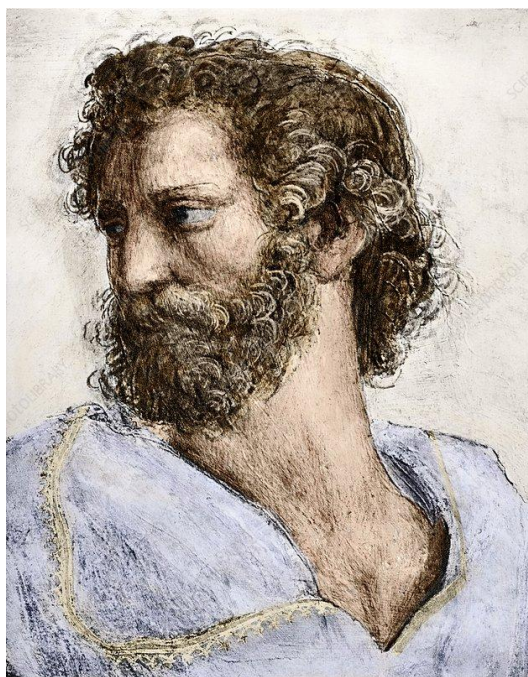


BOOK OF ABSTRACTS  
FIRST INTERNATIONAL ARISTOTELIAN CONFERENCE  
2<sup>ND</sup> TO 4<sup>TH</sup> OF JULY, 2025  
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**Individual presentations**  
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**Alexandra V. Alván León**

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### **Genus and Ordered Series Revisited**

According to a widespread interpretation of, among other passages, *Metaphysics* B 3 999a6–14, Aristotle would have rejected the ‘existence’ of a genus “in the case of things in which the distinction of prior and posterior is present”, i.e. in the case of ordered series. I wish to challenge this interpretation, and to argue instead that Aristotle considers it necessary to accept genera in the case of ordered series. I construct my main argument in two relatively independent, albeit complementary steps. First, I defend a reading of *Metaph.* B 3 999a6–14 as rejecting not genera altogether in the case of ordered series, but rather as rejecting the ‘Platonic’ claim that the genera of ordered series might subsist independently from the members of the series—this is what A. C. Lloyd called the rejection of the metaphysical thesis in his influential paper “Genus, Species and Ordered Series in Aristotle” (1962). I further intend to show, that Aristotle actually suggests that ordered series are paradigmatic cases in which one *should expect* to find genera. Second, I address the claim that a genus ought to be predicated univocally and essentially of its species, and explain how this is possible in the case of ordered series. This part of the argument focuses on soul, more precisely on Aristotle’s comparison in *De anima* II 3 (414b20–33) of the generic accounts of soul and figure—both cases of phenomena constituting ordered series. This way, by first dismantling Aristotle’s alleged rejection of genera in the case of ordered series, and second by showing the plausibility of Aristotle himself having assumed a genus in the case of the ordered series of souls, I intend to correct a common misunderstanding both of *Metaph.* B 3 and *De anima* II 3. But, beyond attempting to correct these misconceptions, the more important aim of this paper is to shed new light on the notion of ‘genus’ in Aristotle. Prejudiced by the later development and entrenchment of the taxonomical system of classification exemplified by the Porphyrian tree, and bequeathed to us by the work of Boethius, there has been—and still is—a tendency, almost a knee-jerk reaction, to project certain assumptions regarding the function of genus and species on to the Aristotelian philosophy without the proper justification. My proposal is to counteract this tendency by focusing on Aristotle’s own use of the term ‘*genos*’ in the abovementioned texts, in order to arrive at a more accurate understanding of the Aristotelian genus. This by no means implies renouncing the classificatory function of genus—nor denying the importance of Porphyry’s and Boethius’ interpretations, for that matter—but rather revisiting said classificatory function from a perspective inherent to Aristotelian philosophy. This implies both the strict rejection of any genera subsisting independently from their species à la Platonic Ideas, and a serious reconsideration of the relationship between genera, species and differentiae—particularly of the method of *genus* and *differentia* as a method of definition. This reconsideration of the method of definition is instrumental in accepting the generic account of soul in *De anima* II 3 as a valid definition of soul, and therefore in accepting the claim that Aristotle does assume genera in the case of ordered series. Although the paper concentrates on the case of soul as presented in *De anima*, its results are by no means restricted to *De anima*. On the contrary, the consequences



of accepting my claim would be of significance for the interpretation of all other areas of Aristotelian philosophy where we find ordered series.

**Christina Anagnostidou**

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### **Prime matter in Aristotelian tradition and its reception in the writings of John Philoponus**

This paper examines the emergence of the concept of prime matter in Aristotle's works and its reception in the writings of John Philoponus. The development of the notion of prime matter in Aristotle's works is examined in the context of substantial transformations (*Phys.* I, 7-9; *GC* I, 3) and reciprocal action and passion (ποιεῖν καὶ πάσχειν *GC* I, 7). Philoponus' rejection of the traditional concept of prime matter is a significant departure from this view.

In Aristotle's system, matter is defined as a passive principle that, in conjunction with form, constitutes substances. For Aristotle, sensible substances cannot be understood separately – by abstraction – from the processes that give rise to them. The idea of continuous transformation is at the core of his understanding of the world, as sensible substances are seen as dynamic entities in a perpetual state of becoming, defined by the principles of change and transformation.

However, Philoponus presents a notable shift from this Aristotelian model. In his works, particularly in the *Contra Proclum*, Philoponus challenges the traditional understanding of prime matter (*materia prima*) as an incorporeal, indeterminate substrate. Instead, he introduces the notion of a three-dimensional, corporeal matter that can exist independently of the ongoing processes of eternal transformation that the Aristotelian tradition emphasizes. For Philoponus, matter is not a mere passive, indeterminate principle but has a specific, determinate nature that allows it to play a vital role in the natural world.

Philoponus argues that matter must be conceived as three-dimensional in order to account for the natural phenomena of generation and growth. Philoponus's reinterpretation of the traditional Aristotelian concepts involves a critique of the concept of prime matter as purely passive and undetermined. In the Neoplatonic tradition, prime matter was often seen as an obscure, undefined entity, but Philoponus moved towards a more positive determination of matter.

Central to Philoponus's new conception of matter is the idea of its "aptitude" (ἐπιτηδειότης) and "latitude" (πλάτος), terms that describe the material potential for change. These concepts are fundamental to his interpretation of the processes of mixing and the transformations of quantity and quality. The three-dimensional nature of matter, in Philoponus's view, is essential for explaining the fixed relationships between different elements and their capacity to undergo transformations. He argues that matter, in order to function as a substrate for generation and growth, must have a certain degree of positive determination. This positive determination is not merely a passive potential but an active capacity for receiving form and participating in natural processes.

Moreover, Philoponus's adaptation of the Neoplatonic idea of matter is not only a physical shift but also a theological one. His emphasis on a created, finite matter is closely related to his Christian views, where matter is not eternal but created by God. This conception contrasts with Aristotle's model of an eternal cosmos that has no beginning or end.

Book IV of Philoponus' *Contra Aristotelem* introduces the concept of creation *ex nihilo* and challenges Aristotle's model of generation. Within this fourth book, Philoponus refers to his new conception of three-dimensional matter. The fact that he discusses his novel idea of three-dimensional matter in the context of creation *ex nihilo* supports the claim that the tridimensionality of the substrate contributes to the Christian metaphysics of creation.

The product of divine creation, by its very nature as created, can only be described in positive terms. The absolute body, in this regard, will thus appear as created.

Philoponus's account of matter plays a crucial role in his broader project of reconciling Christian theology with natural philosophy. By arguing for a tridimensional, corporeal matter, he provides a framework that supports the Christian idea of creation *ex nihilo* and counters the Aristotelian idea of an eternal, self-sustaining universe. The incorporation of Christian themes into his natural philosophy highlights the interplay between philosophy and theology in the late antique period and demonstrates the ways in which philosophical ideas were adapted to serve theological purposes.

**Tom Angier**

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### **The Politics of Perfection: An Aristotelian Vision for the Modern State**

A peculiarity of current Anglo-analytic philosophy is that – while it is highly receptive to Aristotelian ideas and arguments in ethics – it remains highly resistant to them at the level of political theory. This clearly goes against Aristotle’s own view that moral and political values are strongly continuous; but it also deprives political theory of a vital analytical resource, without which, as I shall argue, it cannot arrive at an adequate normative conception of the modern State.

My paper will draw on both Aristotelian and neo-Aristotelian texts to argue that political communities cannot survive – let alone thrive – without putting a concern for virtue, along with other forms of perfection, at their heart. Here are some key themes I shall explore:

- (1) Guaranteeing political rights is an essential aspect of any just political community. But *contra* most recent political thought, rights are not the proper focus of a healthy State. Rather, they are essential conditions of positive, virtuous, action. So insofar as a ‘right’ undermines such action, it is a pseudo-right. And insofar as rights are valued systematically above virtue, they have become politically dysfunctional.
- (2) States have an obligation to protect and encourage virtue among their citizens. Like the citizenry, however, the State is liable to vices of judgement and action. It is an imperfect political actor. So in order to promote virtue, it should place great weight on the principle of subsidiarity, encouraging intermediary institutions to play their proper part in inculcating and sustaining a virtuous, flourishing, nation.
- (3) One of the most salient institutions here is that of the family (which precedes the State). So one of the key tasks of the virtuous polity is to show strong regard for the family. Any policies that undermine the proper authority of parents, or the good of children, are vicious. Indeed, I shall argue for a ‘children-first’ ethos: a virtuous nation must safeguard and promote the good of children *above all*.

Along these and other dimensions I shall show how the Aristotelian tradition helps us formulate a robust, realistic, politics of virtue for the modern State. This perfectionist intervention will serve as a strong challenge to anti-perfectionist liberalism, which has (I shall maintain) run its course both theoretically and practically.

**Dafni Argyri**

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### **The Concept of Memory in Alexander of Aphrodisias**

Although there has been an increasing interest in the study of memory in ancient philosophy, the development of the concept in the post-Aristotelian tradition is arguably a neglected research field. With this contribution I intend to focus on the reception of Aristotelian memory by Alexander of Aphrodisias. As I will argue, Alexander developed his account of memory in an original manner and his distinct ramifications on Aristotle's psychology affected greatly his understanding of memory and the related concept of recollection.

First, I will present the sources of information about Alexander's views on memory, since he did not author a commentary on Aristotle's *De memoria et reminiscentia*. Preliminary indications for Alexander's interest in the subject are found among his comments on the *Topics*, a rather unexpected source of evidence. In that work he refutes various definitions of the concept originating in the previous philosophical tradition through the dialectical tools introduced in the context of the Aristotelian treatise. For the most part, though, the reconstruction of his views is achieved through the careful study of his psychological works in our disposition, and also from experts in his extant commentaries where memory is pertinent to the matter at hand, such as the first chapter of the first book of the *Meta- physics*.

Next, I will discuss the main features of Alexander's account about memory and I will bring forward the aspects of his approach which differ from Aristotle's exposition in the *De memoria*. According to Alexander, memory is most appropriately defined as the activity of a corresponding soul capacity. Therefore, he postulates the existence of a distinct mnemonic capacity in the perceptive soul, a capacity closely connected to sense perception and *phantasia*. In particular, Alexander introduces certain criteria for a soul capacity in the context of his psychology which memory is proven to fulfill, as does *phantasia*. Most importantly, memory as a capacity has its own corresponding object. The object of memory is the same in subject matter as the object of *phantasia*, i.e. the remnant in the soul that is the result of the activity of sense perception. Still, as an object of memory it is unique in that memory regards it as a copy (εἰκὼν) of an external object which derives from a past perceptive experience. On these grounds, in his *De anima* treatise he bluntly renounces the Stoic explanation of these notions. He accuses the Stoics of confusing memory with sense perception and *phantasia*, due to their lack of the appropriate conceptual apparatus.

Moreover, while he preserves the clear cut distinction between memory and recollection introduced by Aristotle, Alexander is considerably less interested in recollection and he seems to attribute a more limited role to it than Aristotle did. He strips off the term from the epistemological load it carried in Platonism and he explains recollection as a specific mechanism applied mainly in mnemotechnics. In parallel, he emphasizes greatly memory's role in knowledge acquisition, in the spirit of a true Aristotelian. Memory's role in concept formation is paramount for Alexander, because it is memory which first spots the similarity (ὁμοίον) among the particular perceptibles and provides the ground for the formation of experience and the eventual abstraction of the universal by the rational soul. Thus, memory in humans marks the transition

between the lower and the higher soul capacities, and thus holds a pivotal role towards the attainment of universal concepts.

Overall, Alexander's treatment of memory stands out as a significant elaboration of Aristotle's account and it is characterized by certain features that mark off his notion from the one more broadly used later in the Neoplatonic schools of Late Antiquity.

Asli Avcan

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### The Role of “Proper Perception” in Aristotle’s Epistemology

In the opening lines of the *Metaphysics*, Aristotle rightly recognizes that the universal human desire for knowledge is manifested in the pleasure we take in perceptions. The perceptual capacity, as the most widespread form and common manifestation of life (with the exception of vegetative life), enables humans to experience a vast variety of perceptions that become the basis of their understanding of the real world. This point is clearly emphasized several times in the *Corpus Aristotelicum*. Furthermore, in the *Posterior Analytics*, Aristotle proposes a theory of science that is intellectual in nature but empirical in origin. This raises the question of how the rational nature of science can be compatible with its empirical origin. The present paper addresses this problem by exploring the interactions between Aristotle’s epistemology and psychology, drawing on his theory of perception (*aisthēsis*) as developed in *De Anima* and *De Sensu*. This investigation begins with an in-depth analysis of the proper activity of the five specific senses: vision, hearing, smell, taste, and touch. In accordance with the scientific methodology proposed by Aristotle himself, according to which each inquiry into a specific subject should begin with the most common and general characteristics, we believe that the way things function in the simplest case of perceptual cognition should not be irrelevant to higher forms of cognition. Since, for Aristotle, cognition (*gnōsis*) is not exclusive to humans but belongs to all animals possessing perceptual capacity, there is undoubtedly something remarkable in the study of the five specific senses. Based on a joint reading of *Posterior Analytics* II. 19 and the *De Anima*, this analysis of the senses leads to the following argument: the soul, as the first entelechy of a natural body equipped with organs, grounds its own cognitive operations. In other words, the soul, from its very first perceptual activity, initiates the complex and progressive process of cognition, which, passing through *phantasia*, culminates in *nous*. Thus, all cognitive activity is an *information* process originating in perception, even in “proper perception” (i.e., the perception of perceptible qualities such as color, sound, and odor, which are called “proper perceptibles” by Aristotle because they are specific to each of the five senses). In *De Anima* Aristotle defines perception as the capacity of receiving perceptible forms (*tōn aisthetōn eidōn*) without matter. This reception is discriminatory and therefore cognitive, as the senses receive perceptible qualities of the external objects as forms characterized by a certain *logos*. Obviously, proper perception differs from thought or science as a cognitive activity, because it does not involve the reception of substantial forms. Nevertheless, like thought and science, proper perception always entails a reception— or more precisely, a discrimination and even an abstraction— of forms. Aristotle’s empiricism is evidently more nuanced than one that would reduce all knowledge to perception. Aristotle clearly recognizes the importance of the rational capacity in the processing and interpretation of the content of perception. This does not mean, however, that the transition from perceptual cognition to *nous* is a sudden leap, but rather a continuous progression realized by the soul itself. This process begins with

the *internalization*, in the form of an *aisthēma*, of a perceptible quality inherent in an external real object. Each sense, which is a *logos*, discriminates its proper perceptibles as forms characterized also by a *logos*— such as colors for vision, sounds for hearing— without needing to receive the material substratum, thereby contributing to a unified perceptual system that makes higher cognitive states possible. As the foundation of all perception, proper perception enables the perception of both common perceptibles (such as change, rest, shape, and magnitude) and accidental perceptibles (such as the son of Diares), and opens the way to *phantasia* and, with certain restrictions, to *nous*. Thus, proper perception, in its discriminatory receptive capacity, lays the groundwork for the complex process of cognition in Aristotle's philosophy.



**Constança Barahona**

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### **Aristotelian Dialectics or the Butcher's New Tools**

Aristotle's *Topics* systemizes an approach to dialectics, offering rules and techniques that guide practitioners in formulating and evaluating arguments. One of its primary objectives is to establish definitions through dialectical reasoning, a process that seems to resonate with Plato's famous metaphor in the *Phaedrus* (265e1-3) of the dialectician as a butcher who cuts along the natural joints of reality. Plato's metaphor talks about the ideal of grasping the structure of reality as it is, but Aristotle's method shifts the focus to the tools within language by which we might achieve this precision. In this paper, I will examine how Aristotle's *Topics* provides a refined toolkit for "cutting" reality, enabling the practitioner to identify and articulate its natural divisions. While Plato emphasizes an intuitive grasp of the Forms, Aristotle grounds his methodology in practical reasoning and the art of *dialegesthai* (engaging in dialectical discourse). The *Topics* presents dialectics not as a means of recollection but as a structured practice for testing and refining concepts through the solution of definitional problems. Aristotle's dialectical inquiry involves examining *endoxa* (reputable opinions), with the help of tools applied by the philosopher in solving questions restricted to the four predicables, by testing definitions through structured argumentation, and progressively refining them in a peirastic fashion. By doing so, Aristotle's approach ensures that definitions are not merely imposed but emerge from a rigorous process of evaluation. A crucial aspect of Aristotle's dialectical methodology is its reliance on syllogistic reasoning and the systematic evaluation of arguments through predication, division, and classification. Unlike Plato's more rigid dichotomous division, Aristotle introduces a more flexible and context-sensitive method for arriving at definitions. The *Topics* hopes to train its users to navigate ambiguities, to identify essential characteristics, and to distinguish accidental from substantial properties. This method ensures that philosophical inquiry remains grounded syllogistical thinking rather than mere intuition. To illustrate this, I will examine concrete examples from the *Topics* where Aristotle refines definitions through dialectical engagement. For instance, Aristotle's discussion of terms such as "virtue" or "justice" demonstrates how dialectical testing sharpens conceptual clarity. This process not only refines the definitions themselves but also strengthens the practitioner's capacity for reasoning, reinforcing Aristotle's broader philosophical commitment to the development of intellectual virtue. The paper will consider the following questions: How do Aristotle's dialectical rules and strategies contribute to the process of dividing reality into its natural joints? To what extent does the methodology of the *Topics* align with or diverge from Plato's idealized vision of dialectics? And what does this tell us about Aristotle's approach to metaphysical inquiry? These questions will be explored by analyzing how Aristotle's method offers a more pragmatic and systematic alternative to Platonic dialectics, one that privileges argumentation and critical engagement over an *a priori* grasp of metaphysical structures. In conclusion, I will suggest that Aristotle's dialectical tools are not just theoretical abstractions but practical innovations that enhance our capacity to engage with and understand the world's intrinsic structure.

through dialogues. These tools empower “the butcher”, so to speak, to achieve the philosophical goal of dividing reality according to its natural joints, though with a distinctly Aristotelian precision and practicality. By refining dialectical techniques, Aristotle provides a methodological framework that remains central to philosophical discourse, influencing not only ancient and medieval logicians but also discussions on definition, predication, and the role of reasoning in debates.

### **Aristotle on Natural Contingency, Modality, and Biology**

Scholars have long noticed the tension between Aristotle's epistemology as described in the *Posterior Analytics* and his treatment of biology and natural sciences. According to the *Analytics*, not only must a scientific claim be based on self-evident principles and deduced by means of valid inferences, but it must also be about what 'cannot be otherwise' (*APo.I.2.71b9-16*). This requirement may be understood as meaning that a scientific claim must leave no room for exceptions. In modal terms, a scientific claim must be a necessity proposition and cannot be a contingency proposition, which instead would allow for things to be otherwise.

Yet, some scientific claims are true 'ὡς ἐπὶ τὸ πολὺ', commonly translated as 'for the most part'. These propositions express states of affairs that occur with some regularity and that do allow for exceptions: e.g., for the most part pigs have even-toed feet, even though some pigs are exceptionally born with odd-toed feet. Since for-the-most-part propositions leave room for exceptions, for-the-most-part propositions may seem to resemble contingency propositions more than necessity propositions. If so, they would fall short of the scientific standards of the *Analytics*. Nevertheless, they are apparently considered genuine scientific claims by Aristotle.

In this paper, building on previous contributions by Anagnostopoulos (1994), Henry (2015), and Striker (2022), I propose a reading of 'for the most part' as a modal operator that I call 'natural contingency': hence, for-the-most-part propositions are modalized propositions. This is striking both with a view to influential readings of Aristotle and with a view to positions defended today. Regarding the former, prominent reconstructions of Aristotle's modal logic (e.g. Patterson 1990, 1995; Malink 2006, 2013) do not consider 'for the most part' a modal operator. Regarding the latter, possible-worlds semantics, the most common semantics framework for modal logic today, is not fine-tuned enough to distinguish between natural contingency and simple contingency. Per possible-worlds semantics, since Napoleon, the pig, is even-toed in at least one, but not all possible worlds, Napoleon being even-toed would just be a contingent state of affairs, in a way not dissimilar to Napoleon being spotted or dirty. An alternative contemporary approach based on the notion of essence (Fine 1994) is also not satisfactory, as it does not distinguish between essential traits that feature in every instance of that essence, i.e., a triangle being three-edged, and those that can fail to manifest itself, i.e., a pig being even-toed.

My interpretation relies on a different semantics framework for Aristotle's modal propositions based on his theory of causality. On my reading, an Aristotelian modality is a function whose input is an assertoric proposition expressing a state of affairs and the output a proposition stating the causation that explains that state of affairs. In the statement 'it is necessary that triangles are three-edged', necessity works as a function whose input is the proposition 'triangles are three-edged' and the output is a proposition stating that the formal cause alone is responsible for the property being three-edged belonging to the triangle. In 'it is possible/contingent that houses are yellow', the input is the proposition 'houses are yellow' and the

output is a proposition stating that non-formal causes would explain the state of affairs of the houses being yellow, if such state of affairs were to obtain. In 'it is by natural contingency that pigs are even-toed', the input is the proposition 'pigs are even-toed' and the output a proposition stating that both formal and non-formal causes explain that state of affairs (cf. Henry 2015).

After arguing that natural contingency is a genuine modality for Aristotle and that, if we apply the right semantics framework, it can be coherently accounted for alongside other modalities like necessity and contingency, I show that Aristotle conceives of valid syllogisms with for-the-most-part propositions and that counterexamples found in the existing literature meant to demonstrate the invalidity of such syllogisms are misguided (contra Anagnostopoulos 1994: 272-5), because they do not consider how for-the-most-part propositions must be properly quantified in order to be part of a valid syllogism.

Then, I explore the role of for-the-most-part propositions as an epistemological device and argue that, because of their conversion rules as well as their semantics, they resemble necessity propositions more than contingency propositions, and, thus, they fit nicely into Aristotle's epistemological framework. First, since the rule of complementary conversion does not apply, for-the-most-part propositions, like necessity propositions, cannot be turned into propositions of the same modality, quantity, but opposite quality, while contingency propositions can. Second, for-the-most-part propositions can figure in a *dioti*-syllogism, i.e. the proper scientific syllogism for Aristotle, while contingency propositions cannot.

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**The Elusive Rightness  
An Examination of Aristotle's Grand Ethical Project**

*Nicomachean Ethics* attempts to connect the good life to virtue and rationality. In principle, a connection of this sort can be either deductive or constitutive. I examine whether Aristotle is able to demonstrate this connection and conclude that he partially fails and partially succeeds. He fails in the case of moral virtues but succeeds partially for intellectual virtues. At the end of Aristotle's account, we still don't see why courage or pride, or other such virtues are necessarily implied by or constitutive of rationality or of living well.

Several other thinkers have, implicitly or explicitly, noticed this gap. John McDowell holds that this gap is not a failure at all, arguing that specific ethical acts or notions cannot be demonstrated as deductions from a universal principle and that the requirement that they do so is a form of prejudice. GEM Anscombe acknowledges that this gap exists and suggests that a detailed account of flourishing is needed to fill it. Joseph Dunne and Jonas Hoist note that in Aristotle's account virtue and practical wisdom are intertwined in a manner that is difficult or perhaps impossible to disentangle. That suggests a possible circularity. I argue against McDowell and in support of Anscombe.

Specifically, the problem with Aristotle's identification of the chief good as being co-extensive with rational excellence and thereby with moral and intellectual virtues is that it is not logically transparent. It contains a failure to explain or justify why certain ends (e.g., Honor, Glory, Greatness, Wealth etc.) are a part of virtuous actions, its use of moral term such as "unseemly", "noble", praiseworthy", "fitting" is seemingly circular and also contains a failure to justify not making a strict distinction between cognitive and prescriptive rationality (e.g., recognizing truth vs telling it).

This problem can more generally be described as the central problem of rationality itself. Is rationality something purely cognitive and instrumental and containing no justification of ends or is there a prescriptive element to it?

Applying the former view to Aristotle would suggest that rational excellence refers only to the way in which the goal of living well is to be accomplished and but the ends that are contained in a well lived life must be assumed. This however would severely limit the scope of Aristotle's endeavor, reducing it, in effect, to a list of things which are needed to live well and some guidance for how they are to be achieved but failing to illuminate what is it about the sort of things he advocates that makes them the constituents of living well. Perhaps Aristotle never meant to provide a transparent non assumptive definition of the good. Perhaps his target audience had a prior consensus about it. However, it is difficult to explain then, why his account of virtues is preceded by a vigorous in-depth examination of what constitutes the good. Moreover, when he ties virtue to the rational activity of the soul, it is not merely an attempt at listing or describing the various virtues, but an attempt to get to their essence. This essence involves right reasoning, but he fails to show, in a non-circular way, what about it makes it right.

Thus, unless these inadequacies in Aristotle's account are addressed the link

between rightness and rationality that he tries to establish will remain elusive.

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### **Aristotle on Philosophizing with *Aporia***

In Aristotle's philosophical writings, the term *aporia*—along with its various forms and related expressions such as *aporein*, *diaporein*, *euporia*, and others—is used extensively. Two main senses of *aporia* emerge with particular significance: first, as a mental state of perplexity or puzzlement, and second, as (a) question(s) or line of argument that produces perplexity. Due to its value as a methodological tool, scholarly attention has primarily focused on this second meaning. In this methodological sense, *aporia* is commonly understood according to a certain specific interpretation. According to what I will refer to as the standard interpretation, an *aporia* is defined by the following formal features: First, it presents two opposing theses—either contradictory or contrary in nature—or it involves two or more arguments, each directed against one of the opposing theses. Second, it is equivalent to the dialectical *problema* as depicted in the *Topics*.

In this paper, I will challenge the standard interpretation of *aporia* in Aristotle. I will argue that Aristotle primarily uses the term *aporia* to denote a psychological state of perplexity and confusion. This is the central, or focal, sense of the term. Derivatively, he also employs *aporia* to refer to a question or constellation of questions or arguments used as a methodological tool in philosophical inquiry. Although one type of *aporia* in this methodological sense overlaps with the dialectical *problema* described in *Topics*, Aristotle's actual philosophical practice reveals other types of *aporia* that are non-dialectical. Thus, *aporia* in the methodological sense is not confined to the conceptual boundaries of the dialectical *problema*. Aristotle appears to employ *aporia* in methodological sense more broadly in his scientific or philosophical research. As I will argue, for him, any question that arises from a lack of knowledge and evokes positive perplexity at the psychological level can legitimately be termed an *aporia*.

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## **The Rout of Appearances**

In this paper I will offer a new interpretation of the rout simile in *Posterior Analytics* II.19 and ask a question not normally asked: what caused the rout? I will argue that the rout is the situation we are in if the Protagoreans are right and “man is the measure of all things,” and that Aristotle’s answer to what ends the rout parallels his answer to why this argument fails to refute his claim that the Principle of Non-Contradiction is the firmest of all principles, and shows that the cognitive state we are in once the rout is ended is similar to the knowledge we have of the Principle of Non-Contradiction, amounting ultimately to knowledge of a first principle.

This cognitive state is *empeiria* and specifically what Aristotle describes as repeated memories forming a single experience. In knowledge based on experience the rout has been repelled, that is to say, this experience has the better claim to knowledge, even to the point that what we know by experience is among the firmest of all principles, and at least a candidate for being a first principle. I will argue that this is because we ascribe the cognitive states that are based on our perceptions to ourselves only with certain qualifications. As these qualifications are neutralised so too we can ascribe this state to ourselves with fewer qualifications, in effect being more certain that we have perceived veridically, so certain in fact that we can consider the possibility of illusion as negligible. This makes them higher cognitive states because we are more certain of them. However, they still fall short of *noûs*.

In Section 1 I will introduce the rout simile and identify three separate questions: i) what caused the rout?; ii) what ends the rout?; iii) what state are we in when the rout is ended? My answers are briefly: i) relativity of perceptions; ii) the Law of Frequency as a law of psychological association; iii) experience.

In Section 2 I will discuss Aristotle’s response to the Protagorean charge against the Principle of Non-Contradiction and show how Aristotle makes use of a distinction between sense and appearance, where appearance has at least a conceptual possibility of being non-veridical.

In Section 3 I will discuss a segment of *De Anima* II.3 where he further uses appearance-talk as a way of guarding one’s reports of sense-impressions to make allowances for the possibility of error and illusion. I will show that what this boils down to psychologically is a perceptual belief plus a judgment on that belief.

In Section 4 I will argue that when a subject forms a belief on the basis of perception, the knowledge-state she ascribes to herself is qualified in various ways, which qualifications are emphasized if she judges that she may have been appeared to non-veridically. When she can discount all the possibility of error and illusion she can ascribe a knowledge-state to herself without qualification. Such an ascription cannot be challenged by the fact that some other subject has a different or contrary sense-impression, making what is known in this way to all intents and purposes irrefutable and firm.

In Section 5 I will return to the rout simile and show that the repetition of memories neutralises at least one of the ways in which we qualify the self-ascription of these knowledge-states. Therefore, what we know when we are in the cognitive



state of experience is irrefutable and a candidate for being a first principle.

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### Aristotelian physics as “studying things qua moving only, apart from their essences”

According to Aristotle, every scientific discipline has a characteristic domain of things that it studies, and in *Physics* Book I, we are told that the domain of physics comprises “things that are by nature (τὰ φύσει)”. In *Physics* Book II, τὰ φύσει are defined as things with natures (192b8-23), but this presents a problem because artefacts, there, are said not to have natures while nonetheless figuring prominently in the arguments of Book I. Thus, in Book I, Aristotle seems to identify the domain of physics (τὰ φύσει) with the wider category of things that change. As it happens, though, this agrees with an alternate characterization of the domain of physics found in the *Metaphysics*, viz., as “moving things”, “things qua moving” (K3-4, 1061b6-7, 29-30), or “things qua moving only, apart from the essence of each such thing and from their accidents” (M3, 1077b23-4). On this last passage, Edward Hussey remarks “To preserve the parallel [with geometry], we must not think of ‘changing things’ here as particular changing sensible substances, but they must be, once again, things which are closely tied, logically, to changing sensible substances.” Hussey’s point is that to think of ‘things qua moving’ as particular changing sensible substances would *not* be to think of them “apart from their essences”. To think of changing things in terms of their essences, however, seems to be exactly what *Physics* II.1, and *Metaphysics* Δ 4 envisage, where physics is conceived as the study of φύσις, which “in its primary and strict sense” is defined as an οὐσία (1015a13-15) and a substantial form (193b6-7). On the other hand, *Physics* I.7, contains analyses of objects of things which are *not* particular changing sensible substances but are closely tied to them, viz., accidental compounds such as “the unmusical man” and “the musical man” (189b34-190a12). Aristotle is not clear, in *Physics* I.7, why he chooses to analyze τὰ φύσει in this way, but I think it is because, in *Physics* Book I, he chooses to conceive of physics as studying τὰ φύσει as “things qua moving only”, apart from their essences. This would solve the problem, mentioned above, about the domain of physics, but it would also solve at least two other problems besetting interpreters of *Physics* Book I: (1) How can a subject of change be a principle of natural substances if the natural substance itself is the subject of non-substantial changes like alterations? In this case, the natural substance would be its own principle, but Aristotle argues against this possibility for the Eleatic One in chapter 2 (185a4-5). (2) How can a non-substance like the musical and the unmusical be principles of a substance like a man, when we know that non-substances cannot be principles of substances? I suggest that these problems can be solved by taking Aristotle to be studying τὰ φύσει in *Physics* Book I as “things qua moving only”, apart from their essences. (1) In alteration, the man is a principle of the accidental compound musical man, and not of himself. Thus, no prohibited recursive principles are envisaged. (2) Since the musical man is an accidental compound and not a substance, a non-substance like musicality can be a principle of it without running afoul of the rule that non-substances cannot be principles of substances. Finally, I will argue that since the same trio of principles (form, matter, and privation) show

up as principles of sensible substances in *Metaphysics* Λ 1-5, a similar analysis of sensible substances, which are also identified as the domain of physics in that work (1069a36-b1), will solve similar problems associated with that text.

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### **Aristotle on the Rational Anticipation of the Future**

Humans spend a lot of time thinking about the future. We may fear the future effects of a recent policy change or eagerly hope to meet a romantic interest later in the evening. Moreover, we make plans based on our anticipations and adjust our plans when we gain new evidence that the future will likely be different than what we anticipated. It is uncontroversial that Aristotle recognizes this facet of human existence – our ability to have future directed attitudes figures prominently both in his account of the emotions and in his account of deliberation as being directed at future contingents that are capable of being otherwise.

What is more controversial, however, is whether Aristotle believes that the ability to have future-directed attitudes extends to non-human animals. On the one hand, many recent scholars have taken this for granted. Indeed, a growing number of scholars believe that Aristotle attributes a crucial role to *anticipating future prospects* in his accounts of desire and locomotion for both human and non-human animals. On the other hand, some scholars have focused on other passages in Aristotle and deny that animals can anticipate the future. A third group of scholars suggest that the most plausible interpretation should differentiate between different *kinds* of anticipation, a non-rational kind that extends to non-human animals and a rational kind that is restricted to human beings. However, these scholars have not yet precisely demarcated the differences between rational and non-rational anticipation. I show, moreover, that perplexity on this issue can be traced back to antiquity.

In this paper I hope to make progress on this topic by developing a new and more detailed version of the third strategy described above, namely distinguishing between *non-rational* anticipation and *rational* anticipation. I begin by focusing on a single argument in *De Anima* 3.10.433b5-10 that appears to deny anticipation to non-rational animals. Aristotle seems to suggest that only animals that possess *both* appetite *and* reason are able to undergo appetitive conflicts, and that this only occurs in creatures that have a *perception of time*. This is a puzzling claim if it implies that non-human animals cannot anticipate the future, as I show that it contradicts other passages from within Aristotle's corpus in which animals are said to experience anticipatory pleasures and feel fear, an emotion that seemingly requires the ability to anticipate potential future harms. Indeed, I show that the author of an ancient commentary attributed to Philoponus evidently found this denial problematic. Philoponus attempts to resolve the issue by distinguishing the perception of 'indefinite time' (τὸν ἀόριστον χρόνον) from the perception of 'definite time' (τὸν ὀρισμένον χρόνον) while granting the former but not the latter to animals. Though clever, I argue that this resolution does not make good sense of the original argument from *DA* 3.10.

I then turn to develop my own positive account and distinguish two kinds of anticipation: a *non-rational* kind of anticipation that is possessed by non-rational animals and a *rational* kind of anticipation that is unique to human beings. Recognizing a special, *rational* way to anticipate the future is supported by

Aristotle's discussion of recollection, a rational way to remember the past that requires the faculty of deliberation. Starting from that observation, I note that the *Eudemian Ethics* and the *Nicomachean Ethics* imply that the faculty of deliberation enables a special, *intellectual* grasp of the goals and final ends of our actions, goals that Aristotle also believes must be future contingents capable of being otherwise. I proceed to argue that humans are uniquely capable of a *rational* kind of anticipation by which we are able to deploy our intellectual grasp of goods and bads for a human being to anticipate the future goals and final ends that our actions promote. This rational anticipation contrasts with a *non-rational* anticipation that is available to non-human animals, but that is completely based off of past *sensory memories* of pleasant and painful experiences rather than any intellectual understanding of one's own goals. This distinction, I contend, can make good sense of the *DA* 3.10 passage while also explaining other evidence that is *prima facie* in conflict with it.

### **Aristotle's Embryology and the Nutritive Soul: a response to Ackrill's problem**

In this paper I use Aristotle's account of embryology in the *Generation of Animals* to clarify two of his definitions of the soul in *De Anima* II.1 and II.2. Specifically, I show how Aristotle's account of potentiality, actuality, and the nutritive soul in embryonic development relate to his definitions of the soul in *De Anima* as (a) "the first actuality of a natural body that has life potentially" (*DA* II.1, 412a28-412b1) and (b) "the first actuality of a natural body that has organs" (*DA* II.1, 412b5). My project is responding to a question raised by J. L. Ackrill in "Aristotle's Definitions of *Psuche*". Ackrill claims that, for Aristotle, "Until there is a living thing, then, there is no 'body potentially alive': and once there is, its body is necessarily actually alive." He points out a tension, in other words, between two of Aristotle's alleged views: (a) that the matter which makes up any living being is essentially alive, and thereby *actually* ensouled and (b) that the matter of a body pre-exists the body itself. In light of this tension, how can we make sense of Aristotle's definitions of the soul? How can the soul be an actuality of a potentially living, natural body if every natural body is made up of already living matter?

In his article, "Aristotle's Embryology and Ackrill's Problem," Nicola Carraro responds to Ackrill's problem with a reading of Aristotle's embryonic theory in *Generation of Animals*: there, in one key passage (following Carraro, we call this passage T6), Aristotle posits that "unseparated [ $\alpha\chi\omega\rho\iota\sigma\tau\alpha$ ]" embryos only "have the nutritive soul potentially" (*GA* II.3, 736b9-14). These embryos are, in other words, only *potentially* alive. Thereby, Carraro concludes, since the body of an embryo pre-exists the *actual living* of that embryo, it is possible for the organic body of a being to pre-exist that being's actual *soul* (life). I follow Carraro's approach to Ackrill's problem— that a solution lies in Aristotle's claim that the unseparated embryo has only a *potential* nutritive soul. Yet, I diverge from Carraro's interpretation of the T6 passage where Aristotle makes this claim. I disagree with Carraro on two points: (1) what it means for an embryo to be "unseparated" (and thereby for *how long* an embryo is only potentially alive); (2) what a body with a *potential* nutritive soul can do.

I offer my own solution to Ackrill's problem using both Aristotle's account of embryonic development in *Generation of Animals* I & II and his account of the nutritive soul in *De Anima* II: since the body of an embryo pre-exists the *actual nutritive soul* of that embryo it is possible for the organic body of a being to pre-exist the actual life of that being. My solution differs from Carraro's by showing that Aristotle elaborates at least two distinct phases of embryonic development: in the first phase, the embryo is "unseparated" and only *potentially* alive— it only has "the nutritive soul potentially" (*GA* II.3, 736b10). I argue, against Carraro, that this potentially alive, "unseparated" embryo does not grow using nutrition, but is rather "formed [ $\sigma\upsilon\nu\iota\sigma\tau\eta\mu\iota$ ]" (*GA* II.4, 738b21) or "fashioned [ $\delta\eta\mu\iota\upsilon\omicron\rho\gamma\acute{\epsilon}\omega$ ]" (*GA* II.4, 738b21) by nature which uses female menses as its "material" and male semen as its "tool" (*GA* II.4, 738b20-26). In the second phase, the embryo is "separated" from its mother. Diverging from Carraro who thinks that the embryo does not become

“separated” until it is born, I follow Sophia Connell’s work in *Aristotle on Female Animals* to show that this separation takes place while the embryo is still in the womb. It is an ontological, rather than spatial separation; the phase-two embryo is separate from the mother insofar as it is an individual living being— a “*ti on*,” as Connell puts it. More specifically, in the second phase the embryo has a fully developed heart, which allows it to perform the functions of nutrition; it moves from having a *potential* nutritive soul to having an *actual* nutritive soul and “grows by means of the umbilicus in the same way as a plant by its root” (*GA* II.4, 740b9). While I follow Connell’s view of the second phase of embryonic development, my model diverges from hers by characterizing the first phase through craft analogies, which Connell’s model discounts.

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### **Aristotle on *Ecthesis* and Induction**

This talk centres on the method of *ecthesis* (ἐκθεσις), which Aristotle mentions and sometimes uses in his logical writings. The aim is to explore its wider connections, in particular its affinity with methods common in ancient Greek geometry and with induction as applied by Aristotle in various contexts of theoretical and practical science. So, what is *ecthesis* and how does Aristotle make use of it? In the *Prior Analytics*, *ecthesis* is introduced as an alternative method of validating syllogisms (An. Pr. I 6, 28a23-26, b14-15, b20-21; I 8, 30a6-14), the main method being that of reduction to the self-evident moods of the first figure. *Ecthesis*, in this sense, is typically used to establish statements of the form “P belongs to some R” or “P does not belong to some R”. In the case of affirmative statements, the method is to proceed by (i) arbitrarily singling out a suitable N, (ii) showing that both P and R belong to N, and (iii) inferring that, since the choice of N was arbitrary, P belongs to some R (see, e.g., 28a24-25). Aristotle’s commentators have often disagreed on what exactly the method consists in, why he uses it at all and to what extent it even constitutes a genuine component of syllogistics (see Joray 2014 and Crubellier e.a. 2019 for two of the more recent contributions). Although in reflecting on these questions, modern commentators have occasionally noted that Aristotle also refers to *ecthesis* outside the *Prior Analytics* (see esp. Smith 1982, 123-126, and Ierodekanou 2002, 150-152), the wider context in which this method is situated is rarely examined in more detail. In order to prepare a more comprehensive account of *ecthesis*, I will survey several occasions on which Aristotle discusses or applies *ecthesis* outside the narrow context of syllogistic logic. The main passages I propose to discuss are taken from the books A, Z and N of the *Metaphysics*: 992a24-b13 (A 9), 1031a28-b21 (Z 6) and 1090a15-b3 (N 3). From these and other passages it will become clear that Aristotle is seeking an understanding of *ecthesis* that, contrary to the Platonic conception, does not imply the hypostasis of forms, and yet manages to account for the legitimacy and fruitfulness of this method, as attested by its ubiquitous application in geometry (see also the passages 76b39-77a3 in book A, ch. 10 of the *Posterior Analytics*, and 178b37- 179a11 in ch. 22 of the *Sophistical Refutations*). Alexander of Aphrodisias already had pointed out an affinity of Aristotle’s conception of *ecthesis* with procedures that he elsewhere refers to as *induction* (ἐπαγωγή). By further exploring this connection between *ecthesis* and induction, I will try to shed some light on a question that has puzzled ancient, medieval and modern commentators alike: Is what is set out in an *ecthesis* an individual, a universal, or something in between – perhaps an *individuum vagum* as certain Latin scholastics will call it?



### **Fixing Signification in *Metaphysics* Γ4**

*Metaphysics* Γ4 consists largely of a sustained and in-depth treatment of the Principle of Non- Contradiction (PNC). This paper seeks to clarify a fundamental aspect of this discussion, concerning the notion of signification (*semainein*).

As formulated by Aristotle, PNC states that it is impossible for the same property to belong and not to belong to the same object simultaneously [1005b19–22]. For example, that it is impossible for the same thing to be a human and not to be a human simultaneously.

In Γ4, Aristotle sets out to defend this principle against a hypothetical objector [1005b35– 1006a28]. This is somebody who affirms that it is possible for the same object (S) to be F and not to be F simultaneously. For example, that it is possible for the same thing to be a human and not to be a human simultaneously.

This presentation will examine Aristotle's first defense of PNC [1006a28–b34]. Specifically, I will attempt to clarify one of the most important and challenging assumptions underlying this argument. This is the claim that what the objector says signifies exactly one thing [1006b11– 13]. For example, that 'human' (or, perhaps: 'to be a human') signifies precisely a biped animal (or, perhaps: to be a biped animal). For the sake of simplicity, I will refer to this as the claim that *signification is fixed*.

On the face of it, Aristotle believes that fixing signification is either necessary or sufficient (or both) for establishing PNC (see esp. 1006a18–26 and 1006b28–34). Hence, he goes to great lengths to show that and illustrate how signification is fixed [1006a28–b13]. Despite its significance and Aristotle's best efforts to elucidate it, though, this claim is still extremely difficult to understand. To my mind, readers are faced with at least four open questions.

1. Which part of what the objector says is acting as the *signifier*? Is it the subject-term (i.e. 'S') or the predicate-term (i.e. 'to be F') in their denial of PNC?
2. What is being *signified*? Is it an object (e.g. a biped animal) or a property (e.g. to be a biped animal)?
3. What kind of relation is *signification*? Is it a reference or meaning relation?
4. When is signification *fixed*? In other words: under what conditions does a term signify exactly *one* thing?

Different scholars have conflicting intuitions about how these questions should be answered. However, questions about signification have largely been subordinate to other issues surrounding Aristotle's first defense of PNC. Hence, there is still little if any consensus on the above four points.

I will attempt to overcome this impasse by tackling these questions head-on, based on a close scrutiny of the key text [1006a28–b13] and, to an extent, by drawing on contemporary logic and metaphysics (Correia, 2006; Dorr, 2016). On this basis, I will clarify Aristotle's claim that signification is fixed as follows.

1. The signifier is a *predicate*-term: i.e. 'being F'; e.g. 'being a human'.
2. The signified is a *property*: i.e. being G; e.g. being a biped animal.
3. Signification is a *meaning* relation: i.e. 'being F' means being G; e.g. for something 'to be a human' means that it is a biped animal.

4. Signification is fixed just in case being *F* is essentially the same as being *G*: e.g. for something to be a human is essentially to be a biped animal; hence, for something to 'be a human' means precisely that it is a biped animal.

I will refine these findings and highlight their possible significance through two observations. First, it is worth noting that the account which states an essence is a *definition* (*Metaphysics* Z4, 1030a6–7; Z5, 1031a12). For example: for something 'to be a biped animal' states what it is, essentially, to be a human; hence, 'being a biped animal' is the *definiens* of being a human. This would imply that signification is fixed just in case being *F* =def being *G*. Secondly, I will distinguish between two kinds of definition: the first states the essence of an object (i.e. what it is to be *S*); the second states the essence of a property (i.e. what it is to be *F*). These may coincide: that is when *S* is essentially *F*; e.g. when something is a human. However, they need not coincide: that is when *S* is accidentally *F*; e.g. when something is pale or is educated. If my reading is correct, then Aristotle's first defence of PNC involves the *second* kind of definition. This could imply that the intended scope of this defence is much broader than has been traditionally assumed (e.g. Anscombe, 1961; Irwin, 1988). Namely, that PNC is supposed to hold not just for essential properties (e.g. being a human) but also for accidental ones (e.g. being pale or being educated), namely unrestrictedly.

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### **From *Kath' Hekasta* to *Katholou*? Aristotle's *Epagoge*, *Paradeigmata*, and the Structure of Rational Reasoning**

A great deal has been written about Aristotle's notion of *epagoge*, a topic that immediately raises a number of additional questions: Is it akin to modern induction? Is it a form of logical inference? Does it concern statements or concepts? Kurt von Fritz revisited *epagoge* in the second half of the twentieth century and provided many important insights, notably arguing that it holds a legitimate place in the discovery of principles. Since then, considerable scholarly attention has been devoted to the issue, with scholars struggling to reconcile Aristotle's seemingly contradictory views on *epagoge* and its relation to the modern understanding of induction. The most recent discussion appears in Pavel Hobza's article "Freeing Aristotle's *Epagoge* from Induction" (*Ancient Philosophy*, Vol. 44, Issue 2, 2024).

Hobza's study is particularly noteworthy for drawing attention to the key theoretical elements and textual loci that any careful examination of Aristotle's *epagoge* must address – namely, the distinction between *epagoge* and modern induction, the meaning and contextual use of *katholou* and *kat' hekaston*, the role of *aisthesis* (perception) in the process, and the significance of the so-called *anamnesis*-doctrine in Plato's *Meno* for the Aristotelian interpretation of *epagoge*. While my contribution follows a similar line of inquiry, it seeks to offer an alternative set of interpretations concerning these fundamental elements – interpretations which, it is hoped, may serve to advance the discussion further.

Another dimension of the difficulties surrounding the understanding of *epagoge* lies in the manifold usages of *aphairesis* in Aristotle, a complexity further entangled with the broader issue of universals. Moreover, what remains unclear in much of the existing scholarship is the precise nature of the process of being "led towards" (*epagein*) an understanding through a particular instance. It is still unclear what exactly must be grasped in the particular (*kat' hekaston*), with some suggesting that this occurs "intuitively", as well as where or how one is guided in this epistemic process. I aim to elucidate these aspects by examining the relevant passages in the *Analytics*, *Metaphysics*, *Rhetoric*, and *Topics*, identifying how *epagoge* is understood in each context and constructing a unified interpretation of Aristotelian *epagoge* from which other occurrences in the *Corpus Aristotelicum* might be systematically understood.

In doing so, I shall seek to clarify exactly what *katholou* (universal) and *kat' hekaston* (particular) denote in Aristotle's work, taking into account the long tradition of interpretation concerning the debate over universals, as this undoubtedly influences our modern understanding of what universals and particulars are. In tracing these different forms of universality, it is crucial to note that ancient commentators on Aristotle – particularly Simplicius and Philoponus – already recognised a more nuanced typology than most modern accounts acknowledge. Further, I shall consider Aristotle's treatment of *aisthesis* and its various forms as discussed in the *De Anima*, with particular attention to their epistemological role in relation to *epagoge*. I shall also examine how the relation between parts and wholes

contributes to this framework and propose a reading of Plato's Meno and its doctrine of anamnesis that, I hope, may provide a more coherent and fruitful interpretation of the relevant Aristotelian texts. Finally, the concept of *paradeigma* (example) will be considered, with a view to situating it within the broader structure of epagoge, thereby highlighting the intersections between rhetoric and the logical and conceptual dimensions of Aristotelian reasoning.

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#### Aristotle's take on Frege's access to reference (*Bedeutung*)

In *On Meaning and Reference*, Frege attempts to isolate “grammatically correctly formed expressions” (“grammatisch richtig gebildeten Ausdrücken”) which are in fact declarative propositions (“Behauptungssätze”). Truth depends only on the referent. The meaning can be opposite expressions  $a=b$  if and only if “a” and “b” designate the same object. The “morning star” is a different expression from “the evening star”, but if they have the same referent they mean the same thing.

In the *De Interpretatione*, Aristotle also attempts to identify the “logos apophantikos” (declarative statement) as the minimal unit of meaning that syntactically synthesizes different elements. The affirmative declarative statement in the active voice implies the copula, which is the result of an operation of *diairesis* and synthesis. The declarative statement must also be an “affirmation” (*kataphasis*), and the broader logos is the sense that connects sentences and constitutes arguments.

Now if there are “states of affairs” (*pragmata*) in the world, and “representations or passions belong to the mind” (*pathemata tēs psychēs*), Aristotle does not fail to see and pose the problem of access. How can there be a mediation between thoughts and states of affairs through a *pathēma* that is directed on the one hand to a state of affairs and on the other hand to an exclusive realm of the *psychē*?

For Frege, access to the referent is “recognition”, but it cannot be explained by concepts such as “intuition” or “representation”, because they are merely subjective. “We presuppose a meaning”. In the Zeta Book of *Metaphysics* we find a difference between “definition of essence (*logos tēs ousias*)” and “this here of this kind (*tode ti*)” which raises exactly the same problems: speaking of a grammatical subject recognized as an object is different from saying something about it with concepts. Language reifies concepts and conceptualizes concepts. How can we tell the difference? How can we get access to the referent?

Aristotle precisely addresses this complex involvement in *De Interpretatione* when he equates the coming into being of mental affections such as perceptions, desires, emotions, and thoughts with ‘likenesses’ or ‘assimilations’ (*homoioseis*, *homoiomata*) of objects [*pragmata*]. We would like to delve into this relationship between mental affections [*pathēmata tēs psychēs*] and objects [*pragmata*]. What is the meaning of [*homoiosis*]? Can we straightforwardly translate it as conformity [*adaequatio*]. Truth is the conformity of thing and intellect [*adaequatio res et intellectus*]. What is the meaning of the verb *homoioō*? In the active sense, it means “to make like,” and in the passive sense, “to be made like.” How can we cope with the relation between meaning (*Sinn*) and referent (*Bedeutung*)? Is it a process of assimilation working out both ways, from inside our minds to the outside world and from the outside world into our minds? Is there an inextricability (David Charles) relation between mind and matter through body? How come? Where lies Frege's take in the end of our analyses?

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### ***Metaphysics* Γ 4-8: A Guide to Argumentation for Dialectical Debate?**

Since the mid-20th century, when Aristotelian dialectic was reassessed, Book Γ of *Metaphysics* has been widely regarded as a dialectical work. This view is based on the fact that its method for establishing the principle of non-contradiction and the principle of the excluded middle relies on procedures described in the *Topics* and *Sophistical Refutations*. However, this interpretation assumes that dialectic, despite its origins in human dialogue, had already become, in Aristotle's time, an individual method of inquiry that, at most, employed a fictitious interlocutor merely as a heuristic device rather than as a necessary element of the argumentative process.

This paper argues that this widespread interpretation does not align with the actual method of argumentation found in *Metaphysics* Γ 4-8. In contrast, I propose an alternative reading that accounts for these passages more satisfactorily. Specifically, I suggest that Book IV of the *Metaphysics* should be read as a manual of argumentation intended for dialectical debate. More precisely, I argue that it serves as a guide for refuting any opponent who denies the principle of non-contradiction or the principle of the excluded middle in the type of dialectical discussions that were common in Athens during the fifth and fourth centuries BCE.

Accordingly, we shall argue that the standard interpretation of Aristotelian dialectic, which we will refer to as *monological*, fails to account for the structure of argumentation in Book IV. The fundamental problem with this view is that the arguments in the text presuppose a real interlocutor whose responses are necessary for the argument to progress in one direction or another. The text explicitly considers different scenarios depending on the interlocutor's intentions. It distinguishes between those who argue merely for the sake of debate and those who genuinely find themselves in a state of *aporia*. In the latter case, the argument's course is further shaped by the specific origin of the *aporia* and by the interlocutor's responses to key questions. For each scenario, Aristotle develops distinct refutation strategies.

For this reason, this paper examines several arguments in favor of this new interpretation of *Metaphysics* Γ 4-8 that we propose. According to this interpretation, these chapters must be understood within the context of dialectical practice in Ancient Greece. Specifically, the dialectical structure of the book is not merely the result of adopting techniques described in the *Topics* and *Sophistical Refutations*, as the traditional interpretation has maintained. Rather, the use of these techniques serves a specific purpose: to function as a guide for potential participants in real dialectical discussions against any kind of opponent who denies the principle of non-contradiction or the principle of the excluded middle. Ultimately, as we will argue, these chapters of Book IV were conceived as a manual of argumentation for the kind of dialectical debates that, according to various testimonies, existed and were institutionally recognized in Athens during the fifth and fourth centuries BCE.

To critically assess our interpretation, we will consider several lines of

argument. First, we will refer to the evidence indicating that the arguments in the text presuppose an actual dialogue with an interlocutor and can only be fully developed through interaction with the other. This evidence remains unexplained by the standard interpretation. Second, we will examine the similarities between *Metaphysics* Γ and certain argumentation manuals whose existence is attested in the period. Among these, the *Dissoi Logoi* provides a relevant example. These manuals compiled collections of arguments intended to be memorized and later used in dialectical discussions. Third and finally, we will analyze specific conventions of dialectical practice as systematized in the *Topics* and *Sophistical Refutations*. In particular, we will focus on the use of deductive argumentative schemes (*topoi*) to construct a significant portion of the arguments in the book.



### **Did Aristotle Believe in the Role of Fortune (*Tuche*) in a Good Life?**

The concept of *eudaimonia* (best/happiest/good/perfect life) occupies a central place in Aristotle's ethics. The debates on the content of this concept are also very rich. My main problem in this paper is not to discuss what a good life is in Aristotle. Rather, I will try to answer the question whether fortune actually plays a role in the Aristotelian conception of a good life. Therefore, this study aims to reveal whether fortune is necessary for the construction of a good life from an Aristotelian perspective.

In Book X of Aristotle's *Nicomachean Ethics*, Aristotle relates to us a painful event experienced by Priam, the king of Troy. Priam lost his most valiant son Hector in the Trojan War, and he is deeply saddened by this loss. According to Aristotle, this event that happened to Priam, the loss of his son is a great misfortune. In addition, according to the philosopher, it is unthinkable for a father who experiences this to be happy. So, the question we need to ask is this: Is happiness (the good life) something related to being fortunate or unfortunate? Before answering this question, we should remember that Aristotle's ethics is an ethics of action. According to Aristotle, one becomes just by acting justly and temperate by acting temperately. The good is not something metaphysical beyond the individual. Aristotle defines the good not as something transcendent but as something immanent to the human being. Both the purpose and the good of being are immanent to the person. Therefore, the good must be related to what a person does. The choices made and the actions performed make a person what he or she is. On the other hand, it is not enough to do it only once. Because as Aristotle says, "One swallow does not make a summer..."

If the good life has something to do with our choices and the results of our actions, where do we put fortune? In one of her works, Martha Nussbaum talks about the "fragility of the good". As a social creature that by nature needs the presence of other human beings, human beings are of course affected by the situations and events around them. This shows us that the good is fragile. The fragility of the good means that the good life is affected by fortunate and unfortunate situations. The example of Priam given by Aristotle seems to strengthen the thesis that the good life is affected by fortune and misfortune. However, a good life can never be reduced to being fortunate from an Aristotelian perspective. For the realization of the good depends on the person, not on an external factor. Being fortunate or unfortunate, on the other hand, is based on external factors and is not related to one's actions. Since the good life is the name of a way of life that people create through their actions and activities, being fortunate cannot be identical with being happy.

In conclusion, it is possible to argue that it is a fact that fortune or misfortune disrupts life. At this point, the individual has no role. But a happy life implies an active life. If fortune were the same as a happy life, then one's actions would have no meaning. If we become a guitarist by playing the guitar and an architect by building a house, we become happy by acting virtuously. Therefore, from an Aristotelian perspective, it wouldn't be wrong to argue that fortune plays no role in the good life.



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**The Aristotelian Comparative-Analogical Method applied to  
Psychology.  
The Psyche of Humans and Non-human animals. A  
comparison**

The first chapter of the VIII book of the Aristotelian *Historia animalium*, besides being a presentation of the modes of life and characters of animals, is also an important sketch of comparative psychology, the soul being the principle of movement and stillness of everything endowed with life, that is plants, animals and men. This paper aims to shed light on the similarities linking the psychic processes of humans to those of non-human animals, which Aristotle mainly describes in his *Biological Works*. A careful reading of these works, which are so vast and important as to constitute three-quarters of the philosopher's entire *Corpus*, reveals that according to Aristotle there are psycho-physiological and ethological affinities between *zôa* and *anthropoi* that confirm a continuity and complementarity between different animal species, from the least complex to the highest, and not a juxtaposition, as much of the culture of the time held, which classified humans under the category of rationality, goodness and knowledge and non-human animals under that of irrationality, evil and ignorance. Along the Aristotelian texts that allude to forms of animal "intelligence" (φρόνησις or νοῦς) – from *Met. Alpha* 980B 21 to *An. Post.* II 19, 99b 35ff, from *Hist. An.* I 1, 488b 13 to *De gen an.* III 2, 753a 11ff. – a comparison between human and non-human perceptual and cognitive processes will be attempted, also to show how Aristotle, by virtue of his concern and admiration for every living species, can be considered an animalist and an ecologist *ante litteram*. In fact, in this regard, I think that the expression of "respect filled of admiration", which the American philosopher Tom Regan (in *The Nature and The Possibility of Environmental Ethics*, 1981) attaches to anyone attributing to natural bodies deep intrinsic and teleological value, could be worth for Aristotle. In this respect, emblematic is the passage, taken from *De partibus animalium* I 5, 645a 4 ff., in which the Stagirite invites his reader to feel admiration for all living things, even the seemingly humblest and most disgusting ones («One should not have a childish repugnance toward the study of less noble animals: in all natural realities there is something wonderful»). For every reality reveals the purpose of Nature, which does nothing in vain but always everything with a view to the beautiful and the good.

**‘διὰ τῶν ἥττον γνωρίμων φύσει εἰς τὰ γνώριμα μᾶλλον’: Another Program for *Metaph. Z*?**

Aristotle’s repeated assertions of the methodological principle that we should start from what is best known to us and move towards what is best known by nature has given rise to considerable controversy in secondary literature: what is best known to us sometimes seems to denote accepted opinions, the endoxa, and sometimes sensation, both of which are of crucial importance in Aristotelian epistemology. In this paper, I will focus on an occurrence of this idea found at the end of chapter 3 of Book Z: after asserting that matter is not substance, because it is indeterminate, Aristotle sets out to examine the possible substantiality of the other two senses of substratum posited at the beginning of the chapter, namely form and compound. It is at this point that he makes this assertion, which commentators have paid little attention to, as it is hard to see what Aristotle is referring to here.

In this presentation, I will explore the following hypothesis: this assertion takes on a specific meaning here, since what is best known to us are neither accepted opinions nor sensations, but schemas belonging to secondary sciences or subordinate to the discourse that is advanced in the inquiry into substance, and in particular physical schemas. What is announced, then, is another program for the investigation of substance, concurrent or complementary to that posited at the beginning of *Metaph. Z.3*, and which thus announces that the primary substance, the *eidos*, is the proper object of *Metaph. Z*, will be known through a secondary sense of substance, the compound and/or matter, and in particular through the analysis of its generation. My claim is that this program is realized in particular in *Metaph. Z.7-9*, where the priority of form over the secondary senses of substance is established through the analysis of the generation of substance. In establishing this specific sense of doctrine ‘διὰ τῶν ἥττον γνωρίμων φύσει εἰς τὰ γνώριμα μᾶλλον’ in *Metaph. Z.3*, I think I open up two interesting perspectives on the arguments of the substance survey:

A/ My proposal allows us to articulate in a different way the suite of chapters *Metaph. Z.4-9*, since *Metaph. Z.4-6* examines the essence candidacy announced at the beginning of *Metaph. Z.3* and *Metaph. Z.7-9*, if not as an interpolation, at least as a parenthesis. By restoring importance to the program ‘διὰ τῶν ἥττον γνωρίμων φύσει εἰς τὰ γνώριμα μᾶλλον’, *Metaph. Z.7-9* appears as the realization of this program, in which is established the priority of form over compound and matter, the central thesis of *Metaph. Z* while *Metaph. Z.4-6* is a parenthesis between the announcement of this program and its realization.

B/ If *Metaph. Z* is a central piece of first philosophy, we can see that the relationship between the two sciences of physics and metaphysics is not limited to a subordinate relationship in which physics finds its principles in metaphysics, since the inquiry into substance makes heuristic use of physical schemas in the way it proceeds and argues. Generally speaking, we can see that the separation between the sciences is sometimes more porous than we might think with an overly strict reading of the incommunicability of genera.

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**Aristotle Against Epistemology:  
F. J. E. Woodbridge and the Naturalist Revival of Aristotle in the United States**

The fate of Aristotelianism in the United States in the first half of the twentieth century has been traditionally entwined with the prior rise of Neo-Scholasticism, specifically Neo-Thomism. Therefore, it is tempting to think that the study of Aristotle exclusively took place within the Roman Catholic tradition. Consequently, the dominant image of the Stagirite was worlds apart from the key tenets of the significantly more popular, and then reigning, 'naturalistic' philosophy of pragmatism.

Despite its apparent plausibility, the above narrative effectively collapses when one considers the oeuvre of F. J. E. Woodbridge (1867-1940). As a long-standing colleague of John Dewey at Columbia University, Woodbridge is nowadays primarily remembered for prompting Dewey to (re)take metaphysics seriously and articulate a distinctive version of naturalism. What scholars have failed to properly document, however, is that this very naturalism was greatly indebted to Aristotle, with Woodbridge almost singlehandedly revitalising the philosophical study of Aristotle in the United States. Representative examples of dissertations (and, subsequently, publications) conducted under his guidance include Edith Johnson's *The Argument of Aristotle's Metaphysics* (1906), Abraham Edel's *Aristotle Theory of the Infinite* (1934), Clarence Shute's *The Psychology of Aristotle* (1937), William Barrett's *Aristotle's Analysis of Movement* (1938) and Harold Hantz's *The Biological Motivation in Aristotle* (1939). Furthermore, Woodbridge was the teacher of Richard McKeon, John Herman Randall Jr., Richard Hope and Mortimer Adler, all responsible for proliferating, in different ways, Aristotle's thought in mid-century. Finally, Woodbridge's influence may be traced in subsequent generations of 'Aristotelians', including Hippocrates George Apostle, John Anton, Emerson Buchanan, James Walsh and Victorino Tejera.

In my talk, I shall sketch the key motivations and doctrines behind this neglected naturalist revival of Aristotelianism. I will begin by situating Woodbridge's thought in the context of a criticism of 'epistemology', captured in a series of disputes between realists, pragmatists, naturalists and idealists. Woodbridge traces the historical origins of these disputes in our modern 'Cartesian' or 'Lockean' understanding of the mind – the mind as an internal domain of 'ideas' – and its accompanied separation from nature. Intellectual conundrums regarding the possibility of knowledge, the precise relation between the mind and the body, the choice between materialism and idealism, are derivative problems, generated by our unreflectively inherited early modern legacy.

I will then proceed by summarising key parts of Woodbridge's sole treatise on Aristotle, the posthumous 1965 *Aristotle's Vision of Nature*. The work contains a series of idiosyncratic reflections on the *Organon*, *De Anima*, *Physics*, *Metaphysics*, *Poetics* and the *Nicomachean Ethics*. My focus will be on Woodbridge's discussion of the soul, believed to set a proper starting point for Aristotle's wider treatment of

nature. The main reading is that the Aristotelian soul, conceived as a set of powers of living things, is grounded in nature. Humans do possess a rational soul. Yet, they remain thoroughly organic creatures: "to say that a man has a seeing and a rational soul is not to free him from the soul of a plant as well, for he too has organs of nutrition and reproduction". More interestingly, Woodbridge maintains that the very existence of powers presumes respective 'correlative fields'. The power of perception/vision cannot be understood in isolation from the existence of visible bodies. Correspondingly, the existence of 'nous', is inconceivable without a "rational order of ideas". The broader point is that the soul's powers cannot be separated from the rest of nature, namely the conditions that enable these powers' activation. Recognising the existence of powers simultaneously transforms our understanding of nature. Eliminating the soul from nature would be akin to a geometry that has previously eliminated surfaces and solids.

Hence, it is no surprise why Woodbridge concludes that Aristotle offers a necessary remedy for the problems of 'modern philosophy': Aristotle is "innocent of epistemology...[He] has not set the mind over against nature, that the problem of how the mind can have anything to do with nature must first be solved before man can have confidence in the operations of his intelligence."

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**Aristotle Between Heaven and Earth  
The 'Physical Laws' in the Universe of the *De Caelo***

It is well known that in Book II of the *De Caelo*, Aristotle describes the structure of the heaven. He distinctly differentiates between the sublunary (terrestrial) region and the upper (celestial) region, adding more detailed divisions when exploring the movements of the celestial spheres. However, at the beginning of the treatise (I, 1), Aristotle does not seem to anticipate these domains clearly. At 268a6-23, he presents a nuanced exploration of the nature of continuity, magnitude, and the significance of the number three, apparently influenced by Pythagorean thought (Πυθαγόρειοι are mentioned at 268a11).

Aristotle's discussion begins with the concept of continuity, which he defines as the quality of being divisible in all ways. He uses the example of the body as the epitome of continuous substances, which can be divided in every possible direction. This contrasts with discrete entities or abstract concepts, which lack this infinite divisibility.

Aristotle proceeds to categorize magnitudes into different dimensions: a continuous magnitude in one dimension is a line, in two dimensions a plane, and in three dimensions a body. He asserts that there are no higher dimensions of magnitude beyond the three-dimensional body, emphasizing that "that which is divisible in three directions is divisible in all" (268a10). This division of the world into 'three dimensions' reflects Aristotle's commitment to a 'structured' and finite cosmos.

The Pythagorean influence becomes evident when Aristotle insists on the strange, symbolic significance of the number three. For the Pythagoreans, numbers were more than mere abstractions; they had real metaphysical implications, as Aristotle reports in *Met. A*, 5, describing the correspondence that they would have identified between numbers and things.

The number three, in particular, is described by Aristotle as a symbol of completeness, representing the beginning, middle, and end of a process. He refers to this 'triadic structure' as if it were one of the laws of nature (ὥσπερ νόμους ἐκείνης), and further examines how the number three permeates human practices, particularly in religious rituals and language (in this regard, Reale' refers to Plato's *Epin.* 978c, where it is stated that man has been endowed by nature with the ability to count). In his language, Aristotle draws attention to 'labels' (προσηγορίας) and the usage of terms like 'both' for two things, while 'All' is reserved for three or more. The number three reappears in other contexts, for example, in *Meteor.* III, 4 374b33-35, in the context of the explanation of why the rainbow is three-colored.

Finally, Aristotle discusses the relationship between form and matter. He argues that the form of a thing, not its matter, determines its completeness. The body, as a three-dimensional form, is complete and represents the 'All' because it is the only magnitude that fully embodies the triadic structure. Unlike points, lines, and planes, the three-dimensional body alone is fully realized in both form and matter, making it the most complete expression of physical reality.

In this passage, Aristotle appears to be influenced by still strong Academic doctrines and presents a high level of abstraction. This suggestion aligns with the well-known problematic nature of *De Caelo* regarding the general architecture of the treatise (Moraux, 1960). In this context, Aristotle's statements at the outset of the treatise fail to provide clear guidance for the reader.

What type of connection can be drawn between this passage and a section of the argument in *Physics* VIII, 6, particularly concerning the structure of the cosmos (259b32-260a20)? This paper offers a detailed exploration of their interplay and argues that, regardless of the dating of the texts, it is possible that Aristotle conceived the natural world with an underlying structure. This structure branches out into the various natural disciplines, forming a coherent and interconnected system.

In exploring the possibility of a structure based on the number three, it becomes essential to consider how this aspect may still reflect the legacy of Academic and Pythagorean doctrines. Given the intellectual milieu in which Aristotle was trained during his early formation, it is plausible that such 'numerical' and 'ritualistic' considerations trace back to his years in the Academy (elsewhere, his departure from this formative period is far more evident; see *Met.* XIV, 1). To what extent, then, can we discern this influence based on the arguments presented in these segments of the corpus? Does the opening of *De Caelo* truly present a 'self-standing' argument (D'Agostino, 2019)? Or might *Physics* VIII, 6 also be relevant?



***Nicomachean Ethics VII, 7: Are there two types of incontinence *stricto sensu*?***

If we are asked what the opposite of pleasure is, the most common answer is “pain.” It is often assumed that both experiences run parallel and that the phenomena associated with pleasure are the inverse reflection of those associated with pain. This framework can be applied to the interpretation of difficult passages in the *Nicomachean Ethics* (*NE*), particularly *NE VII, 7*. To understand it, we tend to apply this seemingly obvious scheme, such as this idea of opposites, which might even appear acceptable to Aristotle. However, this simplification can lead to interpretative errors, even in passages that explicitly depart from this binary framework.

For example, Cook Wilson, in *Aristotelian Studies I* (Oxford, 1879, p. 45), presents a common interpretation: “to dominate is the same as to resist, and to be dominated is the same as to be defeated.” In our view, in *NE VII, 7*, Aristotle refutes this interpretation. This chapter is crucial because it nuances the traditional view of the virtue of temperance as a mean between two vicious extremes, analogous to other ethical virtues. In *NE III, 10*, the classical idea is presented: temperance as a balance between a vice of excess and a vice of deficiency. Although this chapter states that temperance does not relate to pleasure and pain in the same way, in chapter VII, 7, this dual structure of vice is not maintained in the same manner.

This analysis is historically significant because it reinforces the hypothesis that the *Nicomachean Ethics* is a work composed of different versions from various periods and perspectives, sometimes compiled within the same chapter without complete harmonization. In this case, the argument presented in the first paragraph does not fully align with the subsequent development of the chapter, as we will demonstrate in our study.

In the initial lines of *NE VII, 7*, Aristotle classifies the intermediate states concerning the virtue of temperance from the perspective of the object—that is, the pleasures and pains related to taste and touch—rather than from the subjective attitude of the person experiencing them. According to this first part of the chapter, there are only two ways to confront pleasure and pain:

1. To overcome where most people are defeated.
2. To be defeated where most people prevail.

From these two positions, Aristotle distinguishes four intermediate states between virtue and vice:

1. Being defeated by pleasure (*ἀκρασία*).
2. Overcoming pleasure (*ἐγκράτεια*).
3. Being defeated by pain (*μαλακία*).
4. Overcoming pain (*καρτερία*).

However, as the text continues, Aristotle challenges this initial classification and argues that these intermediate states do not only depend on the relationship with pleasure and pain but also on the subjective orientation toward them. This means that “to overcome is not the same as not being defeated,” nor is “to resist the same as not being dominated.” If this interpretation is correct, Aristotle is showing that our relationship with pleasure and pain is not symmetrical: seeking pleasure

and fleeing from pain are distinct phenomena. Regarding pleasure, what matters is overcoming it; concerning pain, what matters is resisting it.

Why this asymmetry? One possible explanation is that while pleasure can be controlled through a decision—for instance, by avoiding certain tempting stimuli, as Leontius does in Plato's *Republic*—pain cannot be dealt with in the same way. We cannot simply banish it from our lives in the same way we avoid a pleasurable temptation. As seen in the case of Theodectes, cited in the text under analysis, pain “threatens” our existence in a way that is not symmetrical to pleasure. We do not have the power to completely avoid suffering.

Perhaps this is why, as Aristotle points out, we are more lenient with those who yield to pain than with those who give in to pleasure. Pain is more closely tied to what is vitally decisive: for this reason, pain is a symptom of illness. If pleasure were a symptom of illness, many would never be cured. Furthermore, the history of suffering teaches us that pain is a more reliable and rapid means than pleasure when it comes to breaking someone's will.



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### **Aristotelians and Sceptics on Action and the Principle of Non-Contradiction**

Greek philosophy features several debates on the reasonableness or unreasonableness of posing the principles of sciences. The crucial question they turn on may be illustrated by reference to an axiomatic-deductive science such as Euclidean geometry. We are justified in believing that the theorems of such a science are true insofar as we can derive them from its axioms. But can we be justified in believing that its axioms are true; if so, how? My paper will focus on an instance of this kind of debate less studied than others: its subject matter is the Principle of Non- Contradiction, and its protagonists are Aristotle, Alexander of Aphrodisias and Sextus Empiricus.

In *Metaphysics* Gamma Aristotle, having introduced the ‘more certain principle of all’ (3, 1005b11-12), and that is to say the Principle of Non-Contradiction, mentions some philosophers who deny it, and others that demand that it shall be demonstrated (4, 1005b35-1006a11). The latter group of philosophers have often been identified with one group of adversaries Aristotle deals with in *Posterior Analytics* A 3 – in particular, with those who reject that some things can be known without proof and arrive at the sceptical conclusion that ‘there is no such thing as knowledge’ (72b5-6). It has also been noticed that, in defending the Principle of Non- Contradiction from those who do not accept it, Aristotle characterizes some of them in sceptical terms – something that led Aristocles to assert enigmatically that Aristotle had refuted Pyrrho’s philosophy before it had been elaborated (frag. 6 Heiland = Eusebius, PE XIV xviii 2).

Against these adversaries, Aristotle tries to demonstrate his principle ‘negatively’ (4, 1006a11- 12). One of the arguments he puts forward is the one from choices and avoidances, whose backbone runs roughly as follows: human action implies choices and avoidances, and these imply belief, and belief implies accepting the Principle of Non-Contradiction (4, 1008b12-31). Alexander devotes several inspired lines to this passage; and, quite interestingly, he characterizes Aristotle’s adversaries in sceptical – Pyrrhonian – terms (*in met.* 299.2-300.22). On the other hand, Pyrrhonians had a reply to Aristotle’s line of reasoning: this is most notably witnessed in Sextus Empiricus’ defence of the possibility, for the Pyrrhonian philosopher, to act, against the objection of inactivity (*PH* I 21-24 and *loci similes*). These textual facts raise the two major questions that will be explored in my paper: firstly, what is the doctrinal (and therefore historical) relationship between the scepticisms witnessed by Aristotle, Alexander and Sextus? Second, and philosophically, is the Pyrrhonian reply witnessed by Sextus effective with respect to Aristotle’s objection? The first question will be treated by a detailed comparison of the terminological – and therefore conceptual – way in which Aristotle, Alexander and Sextus characterise the variety of (proto)scepticism they deal with in the passages mentioned above; the second by inquiring into the nature of the link between action and belief implied by Aristotle’s objection, and into the limits of Sextus’ way of explaining the sceptic’s

behaviour.

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**Revisiting Aristotle's Fragment 161R<sup>3</sup>**  
**A New Philosophical and Philological Perspective**

Aristotelian fragment 161 Rose (=R<sup>3</sup>) addresses a controversial instance of ancient Homeric exegesis, specifically *Iliad* X 252-253, where Odysseus declares: "The stars have advanced, *the night has passed by more / than two parts*, and a third part still remains." This passage posed significant interpretative challenges for ancient scholars—including Apion, Chrysippus, and Aristotle—whose responses were later compiled by Porphyry in his *Homeric Questions* and subsequently reported in ancient scholia. Porphyry introduces these interpretations by noting a mathematical inconsistency within the verses: if more than two-thirds of the night have passed, how can a third still remain, rather than less than a third?

Despite its prominence since Rose's third edition of the Aristotelian fragments [1], this passage has not yet been thoroughly analyzed from an integrated philological and philosophical perspective. Previous studies on the fragment, such as Verhasselt & Mayhew [2]—the most recent item of scholarship—have primarily focused on philological aspects, without addressing the broader interpretative and conceptual challenges. This paper seeks to bridge that gap, offering a comprehensive analysis that situates the fragment within its historical, mathematical, and exegetical context.

The aim of this paper is threefold: (i) to contextualize this underexplored Aristotelian fragment and demonstrate its tenuous connection with the rest of the scholium in which it is preserved; (ii) to propose a new and detailed reconstruction of Aristotle's argument, informed by both his metaphysical framework and a novel analysis of some ancient mathematical conceptions; and (iii) to challenge the traditional ascription of the fragment to the *Homeric Problems*.

Aristotle's response is particularly striking, as it deviates from the exegetical framework established by Porphyry. Through a rigorous reconstruction of his argument, we demonstrate how Aristotle, rather than addressing the question as posed by Porphyry, embarks on an intricate discussion of a totally distinct mathematical issue. He considers a case in which a whole is divided into two parts, and one part increases until the other is reduced to one-third of the whole. At this point, the first part constitutes most of the whole—that is, more than half. But how much more than half? Aristotle's aim is to quantify this surplus, determining precisely how much one part must increase for the other to be reduced to one-third. This reasoning can be applied to the case of a 12-hour night, in which each half equals 6 hours; the question then becomes how much the first half must increase so that only one-third of 12 (*i.e.*, 4 hours) remains. The conclusion is that the increase must be by 2. While this reasoning may appear straightforward to modern readers, as it relies on familiar frameworks of rational numbers and proportional reasoning,

ancient Greek conceptions of number operated on fundamentally different principles.

Drawing on parallels with Aristotle's *corpus* and ancient mathematical texts, we show the fragment's significance for its mathematical insights, its contributions to Aristotelian metaphysics and its illumination of the conceptual gap between ancient and modern arithmetic—areas largely overlooked in previous scholarship. Central to Aristotle's reasoning is his distinction between two types of numerical increase: by a whole unit (ὅλη μονάδι) or by part of a number (μορίῳ ἀριθμοῦ). This distinction is rooted in Aristotle's conception of numbers and units as metaphysically distinct: the unit is an indivisible entity, while numbers are pluralities of such units. This framework shaped the ancient understanding of fractions, as Aristotle demonstrates in his application within the fragment: one-third, for instance, was not seen as dividing a single unit into three equal parts but as a collection of three units, with one selected. By situating the fragment within this conceptual landscape, we demonstrate how its insights deepen our understanding of Aristotle's philosophy of mathematics and its broader relationship to ancient mathematical thought.

The issue with Aristotle's reasoning is that it relies on an alternative version of the Homeric text: "The stars have advanced, *most of the night—two parts—has passed*, and a third part remains". This version avoids the mathematical and interpretative challenges discussed in the other responses reported by Porphyry: while Porphyry's text presents an unsolvable mathematical problem, the version presupposed by Aristotle is entirely unproblematic. Thus, our rigorous reconstruction of Aristotle's reasoning highlights a crucial problem: Aristotle entirely sidesteps the question posed by Porphyry. Since the defining feature of Aristotle's *Homeric Problems* is that the Homeric text presents an ambiguity requiring resolution, yet the text Aristotle presupposes contains no such ambiguity, we argue that the traditional attribution of this fragment to the *Homeric Problems* should be reconsidered. Instead, this fragment gains its true significance as a contribution to Aristotle's philosophy of mathematics.

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**Aristotle on Mixed Acts and Responsibility**

**Introduction**

Aristotle's account of responsibility contains a crucial, yet somewhat neglected component: his discussion of mixed acts. Aristotle provides two examples of mixed acts: jettisoning cargo to lighten a ship in a storm, and responding to a tyrant who holds one's family hostage and demands a base act. I offer a sentence-by-sentence interpretation of Aristotle's account of mixed action. I argue against many commentators that:

- (a) Aristotle's focus is on the tyrant dilemma rather than the storm dilemma.
- (b) Aristotle thinks the right option is to refuse the tyrant.
- (c) The storm and tyrant dilemmas are quite different.
- (d) Mixed acts are said to be both voluntary and involuntary because defying the tyrant is possible for some people, but most of us would be compelled by our human nature to accede to the tyrant's demand.
- (e) Aristotle's discussion of mixed acts expands his account of involuntary acts.
- (f) It also offers a way to excuse certain vices.

**(a)**

While most commentators background the tyrant dilemma in favor of the storm dilemma, I argue that the tyrant dilemma is crucial. The key is the following sentence:

On some actions praise indeed is not bestowed, but pardon is, when one does a wrongful act under pressure which overstrains human nature and which no one could withstand. (1110a23-26)

Obviously, the wrongful act in the storm dilemma would be keeping the cargo. A greedy person might risk the crew by refusing to jettison the cargo, but such a person couldn't claim to have acted "under pressure that overstrains human nature." And no one would be inclined to pardon the refusal to jettison the cargo. Thus, this passage can't be about the storm dilemma, but it obviously fits the tyrant dilemma. Similarly for subsequent passages.

**(b)**

Which option in the tyrant dilemma does Aristotle take to be the right option? In the tyrant dilemma, the "pressure that overstrains human nature" is clearly the natural concern for one's family. Thus, Aristotle thinks the wrong, but pardonable option is to save one's family by performing the base act demanded by the tyrant. The right thing to do must be to defy the tyrant by refusing to do the base act.

**(c)**

Most commentators take the dilemmas to be essentially equivalent. However, in the storm dilemma, agents would earn *no praise* for saving themselves along with a group of sailors and passengers by jettisoning the cargo. Praise is reserved for difficult choices. Agents who jeopardize the group by retaining the cargo would be *blamed*. By contrast, agents in the tyrant dilemma would be *praised* for jeopardizing the group of family members by refusing to perform the base act, and *pardoned* for saving the group by performing the base act. Thus, Aristotle is presenting two rather different sorts of dilemmas under the common label of “mixed action.” One is a simple, lesser-evil dilemma; the other is a complex choice between a high-minded, virtuous act and a pardonable, vicious act.

**(d)**

Recognizing that Aristotle’s focus is on the tyrant dilemma offers a solution to a longstanding textual puzzle. What does Aristotle mean by saying that mixed acts are both voluntary and involuntary? I suggest that the act of defying the tyrant is voluntary for those few who can do it. The vast majority cannot overcome the natural concern for their families, and so are pardoned for performing the base act demanded by the tyrant. To accommodate such pardons, Aristotle expands the range of the involuntary to include not only forced acts, and acts performed in non-culpable ignorance, but also acts performed “under pressure which overstrains human nature.”

**(e)**

This expansion transforms Aristotle’s account of responsibility. Take Kohlberg’s version of the tyrant dilemma: Heinz cannot afford a drug that would cure his wife’s cancer, so he steals it. Without the mixed acts expansion, Aristotle would have had to blame Heinz or sanction his theft, but with the expansion, Aristotle can pardon Heinz, instead.

**(f)**

This expansion is important for another reason, too. Commentators take Aristotle’s view to be that (except for victims of injury, disease, birth defects, corrupt societies, and child abuse, 1148b17-31) people are responsible for their character. Now some people find themselves in *ongoing* tyrant dilemmas through no fault of their own. To save family members from harm, they must repeatedly perform base acts. A contemporary example: Some mothers remain in abusive relationships for the sake of their young children, necessarily performing base acts on many occasions. These acts build bad habits of perception, passion, thought, and action. Since this habituation is due to pardonable acts, the mothers are not responsible for their resulting vices.

**Summary**

My interpretation of Aristotle’s account of mixed action solves an interpretive puzzle, adds an important exemption to his general attribution of responsibility for action and character.

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### ***Pros Hen* Homonymy and Arkhê-Pluralism**

Aristotle argues – most famously in *Metaphysics*, Gamma 2 – that, although there is no single definition covering their every instance, each '*pros hen*' homonym possesses an original instance that somehow makes them all a suitable subject-matter of a single inquiry regardless. His (supposedly) uncontroversial examples of this are *healthiness* and the *medical*, somehow unified by the healthiness of a body or an organism and by the medical nature of medicine itself, respectively. (Aristotle argues that being – divided into several categories – is just like them, unified by the category of substance.) Explaining the nature of this originality, call it the 'originality of the core kind' (OCK), has proven difficult, however.

The literature on this topic has traditionally focussed on offering a *univocal* account of the OCK. Thus, for Owen (1986), *pros hen* homonymy arises when definitions of all but one of the diverse meanings of an equivocal term make reference to its remaining – 'focal' – meaning. For example, 'healthy' applied to a diet might mean something like 'produces healthiness in a body;' and 'healthy' applied to a complexion – something like 'is a symptom of healthiness of a body.' It is due to its reappearances in such definitions that Owen calls the meaning of 'healthy' applicable to organisms the focal meaning of healthiness. Shields (1999) and Ward (2008), by contrast, regard *pros hen* homonymy as a matter of genuine relationships between things connected in this way rather than of linguistic relationships between different meanings of a term. Specifically, they both claim that instances associated in the *pros hen* way are related *causally*: for example, a healthy diet causes health in a body, whereas a healthy body causes a healthy complexion, in each case in the manner of efficient causation. But Shields and Ward disagree about the nature of the OCK. Shields (1999: 123) argues that it is a matter of Aristotle's priority by nature: '*a*'s being *F* is asymmetrically responsible for the existence of *b*'s being *F*.' By contrast, Ward (2008: 85) argues, following Cajetan, that 'the explanation for the distinction between the core and derived cases consists in the fact that the core instance of the homonym realizes the character formally, or in virtue of itself, in contrast to the secondary instances that possess it by "extrinsic denomination."'

However, in this paper I argue that there is in fact no single set of features shared by all core instances of *pros hen* homonyms. My argument for this thesis builds on a belated clarification in *Metaphysics*, Zeta 1, with which Aristotle follows the initial argument for the *pros hen* homonymy of being in *Metaphysics*, Gamma 2, regarding ways in which substance is, as the core instance of being, 'prior' to members of the remaining categories. One of these priorities, constitutive of the originality of substance, is the priority in time. I show, for all extant interpretations of this type of priority, that it does not characterise the core instances of healthiness and of the medical. And I argue, appealing to the principle of charity, that we should not conclude that priority in time is necessary for the OCK. Since, for Aristotle, there is no single set of features shared by all cases of priority, this means that he did not believe that there is a single set of features shared by all core instances of *pros hen* homonyms, either.



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### Reconsider Aristotle's *Metaphysics*: Substantial Form as both Universal and Particular

*Metaphysics Z* is a crucial work for understanding Aristotle's theory of substance. Aristotle examines four candidates for substance: subject, essence, genus, and universal. As a conclusion, he claims that form is substance. Because form is definable and definitions are of universals, it seems that form is a universal. However, Z13 puts it into a paradox, which is detailed as follows:

- (1) Substance is form;
- (2) Forms are definable, and therefore universal;
- (3) No universal is a substance.

There are two main responses to this conflict. One maintains that Aristotle's theory of substance is inconsistent, and contends that Aristotle has two incompatible systems. However, most commentators attempt to reconcile the discrepancy. In one of several ways: (a) some scholars argue that Aristotle does not hold that form is universal, but rather particular; (b) others insist that Z13 is a weak objection to the universal, so they believe that certain universals are substances. Nevertheless, there is one scholar denies that substance is form. Besides, there is still another argument that the substance is both universal and particular.

In this paper, I will defend a version of this last view, namely that the substantial form in Aristotle's theory is both universal and particular by a new interpretation. This characteristic of substantial form resolves the so-called "aporia" of *Metaphysics B* since substantial form, in this case, will be definable, knowable and a "this". As we know, *Metaphysics B* ends with an "aporia" (1003a7-17) which raises the controversial topic of whether the substance is universal or particular: primary substance is not particular, since a particular is not knowable; primary substance is not universal, since a universal is not a "tode ti". Apparently, this aporia indicates a tension between *tode ti* and *toionde*, namely, between particular and universal. Although there is no further discussion of this matter in *Metaphysics B*, this "aporia" actually is raised again at the beginning of *Metaphysics Z*, where Aristotle claims that "the 'being' meant is 'ti esti' or a 'tode ti'" (1028a13). The tension between "ti esti" and "tode ti" here is commonly recognized by commentators, but there is no consensus concerning how Aristotle handles this issue. I will argue that Aristotle aims to eliminate this "aporia", which is the general guideline for his investigation of substance. He shows us that if a claim concerning substance does not entirely meet these two characteristics, i.e. "thisness" and "definability", it is at least insufficient. The perspective concerning both "ti esti" and "tode ti" indicates that Aristotle's investigation develops in a broad view. In this case, Aristotelian substance serves to satisfy different requirements coming from his ontology and his epistemology and semantics. Each of diverse research fields requires that substance has a different morphology, i.e. definition requires the substance to be universal, whereas ontology needs particular form to explain the characteristic of "thisness". If this is correct, the serious question is converted as to how the Aristotelian substantial form can be both universal and particular without contradiction. The key to reconciling universal and



particular is to recognize that the substantial form has two states: its *actual* state is the particular form in the extramental world, while its *potential* state is the universal form in the human mind. The universal and the particular form are not two different kinds of substance; rather, through form-transferring, they are “somehow” one and the same substantial form.

In section (I), my aim is to investigate Aristotelian substance by considering his semantics and to clarify that universal forms are the meanings of definitions and that the universal exists in the mind. By contrast, the referent of a definition is always a particular form that exists in the extramental world. On this basis, I will argue that substantial form is both universal as the meaning of a definition and particular as the referent of a definition.

Section (II) concerns substantial form in terms of actuality and potentiality. I will mainly demonstrate that in Aristotle’s view, substantial form is a dynamic entity which has two states: *actual form*, which is particular in the world, *potential form*, which is universal in the mind. These two states of substantial form have “potentiality” to be transferred to the opposite state, and therefore are “somehow” one and the same.

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### **Aristotle on *eutrapelia*, the virtue of play**

In the *Nicomachean Ethics*, Aristotle provides an account of eleven moral virtues. Many of these, such as courage, moderation and justice, are what we would expect to find on any decent inventory of virtues, ancient or modern. Some, however, are less expected, such as munificence, the virtue pertaining to grand spending, or the nameless virtue which is associated with minor honours. Perhaps most striking of all is wittiness, i.e. *eutrapelia*, one of the three virtues which Aristotle connects with social life (*NE* 4.8). To us, wittiness might seem more like an art or a personality trait than a sign of an upright moral character. Indeed, ‘virtue’ is not the word that springs to mind when we think of Oscar Wilde or Woody Allen. So why does Aristotle make wittiness a full-fledged virtue? And how does his taxonomy of moral virtue apply to wit? According to what David Bostock calls the ‘standard account’ of moral virtue in Aristotle, each virtue is associated with a particular passion which naturally motivates the agent to action since it is not opposed by reason or by other contrary passions. Although *eutrapelia* is rarely commented upon in the vast literature on Aristotle’s ethics, where it is considered, scholars are quick to point out ways in which it fails to conform to this ‘standard account’. Such scholars usually have one of two agendas: to prove that the ‘standard account’ of moral virtue is incorrect or to show that *eutrapelia* cannot be a full-fledged virtue.

In this paper, I address the second of these agendas by tackling three main questions which Aristotle’s *Nicomachean* account of *eutrapelia* generates: (1) what, if any, is the particular passion associated with *eutrapelia*? (2) Is *eutrapelia* *prohairesis* and goal-directed in the same way as the other moral virtues? (3) How can we reconcile Aristotle’s account of *eutrapelia* as the virtue pertaining to the sphere of play (παιδιά) with his views on play elsewhere? In doing so, I aim to show that Aristotle’s account of *eutrapelia* as a virtue is successful on the grounds that it shares its taxonomy with some of the other moral virtues. Finally, I tentatively suggest that *eutrapelia* is not only goal-directed in the standard sense but that it also has far-reaching consequences. Drawing on the passages on friendship in books 8 and 9 of the *NE* and on metaphor and wordplay in the *Rhetoric* (1412a5-1412b), I suggest that (a) by having one’s shortcomings pointed out through wit, *eutrapelia* has the capacity to increase one’s self-knowledge and (b) the ability to create and understand witticisms helps to cultivate the kind of creativity necessary for living a fully virtuous life. While I am primarily concerned with Aristotle’s views on *eutrapelia* in the *Nicomachean Ethics*, I also draw on relevant passages from the *Eudemian Ethics*, *Magna Moralia*, *Poetics* and *Rhetoric* in support of my account.

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**Aristotle's Critique of Plato: Dialectic, Non-Contradiction, and the Foundations of Philosophical Discourse**

This paper argues that Aristotle's critique of Plato's theory of Ideas constitutes a pivotal moment in Western philosophy, marking a fundamental transformation in philosophical method with profound consequences for ontology, epistemology, and the justification of norms. It examines the intricate and interconnected nature of Aristotle's rejection of being as a genus, his alternative conceptualization of substance (*ousia*) and the categories, and his elevation of the principle of non-contradiction to a foundational principle governing all logical and metaphysical inquiry. A central and crucial aspect of this research lies in the detailed analysis of Aristotle's principle of non-contradiction, which he posits not merely as a logical constraint, but as the normative and *sui generis* principle for signification. This principle assumes a paramount role in the investigation of the fundamental principles and axioms that underpin the various disciplines, functioning as a powerful confutative method applicable not only to the internal logical coherence of utterances but also, crucially, to the intersubjective redeemability of affirmations—their capacity to attain the status of truth. More precisely, this research investigates how the affirmation of a proposition, whether in theoretical or practical domains, can be rigorously justified by demonstrating the inherent impossibility of its negation (i.e., its falsehood). This process is demonstrably linked to the dialectical method employed by Socrates as *elenchos* and subsequently refined and developed by Plato, who conceived of dialectic as a method encompassing both the "upward" movement of generalization (*epagoge*), culminating in the apprehension of first principles, and the "downward" movement of *diaeresis* (division), enabling the systematic classification and definition of concepts. This sophisticated understanding of dialectic is most notably exemplified in the central books of the *Republic* (Books VI and VII), with its exploration of the divided line and the allegory of the cave, and the *Parmenides*, which meticulously examines the complex *aporiai* surrounding the Forms. As these seminal texts illustrate, the dialectical process involves the systematic and rigorous investigation of *aporiai* through precisely formulated dialectical questions (typically posed in a yes/no format) and the exhaustive exploration of all possible negations, as masterfully expounded in Plato's *Parmenides* in its exploration of the complex *aporiai* surrounding the Forms. Therefore, the principle of non-contradiction, as Aristotle understands it, is not merely a logical constraint imposed on thought; rather, it constitutes a fundamental condition for the establishment of shared meaning, the precise conceptual determination of terms, and, ultimately, the very possibility of meaningful discourse within diverse contexts. While Plato's theory relies on the ontological separation of Forms and particulars, creating a complex and often debated relationship between the realm of being and the realm of becoming, Aristotle resolutely insists that genuine knowledge, and indeed the very possibility of meaningful discourse, must be rigorously grounded in demonstrable, non-contradictory principles—a process that is fundamentally and inextricably linked to the rich tradition of dialectical

inquiry. My approach in this paper will involve a close textual analysis of key passages in *Metaphysics* Gamma and Delta, informed by a detailed conceptual history of the principle of non-contradiction, tracing its development from its implicit use in Socratic *elenchos* to its explicit articulation by Aristotle. My analysis will concentrate on Aristotle's sophisticated and often nuanced arguments presented in these texts, where he explicitly addresses the principle of non-contradiction and meticulously explores its profound implications not only for the very concepts of being and predication, but also for the structure of logical thought itself. Furthermore, I will critically examine his ethical works, most notably the *Nicomachean Ethics*, to elucidate how this fundamental logical principle, which underpins all rational discourse, informs his nuanced and highly influential account of practical reasoning, ethical deliberation, and the pursuit of *eudaimonia*. This study, therefore, investigates how Aristotle's carefully constructed logical and ontological structures, which are centered on the principle of non-contradiction and its intimate and essential connection to the established and evolving dialectical tradition, provide a more robust and demonstrably stable foundation for philosophical discourse, scientific inquiry, and, crucially, the very possibility of intersubjective understanding than Plato's conceptually challenging theory of participation. This investigation carries with it significant meta-theoretical consequences, particularly for contemporary debates in meta-ethics and discourse ethics, where the grounding of normative claims and the possibility of rational consensus remain central and contested issues. By exploring the historical roots of these debates in the thought of Aristotle, this paper aims to contribute to a deeper understanding of the fundamental principles that underpin both philosophical inquiry and ethical deliberation.

### **The meaning and importance of Aristotle's application of dialectical method**

Aristotle represents the fourth step in the development of dialectic, following Zeno, Socrates, and Plato, and he is the founder of dialectic as a systematic art. At the start of *Top.* he tells us that there are four kinds of reasoning, two of which lead to the truth, namely demonstration (ἀπόδειξις) and genuine dialectic, which is based on generally accepted opinion (*Top.* I, i, 100a 29-30). Aristotle states explicitly that dialectic is useful for the philosophical sciences (*Top.* I, ii, 101a 25-101b4). He applies dialectic in three ways in his treatises.

Firstly, as we can see from numerous passages, Aristotle considers it right to start an investigation by inquiring into the opinion of the many and the wise "... because, being able to raise difficulties on both sides, we shall more easily discern truth and falsehood on every point" (101a35-37; cf. *Top.* VIII, xiv, 163b 9-12). However, it is noteworthy that the opinion of the many is not just common opinion, but also ordinary language, which represents the opinion of the many. The wise are those of Aristotle's predecessors who have expressed a view about the topic under investigation, but the concept also includes ancient traditions. Aristotle considers it essential to draw up these opinions before proceeding to scientific argument. But for scientific argument dialectic is also of fundamental importance. Aristotle writes: "Further [this treatise on dialectic] is useful in regard to the ultimate bases of each science; for it is impossible to discuss them at all on the basis of the principles peculiar to the science in question, since the principles come first before anything else, and it is necessary to deal with them through the generally accepted opinions on each point. This task belongs peculiarly or most appropriately to dialectic; for being of the nature of an investigation, it is the path to the principles of all disciplines." (*Top.* I, ii, 101a 37-101b 4). Aristotle also explains the importance of induction for scientific reasoning in *EE* V (= *NE* VI), iii: "Now induction is a starting-point [of reasoning] leading to the universal, whereas deduction proceeds from universals. Therefore there are starting-points [of reasoning]/first principles from which deduction proceeds that are not reached by deduction; therefore they are reached by induction." (1139b 28-31; cf. *APr.* I, xxx, 46a 8-10). Again in *NE* I, vii Aristotle writes that "of first principles some are grasped by induction, others by perception, others by some kind of habituation, and others in some other way" (1098b3-4). It is of the greatest importance that deduction is dependent on induction and thus on dialectic in this way. Finally, Aristotle's third application of dialectic is that of testing results achieved by deduction from true first principles by comparing them with generally accepted opinions. He refers to this noteworthy procedure as *πειραστική*. Thus having carried out a deduction, for example his deduction of the sources of happiness from the two parts of the soul that are unique to human beings, Aristotle does not consider that his task is finished, but proceeds to test his result. He writes: "We must examine it [our first principle] not only on the basis of the conclusion and the premises of our argument, but also on the basis of what people say about it. For all of the data are in harmony with a true view, but soon clash with error" (*NE* I, viii, 1098b9-12). Thus Aristotle holds that the

conclusion of a deduction requires verification by means of dialectic. From Aristotle's account of the application of dialectic it can be seen, therefore, that its effect is a threefold reduction of the syllogism to dependence on generally accepted opinion.

An examination of Aristotle's application of dialectic also shows various special characteristics of the method. Aristotle can be seen to report the view of the many and then to reason about it in order to show how the popular view partially supports his own view while changing the meaning of the terms he uses in the course of the argument. An understanding of Aristotle's dialectic also appears as essential in order to understand a number of passages which have been rejected as spurious through lack of understanding of this method. Finally, Aristotle's dialectical method can also be used for heuristic purposes, since the method is characteristic of treatises that are acknowledged to be youthful works. But vice versa, where the method appears in a passage of uncertain date, such as part of *Met. A*(XII), viii, it may be argued on the basis of the method that it is a youthful passage. Where a complete dialectical argument is found in *Phys.* II, iv-v, it may be argued (also on other grounds) that *Phys.* II, vi is a later addition by an editor.

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### **The Natural Foundations of the Political Association in Aristotle: Polis as “Natural (*Physeî*)” and “In Accordance with Nature (*Kata Physin*)”**

This paper aims to examine what it means for the *politikē koinōnia*—that is, the *polis* (city)—to be “natural” (*physeî*) and “in accordance with nature” (*kata physin*), through the lens of the human soul and the inherent human potentialities. The inquiry will explore the meanings of the concepts of “*physeî*” and “*kata physin*” as they pertain to the subject of Aristotle’s political research. Specifically, it will analyze in what sense the *polis* constitutes a natural and nature-appropriate human association, drawing on Aristotle’s *Physics*, *Nicomachean Ethics*, and *Politics*.

In Aristotle’s framework, the boundaries of each field of knowledge are determined by the object and the structure of that object within the respective domain. Political philosophy, which is simultaneously an ethical investigation, is the central inquiry within the *epistēmē praktikē* (practical knowledge), with its subject being human actions. Consequently, any philosophical question within the study of politics must begin with the question of what it means to be human. In other words, every definition within this investigation is grounded in the “nature” of human beings. The phenomena studied in political inquiry are always analyzed in relation to the human being and its nature. For instance, a well-ordered *polis* is considered “good” insofar as it is organized to enable individuals to actualize the potentialities inherent in their human nature. Similarly, Aristotle’s characterization of the *polis* as an association that is both natural and in accordance with nature is directly linked to the human soul and the unique constitution of human beings.

The first part of the paper will focus on the concepts of *physis* and *physeî* in Aristotle), particularly as discussed in his *Physics*. In Book II of *Physics*, Aristotle defines nature as “a principle and cause of motion and rest”, which exists inherently in the object it constitutes, independent of external causes. For Aristotle, nature is not merely a collection of objects but the principle of motion, change, growth, and development inherent in individual natural entities. Thus, nature does not exist in abstraction; it is always the nature of something corresponding to a particular activity. Within this framework, the claim that the *polis* is a natural and nature-appropriate human association gains clarity. Here, nature refers to the intrinsic structure of the object of political inquiry and its inherent potentialities. Aristotle’s definition of the *polis* as a human-specific association, natural and in accordance with nature, suggests that human beings possess an innate capacity to establish *polis*-type associations and that such associations are essential for their self-realization and the attainment of a complete and self-sufficient life.

The second part of the paper, building on the framework established in the first, will focus on Aristotle’s foundational determinations regarding human beings in the context of political association, a form of “togetherness” (*koinōnia*) that is “peculiar” to humans. These determinations will be analyzed with reference to the human soul and its inherent potentialities. Aristotle consistently examines human beings within the framework of a particular communal life (*koinōnia*), as demonstrated in his *Nicomachean Ethics* and *Politics*. He asserts that humans are,



*physei zoon politikon*—a being, by nature, suited to the political association, *polis*. Through this characterization, Aristotle underscores two key points: first, that humans are inherently political (*politikon*) beings who live-with-one-another, and second, that they uniquely possess the capacity for political coexistence. To further elucidate Aristotle's claim, it is important also to examine one of his most fundamental characterizations of human beings: *zoon logon ekhon* (a being possessing speaking, *logos*). This determination provides the framework for understanding the phrase "*physei zoon politikon*". In *Nicomachean Ethics*, Aristotle describes human life as the active realization (*energeia*) of a being endowed with *logos* (reason and speech). Therefore, *polis*, as a natural and nature-appropriate association, is distinctly human in character, emerging from uniquely human potentialities and serving as the context in which these potentialities are actualized.

The third and final part of the paper will address the question of why human well-being is attainable only within the *polis*. Aristotle argues that *polis* originates from the potentialities inherent in the human soul while human beings achieve a self-sufficient life through the actualization of these potentialities within the communal life of the city. To understand how this self-sufficiency occurs, it is essential to examine the role of the citizen, the foundational element of the political association, and the activities that define citizenship. The core activities of citizenship are *arkhein* (governing, ruling) and *krinein* (judging, deciding). These activities are intrinsically connected to the *logos*—the rational and deliberative faculty of the human soul—which is unique to human beings. By engaging in these activities, the citizen activates their *logos* and, in doing so, realize the potentialities that define their being human.



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## **A Hylomorphic Solution to The Problem of the Many**

The “Problem of the Many”, first articulated by Peter Unger (1980) and Geach (1980) and further developed by philosophers such as Liebesman (2020), challenges our commonsense understanding of objects as well-defined, bounded entities. The problem arises when considering objects like clouds or cats, where multiple overlapping or embedded configurations of their constituent parts (e.g., water droplets or hairs) seem to qualify as distinct instances of the same object. For example, if a cloud is composed of  $n$  water droplets, does a subset of  $n-1$  droplets constitute a different cloud? Similarly, Geach’s example of Tibbles the cat illustrates that removing one hair from Tibbles creates a seemingly distinct cat, leading to the absurd conclusion that there are as many cats as there are possible configurations of Tibbles’ hairs. This problem is not merely about vagueness but rather about the ontological proliferation of objects, where many potential candidates for being a single object (e.g., a cloud or a cat) seem to coexist.

The problem is formalized through six jointly inconsistent but independently plausible claims: (i) exactly one cloud exists; (ii) there are many cloud candidates; (iii) non-identical candidates constitute non-identical clouds; (iv) any cloud is constituted by one of the candidates; (v) if two clouds exist, there are at least two clouds; and (vi) if there are at least two clouds, there is not exactly one cloud. Philosophers have proposed various solutions, including accepting the proliferation of objects (denying claim i), embracing nihilism (denying the existence of objects altogether), or redefining identity and constitution. Geach, for instance, argues that all potential cats are the same cat under a weaker notion of identity, while Lowe (1982) and Johnston (1992) distinguish between identity and constitution, asserting that objects are constituted by but not identical to their material constituents. However, Lewis (1993) critiques these solutions, arguing that they fail to resolve the problem and inflated the ontology by multiplying entities.

This paper proposes a hylomorphic solution to the Problem of the Many, drawing on Aristotle’s framework of matter and form. Hylomorphism posits that objects are unified wholes composed of matter (their material constituents) and form (their structural or functional organization). From this perspective, a cloud is not merely a collection of water droplets but a hylomorphic compound where the droplets are organized in a specific configuration that gives the cloud its properties and powers. This approach denies that arbitrary collections of matter (e.g., random groups of water droplets) qualify as objects or parts of objects. Instead, only hylomorphic compounds—entities with both matter and form—can be genuine parts of a whole. This framework addresses the Problem of the Many by rejecting the assumption that objects are identical to or reducible to their material constituents. For example, a cloud is not its water droplets but rather the droplets arranged in a specific way that enables the cloud to exhibit its characteristic properties, such as whiteness or the ability to produce rain.

The hylomorphic account also redefines parthood, rejecting classical mereology’s assumption that any arbitrary partition of an object counts as a part.

Instead, parts are understood as hylomorphic compounds themselves, playing functional roles within the whole. This perspective resolves the problem by relativizing parts to the whole, ensuring that only entities with the appropriate form and function are considered parts. For instance, a water droplet is a part of a cloud because it contributes to the cloud's properties, but a random group of droplets lacking the requisite form does not qualify as a part. This approach avoids the ontological proliferation of objects by emphasizing the unity and structure provided by form.

The paper further addresses potential objections, such as Lewis's concern that hylomorphic compounds resemble the objects they constitute, thereby reintroducing the problem. The response is that hylomorphism denies the existence of multiple forms for a single object, ensuring that only one unified whole exists. Additionally, the hylomorphic framework accounts for apparent vagueness by associating matter with potentiality and form with actuality. For example, water droplets on the boundary of a cloud are in a state of potentiality, only becoming actual parts of the cloud under specific conditions. This dynamic understanding of objects allows for flexibility without undermining their unity.

In conclusion, the hylomorphic solution to the Problem of the Many provides a robust framework for understanding objects as unified wholes composed of matter and form. By rejecting the reduction of objects to their material constituents and redefining parthood in terms of functional roles, hylomorphism avoids the ontological proliferation of objects while preserving their unity and integrity. This approach not only resolves the Problem of the Many but also offers a comprehensive account of objecthood that aligns with our commonsense intuitions about the world.

### **Philoponus' Criticism of the Aristotelian Concept of Natural Motion**

This article aims to examine the critique of John Philoponus of Alexandria (c.490-c.570) of the Aristotelian concept of natural motion found in Philoponus's commentaries on Aristotle's *Physics*, written around 517. Special attention will be given to some insertions, possibly later than 517, to the commentary on Book IV: *Corollarium de Loco*, a digression included by Philoponus after his commentary on *Physics*, IV, 4, 211 b 5-212 a 7, and his *Corollarium de Vacuo*, another digression introduced in his commentary on Book IV, Chapter 8 of the *Physics*.

Philoponus' conception concerning the tendency of a body to go to its natural place is diametrically opposed to that of Aristotle, who argues that each of the things, whether those belonging to the celestial region or the terrestrial region, has its 'natural' place and its 'natural movement' to this place. Thus, in the Aristotelian world, each of the things has its own place, according to its nature, and it is only in its place that its being is completed, and that is why it tends to reach there. According to Aristotle, each natural place has a certain specific power (*dynamis*) capable of producing distinct effects such that heavy bodies move, naturally, 'downwards', their natural place; and light bodies 'upwards'.

According to Philoponus, in the Aristotelian system, the natural place plays the role of a formal cause. In doing so, the natural place attracts natural bodies as an object of desire, since, according to Philoponus, Aristotle sets that superior things are the form of the more inferior ones. The latter, in turn, occupy the position of their matter, and since matter desires form, as the female desires the male and the common desires the noble, natural bodies desire their respective natural places.

Philoponus, however, considers "ridiculous" the Aristotelian thesis that the natural place of bodies has a certain innate power that causes things to move in search of it (natural place). According to Philoponus, it is not necessary that the place of a body has any power or quality. Although he recognizes that it is good for each of the things to be in their own (natural) places, this does not determine, according to Philoponus, that these places necessarily must store a certain power. The place, affirms Philoponus, is simply a certain interval (*diastêma*) measurable in three dimensions different from the bodies that occupy it. And although Philoponus refuses the idea that the natural place is part of the *entelekheia* (final cause) of each body, this does not mean that he has eliminated the final causes from his treatment of natural movement, as many historians have considered. In my view, Philoponus simply points to another final cause for natural motion, of which the place is not a part. But he continues to give a teleological explanation for movement, according to which bodies move naturally in search of a certain order (*taxis*) granted to them by God. When God created the universe, according to Philoponus, God endowed it with a certain harmony; arranging each of the things according to a certain order, such that when something is displaced, by violence, from the place established for it at the moment of creation, altering the harmony granted by the Creator, it returns to its place; but not in search of a

surface, but in search of the harmony granted by the Creator.

This article intends to provide support for a later study of the reception of Philoponus' theory of motion in the early modern period, for which the study of the Latin versions of Philoponus' works is necessary since a large part of the Renaissance and early modern authors only had access to Philoponus' ideas via the Latin versions and not the Greek ones. Therefore, the analysis to be undertaken in this article will be based mainly on a Latin translation of Philoponus' commentary on the first four books of Aristotle's *Physics*.

In this research, we chose to work with the 1546 Latin translation of Philoponus' commentary on Aristotle's *Physics* made by Guglielmo Dorotheo (c. 1526-1571): Guilielmus Dorotheus, Venice, *apud Octavianum Scotus*) *Ioannis Grammatici cognomento Philoponi Eruditissima commentaria in primos quatuor Aristotelis de naturali auscultatione libros. Cautum est Priuilegio Senati Veneti, ne quis hunc Librum intra decennium imprimat uendatue*. Venetiis. M D XXXX VI

My hypothesis is that the Latin translations of Philoponus' works provide an important key to reading for the analysis of Philoponus' influence on the philosophers of the Early Modern Age. In my view, these translations represent an important historical source for the investigation of the fixation of the philosophical terminology of the period.

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## **Substance and Separability in Aristotle's *Metaphysics Z*: Rethinking the *Tóde Tí***

This paper examines the central concept of separability (*choristón*) and the notion of *tóde tí* ("this what it is") in Aristotle's *Metaphysics Z*. Traditionally, the relationship between Plato and Aristotle has been framed as a fundamental opposition, with Plato positing the separation of forms (*chorismós*) and Aristotle rejecting it. However, a closer reading of Zeta suggests that Aristotle's stance is more nuanced. He attributes to substance the dual prerogative of being separable and being definable as *tóde tí*. This contribution revisits these notions, proposing that *choristón* and *tóde tí* are not two distinct properties but an *endiadi* that articulates the epistemic and ontological primacy of substance.

### **The Substance as a Quidditative and Separable Entity in *Metaphysics Z***

#### **1. Introduction: The Problem of Separability**

A recurring narrative in philosophical historiography contrasts Plato and Aristotle in terms of the separation of principles. Plato's forms (*eídē*), as outlined in the *Phaedrus* (247c-248c), are said to exist in a separate, transcendent realm, while Aristotle is seen as embedding principles within the empirical world. Scholars like Ingemar Düring have reinforced this dichotomy, emphasizing a fundamental discontinuity between the two thinkers. However, the text of *Metaphysics Z* invites us to reconsider this reading.

In Zeta, Aristotle attributes two key properties to substance: separability (*choristón*) and *tóde tí* ("this what it is"). While often treated as distinct, these properties may be better understood as an *endiadi* expressing the epistemic and ontological nature of substance. This paper explores the implications of these concepts, analyzing the pivotal chapters of *Metaphysics Z* (notably Z3, Z13, and Z17) to demonstrate how Aristotle refines and reinterprets the notion of separability in relation to substance.

#### **2. The Lexicon of Separability**

The concept of separability (*choristón*) plays a central role in Aristotle's definition of substance. Derived from the adverb *choris* ("separately"), *choristón* is a verbal adjective indicating the capacity to be separated. Unlike *kechorisménon* ("that which is separated"), a term associated with the Unmoved Mover in *Metaphysics Lambda*, *choristón* refers to a potential state rather than an actualized one.

This distinction is critical for understanding the epistemological primacy of substance. Unlike other categories of being (quantity, quality, relation), substance is defined independently, without reference to secondary attributes. Thus, the separability of substance is not spatial or physical but conceptual and definitional.

#### **3. *Tóde tí* as "This What It Is"**

The term *tóde tí* has traditionally been interpreted as referring to individual,

concrete substances. However, this interpretation aligns more with the framework of the *Categories* than with the epistemic focus of *Metaphysics*. In Zeta, Aristotle is not concerned with individual substances but with the principles that underlie them.

In this context, *tóde tí* is better understood as the articulation of the “what it is” of substance. The pronoun *tóde* points to a definable subject, while *tí* assumes an interrogative role, expressing the question “what is it?” This interpretation situates *tóde tí* within the epistemological framework of defining and understanding substance as the primary object of knowledge.

#### **4. The Relationship Between *Choristón* and *Tóde tí***

A closer reading of *Metaphysics* Z reveals that Aristotle does not treat separability and definability as independent properties of substance. In Z3, he states, “It seems that to substance primarily belongs being separable and being *tóde tí*” (1029a27-28). These two aspects, rather than being distinct, form a unified characteristic of substance as the foundation of scientific knowledge.

The separability of substance, in this light, is epistemic rather than physical. It reflects the ability to define and understand substance without reliance on other categories of being. This reinterpretation challenges the traditional dichotomy between Platonic and Aristotelian principles, suggesting a more integrated relationship.

#### **5. Conclusion: The Epistemic Primacy of Substance**

This analysis of *choristón* and *tóde tí* offers a fresh perspective on Aristotle’s *Metaphysics*. Rather than rejecting separability outright, Aristotle reframes it as a conceptual condition for defining and understanding substance. By emphasizing the *quid est* as the focal point of his inquiry, he bridges the epistemic concerns of Plato with his own ontological framework.

Ultimately, the *tóde tí*, understood as “this what it is,” underscores the definitional and epistemic priority of substance, affirming its central role in Aristotle’s science of being.



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### **The End as *Archē*: A Reading of *Eudemian Ethics* II.11, 1227b24-37**

Aristotle famously claims that ethical virtue makes the “end” (*telos*) or “target” (*skopos*) correct. The proper interpretation of this claim has been a battleground for scholars studying his moral psychology. According to Irrationalists, his claim implies that the irrational but obedient part of soul alone *determines* our ends. Anti-Irrationalists, by contrast, reject this implication: at best, his claim implies merely that the irrational but obedient part is solely responsible for *desiring* our ends, and it does not preclude reason from partially or even wholly determining them. A sound understanding of this claim, then, promises to shed light on fundamental issues regarding Aristotle's theories of human motivation and action.

In my paper, I focus on Aristotle's presentation of his claim in *Eudemian Ethics* (EE) II.11, 1227b24-37. Prominent proponents on both sides agree that, in this passage, Aristotle seems to aver that ethical virtue determines one's ends in a way analogous to how *nous* grasps scientific first principles. After all, he says that there is no reason or reasoning of one's target (1227b25-26), and he likens ends in productive sciences to starting points and hypotheses in theoretical sciences (1227b30-34). On this common reading, ends are practical *justificatory* starting points, and, like their theoretical counterparts, they too must be determined by a non-discursive faculty of soul. It is often thought, then, that this passage favors the Irrationalist camp.

I disagree. This reading incorrectly identifies the kind of starting point that Aristotle takes an end to be in EE II.11. In this chapter, he does not think of an end as a justificatory starting point. Rather, he conceives of it as an *initiator of practical thought* which kicks off an episode of practical deliberation. So interpreted, EE II.11 does not support Irrationalism. The irrational part of soul makes one occurrently wish for something and begin a process of deliberation. But it is still an open question which part(s) of soul determines our ends in the first place.

I first defend my reading by advancing two reasons against the Irrationalist reading of 1227b24-37. 1. If Aristotle were arguing that ends are justificatory bases, his argument from the fact that craftsmen do not examine their end would be a bad one. 2. Aristotle's example of a theoretical starting point in this passage is the 2R theorem. But this is *not* a theoretical starting point in Aristotle's eyes; indeed, it is one of his “go to” examples of something that is demonstrated. If he means to suggest that ends are like theoretical justificatory starting points, his own example is highly misleading.

Turning to my positive proposal, I observe that the kind of starting point that Aristotle has in mind in EE II.11 is a starting point of a process of thought (*noēsis*, 1227b34). His claim that an end is the starting point of such a process is paralleled at *de Anima* III.10, 433a13-20. There, I contend, it is clear that an end is a starting point in that it is an initiator of practical thought, not a justificatory basis. Given this parallel, I argue that we should understand his claim in EE II.11

similarly. Ethical virtue, then, makes the goal correct in that it causes one to occurrently wish for the appropriate end in a given situation. In turn, this wished-for end incites an episode of deliberation.

I conclude my paper by discussing two implications of my reading. First, EE II.11 provides no evidence for Irrationalism. Aristotle does not talk about justificatory starting points at all in this chapter. Consequently, he does not suggest that the irrational part of soul determines our practical justificatory starting points. Second, EE II.11 highlights an important function of ethical virtue: part of its job is to ensure that episodes of deliberation begin from the right place.



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### **Light and Intellect in Aristotle's *De Anima***

In *De Anima* III.5, Aristotle famously introduces the “active intellect” (νοῦς ποιητικός) corresponding to the passive or receptive intellect of the previous chapter. The contents of this passage have generated extensive debate, from the ancient commentarial tradition through medieval theological discourse to contemporary scholarship. Although much can be said about every detail of these lines, this paper is focused on the analogy that Aristotle draws between active νοῦς and light — namely that it produces all things “as a sort of state like light” (ὥς ἔξιν τις, οἷον τὸ φῶς: 420a15). The purpose of this paper is to use Aristotle's theory of light and vision to yield insight into the nature active νοῦς.

Section I is devoted to a reconstruction of Aristotle's theory of optics. I argue that for Aristotle, (i) light is a complete activity that (ii) serves as a standing condition for colour's motion. I reject Sean Kelsey's view that colour plays a causal role in the actualization of transparent media, arguing instead that both colour and the transparent must be actualized independently of each other before colour ‘moves’ the transparent. The details of Aristotle's theory of light manifest a perceptual realism, which is crucial for maintaining epistemic integrity — both because the objects of perception ultimately play a role in cognitive activity and because the two processes are held to be analogous.

In Section II I argue that if we take seriously Aristotle's light analogy, then active νοῦς must be understood as merely the activity of the human intellect rather than a separate substance. I draw on the Aryeh Kosman's analysis of motion and activity to show that the activity of the intellect, since it is a complete activity, must be non-discursive in nature.

In Section III, I address and resolve the tension between the completeness of intellectual activity and its productive nature. A complete activity is one whose object is nothing other than the activity itself, which is to say that it is ‘fulfilled’ at every point throughout its duration. In contrast, production is paradigmatically incomplete because it is oriented externally at its product. I resolve this tension by pointing to the fact that light, too, is said to be productive, albeit in a very attenuated sense. Light is productive of vision insofar as it is a standing condition for it. By importing this sense of productivity into the analysis of cognition, I find that non-discursive intellectual activity (i.e. contemplation) is productive insofar as it is a standing condition for discursive intellectual activity, i.e. reasoning.

Finally, I suggest that contemplation and reasoning stand in a cyclical relationship. While contemplation is (non-paradigmatically) productive of reasoning, reasoning is paradigmatically productive of contemplation. Moreover, I suggest that contemplation, which is typically associated with the universals derived by demonstration, is type-identical to intuition of non-demonstrable first principles. It is in this way that contemplation is both the beginning and end of demonstration. (*NE* VI.11, 1143b10) Thus, by taking seriously Aristotle's light analogy, we can make some sense of *DA* III.5 while accounting for the epistemic mechanisms involved in the acquisition of scientific knowledge.

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**A deflationary interpretation of NE 1094 a18-22**

There is a long-standing controversy about the argument that opens the second chapter of Book I of *Nicomachean Ethics*. Peter Geach deemed the argument as fallacious and nicknamed it as ‘the boy and girl fallacy’, a condemnation that Anscombe accepted in her *Intention*. Bernard Williams seems to acquit Aristotle from the fallacy, but expresses his skepticism about the argument, asserting that “it is perhaps impossible to say what it exactly means” (“Aristotle on the good: a formal sketch” – *The Philosophical Quarterly*, No. 49, 1962). In 1965, Hardie proposed what would constitute one side of the horn of the dilemma about eudaimonia, i.e., he proposed that eudaimonia is a dominant end, constituted by one single activity, *Theoria* (Hardie, “The final good in Aristotle’s ethics”, 1965). Ackrill, in his “Aristotle on eudaimonia” (1974), an influential paper, laid down the basis for defending the other side of the horn, that eudaimonia constitutes an inclusivist end. Ackrill, albeit considers the argument false as well, proposes that it can be made correct by introducing an “extra premiss”, namely “where there are two or more separate ends, each desired for itself, we can say that there is just one (compound) end such that each of those separate ends is desired not only for itself, but also for it”. The debate is still alive - see, for instance, Zingano, “Revisiting the Boy-and-Girl Fallacy at *Nicomachean Ethics* I 2”, 2021, where we can find a much more detailed retrospective of the history of these lines.

My goal is to present a reading of the passage that will make it coherent as a whole. This is the argument, in Ross’s translation:

If, then, (A) there is some end of the things we do, which we desire for its own sake ((a)everything else being desired for the sake of this), and if (B) we do not choose everything for the sake of something else ((b)for at that rate the process would go on to infinity, so that our desire would be empty and vain), (C) clearly this must be the good and the chief good.

So, the argument has the form ‘if A(a) and B(b), then C’. The fallacy consists of taking B (supported by b) as the premise that, in its turn, supports A(a). In this case, from the fact that all chains of means and ends have a halt, Aristotle concludes that there is unique halt where all the chains of means and ends converge to. To phrase it as directly as Geach proposes, Aristotle concludes from ‘every boy loves a girl’ that ‘there is one unique girl that every boy loves’.

I propose that we view A merely as a valid observation, which can arise from the very idea that certain actions are ends in themselves. Alternatively, A may be a commonly accepted truth in the face of examples such as pleasure, honor, virtue, etc. Alternatively, yet, it may also be a consequence of b, though this is not a necessity for my purposes — I don’t need, and I don’t want, to emphasize the supposedly strong demonstrative aspect of the passage to defend my point. In this case, what is the function of B? The function of B (supported by b) is to assure that the end presented in A is really a final end, that is, it is not subordinate to some yet posterior end. The argument, in this picture, is similar to the one presented in chapter I,7 about ends that are *teleion* but are still subordinate to eudaimonia, the end that is the most

*teleion* of all.

There is, of course, a point of concern regarding (a) ('everything else being desired for the sake of this' -  $\tau\acute{\alpha}\lambda\lambda\alpha \delta\epsilon \delta\iota\acute{\alpha} \tau\omicron\upsilon\tau\omicron$ ). For B to function as a restriction applied to A, as my interpretation suggests, A cannot be characterized by (a) as the end for the sake of which 'everything else is desired.' One possible solution is to narrow the scope of  $\tau\acute{\alpha}\lambda\lambda\alpha$  in (a) so that it refers not to 'everything else,' but to 'other things.' However, when rephrased this way, (a) becomes somewhat idle.

Alternatively, we might consider that  $\tau\acute{\alpha}\lambda\lambda\alpha$  could refer to  $\tau\acute{\alpha}\lambda\lambda\alpha \tau\acute{\epsilon}\lambda\eta$  (other ends). This interpretation aligns better with the overall context of the passage, although some overlap between (a) and B still remains. I believe, nonetheless, that this proposed reading provides a coherent understanding of a passage that has posed a persistent challenge for its interpreters.

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**The Moral Weight of Aristotle's *Poetics*:  
A Critical Examination of Nussbaum's Interpretation**

In the *Poetics*, Aristotle defends the views that (a) the protagonist's suffering in any well-crafted tragedy is caused by an error in judgment (*hamartia*). This error is the starting point of a causally connected sequence of events that culminates in disaster. The protagonist seeks to achieve a certain objective, *x*, but due to an error in judgment, instead brings about the opposite of *x*, with devastating consequences. And (b) the best tragedies are those that elicit pity and fear to their highest pitch. These claims, taken together, appear to entail that the *hamartia* does not originate in the protagonist's character, for if it did, the audience would lose respect for him and, contrary to (b), be unable to pity him. This has led some commentators—most notably, Martha Nussbaum in *The Fragility of Goodness*—to interpret the central moral lesson of tragedy as demonstrating that bad things can happen to good people, and that virtue does not guarantee happiness. According to this view, a tragic protagonist may act in accordance with what he believes is right and yet still suffer calamity. However, I will argue that this is not the lesson Aristotle intends us to draw from tragedy. Rather than supporting a general thesis about the fragility of goodness, Aristotle's theory of tragedy is better understood when linked to his ethical writings, particularly *Nicomachean Ethics* Book VII, where he discusses *akrasia* (weakness of will or incontinence). The tragic protagonist does not merely make a mistake in reasoning but exhibits a form of *akrasia*—he acts against what he would otherwise recognize as best, due to passion, misjudgment, or flawed deliberation. This connection between Aristotle's *Poetics* and his ethical theory has been largely underexplored in contemporary scholarship. By tracing the moral dimensions of *hamartia* back to *akrasia*, we can better understand why Aristotle holds that tragedy possesses deep ethical significance. Well-crafted tragedies do not merely reveal the precariousness of human happiness but instead provide profound insights into the dangers of moral weakness. They serve as cautionary tales about the perils of failing to act in accordance with right reason, illustrating how passion and faulty deliberation can lead even a fundamentally good person to ruin. This, I argue, is the core moral value of tragedy for Aristotle—not the indiscriminate misfortune of virtuous individuals, but the instructive power of tragic error in illuminating the consequences of incontinence.

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**Reading, Translating and Interpreting Aristotle in the 15th Century: the Case of the Latin Translation of the *Nicomachean Ethics* by John Argyropoulos**

It is well known that translations of Aristotle's works into Arabic and Latin not only ensured their dissemination in non-Greek-speaking circles, but also conditioned their exegesis. This paper intends to focus on precisely this aspect, namely the role of Greek-to-Latin versions in the interpretation of Aristotle's doctrine in the 'hinge' period between the end of Scholasticism (which, however, continued to exert an influence to some extent) and the direct knowledge of Greek in the West and the invention of printing, a very important moment of transition for the reception of Aristotelianism in the 15th century. In particular, we will focus on the specific case of the Latin translation of the *Nicomachean Ethics* (henceforth *NE*) made by the Byzantine humanist John Argyropoulos (c. 1415-1487) between the 1460s and 1480s, which is still little studied in spite of its importance. Indeed, it constitutes an essential node in the transmission of the Stagirite's thought in modern-day Europe: as the product of a philosopher versed in Aristotelianism, it renewed the reading and study of the *NE* and the Latin lexicon of morality, and it is precisely on these aspects that the present communication will focus.

The version fits into the broader context of the Greek translations of the humanistic age, the aim of which was the recovery of the Greek language and literature in their authenticity, the latter, in some cases, undermined by the crude and incomprehensible medieval translations; In particular, it was Leonardo Bruni of Arezzo who was the first to lash out against the medieval interpreter of the *NE* in the vehement preface to his version of the Aristotelian text (1417). After Bruni, between 1455 and 1459, Giannozzo Manetti also tried his hand at translating the *NE*, and then Argyropoulos, whose activity as translator is closely linked to teaching. Indeed, Argyropoulos, from 1457 until 1471 and then from 1477 to 1481 in Florence, read and commented on Aristotle beginning with the *NE* (1456/1457), a course that probably promoted the translation of the work.

The polemic against the medieval version and, for Argyropoulos, also against Bruni's translation, which the Byzantine criticised in the course of his lectures, was obviously motivated by linguistic-literary interests, but it also had important repercussions on the philosophical interpretation of the *NE*. Indeed, Argyropoulos' background as a thinker was instrumental in producing a version that was more linguistically precise and, consequently, more philosophically accurate. The superiority of the Argyropulean translation was already recognised by his contemporaries. In fact, it imposed itself on the other humanist versions and enjoyed wide circulation in print throughout Europe, especially in the university sphere. Also contributing to this success were the commentaries that were first based on it, namely those of Donato Acciaiuoli and Jacques Lefèvre d'Étaples. Acciaiuoli attended Argyropoulos' lectures on Aristotle and collected his notes, which were later (1463/1464) revised and edited into a commentary and first printed in Florence in 1478 (*Expositio super libros ethicorum Aristotelis*). As for Lefèvre, he published in 1494 a compendium of the *NE* (*In Aristotelis Ethica Nicomachea introductio*) and in

1496 an edition of the Latin text (*Decem librorum Moraliū Aristotelicū, tres conversiones*), in which Argyropoulos translation, accompanied by a commentary by Lefèvre himself, is followed by those of Bruni and Grosseteste. Both commentaries were a huge success and were printed numerous times during the 16th century, thus becoming the most widely read commentaries on the *NE* during the Renaissance throughout Europe.

Thus, in order to demonstrate how the Argyropoulos translation transformed and conditioned the reading of the *NE* of the 15th and 16th centuries, I will analyse excerpts from Argyropoulos' translation and commentaries by Acciaiuoli, by Lefèvre and some other translators and/or commentators of the 16th century, in order to highlight the significant innovations to Aristotelian exegesis made by Argyropoulos thanks not only to his superior knowledge of Greek compared to the other Latin translators, but also to the combined use of Greek (late antique and Byzantine) and Latin (Averroes, Albertus Magnus and St. Thomas) commentators. These innovations, on the one hand, consisted in increasing the quality of the Latin text with the elaboration of translation alternatives that were more adherent to the original and with the renewal of the moral lexicon through the introduction of terms taken from ancient Latin philosophy (Cicero, Seneca); on the other hand, they consisted in the correction of errors in the understanding of the Greek text and in offering a different reading compared to the exegesis of the *NE* that was widespread in the West at the time. Examination of the above mentioned works on *NE* will then make it possible to assess the reception of these innovations, thus defining the role played by this translation in the reading and exegesis of the Aristotelian text in the modern era.



### **Sleeping, Mad, and Tipsy: Akrasia and Lack of Self-Knowledge in *EN* 7.3**

In *EN* 7.3, Aristotle observes that people succumb to akrasia because they somehow mishandle the minor premise of practical syllogism, which presents the particular object of action for deliberation. He initially characterizes this mishandling as having knowledge of that premise without contemplating or activating it, but then proceeds to say that the akratic person does not fully have this knowledge: the agent “both has and does not have” it. To illustrate this condition, Aristotle compares the akratic person to someone “sleeping, mad, and tipsy”. However, he does not clarify precisely why these states are analogous to akrasia, leaving the reader to wonder what the shared condition entails.

Among Aristotelian scholars, the interpretative routine is to understand the aforementioned trio somewhat intuitively as pointing to some cognitive deficit, which consists either in the diminution of cognition as such or the inconsequentiality of cognition in relation to action, depending on whether one takes Aristotle to allow for akrasia with undiminished cognition (i.e., “clear-eyed akrasia”). In this article, I propose a different approach by examining the moral and psychological implications of each member of this trio within (and occasionally beyond) the context of *EN*. I argue that the critical point of their similarity to akrasia is not merely some cognitive deficit broadly construed, but a failure of a particular kind of self-knowledge: the knowledge of oneself as the agent of one’s action. With respect to the practical syllogism, this is tantamount to not knowing oneself as the one acting on the object mentioned in the minor premise.

Without this self-knowledge, the akratic person “both has and does not have” knowledge of the minor premise; for in its full formulation, the minor premise should present the object and the agent together. While this conclusion does not directly resolve the longstanding debate over “clear-eyed akrasia,” it suggests a new avenue of interpretation—namely, that the akratic person might be clear-eyed about the object of action but fail to be so towards herself as the agent, which alienates her from her own deliberation and makes her akratic.

Throughout the article, I offer four arguments to support my conclusion. While none is decisive alone, together they provide a strong cumulative case:

1. Aristotle often uses sleep as a metaphor for inactivity, but since the trio (“sleeping, mad, tipsy”) is meant to illustrate a lack of full possession of knowledge, sleep must block not only the activation of knowledge but also its acquisition. Now that the knowledge of the minor premise is perceptual, sleep may inhibit its acquisition by blocking perception. And this it does by suspending the “common sense”, which monitors and perceives one’s perceptions. Thus, sleeping in *EN* 7.3 could signify a failure in self-perception and the lack of its corresponding self-knowledge.
2. In *EN* 7.10, 1152a14-20, sleeping and tipsy persons are likened to akratic persons in that they do not fully have knowledge, but Aristotle insists that they are voluntary because they know their action and the end of action. This recalls *EN* 3.1, 1111a3-7, where Aristotle lists these two kinds of knowledge as prerequisite of voluntary action, but also mentions some other action-related knowledge.



There he notes that only someone mad may lack all these knowledges, especially the knowledge of oneself as agent. So presumably, it is lack of this self-knowledge as agent that unites the trio and links them to the akratic person.

3. Madness and tipsiness are described in *EN* as conditions where one is unaware of one's pleasure and pain. But in *EN* IX.9, 1170a30-1170b6, Aristotle underscores how perceiving oneself as alive and active is intrinsically pleasant. So presumably, the absence of hedonic experience in these two states also implies the failure of self-perception as an agent. By analogy, the akratic person may also lack the self-knowledge in question.

4. In *EN* 7.3, 1147a19-24, immediately after likening akratic person to the trio, Aristotle observes that the former may utter the minor premise in the way an actor reads his lines. The best reading of this analogy is to see the actor as someone who acts without seeing himself as the agent (as it is not him but his persona that is speaking out the content of those line.) Hence, the akratic person, as well as those suffering from the trio, may also be considered in lack of the knowledge of oneself as agent.

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### **Ṭūsī's Hylomorphic Account of Perfection and the Place of Ethics in the Arabic tradition**

Many canonical figures of the Arabic Aristotelian tradition exhibit a surprising lack of interest in Aristotle's ethics and politics. For instance, Avicenna's magnum opus, *Shifā*, extensively engages with Aristotelian theoretical philosophy but devotes only a few cursory pages to ethics before shifting focus to the nature of the afterlife. This paper pursues two main objectives. First, it examines how eschatological views shaped the early Arabic Aristotelian (or "Classical") period's relative neglect of ethics. Second, it argues that shifts in the eschatological commitments of Aristotelians during the "post-Classical" period can help explain the revival of philosophical ethics, particularly in the work of Naṣīr al-Dīn Ṭūsī (d. 1274).

In the Arabic Aristotelian tradition, eschatology functioned as a framework for characterizing intrinsic and final human goods. Avicenna, for example, characterizes the ultimate human perfection in the afterlife as the full actualization of theoretical intellect alone. As McGinnis (2010, 210) explains:

"[B]y Avicenna's lights the proper good of the human is to perform that function or operation that is the human's most complete or perfect activity, namely, to theorize and to contemplate, and particularly to contemplate the best and most noble thing, namely, the Necessary Existent."

This intellectualist eschatology entails that perfected human beings in the afterlife exist as disembodied contemplative souls without practical engagement or social relations. Given that practical intellect has no vocation in this idealized state, it follows that the perfection of theoretical intellect alone constitutes the final human good. Hence, on Avicenna's account, practical questions form, at most, a transitory part of philosophical knowledge.

Ṭūsī, however, diverges from Avicenna on two crucial points. First, he maintains that perfected human beings in the afterlife must be conceived as embodied. Second, he insists that these perfected beings exist in eternal association and solidarity with other perfected individuals. In *Origin and Destination*, he explicitly states that attaining this state of association is the proper end for spiritual "wayfarers" on the path to perfection.

Ṭūsī's revision of Avicennian eschatology has significant implications for the place of ethics in the later Arabic Aristotelian tradition. By rejecting Avicenna's view of ultimate perfection as solitary intellectual contemplation, Ṭūsī argues that human perfection involves both theoretical and practical perfections. In particular, for him, friendship [*tawallā*] is not merely an instrumental good but an intrinsic component of the final human good. This marks a fundamental shift: whereas Avicenna subordinates practical intellect to theoretical perfection, Ṭūsī argues that even an ideally perfected human being must retain and exercise practical intellect to sustain relationships within a perfected community. As a result, for him, practical philosophy is an indispensable part of philosophy proper, one that needed to be synthesized and elaborated to complete Avicenna's version of Aristotelian philosophy. This, I suggest, was the task that Ṭūsī took on by writing his influential

treatise in philosophical ethics, Akhlāq Nāserī.

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### **The Problem of Collective Predication and Aristotle's Solution**

Most of us do not see a problem with collective predicates. We know that we cannot infer from "The class is large" that "X, a student in the class, is large." But predicating a character like large to a group of people rarely gives us pause. Not so, Aristotle. He was following Plato who, in the *Hippias Major*, distinguishes between those characters that belong to all because they belong to each and those that belong to all but not to each: it proposes "justice" and "strong" as examples of the former and "both" (= 2) and "even numbered" as examples of the latter (300a-303c). Without saying so explicitly, Plato apparently wants his readers to reason that since the latter characters cannot belong to each individual, they must exist *separately* from the collection of individuals and, in particular, to infer that Beauty, the topic of the dialogue, exists separately. This is surely the way that Aristotle understands Plato. He takes Plato to think that numbers as well as forms are *ousiai* (*Met.* Z.2.1028b19-20; M.1.1076a17-20) and, thus, that numbers exist separately from sensibles. He then argues against the separate existence of mathematical in *Met.* M.2 and against its contrary, that they exist *in* sensibles. We can infer from all this that *where* characters signified by collective predicates exist is an issue for both Plato and Aristotle.

Further support for this conclusion emerges from the *Parmenides*' question whether a form exists as a whole in each sensible that partakes of it or a part of the form exists in each sensible that partakes of it (131a-c). Importantly, that a form could exist collectively in a group of sensibles without being in each in some way is *not* an option. Likewise, Aristotle claims in the *Categories* that whatever is not a primary *ousia* is either "said of" or "in" primary *ousiai* (2a34-35), and he adds: "color is in a body and, so, in some body, for if it were not in an individual body, it would not be generally in body" (2b1-3). Clearly, color is paradigmatic: Aristotle denies that any predicate signifies a character that belongs collectively to multiple, distinct *ousiai* and that exists separately from primary *ousiai* to which it is ascribed. Although we tend to suppose that a predicate is simply a name, Aristotle holds that the name signifies a type of being, either a being that exists on its own, namely, an *ousia*, or a being that is *in* an *ousia*. (What is "said of" a primary *ousia* is its species or genus and these too are *in* it [M.10.1087a10-25]. Since they belong to all because they belong to each, they are not properly collective predicates.) A being that is located within an *ousia* cannot belong collectively to multiple *ousiai*: there is simply no place for it to be.

As well-supported as this conclusion is, it seems to contradict large portions of Aristotle's philosophy—and that may be why it is not widely acknowledged. Let me mention only a few problems: First, Aristotle recognizes a science of mathematics whose part is a science of arithmetic, and he speaks of attributes of numbers such as even and odd, even though a number is not a primary *ousia*. Second, his political philosophy is about states, and it identifies their attributes. These attributes would seem to belong collectively to their citizens who are the only primary *ousiai* here. Third, a tragedy has attributes, attributes that must belong

collectively to its parts inasmuch as a tragedy is not itself a primary *ousia*. Indeed, the same could be said about all artifacts. Houses and statues are Aristotle's most frequent examples of *ousiai*—notably in *Met. Z.17.1041b5-6 ff.*—even though he denies that they are properly *ousiai*.

The first part of this paper argues that Aristotle denies the existence of collective attributes on metaphysical grounds. The second part shows the havoc that this doctrine could potentially wreak with portions of his philosophy. In its final part, the paper sketches Aristotle's solution to the problem. It is rooted in his treatment of numbers and other mathematical. Although a number cannot exist separately, mathematicians treat it as if it were separate without introducing error (*Met. M.3.1078a14-20*); that is, mathematicians treat a number as an *ousia*. So, too, this paper suggests, Aristotle treats the state, household, and tragedy as if they were *ousiai*. Ontologically, a state exists within each of its citizens as a relation or group of relations, but the state and the others are understood much better as if each were a separate being, an *ousia*. If this is right, Aristotle has a way of overcoming the limitations that his denial of collective predication imposes, and this corrective plays a key role in various parts of his philosophy. Of course, it is impossible to defend a claim of this magnitude adequately in a brief talk, but it is possible to set out the issue he confronts and sketch his solution. Although they are virtually unrecognized in the literature, the problem of collective predication and the methodology that Aristotle introduces to resolve it are important. They have the potential to transform our appreciation of his philosophy.

### Immaterial Activities in Pseudo-Simplicius' Theory of Sense-Perception

Aristotle discusses the question of how it is possible to distinguish the object of one sense modality from that of another and how it is possible to perceive both objects simultaneously in his *De Anima* III.2, 426b8–427a16. The discussion leads to the problem of opposites: how can the same thing be moved simultaneously by opposite movements arising from opposite perceptible objects like sweet and bitter? His solution is far from clear; nevertheless, it influences later discussions on the topic of the unity of perceptual experience.

Pseudo-Simplicius, commenting on the text, offers a unique solution to the problem based on the notion of *immaterial activities* that an immaterial substance can have simultaneously, even with contrary contents. His idea is that these activities should be *self-produced* (ἀφ' ἑαυτοῦ) *in respect of different reason-principles in itself* (κατὰ τοὺς διαφόρους λόγους ἐν ἑαυτῷ), so that there might be two such acts simultaneously in relation to contrary items (*in de Anima* 199.2–7 Hayduck).

First, I show the uniqueness of this idea in comparison to Alexander of Aphrodisias' account (see his *de Anima* 61.19–65.2) – taken up by Pseudo-Philoponus (*in de Anima* 477.19–485.7 Hayduck) – according to which a single power cannot have but one activity at one time. This account, instead, relies on the complexity of the activity, which is mirrored in the complexity of the content of the perceptual judging act. This comparison shows the importance of Pseudo-Simplicius' allowing multiple simultaneous activities of the same subject. However, he needs to make it acceptable by specifying the kind of activity, as indicated above.

Thus, next, I attempt to elucidate the features of immaterial activities that make them such that several of them can co-occur in the same subject's perception. I appeal to the author's discussion of unity of thought. The indivisibility of the activity makes it possible to grasp the object and its parts all *as a whole* (cf. 44.10–18), which is a necessary condition of cognition. Otherwise, discrete acts of grasping the several parts result in unconnected cognitions “as if you were sensible of one thing and I of another” (44.29–34). He says about sense-perception that despite its being “cognitive of things divisible, it stands still in virtue of the form of the object of cognition [τῶν μεριστῶν γνῶσις, κατὰ τὸ εἶδος ἴσταται τοῦ γνωστοῦ]” (44.35, the idea is repeated at, e.g., 66.22–26; 125.1–2, 21–23). Since the form is a complete unity (even more than a point with the two aspects of beginning and end, as in the solution to the problem of opposites), its grasp must pertain to a similar unity (44.35–45.4).

As Ps-Simplicius claims about sense-perception, there is indivisible unity, for “the sight of black and white is one, acting in accordance with two λόγοι at once, but wholly in accordance with both and one as an indivisible collection of the two in an indivisible [act]” (77.15–17, cf. 271.30–37). So, the single act of perceiving relates to two bodily parts, of which one is black, and the other is white, and its relation to them mirrors the qualitative difference between the two parts, as it acts in accordance with the λόγος of black and the λόγος of white respectively. So, it seems to be suggested that the *single perceptual act* relates to two bodily parts with *two*

*opposing activities*: these activities are *relative to two λόγοι*. Finally, I turn to these opposing activities.

I present my suggestion by coordinating the single perceptual act and the two opposing activities constitutive of the single act with plausible reconstructions of the perceptual process of Pseudo-Simplicius by Miira Tuominen and Mark Eli Kalderon (about Priscian *Metaphrasis* 2.2–3.9; 7.11–20): (1) an affection in the sense-organ is caused by the object of perception, then (2) the affection is completed or perfected (through projection of λόγος) to become a form, (3) to which the internally projected λόγος (cf. ἐπιβολή) is fitted, (4) to produce a judgement about the external object (*in de Anima* 125.36–126.16; 166.1–34; 189.30–190.20; *passim*). My proposal is to distinguish conceptually the projection of λόγος from perceptual judgement (usually thought to be identical), not as two distinct acts, but one of them as a certain aspect of the other. Namely, a single perceptual judging act may use several λόγοι that are projected in the context of the same judging (similar to how a referring and a predicating act are parts of a propositional act in speech act theories), implying that projection of λόγοι might not occur separably.

The paper, thus, provides a refined reconstruction of Pseudo-Simplicius' theory of sense-perception and places his solution to the problem of opposites and simultaneous perception in a historical context, showing its difference from the Peripatetic account of Alexander.



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### Aristotle, the *Mechanica*, and the Inquiry into Nature

Ask any historian about Aristotelian mechanics and you will typically hear that Aristotle based his mechanics on the untested assumption that what is twice as heavy falls twice as fast, and that decisive refutation came with a brilliant series of arguments in Galileo's *Discorsi* (1638). The drawbacks of this familiar story are twofold. First, Aristotle's statements on falling bodies had little to do with mechanics. The common understanding of 'Aristotelian mechanics' as based on direct proportions between weight or power and speed is a retrospective construction, one that imposes a modern conception of the science of mechanics onto ancient sources. Second, the standard reconstruction of 'Aristotelian mechanics' paradoxically overlooks the text in the Aristotelian corpus, the *Mechanica*, that is explicitly concerned with mechanics and the explanation of devices such as levers, balances and pulleys. The basis of this text's explanations has nothing to do with the proportionality of weight to speed of fall. Rather, the *Mechanica* explains the balance, lever, and other devices through an analysis of circular rotation as a composite of two straight motions, one directed towards the centre of rotation and the other along the tangent. Scholars have long recognised the exceptionality of this theory in ancient Greek science and G.E.L. Owen went as far as to claim that the *Mechanica's* insights were 'almost Newtonian'. However, perhaps because of that exceptionality, which has persuaded many scholars that the extant *Mechanica* is not Aristotle's, only a small number of modern scholars have examined the *Mechanica* in detail.

This talk will reassess the relation of the *Mechanica* to Aristotle's natural inquiry. The most influential arguments against the *Mechanica's* authenticity claim that the text contradicts Aristotle on three fundamental issues concerning motion: (1) whether a body can truly be said to be changing at an instant; (2) the nature of circular motion; and (3) the notion of natural motion. I will first show that none of these three arguments against the *Mechanica's* authenticity is compelling. Thus the case against the *Mechanica's* authenticity is weaker than is commonly thought. I will then consider how the *Mechanica* attempts to solve the problem of mechanical advantage, of how lesser powers can prevail over greater ones. I show that this problem arises in Aristotle's cosmology as mechanical devices were apparent counterexamples to the principle that an effect cannot be greater than its cause, a key premise in Aristotle's arguments for the First Mover in *Physics* VII and VIII. I suggest that the *Mechanica's* analysis of rotation aimed to solve this problem by a causal explanation that developed the concepts of Aristotle's inquiry into nature. In conclusion, there is insufficient textual support for the standard view that the *Mechanica* contradicts Aristotle's basic assumptions about motion. Rather, the *Mechanica's* analysis of rotation applies the conceptual framework of Aristotle's inquiry into nature to identify the cause of mechanical advantage and thereby solve an open problem in Aristotle's cosmology.

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## **Living Well in Aristotle's Zoology and its Relevance for 21st Century Sustainability**

Aristotle's well-known argument for the highest human function and his emphasis on human well-being as *Eudaimonia* in book i.7 of the *Nicomachean Ethics*, refers to the capacity for and utilization of the human soul's power for intelligence. The most basic capacities of the soul, taking in nutrition and expelling waste, described by Aristotle as *soozein*, or saving life, are present in all life, including plants. Between the most basic soul and human intellectual capacities are the perceptive capacities, which include the five senses—taste, touch, sight, olfaction, hearing and desire, movement, memory, and imagination. "Animal" for Aristotle obtains due to at least one sense capacity, the most basic being touch. The great range of the capacities of the perceptive soul aligns with the diversity of animal kinds. While some animals – with only touch—do not seem to do much more than plants, like barnacles or sea sponges, other animals experience the world with a cornucopia of sophisticated perceptual capacities, including the ability to develop character and make friends.

Thinking of the Latin term *cognoscere*, whence the English cognition comes, these complex perceptual abilities allow some animals unique and complex ways of *knowing* the world, others, and themselves, even if these means are non-rational. In turn, such capacity for knowing raises the question of whether or not non-human animals can experience varying qualities of life. If they can, as humans can, then subsequent questions arise, e.g., how do they come to experience a higher quality of life? What must they do, or be able to do to achieve it? What conditions must exist for them to achieve it? What is our responsibility, if any, to facilitate non-human animal well-being? If non-human animals have the potential for various qualities of life, they have the capability to live well, rather than just exist. While Aristotle did not write a treatise on such an idea, he provides clues throughout his ethical, psychological, and biological works to indicate that he thinks non-human animals can and often do live well. In the rest of this presentation, I will discuss the context and use of four terms/turns of speech that Aristotle used for animal well-being in his zoology, or discussions of animals. These are:

1. *De Anima* 435b19-25 "οὐ τοῦ εἶναι ἔνεκα ἀλλὰ τοῦ εἶναι"
2. *Parts of Animals* 656a4-9 "τοῦ εἶναι ζῆν"
3. *History of Animals* book vii/viii "Εὐήμεροισι"
4. *History of Animals* book viii/ix "εὐβίωτος"

Following this discussion, I will suggest the idea that non-human animals can live-well has important implications for how we think about the most significant issues for worldwide sustainability.

In short, we can take Aristotle's zoological observations and interpretations and expand this theory about human flourishing to our shared ecosystem (eco from *oikos*, home). Put simply, the health of the ecosystem demands that all life is flourishing and vice versa, the possibility for individual well-being requires that certain conditions for health and well-being—thriving—exist. There is a consequence when we either do not recognize another's ability to live well, or we

fail to allow/impede for the conditions for the possibility of that being living well. The negative consequences do not affect the individual animal alone. Rather, there is also a consequence to our shared ecosystem. Many non-human animals barely survive but ensuring their survival is not enough to maintain or recover the health of our environments and our planet. We need to consider them as qualitatively equal to us, each with their own ability to thrive. Only then will we begin to recover well-being for our shared ecosystem.

## Present Time in Aristotle

**1. Preliminaries.** Time has no separate existence according to Aristotle. It belongs to things and events that cognition is able to exhibit times at which certain things exist, or events occur. The times at which A and B exist (or occur) may coincide, or overlap, etc., which suggests that, in a way, time is a structure common to everything that exists or occurs at certain times. Accordingly, Aristotle's claim in *Phys.* IV 11 that time is "something of change" may be taken to refer to the eternal motion exhibited in *Phys.* VIII of which all movements, and all temporal existence, depends.

The relevant ontology (see Strobach, *The Moment of Change*, Kluwer 1998, 15-17 and 48-50) involves two kinds of times: periods and instants. The fundamental structure is described in terms of linear order, and of division and fusion. Instants are the limits of periods and occur within periods; periods are divided into subperiods, and fused into one, at instants. – Two more structural features are noteworthy. (a) No time metric is presupposed (occasional exceptions in *Phys.* IV 10, VI 2 and VI 7), but may be derived from the eternal motion which independently of time measurement turns out to be uniform. (b) Whereas *Phys.* IV 10 presupposes an A theory, the account of time in *Phys.* IV 11-14 and *Phys.* VI suggests a B theory. Temporal becoming thus reduces to a moving spot, indicated by the *ho pote on / tōi einai* contrast, in *Phys.* IV 11-14, but has no role to play in *Phys.* VI.

**Notation:**  $\tau$  etc. refer to times,  $T$  etc. to periods,  $t$  etc. to instants

**2. The present.** Assuming that

- (1) If  $\tau$  is present, and is divided into  $\tau'$  and  $\tau''$ , either  $\tau'$  or  $\tau''$  is present, and
  - (2) If  $\tau$  is earlier than  $\tau'$ , then, if  $\tau$  is present,  $\tau'$  is future, and in  $\tau'$  is present,  $\tau$  is past,
- divisibility into subperiods entails that there can be no present period. If there is a present time, it must be an instant (*Phys.* IV 10, cf. *Phys.* VI 3).

A remark in *Phys.* IV 13 might be understood as suggesting a definition such as

- (3)  $T$  is derivatively present iff<sub>Def</sub> some  $t$  in  $T$  is present.

But it is also required here that events in  $T$  are "close" (*eggus*, 222a21) – sc. to the present instant (?). Rather than suggesting a definition such as (3), Aristotle hints at a concept which is essentially vague.

Tenses come with modalities according to Aristotle, and "the past and present are necessary in a way that the future is not" (Coope, *Time for Aristotle*, OUP 2005, 21, referring to *Int.* 9; see, e.g. 19a23-24). Hence, Coope concludes, "some definite division" is required which, in the *Phys.* IV/VI account of time, is provided just by reducing the present to an instant.

**3. Present duration in *Int./Cat.*** In *Int.* 3, “the present time” (*ho parôn chronos*, 16b17-18) indicated by the present tense is arguably a duration – to which the term “now” (*nun*, 16b9 etc.), used as adverb throughout *Int.*, also refers. No limits are indicated to distinguish present from future and past times. According to *Cat.* 6, parts of continuous magnitudes “connect to a common limit” (*pros tina koinon horon sunhaptei*, 5a3–4 etc.), but the present time (*ho nun chronos*, a7) does not so connect: it connects just “to both the past and the future [times]” (a7-8). This, however, is not to say (as Simplicius and others did) that the present is the common limit to which past and future connect. Rather, the lack of a fixed position in respect to each other (*thesis pros allêla*, a25) and, therefore, of limits is due to temporal becoming, i.e. to the fact that no part of time endures (a26-27).

In a way, this is again a vague concept. But in practice, insofar as the present tense occurs in a statement referring to some present event, the present duration may be equated with the time that event takes. – I will argue that this is enough to settle Coope’s concern mentioned above. Aristotle’s example is a sea battle and its prehistory (presumably Salamis, as recorded in Herodotus VIII). Quoting Danto (“Narrative Sentences”, *History and Theory* 2 (1962), 150), such events are “dated but not clocked” and do without the limits presupposed in *Phys.* IV/VI account of time. No fact involving instants is recorded by Herodotus. In particular, Herodotus (VIII 84,1) clearly brings out that it takes time for a sea battle (and similar events) to become inevitable.

**Conclusion:** Instants have no role to play in the *Int./Cat.* account of the tenses. Their role in the *Phys.* IV/VI account of time is just another story.

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### **Aristotle on Perceiving Universals**

It is usually supposed that perception concerns particulars and has nothing to do with universals, though there are some exceptions. It is only knowledge or thought that is concerned with universals. However, I'll try to argue against this largely standard view and will put forward a rather controversial thesis that, in Aristotle, perception too has to do with universals (for similar point cf. Sorabji 1995).

In dealing with perception in *De anima*, Aristotle distinguishes three kinds of perceived objects or sensibles (proper, common, and accidental), according to which three kinds of perception can be distinguished. Perceiving a proper sensible is a kind of direct or receptive grasp or apprehension of an object. However, as Aristotle's example of an accidental sensible as seeing a white object as Diates' son (*DA* 418a21) makes clear, perceiving something accidentally involves perceiving an object as something else, e.g., as someone's son. In other words, unlike the perception of proper objects that is direct or receptive, accidental perception means perceiving something as something else. And perceiving something as something else means recognizing or identifying something as something. Now, recognizing or identifying something as something is a kind of predication activity or attitude, which usually involves universals (for an account of accidental perception see Cashdollar 1973). By the way, predication character of accidental perception explains why accidental perception is, as Aristotle stresses, open to errors (*DA* 428 b19-22).

Accidental perception *first* explains the (biological) advantage that perception gives to animals over plants. By enabling animals to identify something as, e.g., food or danger, it gives them the advantage of getting around in the environment. Second, accidental perception is indispensable for understanding other cognitive capacities like memory and experience (cf. *Met.* I.1; *An. post.* II.19). While proper perception provides a white object, it is only accidental perception that enables to identify it as, e.g., Diates' son. And it is only certain identified objects that we remember or that we have experience with. In other words, we don't remember, nor have experience with, just various colourful, sounding, smelling, moving objects that are products or constructs of proper or common perception.

Accidental perception explains what role universals play in how perception works. Yet, there is much more at stake. For, as Aristotle repeatedly claims (cf. *An. post.* 100a16-b1; 100b4-5), they are acquired by perception as well. From our own philosophical or metaphysical point of view, it seems to be impossible, as we conceive of the universal as what is apprehended by reason. Thus, our very conception or definition of universality excludes the possibility that they can be perceived. However, Aristotle's conception of universality is different. The Greek term that translates as universal is *katholou*. It literally means 'with respect to the whole', consisting of the preposition *kata* 'with respect to' and the adjective *holon* 'whole'. So, by creating the term *katholou*, which we translate as universal, Aristotle wanted to refer primarily to a totality or a wholistic nature of a thing.

Thus, in the important methodological passage from *Physics* I, in which he describes scientific inquiry as a passage from what is more familiar to us to what is

more familiar by nature, Aristotle makes a crucial statement: 'a whole is more familiar with regard to perception, *and a whole is the universal*.' (τὸ γὰρ ὅλον κατὰ αἴσθησιν γνωριμώτερον, τὸ δὲ καθόλου ὅλον τί ἐστι, *Phys.* 184a24-25) And a few lines below he cites an important example as an illustration of the topic dealt with: 'children first address all men as fathers and all women as mothers and only later distinguish each of them' (*Phys.* 184b3-5). Here, Aristotle suggests that small children are originally not able to recognize the individual features of their parents, which is why they address every man and woman as father and mother. That means that small children are not good at perceiving individuality or particularity but rather at perceiving general or universal features. And if this is the case of small children who have not yet developed all their human cognitive capacities, the same should apply to animals as well who have only perception.



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### Aristotle's Reflections on Plato's *chōra* and the Influence of His (mis)Interpretation on Later Platonism

Aristotle knew Plato's *Timaeus* quite well and objected to its cosmology and metaphysics on various occasions. He also directed criticism at the notorious entity known as the Platonic *chōra*. In this particular case, his contention was that by introducing the difficult and unclear notion of the cosmic Receptacle, Plato intended to convey an idea similar to or identical with Aristotle's own concept of matter. The Timaeian *hypodochē* or *chōra* was supposed to stand for and play the role of Aristotle's own *hylē*, but it failed to do so, because Plato badly misconstrued the concept and made it ineffective in explaining the process of generation on either micro or macro level. Aristotle takes up the task of deconstructing his teacher's "theory of matter" mostly in *Physics* 91b35-192a25, 209b6-17 and *De generatione et corruptione* 329a13-24.

This paper has two main purposes. First, to try to demonstrate that Aristotle's criticism of this aspect of Plato's cosmology and metaphysics is erroneous in two crucial respects. A) the *chōra* was never envisaged as equivalent to Aristotle's *hylē*. B) On account of this initial mistaken identification, Aristotle did not properly grasp the nature and function of the Platonic Space, which made his objections miss their intended target to a significant degree, and his criticism incorrect. The paper's second purpose is to suggest that Aristotle's equation of *chōra* and *hylē* did a significant disservice to later Platonist cosmology and cosmogony. We hold that this is the case, because the Middle-Platonists and the Neoplatonists adopted and appropriated Aristotle's interpretation, and thus, in this respect, developed more of an Aristotelian than Platonic viewpoint. Of course, that would not have been a problem, had Aristotle's interpretation of the Receptacle been correct.

To accomplish the paper's first task, we shall have to start with the attempt to offer an interpretation of *chōra* that is faithful to the *Timaeus*. The corporeal constituent of the universe is *anankē*. *Chōra* is ontologically distinct from *anankē* and should not be identified with Plato's *causa materialis*. It is a newly posited and somewhat mystifying entity, halfway between the intelligible and the sensible, unavailable to either intellection or perception. However, its function is clear: the *chōra* is there to receive and sustain the creation, starting from the elementary traces, through the formed *anankē*, to the world as we know it. This also implies that Space does not enter the constitution of the cosmos as its material component, but only as a very peculiar kind of spatial substrate, "that in which" generation takes place. Plato's *chōra* may be characterized as a pure recipient – although not as empty space, but as a plenum of undisclosed structure upon which the primordial traces are impressed. *Chōra* is, thus, a peculiar spatial and three-dimensional receptacle, but still nothing more than a receptacle. Next, the focus will shift to Aristotle's discussion of the *chōra*, and particularly to *Gen. corr.* 329a13-24, since there Aristotle's criticism is very concise and clear. He makes two objections. Plato a) fails to establish *chōra* as separate from *stoicheia* or otherwise; b) Plato makes no use of it in his account of generation and relies solely on geometrical surfaces. As for a), we

shall argue that, despite the alleged evidence of the gold analogy (*Tim.* 50a4-b5) that Aristotle brings up, the four elements in the *Timaeus* were never supposed to be understood as somehow made up of the *chōra*; the latter is instead that *in which* or *wherein* (49e7) the elements come into being and *wherefrom* (49e8) they perish. With respect to b) it will be argued that this objection can actually be used as a *reductio* argument against Aristotle's position.

The paper's second task will be accomplished by turning to Plutarch's cosmogony and using it as a case study of Aristotle's influence and general acceptance by the Platonists of the alleged equivalence between *chōra* and *hylē*. Admittedly, Plutarch's metaphysics and his attempt to derive the entirety of existence from the first principles of the One and the Indefinite Dyad are decidedly Platonic and can be traced back to Speusippus and Xenocrates. Where Plutarch significantly departs from what we know of his early predecessors' relevant doctrines (and, as we shall argue, from Plato himself), is in his interpretation of the generation of the World Soul, as well as in his appropriation of the essentially Aristotelian concept, which both he and Aristotle conflated with the receptacle of the *Timaeus*. The identification of *hypodochē* or *chōra* with Aristotle's *hylē* will remain a fixed doctrine in all later Platonism.

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#### Aristotle on the Principles of Non-Contradiction and Excluded Middle in *Metaphysics* $\Gamma.4$

At *Met.*  $\Gamma.4$ , 1008a2–7, Aristotle argues that a Protagorean argument entails a denial of the principle of non-contradiction (PNC) and that a denial of PNC, in turn, entails a denial of the principle of excluded middle (PEM). What do we learn from this passage about PNC, PEM, and the broader context of their elenctic defenses in *Met.*  $\Gamma.4$  and  $\Gamma.7$ ? I argue that this passage prompts us to distinguish between syntactic and semantic formulations of PNC and PEM. The upshots of my analysis are, first, a new interpretation of the passage, second, a new conception of PNC and PEM, and third, a more nuanced understanding of the views Aristotle attributes to his opponents in *Met.*  $\Gamma.4$  and  $\Gamma.7$ .

Here are PNC's and PEM's syntactic and semantic formulations:

- (PNC<sub>Syn</sub>) For all  $P$  and for all  $S$ ,  $P$  is not both affirmed and denied simultaneously of  $S$ .
- (PNC<sub>Sem</sub>) In every contradictory pair, not both members are simultaneously true.
- (PEM<sub>Syn</sub>) For all  $P$  and for all  $S$ ,  $P$  is affirmed or denied of  $S$ .
- (PEM<sub>Sem</sub>) In every contradictory pair, one member is true.

The syntactic formulations concern pairs of terms,  $P$  and  $S$ , and the semantic formulations concern pairs of contradictory sentences. The actual argument runs as follows (1008a4–7, my translation):

For if it is true that something is a human and not a human, it is evident that it will also be neither a human nor not a human. For the two have two denials, and if the former were one out of both, the latter, too, would be one and opposite.

I reconstruct this argument as a dilemma. According to the first horn of the dilemma, if the contradictories 'Socrates is a human' and 'Socrates is not a human' are simultaneously true (a violation of PNC<sub>Sem</sub>), these contradictories will also be simultaneously false (a violation of PEM<sub>Sem</sub>). This is because the truth of the affirmative contradictory entails the falsehood of its negative counterpart, and similarly for the truth of the negative contradictory. According to the second horn of the dilemma, if a sentence like 'Socrates is a human and not a human' is true (a violation of PNC<sub>Syn</sub>), its opposite, 'Socrates is neither a human nor not a human', will also be true (a violation of PEM<sub>Syn</sub>). This is because affirming a term ('is a human') is to deny its denial ('is not not a human'), and denying a term ('is not a human') is to deny its affirmation ('is not a human'). Accordingly, affirming and denying a term ('is both a human and not a human') is to deny its affirmation and its denial ('is neither a human nor not a human').

If this reconstruction is correct, Aristotle attributes to the deniers of PNC the following views: (i) contradictories are simultaneously true (a violation of PNC<sub>Sem</sub>); (ii) sentences that both affirm and deny the predicate of the subject (a violation of

$PNC_{Syn}$ ) are true; (iii) contradictories are simultaneously false (a violation of  $PEM_{Sem}$ ); and (iv) sentences that neither affirm nor deny the predicate of the subject (a violation of  $PEM_{Syn}$ ) are true. Aristotle also attributes (iii) and (iv) to the deniers of PEM.

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### **Aristotle on Vicious Regret**

The past several years have witnessed a burgeoning of scholarship on Aristotle's account of vice. The result of these studies has been several diverging accounts concerning the basic structure of his theory. At the highest level of description, we have been left with a fundamental fork in explanation: either Aristotle's account of vice (κακία) is underdetermined, or his account of *regret* (μεταμέλεια) is. More specifically, either he holds that vicious people of one sort are without regrets and of another sort full of regrets or he holds that vicious people and akratics are subject to different species of regret (EN 1166b5). This basic explanatory divide has emerged primarily in response to an oft observed tension between Aristotle's EN VII.7 claim that the vicious person *does not have regrets* (μὴ εἶναι μεταμελητικόν) and his EN IX.4 assertion that *base people are full of regrets* (μεταμελείας ... οἱ φαῦλοι γέμουσιν.). Commentators are split. Whereas scholars such as Julia Annas and Rachel Barney suppose Aristotle's views on vice (κακία) to be either inconsistent or about different kinds of base people, scholars such as Thomas Brickhouse and Karen Margrethe Nielsen suspect regret (μεταμέλεια) to consist of different species.

For my part, I argue that we have strong reason to resist the first side of the fork and good reason to take up the latter. However, as matters stand, neither Nielsen nor Brickhouse offers any positive textual evidence to bolster the claim that Aristotle employs different species of regret. Qua bare postulates, both their proposals are open to the charge of introducing ad hoc distinctions. This is where I intervene: I argue that there is in fact textual evidence to support the view that there are multiple kinds of regret at work in Aristotle's ethical corpus. In doing so, I vindicate work already done in part by Nielsen and Brickhouse.

But why should we reject the first side of the fork? If Aristotle's attested view is that some vicious people have regrets whereas others do not, the basic distinction between the akratic and the vicious person is compromised. In this case, there will be one species of the vicious with regrets and another without. But if (1), as Aristotle argues in EN VII.7-8, the vicious person is to be distinguished from the akratic on the grounds that she is not the kind of person to have regrets and (2) *regret* (μεταμέλεια) is singular in kind, then Aristotle has not on this view offered a principled way to distinguish between the two characters in VII 7-8. In short, his argument so understood leaves a major explanatory gap in his account of vice. We should want the other side of the fork to be the problem. But while we have good reason to desire that *regret* (μεταμέλεια) (as opposed to vice) be underdetermined, we are nonetheless tasked with showing (a) that Aristotle deploys several usages of this term and (b) that one such usage picks out the kind of retrospective pain the vicious feel about their base actions.

My argument moves in three stages. Taking as evidence Aristotle's remarks on ignorant action in EN III.1, I argue first that Aristotelian μεταμέλεια is in fact underdetermined to such an extent that it can accommodate precisely the kind of regret we should expect to belong to vicious people – namely prudential, as opposed to remorseful, regret. Second, I argue (contra Warren) that we can attribute to

Aristotle familiarity with prudential regret as a distinct species of μεταμέλεια without committing anachronism if we note the proliferation of prudential uses of this term in the Greek intellectual tradition preceding and contemporaneous with Aristotle. More specifically, we can find clear uses of prudential μεταμέλεια in the earlier histories of Thucydides and Herodotus as well as in the rhetorical works of Isocrates. Taking these two arguments as sufficient to ground the claim that Aristotle employs a prudential usage of μεταμέλεια, I contend that we are equipped to secure a promising solution to our central problem: the vicious, while without remorseful regret, are full of prudential regrets.

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### **Aristotle on the Emotions of Justice**

This paper explores the psychology of the emotions related to the fortunes of others, focusing on two key emotions: *nemesis* (righteous indignation) and *phthonos* (envy). I analyze Aristotle's treatment of these emotions in his *Rhetoric*, *Politics*, and ethical works, explaining why in *Eudemian Ethics* III 7 1234a30-31, he connects them to our sense of justice and injustice. I argue that these emotions, tied to merit and fairness in the distribution of the goods of fortune, contribute to early forms of virtuous or vicious tendencies, playing an important role in the development of justice or in our corruption into greedy individuals.

There are several textual difficulties regarding the emotions of *nemesis* and *phthonos*, and the relationship between them, and a first look at the texts makes it appear as if Aristotle does not maintain a consistent view throughout his different works, and even within the *Rhetoric*. In fact, Aristotle seems to be divided on the potential moral value of *phthonos*, treating it sometimes as a purely negative emotion, sometimes as a legitimate resource for persuasion. He seems to be also divided on the moral value of *nemesis*, which is presented in *Nicomachean Ethics* II 7 1108a35-b6 as a praiseworthy mean between the blameworthy extremes of *phthonos* and *epichairekakia* (*Schadenfreude*), but does not receive full treatment and seems to be problematically dropped off the discussion. These tensions, as has been often noted, are also reflected on his approach to how to differentiate between *phthonos* and *nemesis*, which some commentators consider to be dangerously close to one another, taking sometimes *nemesis* to be a sub-class of *phthonos* (Castelli 2015, Wyllie 2021). My strategy is to explore these apparent inconsistencies, showing that the texts can be read harmoniously and that Aristotle's ambivalence is a strength rather than a flaw.

First (in Section 1), I examine the tension in the *Rhetoric* regarding *phthonos*. Aristotle describes envy in *Rhet.* II 11, 1388a 35-36 as "bad and characteristic of the morally corrupt" (*phaulon kai phaulōn*), indicating a distorted view of one's worth and others' deservingness. However, he also acknowledges that envy can be used by orators to evoke strong responses, potentially guiding audiences to make just decisions. This tension has led to differing scholarly views. Some, like Sanders (2008, 2014), limit the role of envy in persuasion, while others (Castelli 2015, Wyllie 2021) argue that Aristotle's negative view of envy is overstated, making envy morally neutral. I argue that while the second strategy is more attractive, it leads to the blurring of the distinction between *phthonos* and *nemesis*, which Aristotle clearly seeks to maintain.

Next (in Section 2), I investigate the status of *nemesis* as an emotional praiseworthy mean, present the difficulties that commentators have found to fit *nemesis* in the Aristotelian scheme of the means between extremes, and discuss the different reasons why commentators think that Aristotle abandons the treatment of *nemesis* in his ethical treatises.

Finally (in section 3), I explore the relationship between *nemesis* and *phthonos*. In several passages, Aristotle presents these emotions as strongly opposed



and linked to opposed characters. He describes *nemesis* as an emotion proper of the decent person, linked to the natural virtue corresponding to justice, and as a response to others' misfortune grounded in fairness and recognition of merit. Conversely, *phthonos* is described as characteristic of bad people, linked to the natural vice tied to injustice, and arising from an inappropriate sense of self-worth and resentment toward others' good fortune. This opposition has sparked scholarly debate, with some suggesting that Aristotle fails to maintain a clear distinction between these emotions and that they share a deeper connection. Some argue that both emotions are driven by a sense of justice and can be used positively in moral education. Others (including Aquinas) claim that the proximity between the two emotions is why Aristotle ultimately rejects *nemesis* as a reliable tool for moral education. I offer an alternative interpretation, emphasizing that Aristotle sees these emotions not necessarily as a strict dichotomy but as a spectrum of emotional responses influenced by perceptions of merit and fairness and useful as sources of inclinations towards justice and injustice.

In exploring these debates about the emotions related to justice, I conclude that Aristotle's treatment of emotions in the *Rhetoric* complements his ethical and political writings and can help us understand the complex moral role of emotions. While the *Rhetoric* serves a different purpose than the ethical treatises—focusing on persuasion and the psychology of emotions as tools for rhetorical effectiveness—it offers valuable insights into the connection between emotions and virtue. Aristotle's treatment of *phthonos* and *nemesis* in the *Rhetoric* underscores their importance in shaping our responses and enforcing norms related to merit, equity, and the distribution of fortune, and in combination with his treatment in his *Ethics* and *Politics* complements our understanding of how emotions can have a significant function not only in shaping our opinions but also in character transformation.

### **Aristotle's Τέχνη in *De Anima* III.5: The Myth of "the Active Intellect"**

Despite the fact that many preeminent and distinguished commentators have spent prodigious efforts in explaining the notoriously difficult chapter of *De Anima* III.5, no one has yet *thoroughly* examined the possible relevance of the τέχνη example at 430a12-13. This is an unfortunate omission, since it is an example that Aristotle employs to illustrate what he means by "the productive cause" (τὸ αἷτιον καὶ ποιητικόν). The aim of this presentation is to twofold: first, to fill this important lacuna in the scholarship of III.5 by examining to what extent, if any, the τέχνη example can be useful, in understanding the argument of this terse, cryptic and controversial chapter; and two, to point out the implication of adopting this interpretative strategy is that \*the Active Intellect\* may turn out to be otiose; that is, it could be the case that it is simply a myth created and transmitted by the Aristotelian commentators.

The paper is divided into three main parts. In the first part, I shall highlight a number of pertinent features of τέχνη that could be relevant in understanding the chapter. First, I shall address how τέχνη is *affected* (πέπονθεν) in relation to the matter. Here I show that, in artificial productions, τέχνη that exists in the mind of its practitioner is related to the matter by the very description of the mind found in III.5 – that τέχνη is "separate, unaffected, unmixed and being in its essence (or substance) is in actuality (χωριστὸς καὶ ἀπαθὴς καὶ ἀμιγής, τῇ οὐσίᾳ ὧν ἐνεργεῖα). Then, I shall address how τέχνη is *related* (πρός) to the matter and show that Aristotle speaks of two different kind of relationships: 1) the manner in which τέχνη that exists in the mind of a craft-practitioner is related to the *physical* matter, for example, the relationship that obtains between the τέχνη of housebuilding that exists in the mind of a builder to the bricks and timbers of the house – which I shall refer to as the Craft-practitioner/Material (CM) Relationship; and 2) the manner in which τέχνη that exists in the teacher's mind is related to the learner's mind (understood as the matter) – which I shall refer to as the Teacher/Learner (TL) Relationship. Based on this distinction I shall argue that Aristotle could be referring to the TL when he is addressing how the productive cause is acting on our *human mind* in III.5.

In the second part, I shall make a brief excursion to *De Anima* II.5, where Aristotle himself employs the CM/TL distinction. There Aristotle introduces three different kinds of knower: Knower 1 is a potential knower (potential 1) in the sense that we are knowers by belonging to the class of those who are knowers and possess knowledge; Knower 2 is also a potential knower (potential 2) but in the sense that those who have knowledge know but are not actually contemplating it; and finally, Knower 3 in contrast is actually contemplating the knowledge that she possesses. And there are two different kind of transitions: Transition 1: from Knower 1 to Knower 2; and Transition 2: from Knower 2 to Knower 3. Having drawn the distinction between the transitions, Aristotle then explains each of them by identifying their respective agent and patient. In contrast to the Standard Transition, which is described in terms of the CM, when he turns to Transition 1, Aristotle explicitly mentions a teacher as an agent and a learner as a patient (417b12-14) –

that is the TL relationship; and when he turns to Transition 2, Aristotle mentions the unnamed agent of the contemplator as an agent and the contemplator as a patient – that is, he describes the transition in terms of neither the CM or the TL.

In the third and the final part of paper, based on the findings of the previous two parts, I will briefly outline to what extent we can employ the TL relationship to understand his discussion of the chapter and most importantly address why, to the extent that the TL is successful in explicating the chapter, we may be able to dispense with \*the Active Intellect\* all together. For once we acquire knowledge no direct cause is require to explain Transition 2. It is possible to explain the transition from not thinking about x to thinking about x merely in terms of an incidental or indirect cause, that Aristotle seems to be alluding to in the two passages where he relies on the analogy of the different knowers: *De Animal* II.5 (an anonymous agent at 417b9-12) and *Physics* VIII.4 (an obstacle remover at 256a2).

### **Averroes on *Phantasia*: Beyond Aristotelian Passive Intellect**

Averroes was particularly drawn to Aristotle's distinction between the active and passive intellects in *De Anima* (Book III, Chapter 5). A fundamental division frequently derived from Aristotle's text is between the *nous poietikos* (active intellect), which is separate (*choristos*), impassive (*apathos*), and unmixed (*amiges*), and the *nous pathetikos* (passive intellect), which resembles matter and thus has the potential to become everything. Averroes largely agrees with Aristotle's account: it has no nature of its own other than receiving intelligibles, it enables the soul to think and judge, it has no actual reality prior to thought, it does not mix with the body, is the locus of forms. However, Averroes takes a step further in his interpretation, asserting that not only the active intellect (*intellectus agens*) but also the passive intellect (*intellectus passibilis*) is separate, impassive, and unmixed. If the passive intellect has the potential to receive everything, it must remain purely potential; since it is open to all forms, it cannot contain the nature of material forms within itself and thus remains unmixed. Furthermore, because it is neither a body nor something within a body, it cannot be subject to generation and corruption and is therefore eternal. Due to these properties, Averroes renames the passive intellect as the material intellect (*intellectus materialis*), arguing that although it is receptive, it is not passive. Since this intellect is unmixed with matter, it does not reside in individuals. It is singular and shared by all human beings. The unity of the material intellect means that all humans possess a potential intellect. The shared material intellect stores intelligible forms and universal concepts, forming the basis of human knowledge. However, individuals actualize this potential through unique experiences, memories, and thoughts. Averroes identifies two *subiectum* of thought: *phantasmata* (images) and the material intellect. While the material intellect deals with universal concepts and scientific knowledge, thoughts about corporeal things reach it only through the imaginative faculties.

Averroes interprets Aristotle's reference in *DA* 430a23-25 to a faculty beyond the active, passive, and material intellects as pointing to *phantasia*. According to Averroes, the material intellect cannot grasp anything without *phantasia*. Unlike the material intellect, the imaginative faculty is a distinct material power concerned with corporeal entities. Thinking is impossible without images, as *phantasia* provides the material intellect with the intelligibles it processes. *Phantasia* enables the placement of *intentiones* (forms) into memory, the recognition of forms, and the differentiation of the imagined from the singular. Once this process is complete, the material intellect receives the *intentiones* from *phantasia*. For Averroes, *phantasia* is not merely a passive faculty performing subordinate functions as in Aristotle; rather, it is the passive intellect itself.

In Aristotle, *phantasia* differs from both intellect and sensation, existing in neither potentiality (*dynamis*) nor actuality (*energeia*). It processes immaterial forms (*eidos*) from sensory inputs, unified by common sense (*koine aisthesis*), to generate images. Aristotle describes *phantasia* as having the "power of real things," explaining why mere imagination can cause physical reactions. It also underpins

memory (*mneme*), preserving images that resemble but do not replicate sensory input. In *On the Motion of Animals*, phantasia guides action by shaping desire (*orexis*), which replaces inquiry and thought. Though none of these faculties ensure reliable knowledge, all rely on phantasia. Averroes argues that these functions of *phantasia* indicate that it is not merely a faculty that is affected by external stimuli or serves another faculty. Rather, *phantasia* is also an active force. Since it initiates thought, *phantasia* functions as a *subiectum movens* (a mover). Jean-Baptiste Brenet argues that Averroes' *phantasia* shapes the possible form we call intellect, and unlike Aristotle's passive intellect, it emerges not as a mere receiver but as a shaper of forms.

Averroes' conception of *phantasia* challenges traditional interpretations of Aristotelian philosophy by demonstrating that thought is not merely an intellectual process but one inherently intertwined with images (*phantasmata*). He does not view the passive intellect as a mere receptacle, rather, he asserts that it necessarily operates in conjunction with *phantasia*, making cognitive processes directly dependent on sensory images. This interpretation not only diverges from Aristotle but also has significant implications for medieval epistemology and contemporary cognitive theories. First, Averroes' view—grounded in the notion of a singular, universal *material intellect*—was met with strong opposition from both Islamic philosophers and Christian scholastics. However, this perspective, which frames human thought as part of a collective field of knowledge, resonates with contemporary debates in neuroscience and cognitive science. Today, discussions on the shaping power of the mind (such as plasticity theories) parallel the role Averroes attributes to *phantasia*. In this context, Averroes' reworking of *phantasia* redefines the boundaries between thought and imagination. Unlike the Aristotelian tradition, he presents thinking not as a purely abstract function of the intellect but as a dynamic process deeply integrated with the transformative power of sensory experiences. His perspective provides a fertile ground for modern philosophical inquiries into the impact of images on cognition. This paper highlights that Averroes does not treat *phantasia* merely as an auxiliary function of the passive intellect but as a fundamental element that actively initiates and sustains cognitive processes. Thus, his approach, which refuses to reduce intellectual activity to the workings of an abstract intellect, deserves renewed attention both within classical philosophy and in contemporary discussions on cognition.

### **Types and Strategies of Explanation in Aristotle's *Poetics***

Aristotle's *Poetics* is a complex investigation into the domain of poetry and the sophistication of its scientific organization has often escaped notice. The aim of this paper is to lay out the basic features and implications of said organization. Consequently, I argue that there are various factors that convene in this work and in turn produce several layers of complexity of Aristotle's account: First, the *Poetics* constitutes a productive science. It is on the one hand, as a science, concerned with the presentation of causal-explanatory relations in its domain and thus shares points of contact with Aristotle's theoretical investigations (e.g. biology). On the other hand, it is oriented towards the production of certain objects, which transforms the organization of the account in a highly characteristic manner. Second, it is concerned with a cultural human activity that shows a historical development that can be reconstructed. This is a notable difference from natural forms, who are conceived of as eternal and unchanging. Third, the discussed art of poetry has concomitant sociological factors which must be taken into account. In the hostile Greek discourse practitioners of the τέχναι were required to fend off vicious attacks. This was especially true in the case of poetry, that invited sharp criticisms in the philosophical discourse which culminated in the total rejection of the art from Plato's *Republic*. I argue further that the confluence of these factors in the *Poetics* generates a set of distinct types of explananda which determine the structure of the text:

- (1) Paradigmatic (scientific) explananda: In rare occasions we find types of explananda who stand in the context of a paradigmatic scientific procedure, i.e. the demonstration of a per se accident.
- (2) τέχνη-type explananda: These constitute the chief occupation of the *Poetics*. In terms of the *Rhetoric*, the aim is to study the causes (τὴν αἰτίαν θεωρεῖν, 1354a10) of a successful exercise of the art.

These first two types are a consequence of the status of the *Poetics* as a productive science and they jointly constitute the crucial core of the text: An investigation into the very essence of the art of poetry and the related causes.

- (3) Historic-type explananda, which concern the diachronic development of the art of poetry and its forms.

Since the art of poetry and its connected poetic forms show a historical development, they confront the investigator with a dynamic set of facts and observations that require different explanatory accounts. Aristotle addresses this issue mainly in chapters 4–5. His strategy involves two factors: First, he construes a universal causal framework that serves to explain the orientation and movement of the development in general. Second, he punctually adduces certain causes for certain historical developments. For instance, while the continuous development of

more complex poetic forms is explained by the factors of natural teleology and increasing social prestige (1449a5–6), the change from trochaic tetrameter to iambic trimeter is punctually explained by the fact of its being best suited to speech (μάλιστα γὰρ λεκτικὸν τῶν μέτρων τὸ ἰαμβεῖόν ἐστιν, 1449a24–25).

(4) Poetic problemata, which are construed by first posing a problem for a work of poetry (an inconsistency, grammatical mistake, misrepresentation, etc.) followed by a solution through an explanation.

The final type is a direct consequence of the hostile Greek discourse on poetry that accumulated accusations and problems in poetry, most notably in Homer. The *Poetics* is giving a systematic overview over the problems and their solutions in chapter 25. With respect to their explanatory organization, they constitute a remarkable class of their own. On the one hand, they are related to scientific explanations in their fundamental structure: one state of affairs, the problem, is connected to a more fundamental causal factor that serves as its solution. On the other hand, they possess some crucial characteristics of their own that distinguish them from a genuine science.

Interestingly, these four explanatory types are not as disconnected as they may seem. In fact, the concomitant types (3) and (4) deeply rely on concepts that were established in the account concerning (1) and (2). The historical development of the art is dependent on the historical development of its corresponding products, thus the essential features established in (1) and (2) ultimately determine the historical account of (3). Furthermore, the solution of the problems in (4) relies on fundamental concepts of art as representation (μίμησις) and poetic correctness ὀρθότης, which are again laid out in the essential account of (1) and (2).

In consequence, the ultimate goal of my paper is to delineate (i) how various factors convene in the text and necessitate distinct types of explanations and (ii) how these are hierarchically organized to produce a coherent, complex whole.



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**Adultery and Involuntary Exchange in Aristotle's *Nicomachean Ethics*:  
A Contextual Reading**

The paper considers a particular segment of Aristotle's treatment of justice in Book V of the *Nicomachean Ethics*, namely the passage dealing with 'corrective justice in transactions', further specified in terms of voluntary and involuntary transactions (*Eth. Nic.* 1131a1-9). In considering involuntary transactions, which can be classified as either covert or violent, the paper pays particular attention to the fact that Aristotle includes adultery (*moicheia*) among involuntary exchanges, a fact that may seem counterintuitive to modern readers. From a contemporary point of view, adultery might be seen more as a voluntary exchange, say an exchange of pleasure between a man and a woman. Faced with this discrepancy, the paper aims to clarify what is the object of the transaction in question and what is the status of the agents involved.

To clarify Aristotle's perspective here, the paper reflects on the contextual grounding of Aristotle's position in the norms and structures of ancient Greek society. The contextual reading attempts to take into account the socio-cultural underpinnings of Aristotle's classification in terms of specific patterns that determine the dynamics of interpersonal relations. In this case, it means interpreting Aristotle's position through the lens of male-male rather than male-female relations. As the proposed interpretation aims to show, Aristotle's focus in categorising adultery is on the status of the male head of the household and the potential threat to his authority posed by a male intruder. In this sense, Aristotle's classification correlates with social practices related to honour, property preservation and household stability as encoded in the institution of marriage.

Specific to this context is the consideration of actions that affect the body and soul respectively. The particular threat implicit in adultery is precisely that it not only affects the body of the seduced person (as acts of violence do), but above all subjugates her soul in a more permanent and formative way that threatens the authority of the head of the household (cf. *Lys.* I,32-33). As a sub-theme, one might consider to what extent (if at all) Aristotle's perspective allows for concern about sexualised violence. A critical element in this assessment will again be a culturally shaped dynamic of interpersonal interactions and their terminological framing, facilitating the recognition of internal limitations that prevent an anachronistic translation of the Aristotelian perspective to modern concerns about consensual or non-consensual behaviour.

Finally, given that Aristotle includes adultery among the types of actions that are unconditionally forbidden, the paper examines the genuinely philosophical reasons that guide Aristotle's normative standards for marital relations. These reasons can be seen both in his teleological framing of the concept of marriage, i.e. his views on the purpose of marital relations (*Eth. Nic.* 1162a16-24), and in his complex notion of human flourishing, or *eudaimonia*.

At the same time, by examining Aristotle's classification of adultery as an

involuntary transaction, the paper invites a critical assessment of the relevance of Aristotle's normative standards to discussions of ethics, justice, and the cultural specificity of moral reasoning. This exploration encourages a nuanced appreciation of how cultural and philosophical contexts shape the interpretation of key moral concepts.

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**Aristotelian Notions at the Core of Plotinus' Account of Eudaimonia**

Plotinus locates eudaimonia in the perfect (or complete) kind of life, which he identifies with the activity of the intellect. While such an account is certainly reminiscent of Aristotle's position in *Nicomachean Ethics* X 7, the precise relationship of Plotinus' account of *eudaimonia* to Aristotle's theory is far from clear. In this paper, I trace the development of Aristotelian themes in Plotinus' line of argumentation for placing *eudaimonia* in the activity of the intellect (*Enn.* I.4.1–3). I argue that Plotinus' modification and recontextualization of certain Aristotelian notions play a key role in establishing an exclusive identification of *eudaimonia* with intellection in line with his general metaphysical commitments. Particularly, my analysis will focus on the notions of „living well” (eu zēn) and completeness (*teleion*).

Aristotle introduces „living well” as a commonly accepted opinion about what eudaimonia is, and takes it to support his views on the matter (EN 1095a19–20; 1098b20–11; EE 1219b1–2). Plotinus, as I will argue, elevates „living well” to the rank of the common notion of *eudaimonia* providing both the starting point of discussion and a criterion of truth. He develops the notion through an *aporia* generated by the tension between the seemingly inclusive scope of „living well” and the intention (shared with Aristotle) to restrict the scope of *eudaimonia* to human beings. Since all living beings—including plants and non-rational animals—can live well in the sense of performing their respective functions well, they should all have a share in *eudaimonia* defined as living well. Instead of appealing to the fact that non-human animals lack certain kinds of activities such as *praxis* or *theoria* (as Aristotle does in EN 1099b32; 1178b27), which would be circular from the point of view of Plotinus' argumentation, he postulates that living well includes the awareness that we are living well and thus requires rational capacities.

Completeness, defined by Aristotle as being chosen for its own sake (EN 1097a30–34), is one of the criteria for an activity to qualify as *eudaimonia*. Plotinus takes over the criteria of completeness and redefines it in metaphysical terms as being in no way deficient (*Enn.* I.4.3.24–30). Being in no way deficient entails that the good of the said activity is extrinsic (epakton) to it, which applies only to the self-directed activity of the intellect. Although the argument is constructed so as to fit into the framework of Plotinian metaphysics, it relies on Aristotelian commitments. It presupposes that all kinds of activities aim at or tend towards certain goods (EN 1094a1–3) the attainment of which constitutes their excellence. Activities whose fulfilment depends on extrinsic factors are, for Plotinus, essentially incomplete even if they happen to attain their goals. Completeness, therefore applies only to an activity whose excellent operation is grounded in intrinsic factors only: the self-directed activity of intellect. By developing Aristotle's notion of completeness in this, more metaphysical direction, Plotinus arrives at a more radical formulation of the thesis of equating *eudaimonia* with *theoria*. It is by virtue of their metaphysical structure that all other activities are incomplete. Thus, it is only the activity of the intellect that fully and intrinsically exemplifies what it is to live well.

***Epithumia* for learning and knowing: evidence for reconsidering *epithumia* in Aristotle**

According to the dominant view, Aristotelian *epithumia* is paradigmatically for food, drink, and sex. I argue this conception is false and that there are two heterogeneous kinds of *epithumia* in Aristotle. To do this, I introduce evidence of *epithumia* for learning and knowing in Aristotle.

I start by introducing the traditional view of *epithumia*—i.e., the **Object First & Guise View (§1-4)**. On the Object First & Guise View, *epithumia* is for immediately pleasant objects and, in the “narrow” sense, for food, drink, or sex (*EN* III, VII). All other *epithumiai* are the “loose” sense and are *derivative* on bodily appetites (Moss 2012: 27-28; Bostock 2000: 34).

This dominant approach fails for two reasons: the plurality of objects of *epithumiai* in Aristotle and their radical heterogeneity. Instead, I propose that Aristotle holds a **Guise & Mode First View**: a species of *orexis* does not depend primarily on its object (e.g., drink) at hand, but rather on the guise of value and mode of presentation under which the object is experienced as desirable. This view entails that *epithumiai* for food, drink, and sex need not be paradigmatic.

Then, I introduce evidence of *epithumia* for learning in Aristotle (§5-6). The most explicit evidence comes at *Rhet.* I.11, where Aristotle recognizes different kinds of *epithumia* and says “to learn and wonder is for the most part pleasant, since in wondering there is an *epithumia for learning*” (1371a30-32). In *EN* III.1, Aristotle mentions *epithumia* for *learning* (1111a29-31). At *Poetics* IV, Aristotle defines the philosopher’s pleasures as of learning (1448b8-19). The problem then becomes: is learning a kind of bodily replenishment? I argue “no.”

I present evidence of non-replenishment *epithumiai*. In the *Magna Moralia* (II.7.4.) and *EN* VII.12, Aristotle says the pleasures of seeing, thinking, and contemplation do not involve bodily replenishment pain. While learning is not mentioned, it is in *EN* X.3, where Aristotle says the pleasures of learning are “without pain” (1173b7-19). In *EN* III.10, Aristotle mentions that a “psychic pleasure” comes from “love of learning,” but the body “suffers nothing” (1117b28-31). Thus, not all *epithumiai* affect the body and even some bodily *epithumiai*—e.g., smelling a rose—are not bodily replenishment. Thus, if we model all *epithumiai* on appetite for food, drink, and sex, we erase *epithumia* to learn or make it derivative on something with which it is heterogeneous. Based on *EN* III.12 and *Rhet.* I.11, I argue there are two kinds of *epithumia*: one bodily replenishment kind resulting in pain from lack and another that provides psychic nourishment without pain. I conclude by proposing a more pluralistic framework for *epithumia* (§7).

This account of *epithumia* sheds new light on core issues: the *orexis eidenai* in *Metaphysics* A.1 (it is *epithumetic* contra Lear (*philia*, 1988)); moral habituation involves, specifically, *epithumia* for learning (not *thumos*, Burnyeat (1980: 79-83)). Both Lear and Burnyeat assume *epithumia* is paradigmatically for bodily pleasure.

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### **Two levels of capacities in Aristotle's *Meteorology* 4.8-9.**

Within Book 4 of the *Meteorology* – which scholars now generally take to be an authentic work of Aristotle – two chapters remain puzzling. In *Meteorology* 4.8-9, Aristotle introduces 18 pairs of characteristics that belong to materials; each pair is a capacity of a body to be acted upon along with the corresponding incapacity. Several of the pairs are related to processes that Aristotle discusses earlier, in *Meteorology* 4.5-7, as well as in the next chapter, *Meteorology* 4.10. The majority, however, are new: some enter into Aristotle's biological explanations in *Meteorology* 4.12 and elsewhere, while others are not mentioned anywhere in Aristotle's extant works.

While recent scholarship (including the work of James Lennox and Tiberiu Popa) has made significant progress toward a characterisation of the capacities in *Meteorology* 4.8-9 as passive dispositional qualities, two significant questions remain. First, it remains unclear how the new capacities in *Meteorology* 4.8-9 – the ones that play no part in the discussion of *Meteorology* 4.5-7 or 4.10 – relate to those that do. The capacities that feature into the discussion of *Meteorology* 4.5-7 are apparently primary in some sense, but it is difficult to characterise precisely why they might be primary in comparison with the others. Second, it remains unclear how the capacities in *Meteorology* 4.8-9 relate to the matter of a compound or its moisture and dryness. Aristotle identifies certain capacities as the 'forms' or types of moisture and dryness, but it is unclear whether all 18 passive dispositions relate to moisture and dryness in the same way.

The objective of this paper is to answer both of these questions. In doing so, I shall argue that *Meteorology* 4.8-9 demonstrates a commitment to two levels or layers of passive dispositions: one level includes abilities to be acted upon by heat and cold, whereas the other includes abilities to be acted upon by locomotion and contact or extreme heat. The former are primary because they are necessary conditions for the development of the latter. In addition, I argue that the first layer of passive dispositions belongs to the matter of a compound – its intrinsic moisture and dryness – whereas the second layer belongs to the actual and accidental moisture and dryness of a compound, which it acquires after being acted upon by heat and cold.

As a result, the second layer of passive dispositions can be considered as emergent qualities, as Lennox argues; the first layer, while perhaps emergent in some sense, stands in a different relationship to the matter of a compound. Uniform compounds are primarily characterised by their emergent qualities – these explain their abilities to function as materials for artefacts and organisms – but they also possess intrinsic abilities to be acted upon by heat and cold in virtue of their material structures, understood as the essential moisture and dryness that they acquire through their construction from the elements.

In defending Aristotle's commitment to two layers or levels of passive dispositions in *Meteorology* 4.8-9, I shall proceed as follows. First, I begin by briefly setting out the 18 pairings in *Meteorology* 4.8-9. Second, I introduce a question about the relationship between the 18 positive capacities, and argue that the first four are

abilities to be acted upon by heat and cold, whereas the remaining capacities are distinct because they are abilities to be acted upon by locomotion and contact or extreme heat. Third, I argue that the first four capacities are essential to the matter of a compound, and can survive their own actualisations. Finally, I demonstrate that the first four passive capacities in *Meteorology* 4.8-9 are primary in one sense because they are necessary for the development of the remaining capacities, but fail to be primary in another sense because, for Aristotle, the capacities developed by heat and cold ultimately explain the differentiation of compounds into kinds.



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### Was Aristotle a Moral Intuitionist?

At various places in Books VI and VII of *Nicomachean Ethics*, where Aristotle delineates his theory of *phronesis* (or practical rationality), he engages in talk that alludes to what contemporary metaethicists would call *moral intuitionism*. This is the moral realist theory that we can grasp stance-independent basic moral truths on the basis of intuition. Like historical moral intuitionists (Cudworth, Price, Moore, Ross) and their contemporary followers (Cuneo and Shafer-Landau (2014), Huemer (2005)), Aristotle talks about ‘the mind’s eye’ (Book VI 1144a29-30, Book VI 1143b), about a ‘moral sense’ (Book VI (1141b-1142b)), about grasping foundational moral principles (Book VI 1143b) and even draws an analogy between reasoning in ethics and mathematics (Book VI (1141b-1142b), Book VII (1150b-1151a)).

In this paper, I draw attention to the passages that Aristotle engages in intuitionist-like talk in *Nicomachean Ethics* and reconstruct his reasoning. As I argue, Aristotle seems to commit to a version of moral intuitionism. He argues that we have a moral sense, or moral intuition, that grasps particular moral truths that are foundational and not subject to further justification e.g. that something is a triangle, or that a particular act is just (Book VI (1141b-1142b)). This cognitive competence belongs to *nous* (or understanding) but not to the *nous* of scientific understanding (Book VI 1143b). It belongs to *practical nous* that can apprehend those ultimate particular truths that are self-evident and cannot be proven by further argument. This is an ability that the *phronimoi* have and can develop through experience (Book VI 1143b).

Like in mathematics, where the goal of reasoning is to prove a hypothesis, in ethics the goal of practical reasoning is virtuous action and eudaimonia (Book VII (1150b-1151a)). Like in mathematics, the basic principles of mathematics (i.e. axioms) are not provable from a process of reasoning, but are grasped via the mind’s eye by intuition (or practical *nous*). Likewise in ethics, there can be no proof of basic moral principles and only virtue -natural or habituated- can lead us to have true beliefs about those basic moral principles (Book VII (1150b-1151a)). It is the virtuous apprehension of a noble goal that distinguishes the virtuous agent from the merely cunning person (δεινός). Although the cunning person can efficiently employ the required means to achieve a goal, the goal may not be a moral or noble one.

In effect, Aristotle claims that virtuous agents have a reliable moral intuition that helps them grasp what is right or wrong in a given context. In this respect, moral knowledge is not like deductive scientific knowledge where we have general principles that hold universally (e.g. that fire burns dry wood). This is why *phronesis* is a different kind of cognitive competence from scientific knowledge (ἐπιστήμη). It is more like mathematical knowledge where some basic principles (i.e. axioms) are grasped as self-evident and foundational and helps us to see a particular truth in a context (e.g. a theorem). Of course, perhaps unlike mathematics, Aristotle makes clear that in the case of moral knowledge it is virtue that induces moral intuition. As he makes clear, viciousness (μωχθηρία) distorts our perception of moral principles (Book VI 1144a29-30). I close with some discussion of how my intuitionist



interpretation of Aristotle comports nicely with his position on natural law in Book III.

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**Aristotle on Language as a Rationality-Constituting Instrument**

The aim of this paper is to examine Aristotle's view of the relation between language and rationality and to argue that, according to Aristotle, human language is a rationality-constituting instrument. This interpretive stance has a long and robust tradition in Aristotelian studies. With slight differences, it has been supported by scholars such as Labarrière (1984, 1993), Wedin (1988), Osborne (2007), and Newmyer (2016). However, an intriguing critique of this stance has recently been raised by Ian McCready-Flora in his paper *Speech and the Rational Soul* (2019).

McCready-Flora argues for the thesis that, for Aristotle, the performance of human speech (or any aspect of it) cannot constitute rationality because Aristotle consistently obeys the principle of cognitive priority. This principle states that the existence of a cognitive faculty explains the existence of its realizing instrument, not vice versa. Nature provides animals only with the instruments corresponding to their capacities. Thus, the fact that a particular animal species (e.g., humans) possesses a cognitive faculty (rationality) explains its having a particular instrument to manifest it (the rational speech/language), not the other way round. Importantly, McCready-Flora's interpretation shows that he associates Aristotle with an understanding of human language as a direct and external means.

I, however, argue that such an interpretation is untenable because Aristotle does not understand human language as an instrument provided by nature (*kata physin*). Unlike all other forms of the sound and vocal communication used by non-human animal species, Aristotle regards human language as an instrument of a fundamentally different type. It functions only insofar as it follows certain (syntactic-semantic and pragmatic) rules. Human language is a conventional instrument (*kata synthēkēn*), a tool of our normative practice. In inferentialist terms, it is a tool for the practice of giving and asking for reasons. Viewed this way, language can be seen not merely as a tool but as a mode of rationality itself. This interpretation aligns with Aristotle's observations about the language-like structure of human thinking. Human rationality is propositional because it has the structure and normativity of language.

McCready-Flora's assumption that the relationship between language and rational thinking in Aristotle is extrinsic can be further challenged by an analysis of his interpretation of Aristotle's use of the flute-flautist analogy. According to his reading, language is analogous to a musical instrument (the flute), and the rational agent is analogous to the flautist. However, if this analogy were accurate, it would imply that one could become a flautist without ever properly playing the flute—an absurdity. What McCready-Flora's account overlooks is the normative dimension of practice. Language is not analogous to an unplayed or misplayed flute. Instead, it is analogous to a properly used flute, one employed according to socially accepted norms. Through language, we coordinate our lives normatively rather than naturally. It is noteworthy—and consistent with this interpretation—that Aristotle never mentions non-propositional, non-linguistic, or pre-linguistic rational thought in his

texts. For Aristotle, even children do not exhibit rationality until they have adequately mastered language. Thus, human language attests to the propositional and normative nature of rational thought.

That language is a rationality-constituting instrument in Aristotle's thinking implies that language is a practice that initiates and develops rationality. Language helps humans realize what they are disposed to as a species, to be rational. Within Aristotle's species-eternalist framework, species are eternal. Therefore, while language constitutes rationality, this does not mean that language is the cause and thinking the effect. Instead, language is the means through which rationality is realized in individuals born into communities of competent speakers, i.e., rational beings. In this eternalist framework, causes and effects are realized in a circle.

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### **The Aristotelian *thaumazein* in Martha Nussbaum's recent studies**

The paper aims to investigate Martha Nussbaum's recovery of the Aristotelian concept of *thaumazein* in one of her latest publications: *Justice for Animals: Our Collective Responsibility*. In this work, the philosopher describes the results of applying a specific version of her Capabilities Approach to questions of justice and non-human animal rights. The philosopher believes that every animal has the capacity to live a "flourishing life", because it "possesses capacities, social and individual, that equip it to negotiate a decent life in a world that gives animals difficult challenges", but that it is continually hindered by human intervention. Nussbaum presents "wonder" as one of the three human capacities – along with compassion and outrage – that, if properly developed and cultivated, can become resources for raising awareness of the condition of injustice in which animal species live. All animals, the philosopher argues, have rights, but not all humans agree on this point or are aware of it. Many humans feel love or affection towards animals, especially towards those that belong to them in some way. But can these feelings be so strong that they also extend to other animal creatures, with whom it is not possible to have a direct relationship? Nussbaum's answer is negative. Love and affection in themselves are not enough, because people tend to love what they know, what is familiar to them (p. 188). They must therefore be complemented by a "sense of wonder".

The author's intention is to "to awaken a sense of ethically attuned wonder that might lead to an ethically directed compassion when the animal's striving is wrongfully thwarted, and a forward-looking outrage that says: 'This is unacceptable. It must not happen again'" (p. 190). Wonder, in fact, has the capacity to affect us in a profound way, to make us feel astonishment and curiosity at the same time, to go beyond appearances. As Aristotle says in *De partibus animalium* I, 645a 16 sgg, "For in all natural things there is something marvellous. [...] too one should approach research about each of the animals without disgust, since in every one there is something natural and good. For what is not haphazard but rather for the sake of something is in fact present most of all in the works of nature; the end for the sake of which each animal has been constituted or comes to be takes the place of the good. If someone has considered the study of the other animals to lack value, he ought to think the same thing about himself as well; for it is impossible to look at that from which mankind has been constituted-blood, flesh, bones, blood vessels, and other such parts-without considerable disgust".

The Aristotelian sense of wonder is related, according to Nussbaum, to the recognition of sentient life: we can see and hear animals moving, speaking, acting, through movements that are not purely accidental - she argues - but are somehow directed by an inner awareness. This is the meaning of wonder that the author, in accordance with her neo-Aristotelian perspective, takes from the philosopher of Stagira and reformulates within her theory. Nussbaum's return to this Aristotelian principle aims to encourage a series of interventions, collective and individual, to

prevent and promote a dignified life for all animals. A potential condition that Aristotle had already established and that for Nussbaum can be realised through a philosophical theory that changes the human way of understanding and approaching the animal dimension. And so, wonder becomes a way to see the world differently, in the way configured by Martha Nussbaum's Capability Approach: "as a world of remarkably diverse forms of animal striving that seem significant and worth supporting".

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### **Aristotelian Anatomy in 3D: State of the Art and Future Prospects**

Aristotle is considered as a pioneer of anatomical research in Ancient Greece. While others had investigated the structure of the body before him, Aristotle was the first to undertake a systematic anatomical study of living bodies – ranging from the smallest insects through large beasts to humans. As part of his study of the natural world, and specifically biology, he performed repeated dissections of non-human animals of different species with the aim of understanding the structure of their bodies and their parts, in terms of size, shape, location, connections and texture. His anatomical research shaped his broader biological ideas concerning the functioning of the living body, animal habits and life and death. His *Research of Animals* (*Historia animalium*) records his anatomical findings, and his other biological works such as *Parts of Animals*, *Generation of Animals* and the treatises in the *Parva naturalia* offer further rich evidence for his anatomical ideas.

Aristotle laid great emphasis on the importance of visual evidence for the study of anatomy – he used the body as his key source (through dissection and observation) and he encouraged his readers to perform dissections or at least consult anatomical illustrations he provided. However, all that remains for the readers of Aristotle today, are his words, in which he was forced to flatten the three-dimensional body onto a single verbal dimension. While offering rich detail, these treatises pose substantial gaps and challenges in attempts of classicists, philosophers and historians to truly engage and grasp Aristotle's perception of the body and its internal parts and through it his broader physiological, biological and psychological ideas.

In our talk we will present and discuss a new interdisciplinary method of studying Aristotle's anatomical ideas. The method centres on the creation of interactive 3D digital visualisations (models) of human anatomy as understood and described by Aristotle. We will explain the analytical process of designing and producing such visualisations. The key stages involve: close reading of Aristotle's text, dissection and observation of animal bodies (together with veterinary surgeons and experts) in an attempt to observe what Aristotle describes, and the iterative and analytical process of creating the models together with 3D artists. We have already created models of the respiratory, cardiovascular, urinary and digestive systems according to Aristotle (and a model of the reproductive system will be available in early spring 2025). The models are available on the digital interactive atlas of ancient anatomy, along with lexical and bibliographical data and analytical discussions of the research and scholarly decisions informing the models.

In the talk we will explore the models we have already created, and discuss particular interpretive queries (e.g. the meaning and location of *nēdus*, "the

fasting intestine”, or of the *koilon*, hollow, between the heart and windpipe). In so doing we will demonstrate how creating such models improves our interpretation and understanding of the texts by requiring a more nuanced reading and analysis. We will show how the visual analysis and research not only offers new answers to long-standing questions but also reveals textual and interpretive questions that had been glossed over or gone unnoticed. We will further explain how the interactive platform we built for showcasing these and other models, facilitates transparency, reproduction as well as scholarly discussion and review of the models and of the interpretation they present.

Our aim is to encourage an open and constructive discussion on the advantages and challenges in such research and importantly, on the ways to ensure their suitability and utility to Aristotelian scholars and students.



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### **Kinds of Predicational Modes and Kinds of Being: Predicational and Ontological Categories in Aristotle**

There is an ongoing debate in the scholarship with Aristotle's theory of categories: are the *genē tōn katēgoriōn* which begins with 'what it is' (*ti esti*) in *Topics* I 9, basically the same as the categories which begins with 'substance' (*ousia*) in *Categories* 4? The view that they are basically the same list can be traced back to Alexander of Aphrodisias. In the last few decades, M. Frede (1981), T. Ebert (1985), D. Morrison (1993), M. Malink (2007) and R. Granieri (2016) have argued for the view that the two lists are different. Most recently, P. Fait (2023) offered a new plea for the view that the two lists are basically the same. In this work, I shall argue for the view that the two lists are different, for the categories in *Categories* 4 are ontological categories or kinds of beings, whereas as the *genē tōn katēgoriōn* in *Topics* I 9 are predicational categories or kinds of predicational modes.

By 'kind of predicational mode' I mean the kind of *the relation* between a predicate and a subject. For instance, '...is the genus of...' is a relation between a predicate and a subject, where different predicates and different subjects can be filled in. By contrast, by "kind of being" I mean the ontological kind to which a predicate or a subject belongs.

After the introduction about this general distinction between predicational mode and kind of being, I shall, in the second section, give a detailed analysis of *Topics* I 9 and argue that the *genē tōn katēgoriōn* in *Topics* I 9 are kinds of predicational modes, not kinds of being. The reasons are the following: Firstly, in *Topics* I 9, Aristotle clearly indicates the close connection between the four predicables and the *genē tōn katēgoriōn* by claiming that all the four predicables are to be found (*huparchousin*) among the *genē tōn katēgoriōn*. This indicates that the four predicables and the *genē tōn katēgoriōn* share the same predicational nature. Secondly, Aristotle claims that entities under non-substantial categories can also signify "what it is". This speaks against the suggestion that "what it is" in *Topics* I 9 should be identified with "substance" in *Categories* 4. By contrast, "what it is" in *Topics* I 9 is a kind of essential predication which collects definition-predication and genus-predication.

After that, I shall look at the categories in *Posterior Analytics* I 22, which are also kinds of predicational modes, but slightly different from those in *Topics* I 9. They are also kinds of predicational modes, because the first category, *en tōi ti estin* or *ousia*, is not the *ousia* or "substance" in *Categories* 4. By contrast, it signifies a kind of essential predication. However, this kind of essential predication is slightly different from "what it is" in *Topics* I 9 in that it collects genus-predication and specific difference-predication, whereas 'what it is' in *Topics* I 9 collects genus-predication and definition-predication.

Finally, I shall turn to the categories in *Metaphysics* Δ 7 and Z 1. I shall argue that in *Metaphysics* Δ 7, Aristotle arrives at different kinds of being through different kinds of predicational modes, with particular substance as the implicit subject. The list of categories that is stated explicitly in *Metaphysics* Δ 7, which begins with 'what

it is', is the list of predicational modes. But when the subject is fixed, we can make use of different kinds of predicational modes to arrive at the different kinds of being. For instance, what is predicated of particular substance in the mode of 'what it is' (*ti esti*) is a universal substance and belongs to the ontological category of substance, and so on. It is to note that in *Metaphysics* Δ 7, Aristotle does not state explicitly a list of ontological categories which includes particular substances into the first category. By contrast, *Metaphysics* Z 1, Aristotle states explicitly a list of ontological categories which begins with *ti esti kai tode ti*, where *ti esti* indicates the origin of the first category and *tode ti* has the function of including the implicit subject of all other beings, i.e., particular substance, into the first category.

### **On the Art of Aristotelian Rhetoric: A formal art?**

One of the main problems in Aristotelian scholarship is determining Aristotle's exact attitude towards rhetoric. This problem touches upon various aspects within rhetoric and rhetorical theory, such as Aristotle's position on rhetoric as an art; his attitude towards τὰ ἔξω τοῦ πράγματος ("things extraneous to the issue") - those elements which he attacks in the first book of Rhetoric, but elaborates in detail in the following books, especially in the third; the relation of rhetoric to other arts, specifically to dialectic and politics - and, of course, his controversy against the τέχναι writers - changing the emphasis from the μέρη λόγου ("parts of a speech") to the πίστις ("conviction, evidence").

In this presentation, I shall concentrate on one question concerning Aristotle's rhetorical art: is rhetoric a formal or even a neutral art? Many scholars have touched upon these terms in Aristotle's rhetoric. There are works intended to find the exact ὑλη ("subject matter") of rhetoric for Aristotle, or even deny the existence of ὑλη altogether. Some scholars have argued for the amorality of Aristotle's rhetoric, while others insisted on his non technical concept of τέχνη. No doubt in the *Rhetoric* there are traces of formality alongside other traces which point to rhetoric's *materia*. Likewise one can detect neutral statements in Aristotle's Rhetoric alongside explicit statements which see rhetoric as a beneficial art qua art. This inconsistency is part of a larger problem which characterizes Aristotle's Rhetoric in general. Indeed, the problems which the Rhetoric raises, problems of inconsistencies, ambivalence, and - some would even say - contradictions, are well documented in the secondary literature. One famous solution is that of Solmsen who argued for Rhetoric as a collection of different texts composed in different stages of the author's activity, thus manifesting different views held by Aristotle. However, much work has been done since 1929. Today there are scholars who try to find the solution by other means, such as the intention of Rhetoric or the exact audience to whom Rhetoric is aimed at.

Concentrating on the issue of rhetoric as a formal and neutral art, I shall suggest an alternative answer. I shall argue for a vacillation in Aristotle's conception of rhetoric, which both reflects the specific historical position of rhetoric in his days, and at the same time locates him and his discussions of rhetoric in an intermediate stage between the traditional ancient Greek concept of art and our modern concept. While the traditional ancient Greek attitude could not even imagine combinations such as 'formal art' and 'neutral art', and the modern present-day attitude sees in such combinations a rather natural expression, or at least an option, I shall be claiming that Aristotle identifies in rhetoric formal and neutral elements, but that he still does not attribute these characteristics to the very essence of the art. In fact Aristotle paves the way for one of the most important metamorphoses the notion of art has gone through from ancient times to the present day.

### **Was Aristotle an indeterminist?**

Scholars disagree as to whether Aristotle should be classified as a determinist or indeterminist regarding human action and deliberate choice. This debate dates back to antiquity: Cicero *De Fato* (§39) classifies Aristotle as a determinist, whereas Alexander of Aphrodisias (*De Fato* 192, 22ff.) considers him an indeterminist. The issue is closely tied to whether Aristotle's view supports *moral* responsibility or merely of *causal* responsibility. In my paper, I argue for two claims: (i) Aristotle should be classified as a determinist rather than as an indeterminist, and (ii) his determinism is nonetheless compatible with moral responsibility.

Those who argue that Aristotle was an indeterminist rely primarily on two passages in *Nicomachean Ethics* III 5. However, neither passage supports this claim. By 'indeterminism' I mean the view that no external cause determines the agent's decisions and actions. Aristotle's conception of 'decision' (*prohairesis*) entails a deliberative process leading to action unless impeded (cf. *EN* III 2). The first passage in question (*EN* 1113b7-8) states: "For when acting depends on us, not acting does so too, and [when saying] no does so, [saying] yes [does so] too". Although Rowe's translation (and many others) adds "saying" as the missing verb in the second part of the original Greek sentence, this lacks a textual basis. Additionally, "*to mê*" and "*to nai*" (literally, "the not" and "the yes") do not form a natural pair (a more natural counterpart to "*to nai*" would be "*to ou*", i.e. "the no"). Bobzien resolves the first problem by adding "acting" to the second part of the sentence and justifies the use of "*to mê*" by referring to a parallel usage in Byzantine Greek, which allows to read the pair of expressions in the sense of '*vice versa*': "For when acting depends on us, not acting does so too, and when not acting depends on us, acting depends on us too." This formulation underscores the two-sidedness of voluntary action – one can choose to act or not to act –, thereby also supporting Aristotle's argument against the Socratic asymmetry thesis (that virtue depend on us, while vice does not).

In the second passage (1113b14-21), Aristotle objects to causal determinism by asserting that actions originate in the agent. This has been interpreted as supporting both indeterminism and a weaker form of determinism. To decide this case, it is crucial to understand what is meant by the phrase that "the cause (*archê*) of an action lies in us". Indeterminists claim that voluntary actions must be exclusively self-caused, which includes that the agent masters her desires and beliefs, whereas determinists argue even voluntary actions that are not externally coerced can be shaped by an agent's desires and beliefs, which in turn stem from her character (and in this regard lie in the agent). As the textual basis for indeterminism is questionable and ambiguous, and because Aristotle elsewhere explicitly acknowledges movements that have their origin in us (*archê en hêmin*) without depending on us (*eph' hêmin*), the deterministic interpretation is more compelling. My thesis is therefore that Aristotle's concept of the voluntary does not preclude determination by character.

In the remainder of the paper, I show that Aristotle's deterministic concept of the voluntary is compatible with moral responsibility. Critics object that if actions were determined by character, moral responsibility would be undermined, as character itself is shaped by external influences. The argument fails, however, as Aristotle's definition of voluntariness excludes only two excusing conditions: ignorance and external force. The formative role of education does not exempt agents from constantly increasing responsibility for their character. Moreover, the further objection that Aristotle's account supports only causal responsibility misreads his distinction between two functions of praise and blame: a prospective, formative function and a retrospective, imputing function. While the first serves to educate children and guide or correct adults, the second serves to hold adults accountable for their actions. For Aristotle, character is progressively shaped by voluntary actions. As individuals mature, they become co-responsible for their character, which suffices to establish moral responsibility.

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**Aristotle's Analogy Between Poetry and Painting: A Note on *Poetics* VI.  
1450a37–b4**

Aristotle, in *Poetics* VI, provides a definition of tragedy (1449b21–31) and elaborates on its six constituent elements—plot (ὁ μῦθος), character (τὰ ἥθη), diction (ἡ λέξις), thought (ἡ διάνοια), spectacle (ἡ ὄψις), and composition (ἡ μελοποιία) (1449b31–1450b20). Among these, “plot” is emphasized as the most important, with “character” deemed second in significance. In discussing these elements, Aristotle introduces an analogy between poetry and painting, stressing the importance of outline over the application of colors in painting:

παραπλήσιον γάρ ἐστιν καὶ ἐπὶ τῆς γραφικῆς· εἰ γάρ τις ἐναλείψει τοῖς καλλίστοις φαρμάκοις χύδην, οὐκ ἂν ὁμοίως εὐφράνειεν καὶ λευκογραφῆσας εἰκόνα. (1450a39–b3)

Given the preceding statement: “ἀρχὴ μὲν οὖν καὶ οἷον ψυχὴ ὁ μῦθος τῆς τραγωδίας, δεύτερον δὲ τὰ ἥθη” (a38), the analogy here appears to suggest that the plot is akin to the outline in paintings, which is most important, while character is comparable to the colors, which are secondary.

However, this interpretation raises two problems. First, if this passage is understood in this way, it merely reiterates the earlier argument about the supremacy of the plot (a14–38), rendering it redundant within the overall structure of Aristotle's discussion. Second, interpreting character as color is highly unconventional and does not align well with Aristotle's treatment of character as an important element of tragedy. Character, along with plot and thought, belongs to the contents of representation (1449a11: ἃ μιμοῦνται, also cf. 1448a1–18), whereas colors pertain to the mediation of the representation (cf. 1447a18–23). Thus, it is difficult to accept that Aristotle uses colors as analogy for character.

For these reasons, the conjecture proposed by Castelvetro 1570, which relocates the passage to follow 1450a29–33 (“ἔτι ἂν τις...πραγμάτων”) has been influential. Many editors from the 17th to the 20th century have either partially or fully adopted this relocation, making it a landmark revision in the editorial history of the *Poetics* (Heinsius 1611, Twining 1789, Buhle 1799, Hermann 1802, Ritter 1839, Vahlen 1864, Susemihl 1865, Vahlen 1867, Überweg 1869, Bekker 1873, Else 1957). Despite its historical significance, this conjecture has received limited discussion in recent scholarship. Recent editions—such as Tarán-Gutas 2012, and Hose 2022—like Kassel 1965, enclose the passage in parentheses, signaling uncertainty about its role but refraining from further commentary.

This paper addresses these long-standing issues in two ways. First, it examines the editorial and commentary history surrounding this passage, from Castelvetro to Else. By tracing this history, it highlights the persistent challenges of reconciling the passage's placement and meaning within the broader framework of Aristotle's argument. Second, the paper proposes a new interpretation of the analogy in 1450a39–b3 by analyzing Aristotle's use of analogies between poetry and painting

throughout the *Poetics*. While past scholarship has extensively debated the meaning of colors in this analogy, the outline has almost universally been equated with the plot. This paper, however, explores the possibility that the outline in this passage corresponds to character rather than plot. By reconsidering the analogy in this way, this paper aims to address unresolved interpretative challenges and shed new light on the comprehension to the characters in the *Poetics*.



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### **Is Perception a Physiological or Psychological Process? Aristotle's Theory of Perception Revisited**

The nature of perception as proposed by Aristotle has long been hotly debated by scholars. Sorabji offers a physiological interpretation of perception, while Nussbaum and Putnam propose functionalism. Both interpret perception in a physiological way, equating perception with qualitative change, i.e., alteration. Against the physiological approach, Burnyeat claims to follow in the footsteps of Philoponus, Thomas Aquinas, and Brentano by taking an intentionalist position. Accordingly, he argues that perception in the Aristotelian sense is not an ordinary alteration, pointing out that the consciousness or intention of the soul plays a key role in sensory activity. In addition, Shields emphasizes hylemorphism and interprets perception as having a hylemorphic structure. Although Shields' hylemorphic interpretation is somewhat independent of the scholarly debate between physiological and intentionalist approaches, the former is consistent with hylemorphism and the latter is inconsistent with it. In this paper, I propose an alternative interpretation of Aristotle's theory of perception that makes it possible to integrate the seemingly antithetical interpretations of perception, i.e., the physiological approach and intentionalism, both of which, I argue, are compatible with hylemorphism in a broader sense. Crucial to my interpretation is that Aristotle's hylemorphism in its full form consists of matter-privation-form, underlying substrate-opposite properties, passivity-activity, potency-actualization, and potentiality-actuality. These distinctions, intertwined and interrelated in some way, form a matrix of distinctions. The matrix of distinctions as an intertwined web manifests itself as the totality of Aristotle's hylemorphism, which appears in both the physiological and psychological processes of perception, albeit in different forms and with different emphases.

As Nussbaum and Putnam have correctly pointed out, Aristotle sees perception as a common function of body and soul (*De sen.* 436a5-15, 436b2-11), so perception in the Aristotelian sense must have both aspects related to body and soul. In my view, the two approaches, the physiological and the psychological, respectively orient the two aspects of perception, that is, the passive capacity of the bodily organ and the active, sensitive capacity of the soul. To clarify the passive capacity of the bodily organ, which plays a fundamental role in perception, Aristotle analogizes perception to alteration and thus interprets perception as a kind of alteration (*Phys.* H2, 244b10-12; H3, 245b3-6; *De an.* B5, 416b34-35). Alteration and perception are analogous in that they share the hylemorphic structure, which appears both in the form of activity-passivity (ποιεῖν-πάσχειν) and in the form of the three principles composed of an underlying substrate and opposite properties (ὑποκείμενον-ἀντικείμενον). In interpreting perception as a kind of alteration, Aristotle emphasizes not only the bodily organ, but also the passive faculty with which the bodily organ is endowed, so that he identifies perception as a passive, physiological process (κινεῖσθαι καὶ πάσχειν, *De an.* B5, 416b33-34). In my view, it is the analogy between alteration and perception that leads scholars such as Sorabji, Nussbaum,

and Putnam to regard perception as a physiological process. On the other hand, to illustrate how the active, sensitive faculty of the soul, which intentionists call the soul's consciousness or intention, plays a central role in sensory activity, Aristotle analogizes perception to contemplation. Perception and contemplation are analogous in that they share the hylemorphic structure of activity-passivity (*De an.* Γ4, 429a16-18). Aristotle constructs the analogy between perception and contemplation in a different way, based on the triple distinction between first potentiality, second potentiality, and actualization (*De an.* B5, 417a21-30). In this case, perception and contemplation are analogous in that they share the hylemorphic structure of potentiality-actualization (δύναμις-ἐνέργεια, *De an.* B5, 417a32-b2), so that both can be seen as a process by which the soul moves its active faculty, whether sensitive or intelligent, from potentiality to actualization. It is on the basis of this analogy, I think, that Burnyeat offers the intentionalist interpretation of perception as the actualization of the second potentiality.

I conclude that perception in the Aristotelian sense is both a physiological and a psychological process. Aristotle considers perception to be a psychological process by analogizing perception to contemplation, while he considers perception to be a physiological process by analogizing perception to alteration. Although both processes share the hylemorphic structure of activity-passivity, perception as a physiological process emphasizes the passive capacity of the bodily organ (δύναμις τοῦ πάσχειν), and perception as a psychological process emphasizes the active, sensitive faculty of the soul (δύναμις τοῦ ποιεῖν). In light of Aristotle's assertion that "perception is the common function of body and soul", it is imperative to consider perception from a dual perspective that encompasses both the physiological and the psychological. I offer a holistic interpretation that recognizes the interdependence of the physical and the mental and elucidates both the active and passive dimensions of perception. The holistic interpretation also sheds light on the totality of Aristotle's hylemorphism and its widespread use in Aristotle's theory of perception.

### Honour, Slight, and Revenge: Aristotle's *orgē* and Modern Anger

In his analysis of emotions, Aristotle famously describes *orgē*, the emotion commonly translated as 'anger', as an emotional process with three key-stages (*Rh.* 2.2). An inappropriate or unwarranted slight (*oligōria*) on the part of an offender devalues a victim and expresses a negative view about the victim's worth (*axia*). This attack causes pain or distress to the victim and generates in them a desire to retaliate or seek redress (*timōria*) so as to restore their honour and worth. On the basis of this definition, Aristotle's *orgē* has often been interpreted as a culturally specific emotion, characterised by its intensity and desire for revenge, and hence especially at home within the context of stratified, 'face-to-face' societies particularly attentive to objective status differences and the values of 'honour'. As such, Greek *orgē* is taken to overlap only partially with modern anger, which pays less attention to status differences between individuals and is usually associated with a wider range of causes extending beyond intentional offences in the form of a slight.

My paper aims to challenge this interpretation and present a reading of *orgē* that does not restrict its scope to Aristotle's time and place. Through a careful examination of the eliciting conditions and the targets of *orgē*, in conjunction with Aristotle's remarks on the related virtue of *praotēs* (*Eth. Nic.* 4.5), I argue that *orgē* can be reconciled with modern anger both in its prototypical model and in the wide range of scenarios that Aristotle conceptualises as instances of *oligōria*. The variety and nature of those scenarios suggests that Aristotle's construal of *oligōria* is in fact very broad and that the term is used with reference to forms of behaviour that extend beyond paradigmatic cases of insult (such as *hybris*) to describe breaches in co-operation and even failure to show the concern and thoughtful behaviour that people are expected to show for others in the context of social interaction. What the angered party reacts to in many of the scenarios envisaged by Aristotle is not actively degrading treatment (active contempt), but another's failure to take notice of them, to show them the attention and regard that they consider their due on the basis of a certain feature or relationship (passive contempt). In this light, Aristotle's analysis of *orgē* presents an intricate theory of social interaction very much in line with the stipulations of 'politeness theory' (Brown and Levinson 1987) and Erving Goffman's insights on the presentation of self and on the universal principles that govern social interaction.

Accordingly, the notions of *axia* and *timē* that *orgē* seeks to protect do not bear on some obscure or parochial notion of 'honour' characteristic only of particular forms of social organization ('shame-cultures' or 'honour-oriented' societies). Rather, they reflect the universal human concern with esteem, recognition, and the preservation of our self-respect and social image in the context of our lives as social beings. The focus of *axia* and *timē* is, in Goffman's terms, our 'sacred self', the image of the self that we project in social interaction, which we expect and wish that others will endorse. The language of 'honour' itself (*timē*, *oligōria*, *timōria*), far from being restricted to competitive attitudes, is equally applicable to the context of co-operative relationships with fellow-citizens, where both parties are expected to

show perception of, and consideration for, the needs and face of the other. A narrow interpretation of *orgē*, therefore, obscures the ways in which Aristotle's conceptualisation of the emotion can be brought into dialogue with modern anger, and misses the richness of insight into the workings of human interaction that Aristotle's analysis can provide.

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### **Aristotle on the Objects of Geometry**

This paper focuses on two bold claims that Aristotle puts forward in *Metaphysics* M.3: (i) that mathematics is about sensible objects, but not *qua* sensible, and (ii) that mathematicians can posit as separate what is not separate, and consider it as such. These two claims have often been read as two different formulations of the same ideas. On the contrary, I argue that they amount to two different theses, aimed at solving two different problems: the Grounding Question (what makes geometrical statements true?) and the Reference Question (what do the singular terms in geometrical statements refer to?). I submit that, contrary to our expectations, in Aristotle's account the answers to these two questions come apart. This is because the ontology that seems to be implicit in geometrical practice and language is at odds with Aristotle's metaphysical commitments.

The *qua*-theory is offered as an account of geometrical truth, while the doctrine of separation is supposed to account for geometrical practice and for the way in which geometers speak of the objects they study. I give a radically anti-Platonist account of geometrical truth, according to which Aristotle does not need to introduce any kind of object that is specific to geometry (not even objects that depend for their existence on sensible substances and thus have a subordinate ontological status): geometry is true in virtue of sensible substances and their properties. However, I believe that Aristotle relies on a moderate form of fictionalism (which only concerns the mode of being of the entities in question) in order to account for geometrical practice, and for the specific language used in mathematical theorems.

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### **Is Aristotle anti-racist (and Plato too)?**

As has been repeatedly observed, the concept of race is a modern representation and, as such, cannot be found in ancient thought. Therefore, rather than looking for other ideas in antiquity that come as close as possible to that of race, such as those of *ghenos* or *ethnos*, it is preferable to refer to a classification, introduced by the ancient Greeks themselves and which remained later in European culture: the distinction, that is, between Greeks and Barbarians. It seems that initially the word barbarian was used to indicate all those who spoke a language other than Greek and that to the Greeks it sounded like an incomprehensible repetition of the same syllable ("bar-bar"). It most likely derives from the Sanskrit *barbarah*, which means stammerer. But in the 5th century, at the time of the Persian invasions, which effectively constituted a threat to the survival, or at least to the independence, of the Greek populations, the term barbarians came to indicate more precisely the Persians, taking on all the connotations we have listed above, obviously expressed in a negative form: the Persians in fact appeared irremediably different from the Greeks, feared as a danger both for the survival and for the "purity" of the Greek lineages. This idea of the Persians as barbarians, which must have been widespread in the common opinion of the citizens of the Greek cities (in particular of Athens, which bore the burden of resistance to the Persian attacks more than all the others), is found, for example, in *Persians* by Aeschylus, tragedy written in 472 BC, in memory of the battle of Salamis (480 BC).

But in the same fifth century there was no lack of voices discordant with common opinion, mainly among the different Sophists, for example in Hippias of Elis, who, interpreting the opposition between it and the *nomos* in a favorable sense to *physis*, stated that all men are by nature relatives, family members and therefore fellow citizens; but we can also consider the hypotheses of Antiphon, who explicitly maintained that by nature we are all absolutely equal, Greeks and barbarians. However, one must assume that these typically nonconformist voices were somewhat isolated. This contribution aims to frame and limit this topic to the writings of Plato and Aristotle. Both take the point of view of common custom, accepting the opposition between Greeks and barbarians; but nevertheless they introduce some clarifications regarding it which give their respective positions traits of undoubted originality and therefore prevent them from being considered oriented towards the modern concept of "race".

Both the Athenian philosopher and the Stagirite accept this fundamental distinction which often implied natural differences linked to various factors (such as, among other things, climate). However, as already anticipated, the cornerstone of their thought is not linked to any theoretical form of modern 'racism': not only because the most important reason for Greek excellence is, in both authors, a set of cultural factors (read, customs, education, etc.); but also because individual value is always linked to personal choice and virtue, rather than simply belonging to any geographical area or to any 'racial group'. Modern supporters of race, therefore, cannot refer to either Plato or Aristotle to draw arguments in favor of their narrative;

indeed, both in Plato and in Aristotle we find arguments that deny any theoretical and political foundation to the modern concept of race.



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### **Aristotle's Account of Brutishness**

At the start of *Nicomachean Ethics* [NE] VII, Aristotle introduces three things concerning character that are to be fled: vice, *akrasia*, and *thēriotēs* or brutishness. Interpretation of his account of brutishness is mired in difficulties. Many of these difficulties arise from a constraint on an account of brutishness accepted by most interpreters. According to this constraint, brutishness is a habitual state that properly belongs to humans. I call this the *human constraint*. It is difficult to understand how this constraint can be applied. For one thing, Aristotle claims that in the case of brutishness, intellect [*nous*] isn't perverted, as in the case of vice, but lacking. However, the presence of *nous* is what distinguishes human beings from the other animals. Thus, an application of the human constraint requires an explanation of how a state that lacks *nous* belongs to humans rather than to nonhuman animals.

Acceptance of the human constraint raises a further difficulty. In NE VII.5 Aristotle describes various cases of brutish human action that are traditionally taken to be cases of brutishness, the state. Many of these are noteworthy because they describe actions of great cruelty towards other human beings, e.g. he describes a case where an agent tears a fetus out of its mother's womb and then eats it. These cases are not only distinctively awful by the standards of natural human behavior (including by the standards of vicious human behavior), but they are also distinctively awful by the standards of nonhuman animal behavior. First, while brutish humans perform actions that no "normal" human would perform, violent behavior is natural for many nonhuman animals. And, more importantly, there don't seem to be any parallels between the behavior of nonhuman animals and brutish human behavior. Aristotle, at least, doesn't describe cases of nonhuman animal behavior that involve such terrible treatment of one animal by another. Why are human animals who lack *nous* capable of much worse behavior than nonhuman animals who also lack *nous*? If brutishness is supposed to be a human state that is characterized by lack of *nous*, the actions of humans in the state of brutishness should be, in all important respects, indistinguishable from the actions of nonhuman animals.

In this paper I defend an alternative interpretation of Aristotle's account of brutishness that resolves these puzzles. I argue that the human constraint should be rejected. This is because there is strong textual evidence that brutishness, the state, does not properly belong to humans but only to nonhuman animals. What belongs properly to humans are *brutish* states that are characterized by desires for things that are not pleasant by nature. This allows that some human brutish states involve *nous* while still allowing that others may be characterized by lack of rational calculation. This interpretation resolves both various difficulties of textual interpretation and the two puzzles posed by the human constraint. If brutishness proper only belongs to nonhuman animals, there is neither a need to explain how it is possible for some human beings to both lack *nous* and remain human beings nor is there a need to explain why some animals – humans – without *nous* perform much more terrible actions than other animals – brutes – without *nous*.

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### **The Less Accurate Arguments in Aristotle's *On Ideas***

Aristotle, at *Metaphysics* A9 990b8-17, offers capsule criticisms of five Platonist arguments for the Forms. Aristotle does not expand on these brief remarks anywhere in the extant corpus. But in his commentary on the *Metaphysics* Alexander of Aphrodisias tells us that Aristotle has in mind what he says in the (now lost) *On Ideas*. Alexander then offers an extensive report of its treatment of these five arguments, giving us insight into how Aristotle thought the Platonists' arguments were supposed to work and into why Aristotle thought those arguments failed.

Aristotle's *Metaphysics* A9 passage contains only criticisms of Platonic arguments for the Forms, suggesting that the aims of the *On Ideas* were exclusively negative. But Alexander's commentary may seem to tell a different story: it treats some or all of the first three arguments Aristotle mentions in A9 (which I'll call the 'less accurate' arguments, following Aristotle's division in that passage) as good arguments for Aristotelian universals. After discussing the Arguments from Sciences, Alexander writes:

These arguments do not show what was stated, that there were Forms, but they show that there is something besides the particulars and sensibles. But it is not at all the case that, if there is something which is besides the particulars, these are Forms: for there are besides the particulars the common things, of which we say the sciences are. (79.16-19)

And after discussing the One over Many Argument, Alexander writes:

And it is clear that this argument does not prove that there are Ideas, but that it too wants to show that there is something other [than particulars]: the thing predicated in common of the particulars of which it is predicated. (81.8-10)

The case of the third 'less accurate' argument, the Object of Thought Argument, is more complex: Harlfinger's edition prints two recensions, OAC and LF, and takes OAC to be more reliable. OAC simply concludes that the Object of Thought Argument does not show that there are Forms; but LF adds:

...but that there is something else beyond the particulars. And the universal in the particulars fits this and does not necessarily introduce an Idea. (82.7-10)

Alexander's commentary thus suggests that the *On Ideas* may have had constructive aims in addition to negative ones. Indeed, Gail Fine has argued on the basis of Alexander's commentary that "Aristotle's primary purpose in *Peri ideōn* 1 is to defend his own conception of universals ... against Plato's rival conception of

universals as forms" (1993, 25).

This paper will argue that the evidence from Alexander's commentary does not in fact support the claim that the *On Ideas* aimed at defending Aristotelian universals. I begin with the Object of Thought Argument. Aristotle objects that if the argument showed that there were Forms, it would show that there are Forms of particulars like Socrates; but if this is right, then if the argument showed that there were Aristotelian universals, it would show there are universals of particulars like Socrates, something Aristotle cannot accept. (My conclusion that Aristotle did not use this argument to establish universals is strengthened by the work of Golitsis (2014) and (2022), who argues that LF is not a separate recension of Alexander, but a later commentary by an anonymous author who drew heavily on Alexander. Anonymous, I suggest, adds this conclusion to the Object of Thought Argument after seeing Alexander draw it in the other two cases.) I then turn to Alexander's claim that the One over Many Argument "wants to show" that there are Aristotelian universals. This is unusual language for Alexander – by my TLG search, there are only 11 parallels – and I argue that this formulation suggests that Alexander did not find the claim in the *On Ideas*. (If he had, he could simply have reported that the argument "shows" that there are universals.) Rather, I argue, Alexander saw that Aristotle took the Arguments from the Sciences to show that there were universals, and extended the point to the One Over Many Argument, saying that it "too" "wants to show" that there are universals. Thus, while the *On Ideas* may have in fact taken the Arguments from Sciences to support universals, Alexander's commentary does not support the claim that either of the other two less accurate arguments did so. (This fits with the fact that Aristotle uses reasoning akin to the Arguments from the Sciences in support of Aristotelian universals at *Posterior Analytics* I.11 77a5-77a9, but, to my knowledge, never uses One over Many or Object of Thought Argument-style reasoning in favor of universals in the extant corpus.)

If this is right, we do not have evidence that the *On Ideas* is organized around showing that there are universals; but we do have a fascinating story about how Alexander's commentary came to suggest that it might.

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### **The Three Senses of Θεωρεῖν and Θεωρία in Aristotle's Ethical and Metaphysical Treatises**

In the *Republic* 466e-467c7, Socrates asserts that the fathers and mothers from the guardian class of the ideal city-state should bring their children to the site where war is taking place so they can be apprentices of the ἐπιστήμη, *epistēmē* of war. Comparing them to children who learn a craft, he asks Glaucon, "Or, for example, haven't you noticed what takes place in the crafts, that the sons of potters as helpers apprentice for a long time before they attempt to make a pot?" (467a2-5). The verb Plato uses to designate 'apprenticeship' is θεωρεῖν, *theōreîn* (467a4). Later in the speech Socrates asks Glaucon if it is really that important that the children *theōreîn* (apprentice) to learn the skills needed for a warrior. Glaucon agrees that it is important and Socrates adds we must, then, "make them θεωροῦς, *theōroús* of war and they will be successful" (467c5-6). So, not only is Plato using the verb *theōreîn* in the sense of "to apprentice", but he also uses the noun *theōrós* to designate one who is an apprentice (cf. 537a5).

This use of *theōreîn* may come across as unusual, considering that the standard way of interpreting the words *theōreîn*, *theōrós* and, for that matter, θεωρία, *theōría*, refers to individuals traveling on a journey to view something sacred at the cultic sites of the gods, usually while attending a festival. This is the so-called "traditional *theōría*" championed by Nightingale 2004 and Ward 2021, which "provides the ground in which the philosophical accounts by Plato and Aristotle germinate and come to fruition" (Ward, 11).

In this paper I will argue that the source which shaped Plato and Aristotle's use of this family of words in philosophy is instead 'apprenticeship'. This cultural unit is composed of an apprentice who learns and masters a τέχνη, *téchne*, i.e., an *epistēmē*, under the guidance of a teacher who is a master craftsman. The focus of the argument will be that in Aristotle's use there are three senses of *theōreîn* and *theōría*. Each sense is determined by its *télos*. Sense one: a student *theōreîn*-s, i.e., μελετᾶν, *meletân* or ἐνεργεῖν, *energeîn* "practices" a *téchne* in order to master the *epistēmē* (e.g., *Physics* 255a33-b1, *Meta.*1050a10-14, *NE* 1103a31-34, 1114a7-10). Sense two: a master craftsman *theōreîn*-s, i.e., *energeîn* "activates" this *epistēmē* in order to achieve a "real life" *télos*, e.g., one is no longer just practicing making a shoe under the direction of a master but is making shoes as a master cobbler for people to wear (e.g., *Physics* 255b2-4). Sense three: the master craftsman teaches his craft.

Once a reader of Aristotle has a clear view of these three senses of *theōreîn* and *theōría* as sourced in apprenticeship, they will be in a better position to understand Aristotle's metaphorical use of these terms in his ethical and metaphysical treatises. This is not to say that Aristotle never uses *theōreîn* and *theōría* in a sense that reflects their use in cultic activity, which we can see, for example, in the *Poetics* 1450b34-1451a6. However, such a use is based in the cultural practice of a *theōría* as ἀγών, *agōn* "contest" in honor of a god, not in apprenticeship.

My study draws from Natural Semantic Metalanguage, Frame Semantics and

Blending as found in Cognitive Linguistics. I will begin in philology with a generic or schematic definition of the verb *theōreîn*. This definition will, then, be used to tease out the two cultural units in which *theōreîn* and word family are used, namely, ‘apprenticeship’ and ‘contests’. Next, I will show that these two cultural units are the sources or the “motivators” for numerous metaphorical uses of this family of words in Greek literature. With that established, the main bulk of the paper will be a demonstration that ‘apprenticeship’ is the motivator for the metaphorical uses in Aristotle’s ethical and metaphysical treatises with a particular focus on what meanings are motivated (generated) in the *NE* and *Meta.* 12 on a comparison between human and divine *theōría*.

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### **Is Sleep Merely Privation? Rethinking Aristotle's Model**

In *De Somno et Vigilia*, Aristotle defines sleep (*hypnos*) and waking (*egrēgorsis*) as opposites structured around possession (*hexis*) and privation (*steresis*) (*Somn. Vig.* 453b 25-27). However, a comparison with *Categories* 10 reveals certain inconsistencies in this characterization. According to Aristotle's principles of opposition by possession and privation, such opposites are typically characterized by the following criteria:

1. Irreversibility: The transition occurs naturally from possession to privation, without reversal (*Cat.* 13a 31-36).
2. Absence of intermediates: There are no intermediate stages between the two opposing states (*Cat.* 13a 8-13).
3. Opposition between a "natural" state and a "contrary-to-nature" state: one of the states is natural, while the other represents a deviation from the norm (*Cat.* 13a 3-6)

However, sleep and waking challenge these criteria in significant ways:

- Reversibility: They alternate regularly in the natural cycle of living beings, suggesting a cyclical rather than a one-way relationship (*Somn. Vig.* 454a 24 - 454b 8).
- Presence of intermediates: States such as drowsiness and deep sleep indicate the existence of gradations between the two (*Somn. Vig.* 457a 33 - b6).
- Both are natural states: Sleep and waking are both necessary and natural conditions for living beings, with neither considered a deviation from nature (*Somn. Vig.* 454b 1-8; 455b 17-27; 458a 30-32).

These observations suggest that Aristotle applies the concept of privation in a more flexible manner (*steresis tis*, *Somn. Vig.* 453b 27), recognizing gradations and complementarities between sleep and waking. Moreover, he includes examples such as beauty-ugliness and health-sickness, which do not strictly oppose each other as possession and privation but rather as contraries (*enantia*), further indicating a degree of flexibility in his approach to oppositions (*Somn. Vig.* 453b 24-30).

A more coherent model emerges when sleep and waking are analyzed through the framework of potentiality and actuality. In this perspective:

- Waking as *energeia*: It represents the active exercise of the soul's perceptual faculties, in which sensory capacities are fully operational (*Somn. Vig.* 454a 2-10).
- Sleep as *adynamia*: It denotes a temporary incapacity to exercise these faculties, where sensory capacities are present in potentiality but not in actuality (*Somn. Vig.* 454b 4-8).

This interpretation builds on *De Anima* II.1, where Aristotle uses the analogy of sleep and waking to illustrate the distinction between possessing and using the soul's faculties, reinforcing the idea that sleep represents a condition of potentiality,



while waking represents one of actuality (*De An.* II 1, 412a 22-28). It also aligns with *Metaphysics* Θ 6, where Aristotle contrasts potentiality and actuality, emphasizing that the sleeping individual is in potentiality, while the awake individual is in actuality (*Metaph.* 1048b 1-9).

This dynamic can further be understood through the distinction between *kinesis* (movement or process) and *energeia* (complete activity). Sleep may be seen as a process (*kinesis*) oriented toward a goal — waking — which represents the complete activity (*energeia*) of the perceptual faculty (cf. *Somn. Vig.* 455b 22-23). This reflects the regularity of the sleep-waking cycle and the teleological role of sleep in preserving the perceptual faculty.

A biological perspective complements this metaphysical framework. Aristotle attributes the alternation between sleep and waking to physiological processes of heating and cooling, derived from the exhalation associated with nutrition. In the *De Somno*, he observes that nutrition and growth occur predominantly during sleep (*Somn. Vig.* 454b 34 - 455a 3). Even in the *Nicomachean Ethics* (*Eth. Nic.* I 13, 1102a 32 - b 5), Aristotle suggests that during sleep, the vegetative soul is more active, consistent with processes such as digestion and growth. This indicates that, while perceptive faculties are inactive during sleep, vegetative functions remain active or even intensify. This supports the idea that sleep plays a crucial role not only in preserving perceptual capacities but also in the overall maintenance and nourishment of the living organism. Thus, sleep should not be regarded merely in negative terms as the incapacitation of perception, but also in positive terms as the functioning of the vegetative faculty.

## Conclusion

While the model of privation and possession provides a starting point, the frameworks of potentiality and actuality, along with biological causation, offer a more integrated and coherent explanation. Sleep and waking emerge as interdependent states within a natural cycle: waking marks the full actualization of the perceptual faculty, whereas sleep holds perception in potentiality while allowing nourishing processes to occur in actuality. This integrated approach not only captures the cyclical rhythm of life but also highlights Aristotle's ability to bridge metaphysical rigor with biological reality.



### **Can Species Fall Under a Different Category from Their Genera?**

Consider these two texts:

**(T1)** We should not be disturbed lest someone may say that though we proposed to discuss quality we are counting in many relatives (since states and conditions are relatives). For in pretty well all such cases the genera are spoken of in relation to something, but none of the particular cases is. For knowledge, a genus, is called just what it is of something else (it is called knowledge of something); but none of the particular cases is called just what it is of something else. For example, grammar is not called grammar of something nor music music of something. If at all it is in virtue of the genus that these too are spoken of in relation to something: grammar is called knowledge of something (not grammar of something) and music knowledge of something (not music of something). Thus, the particular cases are not relatives. But it is with the particular cases that we are said to be qualified, for it is these which we possess (it is because we have some particular knowledge that we are called knowledgeable). Hence these—the particular cases, in virtue of which we are on occasion said to be qualified—would indeed be qualities; and these are not relatives. (*Cat.* 8, 11a20-36, translation by Ackrill)

**(T2)** If the species is a relative, see whether the genus is a relative as well; for if the species is a relative, so too is the genus, as is the case with double and multiple; for each is a relative. If, on the other hand, the genus is a relative, there is no necessity that the species should be so as well; for knowledge is a relative, but not so grammar. (*Top.* IV 4, 124b15-19, translation by Pickard-Cambridge)

From these two texts, the following common assertion can apparently be drawn: species may fall under a different category from their genera; for instance, qualities may fall under a genus that is a relative. This assertion is arguably implied by other texts as well, namely *SE* 13, 173b1-5, and 31, 181b25-35.

The problem with this assertion, however, is that it simply does not make sense. The following line of reasoning demonstrates why it does not. Let us assume that categories are the highest genera. Higher genera are predicated of lower genera until the *infimae species*, and then of the individuals, within each generative chain. The predication within a generative chain is synonymous; plainly put, items in each step of a generative chain essentially are what the items in the steps above essentially are. So, if the highest genus is Substance, everything under it in the generative chain is a substance; if it is Quality, everything under it is a quality; if it is Relatives, everything under it is a relative; and so on. And yet the assertion states the opposite.

Akrill, in his commentary on the *Categories* passage, aptly describes it as

involving “a nasty dilemma” (Ackrill 1963: 109). In my presentation, I aim to address the nasty dilemma as follows: first, I will reconstruct the underlying meaning of T1 in a way that is strictly consistent with the examples invoked in it (states and conditions, and in particular scientific knowledge and its species), as well as with what is stated in chapters 7 and 8 regarding the two categories they are supposed to belong to, namely the categories of relatives and quality; then, I will show that the resulting reading allows us to offer a straightforward and unproblematic interpretation of T2 and the other texts where the controversial assertion appears to be assumed.

My conclusion will be that, although formulated in an infelicitous manner, Aristotle’s reasoning in the cited texts is sound and consistent with the principle of the synonymy of predication within generative chains. Therefore, despite all appearances to the contrary, species cannot fall under a different category from their genera.

### **Delights of Temperance: On the Characteristic Enjoyments of the Temperate Agent**

Integral to Aristotle's conception of the virtuous person's state is the enjoyment of her own virtuous activity. This is as true for virtue in general as it is for the individual virtues of character; we should not say of someone that she is temperate if she does not enjoy acting temperately (*Nicomachean Ethics* I.8, 1099a7–20). Yet it remains unclear what the content of the temperate person's characteristic pleasure is. In other words, when the temperate person is pleased as a result of her temperate comportment towards the bodily pleasures of eating, drinking and sex, what is it that she enjoys? Current scholarship is united by a focus on the rational part of the temperate person's soul; thus, she is said to be carved out by her enjoyment of her own activity as virtuous (Curzer 1997, Frede 2009, Gottlieb 2021), the fineness of her fine action (Coope 2012), or in general the pleasure intrinsic to abstaining from bodily goods (Jimenez 2015).

However, Aristotle's assertion that temperance is a virtue of the nonrational part of the soul (*NE* III.10, 1117b24) suggests that these accounts overlook a crucial aspect of the nature of temperance. In contrast to the literature, the paper defends the importance of characteristic pleasures of temperance which belong to the nonrational part of the soul, arising as a result of the agent's pursuit of bodily goods beneficial for her physical welfare. As such, the role of appetitive desire for bodily pleasures is the independent identification of particulars beneficial for the agent's bodily state. Looking particularly towards the text of *Nicomachean Ethics* II.3, I suggest that this ability constitutes the pleasures distinctive to temperance as a character state. Thus, the temperate person is carved out by the state of her nonrational part of the soul, allowing her two unique abilities. First, she will be sensitive to the particulars in her current environment which can ensure, or harm, her wellbeing. Second, she will be appropriately attracted to these because she will enjoy – at the nonrational level – the particularly temperate way in which she comports herself with respect to these goods. The content of her pleasure, therefore, will be what her temperate activity *consists* in, that is, the particularly appropriate way in which she consumes these goods.

The view has three attractive consequences for our understanding of temperance and the role of bodily pleasures in the good life. Firstly, the enjoyment of bodily pleasures comes to take on a richer role than being simply a necessary consequence of our animal natures. The right enjoyment of bodily pleasures – the pleasures distinctive to temperance as a character state – are an expression of a particularly human comportment towards these pleasures. Thus temperance is not, for Aristotle, simply a matter of reiterating what his audience will already know is the temperate way to behave: to engage moderately in activities related to bodily goods. Rather, the right comportment towards bodily pleasures articulates the way in which human beings are able to achieve a rational purpose without being at odds with their animal biology. It is the relationship between these that a temperate pursuit of bodily pleasures expresses. Secondly, the view defended shows us that the

possession of bad appetites is not only an ethical failure, but a failure to be sensitive to the truths of the world around us. The character who fails to have appetites for those, and only those, goods which ensure her bodily health is most correctly characterised as experiencing a nonrational failure – just as failing to recognise the fineness of virtuous action comprises a rational failure. This kind of interpretation offers a way to understand the role of appetite as positively guiding the agent towards pursuits useful for her life, in a way that remains consistent with her appetitive tendencies being, in principle, independent in their content and arousal from reason. It suggests that the role of nonrational enjoyment is sensitive to facts about what benefits the agent's bodily state, allowing the appetitive part access to truth about some state of affairs necessary for its proper function. Finally, the paper suggests that this proposal unites the aims Aristotle sees for both the rational and nonrational part of our human soul; to understand, in each faculty's own way, the world around us. If the proposed view is right, there is a relevant sense in which even our nonrational nature has the capacity to correctly identify – within the realm of biological survival and reproduction – the particulars which, on Aristotle's view, provide the cornerstone of information available to us as rational beings.

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### **Investigating The Tenacity of Impure Form Hylomorphism**

Socrates in *Phaedo* argues against the harmony theory of soul. Soul, he argues, can resist the body's appetites, and unlike harmony, it does not merely follow its physical basis but leads it. In *On the Soul*, Aristotle defends soul as something which is not a mere tuning, contrasting it to health, where the latter could be a mere byproduct of bodily changes but not the former. For both Plato and Aristotle, soul is causally efficacious. Later, we find Descartes trying to squeeze in the causal efficacy of the mental through the tiny pineal gland. Despite the caveats, the idea of the causal efficacy in the mind-body relationship remained central.

Centred around the concept of causal efficacy, there is a wide spectrum of theories of the mind-body relationship— from very strong to weak causal roles and even eliminating causation. We will try a broad-stroked mapping of the theories of mind and body based on the strength of causal roles and finally move towards the Aristotelian hylomorphism, understood in the impure sense as propounded by David Charles, and see how it differs from the other discussed theories and argue that it fares best among all.

Except for some substance dualists, like parallelists or occasionalists, most accept that there is some causal relation between the mind and body. Descartes subscribes to the transference theory of causation but cannot explain how this transference occurs between two substances which share no attribute. However, the problem is that interaction is not limited to Cartesian dualism. Cartesian dualism suffers from the binding problem. There's also the charge of violating the principle of completeness against substance dualists.

One approach to resolve the problems of substance dualism is to remove the causal efficacy of the mental. The mental event is an epiphenomenon devoid of all causal powers. The apparent advantage of epiphenomenalism is not to have to account for the interaction between two substances. Prima facie, epiphenomenalism seems to be able to preserve the principle of completeness of the physical. However, a closer look reveals that there are still two events: physical and mental. Victor Caston calls it 'token dualism'. The mental event is incapable of causing any changes in the physical realm. Still, it is caused by the physical and is not identical to the physical, and therefore, the principle of completeness of the physical is not contained, and it seeps out into the mental.

Theories of supervenience argue for a token monism and type dualism. This allows one event to be of two types, i.e., mental and physical. Thus, the epiphenomenalist's problem is avoided. There's a catch. The epiphenomenality of the mental implies the causal inefficacy of the mental; however, a supervenience relation *qua* supervenience does not imply the inefficacy of the mental. Leading either to the problem of systematic overdetermination or back to epiphenomenalism.

Caston argues that emergentism, with downward causation, should be the way forward. This, however, invites a different set of problems. Now that there are two causes, we cannot do away with the risk of overdetermination. There's also the

ambiguity in the relationship between lower-level causes and the higher-level causes. Through this survey, we argue that the mind-body problem remains unresolvable in any dualist framework, be it type, token or substance dualism.

The answer to the question, 'in virtue of what is something caused?' is contemplated in Aristotle through the notion of form or essence. A primary substance is causally efficacious in virtue of its essence. The explanation of causation, then, is sought by asking, in virtue of what one thing belongs to another. When a substance causes another *qua* itself and not another, the question arises in virtue of what it (the substance) can bring about the relevant change. Thus, we argue that understanding causation is central to understanding the mind-body relationship. To understand causation, we would have to understand the notion of form and see what understanding of form allows the substance to be causally efficacious.

Causal efficacy remains to be one of the most significant concepts in the Aristotelian framework. We argue, with Charles, that to have causal efficacy in Aristotle's primary substance, we must see the form in an *impure* sense, where it is, in principle, en-mattered. Here, form and matter are understood at a conceptual level and then at the ontological level, arguing for a unity of form and matter where they cannot even be defined independently. We argue that the impure form of hylomorphism does away with dualism at every level and deals with mind and body as a whole. We aim to show that understanding mind and body, through the impure form hylomorphism, allows us to reinterpret the problem of causal efficacy in a newer light.

**Aristotelian Criticism of Cyrenaic Epistemology: *Prep. Evan.*, XII, 544a-b**

This paper examines Aristocles of Messina's critique of Cyrenaic epistemology through an Aristotelian lens. The Cyrenaic school, founded by Aristippus, holds that human beings can only apprehend their own affections (*pathé*), which are subjective and relative. This knowledge is limited to opinion (*dóxa*), free from error if restricted to personal experience. However, the Cyrenaics argue that knowledge derived from *pathé* does not extend to the intrinsic nature (*kath' autó*) of external objects, rejecting the possibility of objective or scientific knowledge (*epistémē*).

Aristocles critiques this position using Aristotle's framework of the four causes: material, formal, efficient, and final. Concerning the apprehension of affections Aristocles points that one must be able to point the following: The material cause refers to the subject experiencing the *páthos*, the formal cause to the specific affection, the efficient cause to the external object producing the affection, and the final cause to the conscious apprehension of the *páthos* by the subject. While the Cyrenaics accept the material, formal, and final causes (though not referring to them as causes) as aspects of subjective experience, they deny knowledge of the efficient cause. They acknowledge that an external agent produces affections but assert that its nature or properties cannot be known with certainty. For example, when tasting honey, one person might perceive sweetness, while another might perceive bitterness. The Cyrenaics conclude that these differences make it impossible to determine the true properties of the honey.

Aristocles critiques the Cyrenaic focus on subjective affections, arguing that their epistemology cannot account for a complete understanding of causation or reality. He insists that true knowledge requires grasping all four causes. Without it, the Cyrenaics fail to explain the external factors that produce affections. Aristocles illustrates this with examples from practical knowledge: artisans understand the tools (efficient causes) that shape their creations, sailors adjust their course in response to changing winds, and doctors diagnose illnesses by identifying causes. Even dogs follow scent trails to locate prey. These examples show how understanding causes enables practical and theoretical knowledge, which the Cyrenaics reject by confining themselves to subjective affections.

Additionally, Aristocles critiques the Cyrenaic reliance on only one Aristotelian category—suffering or being affected (*páschein*). Aristotle's ten categories include substance, quality, relation, place, and time, among others. By focusing exclusively on the affections, the Cyrenaics limit their ability to describe reality comprehensively. For instance, they cannot determine whether a heating sensation applies to themselves or another, nor can they identify the time or place of the experience. Aristocles argues that this restriction undermines their capacity for apophantic (truth-claiming) discourse. From an Aristotelian perspective, truth and falsehood depend on the alignment of statements with reality. The Cyrenaics, by neglecting most categories, cannot make meaningful truth-claims about external objects.



The Cyrenaics might respond by emphasizing the privacy of affections. They argue that the *pathé* are exclusively experienced by the subject undergoing them. For example, when Aristocles claims a Cyrenaic cannot know whether they or their neighbor is being heated, the Cyrenaics would counter that only the subject experiencing the heating can apprehend it. Thus, first-person statements such as “I am being heated” are accurate within their framework, while statements about others’ affections remain speculative.

Aristocles also addresses the practical implications of Cyrenaic epistemology, comparing it to medicine. Hippocratic doctors sought causal explanations for diseases, but empirical physicians prioritized observation and practical outcomes, abandoning speculative etiological studies. Similarly, the Cyrenaics prioritize subjective experience, rejecting theoretical exploration of external causes. They acknowledge that external agents produce affections but deny the possibility of knowing their properties. For instance, if honey appears sweet in one context and bitter in another, the Cyrenaics argue that the same cause cannot consistently produce identical effects. They also contend that no comparison of affections between individuals can determine their similarity, as the *pathé* are inherently private.

Ultimately, Aristocles’ critique highlights the limitations of Cyrenaic epistemology. By confining knowledge to subjective affections, the Cyrenaics deny the possibility of objective or intersubjective knowledge. Their rejection of efficient causes and other Aristotelian categories leaves their framework incomplete and incapable of addressing external reality from this perspective. While the Cyrenaics argue that the *pathé* provide a reliable criterion for subjective knowledge and practical guidance, Aristocles aims to demonstrate that this approach is insufficient for constructing a comprehensive understanding of the world.

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### Not knowing the minor premise: Aristotle's *Nicomachean Ethics* 7.3

In *Nicomachean Ethics* 7.3 Aristotle seems to reduce the phenomenon of akrasia to a form of ignorance. As is well known, this raises the question of what the akratic agent is ignorant of when she acts akratically. In this paper, I argue that, among the components of the 'practical syllogism' that she performs, she is ignorant of the minor premise.

My claim is not new, and indeed has been the dominant scholarly view for some time. Since Kenny (1966), however, an increasing number of interpreters have argued that the object of the akratic agent's ignorance is rather the *conclusion* of the practical syllogism. I therefore try to show why this suggestion, though philosophically appealing, cannot represent Aristotle's position. To do this, I examine *EN* 7.3, highlighting the reasons for my claim – which includes addressing the vexed question of the meaning of τελευταία πρότασις (1147b9) – and presenting several new arguments against the opposing interpretation.

Secondly, I intend to do justice to the view I ascribe to Aristotle by demonstrating how it provides us with a meaningful insight into the phenomenon of akrasia and is less psychologically unrealistic than previously assumed. In doing so, I also attempt to exonerate what I take to be Aristotle's solution to the problem of akrasia from the charge of intellectualism that has often been levelled against it, seen as a weakness of this view, and even offered as a reason for preferring alternative interpretations.

The paper is structured as follows. In the first section I argue that lines 1147a4–9, in which Aristotle distinguishes two ways in which 'the universal' can be predicated (that is, either of the subject of the action – the agent – or of the object about which the action is being taken), suggest that the akratic agent does not use knowledge of the minor premise. I claim this by attempting to reconstruct Aristotle's example as a syllogism. I also show how lines 1147a24–31 might go in the same direction – especially because of the thesis that if you draw the conclusion from the syllogism, you must immediately resolve it into action.

In the second section I consider the controversial lines 1147a31–b5 and make the following interpretive claims about them. First, we should regard the second, 'bad' syllogism introduced in these lines as merely a tool used by Aristotle to make intelligible what happens in cases of akrasia, rather than as an accurate and truthful representation of the agent's reasoning process. More specifically, I think that some passages (*EN* 7.6. 1149a32–b2, 7. 1150b25–8; *MA* 7. 701a29–36; *DA* 3.3. 429a4–8) imply that 'appetite' (ἐπιθυμία) and 'temper' (θυμός) can drive one to an object simply by relying on the perception or *phantasia* of the object; therefore, their cognition is not strictly syllogistic, but can at best be expressed in terms that resemble a proper syllogism. Second, this makes room for the possibility of not using the minor premise in the 'good' syllogism and still acting on it in the wake of appetite.

Third, the fact that in these lines Aristotle seems to say that the knowledge of the minor premise is *actualised*, i.e. used, and that the conclusion of the 'good' syllogism seems to be drawn, is not incompatible with my interpretation, since Aristotle has here changed

his perspective from the previous part of the chapter, as he sets out to illustrate the *process* by which an actual case of akrasia takes place, i.e. how the akratic agent *comes to be* ignorant, rather than what she is ignorant of and in what way she is ignorant.

In the third section I take up the famous problem of identifying what Aristotle means by τελευταία πρότασις and present several reasons for identifying it with the minor premise. In particular, I argue that our default assumption should be that the term πρότασις refers to a premise, since there is only one occurrence in the Aristotelian corpus where it means ‘conclusion’ (discussed by Crivelli-Charles 2011), and this occurrence is itself quite dubious. I then analyse some Aristotelian passages (*EN* 6.7. 1141b14–21; 8. 1142a11–29; 11. 1143a32–b3) to show that what makes the ‘wise’ (φρόνιμος) person – from whom the akratic agent is said to be different – is the knowledge of both the universal major premise and of the *singular minor premise*, not the *conclusion*.

In the fourth section I make two points: first, I justify why it makes sense for Aristotle, given his philosophical commitments, to identify an object of *ignorance* on the part of the akratic agent, and why he might think that a motivational impairment must correspond to a *cognitive* impairment. On the other hand, I show why it is philosophically rich for him to identify the object of ignorance of the akratic agent with the minor premise of the practical syllogism.

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### **Aristotle on *Melancholia***

In his *Problemata* XXX.1, “Problems concerning prudence, intelligence and wisdom”, Aristotle discusses *melancholia* in relation to poetry, biology and the nature of a human being with nostalgic, sometimes dark and deep feelings. As we can see from ancient thinkers, the word *poësis* does not only mean poetry, but rather “to create”; and according to Aristotle, in order to create something new, the creator must be a little melancholic. But in addition to this explanation, in order to understand Aristotle’s connection between *melancholia* and various fields, we need to talk about what Aristotle understands by the term “melancholia” and how it differs from the term melancholy we use today. We see melancholy, or having melancholic feelings, as a sadness or grief that in a limited sense is very similar to depression. While these explanations can be drawn from Aristotle’s views, we should still look for a more natural cause. This is because the mood swings caused by *melancholia* have been seen as a consequence of the main bodily fluids recognized since Aristotle. Hippocrates and later Galen follows his arguments and try to explore the role of body fluids called humors. It is believed that there are four main bodily humors - blood, phlegm, yellow bile and black bile – has an influence both on physical and mental states. Aristotle ideas on these fluids have deep connection with his ideas on four elements named as water, air, fire and earth. These four basic elements were associated with certain qualities: cold, wet, hot and dry. Earth is cold and dry; water is cold and wet; air is hot and wet; fire is hot and dry. Within these qualities they also have a natural tendency for their natural places; in other words, earth and water which are seen as heavy ones have a naturel movement downward, while when it comes to air and fire they move to upwards. So, as blood is hot and wet it is usually seen in connection with air and water; phlegm is cold and wet and associated with water; yellow bile is hot and dry and associated with fire; and finally black bile is cold and dry and associated with earth. Just as a balance between the proportions and movements of the four elements is necessary to ensure the orderly continuation of the universe, the same is true for the four humors. The balance between these humors was crucial for health. The balance of humors was closely linked to both physical and psychological well-being. The excess of black bile is called *melaina cholè*, and while it is normally present to some degree in every human body, in melancholics it is higher than normal, and the temperature of *melaina cholè* can change rapidly; in other words, it can quickly become too cold or too hot. This explains the extreme moods of melancholics. In this context, this paper will try to consider Aristotle’s views on *melancholia* from a biological rather than a poetic context. In this way, it will try to address whether a connection can be established between physical illnesses given through a biological explanation and mental illnesses given through a psychological cause.

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### **Potentiality inside Self-Movers**

This paper defends the view that the *locomotion* of self-movers, as opposed to the other types of change they undergo, demonstrates the exercise of a unique sub-class of potentiality (δύναμις). I argue for this claim in several steps.

First, something must be said about self-movers. According to Aristotle's usage in *Physics* VIII, a self-mover is a unified natural entity, paradigmatically an animal (ζῷον), that can without being determined by outside sources move itself (but for qualifications see *Phy.* VIII 2 and 6; Furley 1978). Aristotle argues that because everything that moves (transitively) is moved by something else, the same holds true for the (transitively) moving self-mover. As such, it must be composed of a mover and a moved part. That leaves us with two general theses about self-movers—they are unified natural substances but have two separate parts—that some have worried threatens contradiction (Coope 2015; Waterlow 1982). More on that shortly.

Next, something must be said about potentiality. Potentiality and change are closely linked, offering a promising way to analyze Aristotle's different types of change (μεταβολή) and motion (κίνησις). In a paradigmatic formulation, Aristotle defines a δύναμις as a 'principle of change [μεταβολῆς] in another thing or in itself insofar as it is other' (Θ 1 1046a10-11; cf. Δ 12). Though this sense of δύναμις will turn out not to be the useful sense in the overall dialectic of Book Θ, Aristotle never discards it as *a* sense of potentiality, in fact calling it the 'κυρίως' use of the term. On Aristotle's broader taxonomy, change (μεταβολή) has four species: substantial change, qualitative change, quantitative change, and locomotion (e.g., *Phy* III 1 200b32-4), the last three of which are usually categorized more specifically as motions (κινήσεις). Thus, a δύναμις is a principle of various kinds of change—in another or in itself insofar as it is other. Now it is possible to better frame the motivating issue: How is the definition of δύναμις satisfied by each kind of motion an animal (i.e., a self-mover) undergoes? My proposal is that only self-moving locomotion satisfies the second part of the definition, being a principle of change 'in itself insofar as it is other.' That is, the other kinds of change either prove irrelevant to the motion of self-movers or satisfy the δύναμις-definition only by making true the first part of the definition.

First, substantial change can be set aside. This is because a self-mover does not cease being what it is throughout the kinds of changes that occur while it is still a unity. We are interested in the types of changes that it undergoes without losing its identity and hence all its relevant δυνάμεις. Next, qualitative and quantitative changes seem only to satisfy the first part of the definition of δύναμις. That is, a self-mover, as a substance, can suffer both quantitative changes and qualitative changes due to other substances. But then, that is just the self-mover suffering a change by possessing a passive δύναμις (see Θ 1 1046a19-29 for Aristotle's distinction between active and passive potentialities—the paradigmatic definition applies to both). Further, when a self-mover is locomoted (transitively) by another substance, an identical case arises: the self-mover is a passive principle of change due to another

substance. In all these cases the δύναμις- definition either does not apply or is satisfied only by having its first part satisfied.

In the interesting case of a self-mover initiating its own locomotions, however, the situation is otherwise. In this case, the self-mover satisfies the definition of δύναμις in a distinct way when it self-moves. A self-mover does not self-move as a whole. Rather, it is composed of two parts with one part moving (transitively) the other while remaining unmoved, thus making the animal responsible for its own holistic motion (*pace* Morison 2004). The self-mover, then, actually has two distinct δύναμις, one associated with each of the parts. Further, each is a δύναμις that is a δύναμις for change ‘in itself insofar as it is other’—satisfying the second part of the definition.

Objections are possible. One interesting one is that perhaps natural growth—quantitative change—also requires a substance’s division and δυνάμεις mirroring those of self-locomotion. It’s plausible that Aristotle’s comments about natural unity rule this out, such unity implying the ability to grow (e.g. συμπεφύκεναι in *Meta.* Δ 4), but more would have to be said.

There are several upshots to this reading. The first is that the problem of the unity raised in the second paragraph can be alleviated. The δυνάμεις of the self-mover don’t operate ‘in another thing’ simpliciter, but rather ‘in itself insofar as it is other.’ Thus one can preserve the unity of the self-mover. Second, it usefully grounds Aristotle’s frequent claim that locomotion has priority among motions: it can apply a unique δύναμις.



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**The possible and the best moral education: habituation between the  
*Nicomachean Ethics* and the *Politics***

In his paper *Aristotle on Learning to Be Good* (1980), Burnyeat conceives of Aristotle's concept of habituation as strongly associated with the idea of upbringing. A similar account is outlined by Sherman in her book *The Fabric of Character* (1991). In her discussion of the concept of habituation, Sherman gives prominence to an account of habituation that privileges the moral education from childhood to the coming of age. I call this kind of approach as developmental accounts. Nowadays, Burnyeat's and Sherman's accounts of habituation play an influential role in the *Nicomachean Ethics*' scholarship. Most of the approaches to the concept of habituation in the *Nicomachean Ethics* take for granted that Aristotle proposes an investigation into habituation that is strongly interested in the early education of character before the coming of age (Frede 2011, 30; Moss 2012, 197; 2014, 233-234, 239; Curzer 2012, 13; Kristjánsson 2013, 432; Frede 2013, 22; Jimenez 2015; 2016, 24; 2020; Hampson 2019). Such a kind of view is also shared by contemporary philosophers who engage in dialogue with the Aristotle's ethics (see, for instance, Korsgaard 1996, 3-4; McDowell 1998a, 174, 189, 197; Williams 2006, 44). In certain interpretations, a good upbringing is even taken as a necessary requirement for becoming a virtuous individual. In the first moment of my presentation, I will show that the main passages that have given support to the traditional view can be construed otherwise (*NE* I.4, 1095b4-6; II.1, 1103b23-25; II.4, 1104b11-13, 1105a1-3): Aristotle neither conceives of habituation in terms of upbringing nor establishes it as a necessary requirement for the acquisition of virtue. In the second moment, I will discuss how an interpretive interplay between the *Nicomachean Ethics* and the *Politics* has lead several scholars to introduce in the first work certain debatable presuppositions about moral education taken from the *Politics*. In my view, there are two different kinds of questions that should be kept apart when we approach the *Nicomachean Ethics*' account of habituation in book II: how do we acquire virtue of character? And: what is the best path to the acquisition of virtue of character? The answer for the first question is through habituation; for the second, through a good upbringing. I will argue that *Nicomachean Ethics* II deals primarily with the first question, although Aristotle expresses certain views on the second in a couple of passages, while *Politics* VII-VIII is mainly interested in the second question. It is important to highlight that in the *Eudemian Ethics* Aristotle strikingly gives no clue of having the second question in mind. In the *Eudemian Ethics*, Aristotle investigates habituation without any interest in the idea of upbringing. This seems to lend support to my interpretive hypothesis that Aristotle keeps these two notions apart. But then why are there references to the second question in the *Nicomachean Ethics*? To explain this, it is necessary to take a look at the closing chapter of the *Nicomachean Ethics*. Unlike the *Eudemian Ethics*, the *Nicomachean Ethics* has many references to the *Politics* and its closing chapter is famously known for transitioning from the *Nicomachean Ethics* to the *Politics*. In the *Nicomachean Ethics*' closing chapter, most of Aristotle's philosophical concerns are related to how to morally



educate the citizens. This discussion is deeply connected with *Politics*' two last books, a place where Aristotle discusses the best education in the best city. In these two books, Aristotle discusses how to take advantage of every circumstance to foster virtue. Due to the link between the *Nicomachean Ethics* and the *Politics*, I will argue that Aristotle's short notes on upbringing in the *Nicomachean Ethics* keeps some connection with *Politics*' educational program in books VII and VIII. One of my hypothesis is that the lack of a link between the *Politics* and the *Eudemian Ethics* is the reason why the notion of upbringing is completely absent in the investigation into habituation in this book. The remarks about upbringing in *Nicomachean Ethics* X.9 are already embedded in *Politics*' investigative agenda and should not be seen as claiming that a good upbringing is a necessary requirement for virtue. In *Politics* VII and VIII Aristotle investigates habituation in the context of discussing the best moral education, which includes a good upbringing. In the *Nicomachean Ethics* II, Aristotle's interest is more modest: to show the power that habituation has in the consolidation of *any* character, regardless of age.

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**What Thomas Aquinas' commentary on *ars* and *prudentia* adds to our understanding of *technê* and *phronêsis* as intellectual virtues, as defined in Aristotle's *Nicomachean Ethics*?**

The contemporary questioning of technology, that which since the last quarter of the 19th century asks what the essence of modern technology would be has too eagerly assumed that it deals with something unheard of before: modern technology, after all, seems to be an exclusive phenomenon of modernity. As a consequence of this assumption, it is believed that previous accounts of man's technical activities - such as the inquiry on *technê* in IV century BCE Athens, or the analysis of *ars* in 13th century Western Europe, for example, which concerned the activities of artisans, artists, physicians, military strategists, as well as other skilled professionals - would have nothing relevant to say about the technology of industrial age, that which was created by the engineer, and based on an intensive use of machines and on a knowledge of nature made possible by modern science.

Contrary to this view, we would claim that modern technology has in common with *technê* and *ars* the fact that it can be related to what used to be called, in both the Classical and medieval philosophy, man's intellectual virtues. Thus, accounts such as those in Aristotle's *Nicomachean Ethics*, VI, and in Thomas Aquinas' *Summa Theologiae*, *secunda secundae partis*, teach us that technology, however successful a productive activity it may be, is an incomplete virtue as long as it is not accompanied by excellence in practical activity, i.e. that which in Greek was called *phronêsis*, and in Latin, *prudentia*.

Of course, not only Aristotle, but also notably Plato before him, have defined *technê* as the *aretê* that aims at attaining a correct and reliable success when making something, be that building a house, sculpting a statue, diagnosing a sick person. Thus, already in itself, *technê* is concerned with some sort of intrinsic goodness: getting a good house or a beautiful statue done, turning a sick person into a healthy one. Nonetheless, however skilled the *technikós* may be in doing the job, this intrinsic goodness does not necessarily translates into what one could name external goodness, i.e: how good a well-crafted work fits in relation to its general environment. A well-done house, if built in a bad location, may not really fulfill its purpose of providing a good housing for its residents; a beautiful statue may lose its appeal if misplaced among works which may be still more beautiful than her; a person with restored health may profit of its renewed forces to do evil that he would be unable to do if he were sick.

While Plato's Socrates teaches that any technology must take into consideration the common good as a whole, Aristotle seems to offer a more detailed account of the issue by exploring in his ethical treatises the role of *phronêsis* as a virtue that allows for the right deliberation in practical matters in view of what should be done and why: in other words, it is a the virtue that allows *technê* to be not only in conformity with right reason (*kata ton orthon logon*), but also to be done with the right reason (*meta logou*) so that it would be conducive to "living well", namely *eudaimonia*.

Now, Western Europe in the 13th century is in many ways very different from IV century BCE Athens: there are now huge cities scattered around the continent, many of them trading between them, as well as fighting each other or fighting external enemies. Many, also, are the *technai* available to fulfill every need within the city as well as in the farmlands. Nonetheless, however good as the Middle Age artisans may be, it remains necessary to consider whether their products are not only good in themselves, but also whether or not they are the fruit of a good deliberation (*euboulia*).

What is new in the context of medieval philosophy that was not existent at the time of Aristotle is Christianity and the faith in only one true God. As a result, *eudaimonia* is no longer exclusively a matter of living well in a *polis*, but also living well so that one may attain eternal life: good deliberation must now take into account the after-life as well. Thus, in order to retain Aristotle's conception of the relationship between *technê* and *phronêsis* as a valid means to evaluate goodness in human action in a world where the ultimate Good is not immanent, thinkers, as Thomas Aquinas, had to come up with a new set of references to which compare and contrast man's practical deeds and works. We would claim that he was able to do so through the concepts of natural law and *synderesis*.

### **The Influence of Aristotle's Theory of the Intellect in *De Anima* III.4–5 on the Theory of Emanation and the Role of Ancient Commentators**

Aristotle's account of the intellect in *De Anima* III.4–5 stands as one of the most influential and philosophically significant passages in his corpus. Rather than offering a purely psychological theory, Aristotle's distinction between the passive intellect (*nous pathetikos*) and the active intellect (*nous poietikos*) engages epistemological, metaphysical, and theological concerns. The passive intellect is a receptive and perishable faculty dependent on sensory experience, whereas the active intellect is described as immaterial, separable, and impassible. It actualizes knowledge by converting potentiality into actuality. The concept of the active intellect, in particular, became a focal point for subsequent philosophical traditions, prompting divergent interpretations from Neoplatonists, Islamic philosophers, and Latin scholastics. Although its nature —whether individual, universal, or divine—remained contested, its lasting impact on later philosophical systems is widely acknowledged.

In light of these foundational tensions, this paper examines how Aristotle's theory of intellect was received and transformed in Islamic philosophy, particularly through the works of al-Fārābī and Avicenna (Ibn Sīnā). Both philosophers engaged with Aristotle's theory through the interpretive lens of late antique commentators and within a Neoplatonic metaphysical framework. A key feature of this reception was the integration of Aristotle's psychology into the Neoplatonic model of emanation (*sudūr*), preserving Aristotelian insights while embedding them in a hierarchical cosmology.

Al-Fārābī constructed a cosmological model in which all beings emanate from a single, immaterial First Cause. This emanation unfolds through a descending series of incorporeal intellects, each linked to a celestial sphere. At the lowest level stands the Active Intellect (*al-ʿaql al-faʿāl*), which governs the sublunar realm and plays a pivotal psychological role by actualizing the human potential intellect (*ʿaql hayūlānī*). Human intellectual development proceeds through a sequence of stages: from intellect in habitu (*ʿaql bi-l-malaka*) to actual intellect (*ʿaql bi-l-fiʿl*), and finally to acquired intellect (*ʿaql al-mustafād*). Conjunction (*ittiṣāl*) with the Active Intellect marks the culmination of this ascent, resulting in *saʿāda* (felicity) and a form of incorporeal immortality.

Building on al-Fārābī's model, Avicenna refined this vision through a systematic metaphysical framework. He proposed a continuous emanation (*fayḍ*) from the Necessary Being (*Wājib al-wujūd*), generating a series of intellects, each governing a heavenly sphere. The final intellect in this chain —the Active Intellect— is responsible for bestowing forms on prime matter and rational souls on human beings. The soul begins as material intellect (*al-ʿaql al-hayūlānī*) and progresses through habitual, actual, and finally acquired intellect under the influence of the Active Intellect, which informs without being affected. Internal faculties such as imagination (*al-mutakhayyila*), cogitation (*al-mufakkira*), and intuitive insight (*al-ḥads*) enable the soul's ascent. Prophetic souls (*ʿaql qudsī*) achieve perfected union

and receive all intelligibles simultaneously. As an immaterial, unified substance, the soul is immortal and, once perfected, joins permanently with the Active Intellect.

While this synthesis is deeply shaped by Neoplatonism, it retains key Aristotelian elements. In *De Anima*, Aristotle describes the passive intellect as receptive and the active intellect as unmixed (*amigís*), impassible (*apathís*), separable (*choristós*), immortal (*athánatos*), and eternal (*aiónios*). The *Metaphysics*, especially Book Lambda, adds a theological dimension by portraying the divine intellect as “thought thinking itself.” Islamic philosophers, particularly Avicenna, interpreted *De Anima* through this metaphysical lens, likely influenced by Neoplatonic strategies that integrated psychology and theology.

To fully appreciate this transformation, the Platonic background must also be considered. Plato’s views on the soul’s motion, rational governance, and immortality—especially in the *Laws*, *Phaedrus*, and *Timaeus*—informed ancient commentators and Islamic thinkers alike. The Platonic conception of the soul as the source of cosmic order anticipated many features of Islamic emanationist cosmology. While Neoplatonism supplied the immediate conceptual framework, it was Aristotle’s theory of the active intellect, transmitted through Greek commentary, that provided the decisive structure.

Among the most influential commentators, Alexander of Aphrodisias proposed a metaphysical reading of the active intellect as a separate, divine entity emanating from God, a view foundational for al-Fārābī. By contrast, Themistius emphasized the immanence of the active intellect within the soul’s cognitive faculties, a view that resonates with elements of Avicenna’s psychology.

Philoponus and Simplicius advanced these lines of interpretation further by embedding the intellect within broader cosmological systems. Philoponus viewed the active intellect as a channel of divine action in the natural world, while Simplicius emphasized its role in maintaining the unity and intelligibility of the cosmos. Simplicius’ integrative method—reading *De Anima* alongside *Metaphysics* and Neoplatonic metaphysics—likely inspired the comprehensive structure of Avicenna’s emanationist model.

Averroes (Ibn Rushd), however, diverged sharply from this Neoplatonic synthesis. Committed to a more faithful interpretation of Aristotle, he rejected the emanationist framework and insisted that the active intellect is a single, eternal substance shared by all humans. For Averroes, knowledge arises through abstraction, not emanation, and the Aristotelian intellect remains a cognitive rather than a cosmological principle.

In conclusion, Aristotle’s theory of the intellect in *De Anima* III.4–5 began as a doctrine of human cognition but evolved, through the work of commentators and philosophers, into the foundation of complex metaphysical systems. Through the interpretive efforts of figures such as Simplicius and Philoponus, and the systematic elaborations of al-Fārābī and Avicenna, the Aristotelian intellect became central to Islamic cosmology and anthropology. Its legacy lies in its capacity to link epistemology, ontology, and theology across traditions.

### **An Attempt at Conceptualizing Beauty in Aristotle's Philosophy**

This study investigates Aristotle's conception of beauty as articulated in his works. Unlike Plato, who developed a systematic theory of beauty, Aristotle appears to employ the term "beautiful" (*kalos*) in a more colloquial manner, often using it interchangeably with "good" (*agathos*). This interchangeability is evident in the *Nicomachean Ethics*, where Aristotle posits that virtuous actions are inherently beautiful (*NE*, I, 7, 1098a15). He further elaborates that individuals cultivating virtues develop an appreciation for beauty while simultaneously rejecting ugliness. In *Metaphysics*, Aristotle asserts that beauty and goodness are fundamental causes of both movement and knowledge (*Met.*, V, 1013a20-25). However, he also delineates between the two concepts. Firstly, in Book XIII of *Metaphysics*, he distinguishes beauty from goodness, emphasizing that while goodness pertains to action, beauty exists in the realm of immobile beings, often associated with mathematical sciences. Aristotle identifies three primary species of beauty: order (*taxis*), proportion (*symmetria*), and definiteness (*hōrismenos*). These species are proven by mathematical sciences. He argues that order and definiteness among various species of beauty (*eidos*) serve as causes for numerous phenomena, suggesting that beauty itself functions as a cause (*aitia*), a determination that remains unexplored in his works. Secondly, in *Poetics*, Aristotle elaborates on beauty by examining the physical attributes of beautiful entities. He posits that beauty is linked to a specific magnitude that is not random, arguing that a being must possess a certain size and wholeness to be considered beautiful. He contends that neither excessively small nor excessively large entities can embody beauty; smallness leads to a disjointed perception, while vastness hinders a unified view of the object. Thus, for Aristotle, entities with observable and specific magnitudes can be deemed beautiful. To describe something as beautiful implies that it is orderly, proportional, and definite in its composition. Aristotle's discourse on beauty extends beyond aesthetics to encompass mathematical beauty, suggesting that both concepts are ontologically grounded in beings. However, in the *Eudemian Ethics*, he seems to embrace a different way of thinking about beauty (*EE*, III, 1230b-31b). He asserts that admiration for beautiful statues, animals, or scents does not signify profligacy. He observes that while animals possess sensory faculties, they exhibit indifference to harmonious sounds and beauty, often responding to pleasant scents due to instinctual associations with food. Aristotle differentiates, in this book, between "intrinsic" enjoyment and "instinctive" enjoyment, exemplified by the enjoyment derived from smelling a flower versus the pleasantness of food aromas. He cites Stratonikos, who distinguishes between the beautiful and the pleasant: "Smelling a flower is beautiful, while smelling food is pleasant." The beauty of a flower's scent stems from its inherent qualities, while the pleasantness of food-related scents arises from their association with hunger. He posits that only humans can appreciate beauty not merely as an instinctive response but as an intrinsic quality. Humans uniquely recognize and derive pleasure from beauty for its own sake, suggesting an innate ability to perceive and value beauty. In this instance, beauty seems to

transform into a determination not just of beings but also of the human observer who perceives it. This leads to the inquiry of how this connection, this attraction to beauty, can be explained through the faculties of the human soul. This study aims to explore these questions, examining the philosophical implications of Aristotle's understanding of beauty and its significance in the context of human experience.



### **Friendship in Aristotle: Is It a Virtue or Accompanied by Virtue?**

At the beginning of the *Nicomachean Ethics* Book VIII 1, Aristotle states that friendship “is a virtue or is accompanied by virtue” (ἀρετή τις ἢ μετ’ ἀρετῆς, 1155a4). However, he never specifies which of these two options actually applies to friendship.

Among the Aristotelian ethical works, the classification of friendship appears to be uncertain, creating dispute among scholars and commentators, both in modern and ancient times, regarding which of these options Aristotle left suits his notion of friendship better. While some experts support that Aristotle regards friendship as a virtue (Araiza, 2005, p. 129; Salamouras, 2018, p. 127), others contend that friendship is something accompanied by virtue (Burnet, 1900, p. 346; Wolf, 2002, pp. 218-219). It is noteworthy to note that modern literature seems to offer no explanations for either of both claims nor does it address the problem, much less in a thorough way as this work intends to do. Therefore, this presentation will mostly rely for its argumentation on Aristotle’s ethical works and the ancient commentaries of the *Nicomachean Ethics*, including Aspasius, Michael of Ephesus, Tomas Aquinas, but also enlightening new information from the recently published critical edition of George Pachymeres’ *Commentary on Aristotle* by Xenophontos and the non-translated commentary of the *Nicomachean Ethics* by Pseudo-Heliodorus.

In contrast to previous perspectives, this paper will propose that the options “virtue and is accompanied by virtue” are not presented by Aristotle at 1154a4 as two exclusive alternatives. Instead, I will argue for an inclusive view, namely, that Aristotle conceives friendship both as a virtue and as something that accompanies virtue.

To support this claim, I will first examine the first option: friendship as a virtue. I will demonstrate that the notion of virtue might apply to friendship in Book VIII of the *NE*, by correlating the main features of virtue with the features of friendship, including the concept of virtue as a mean between extremes which, I will argue, is implicitly present in Book VIII. Furthermore, I will present some arguments in favour of and challenges against the first option regarding the structure, placement, and treatment of the work related to friendship in Aristotle’s *Nicomachean Ethics*. Following this, I will examine the second option of friendship as something accompanied by virtue. Before addressing the validity of this option, I will explore the potential meaning of the alternative μετ’ ἀρετῆς by analysing the testimony of Aspasius who advocates in favour of this alternative and identify the virtue that should accompany friendship as justice. I will argue in favour of this interpretation by exploring the relationship between justice and friendship. This connection will lead us to conclude that, contrary to the suggestion of an equivalence between justice and friendship, friendship seems to involve justice. Finally, I will show that the categorization of friendship in the criteria of good, pleasure, and utility supports the μετ’ ἀρετῆς option.

In conclusion, this paper will prove that both alternatives are supported by plausible arguments and that they should not be regarded as mutually exclusive

options. Rather, by adopting an inclusive approach, both options should be accepted as intrinsic features of friendship's nature. Among final implications, the exploration of these new insights about friendship will stand out for its relevant role in the accomplishment of εὐδαιμονία and highlight friendship's distinctiveness within Aristotle's ethical framework.

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## **Equality, Common Axioms, and the Hierarchy of Theoretical Sciences in Aristotle's *Metaphysics***

In this paper, I investigate Aristotle's principle of equals ('If equals are subtracted from equals, the remainders are equal', hereafter EQUALS) within his theory of common axioms. I argue that current interpretations overlook EQUALS's role in metaphysics and its connection to mathematics. Aristotle presents common axioms in *Posterior Analytics* (I.2, I.9–11, I.32) and *Metaphysics* (B2,  $\Gamma$ 2–4, K4) as indemonstrable principles applicable across multiple sciences. Scholars agree on this definition but debate their precise nature.

De Risi (2022) identifies two main interpretations: the *schematic* and the *inferential*. The schematic interpretation traditionally endorsed by several scholars, including McKirahan (1992), views common axioms primarily as *demonstrative premises* for reasoning within a genus. Conversely, the inferential interpretation, defended by De Risi and influenced by Ross (1949), sees them as *formal rules* governing logical relations across categories. However, both interpretations neglect the crucial role of Aristotle's metaphysics in understanding common axioms and the explanatory primacy of metaphysical principles over mathematical ones.

I propose a metaphysical approach to common axioms, especially EQUALS, by examining the foundational role of equality as a *per se* attribute of being in *Metaphysics*  $\Gamma$ 2 and the hierarchical relation between metaphysics and mathematics in *Metaphysics* E1.

EQUALS is a recurrent example of common axioms in Aristotle's above-mentioned texts. He distinguishes common axioms from proper principles—principles specific to one science—by stressing their applicability across sciences through analogy (7Ga37–b1, cf. 1005a18–2G). While the principle of noncontradiction is widely accepted as the most universal common axiom, the universality of EQUALS is contested (Barnes 1993, Code 198G, McKirahan 1992, Mueller 1991). Ancient commentators acknowledge EQUALS as a key common axiom; but, in many instances (e.g. Alexander of Aphrodisias, Themistius, Syrianus, Asclepius), its precise scope—whether universal or restricted to mathematics—remains obscure.

The schematic interpretation argues that common axioms are demonstrative premises applied across sciences through an analogy based on similarity among *genera*. Accordingly, EQUALS applies to numbers and magnitudes since mathematics concerns all quantities. Conversely, the inferential interpretation suggests that common axioms are formal principles governing logical relations, arguing the analogy lies in similarity within *categories*. Here, EQUALS serves as a relational rule for the behaviour of objects in demonstrations when they are regarded as quantities. While these interpretations differ, both pay little attention to Aristotle's key discussion of the relation between metaphysics and mathematics in *Metaphysics*. I argue that Aristotle's discussion on equality as a *per se* attribute of being and number in  $\Gamma$ 2 provides crucial insight into the nature of EQUALS as a common axiom. Moreover, I show that his hierarchy of theoretical sciences clarifies the distinct roles of EQUALS

in metaphysics and mathematics, deepening our understanding of its explanatory power.

In *Metaphysics* Γ2, Aristotle lists equality as a *per se* attribute of being (1003b32–G, 1004a1G–20). Alongside sameness and similarity, equality is a fundamental feature of *being in general* and applies to all beings *qua* being. Additionally, Aristotle describes equality as a *per se* attribute of number (1004b11–12). Here, equality is only a feature of a specific *part of being*, namely being *qua* quantities. This suggests different roles for EQUALS: in metaphysics, it is a foundational principle applying to all entities, while in mathematics, it governs relations among quantities. Explaining the nature of EQUALS is a task for metaphysics, which investigates principles and axioms assumed by other sciences without questioning (1005a18–31, cf. 77b3–G). While mathematicians view EQUALS as a common axiom for quantities, philosophers must explain its nature and universal validity, grounded in equality as a *per se* attribute of being.

In *Metaphysics* E1, Aristotle orders the theoretical sciences according to the nature of their objects (102Ga10–32). Physics, the lowest, studies changing, separate entities (sensible substances). Mathematics, higher, studies unchanging, non-separate entities (quantities). At the highest level, special metaphysics investigates unchanging, separate entities (highest substances), constituting the core of general metaphysics—the study of being *qua* being (Frede 1987, Cleary 1994). By referring to what is most fundamental in examining the principles that apply to all beings, general metaphysics is universal and holds explanatory priority over mathematics and physics. Thus, in metaphysics, EQUALS has a stronger explanatory power than in mathematics, as confirmed by Aristotle’s discussion of equality in *Metaphysics* Γ2.

Framing common axioms within Aristotle’s hierarchy of sciences offers a more complete understanding of EQUALS. Rather than viewing it either as a demonstrative premise or formal rule, it recognises and clarifies its distinct explanatory status as discussed in *Metaphysics* Γ2 and E1. As a metaphysical principle, EQUALS describes an essential feature of being *qua* being; as a mathematical principle, it applies to quantities but presupposes its metaphysical foundation. This view resolves the polarisation between the schematic and inferential interpretations, accommodating insights from both while integrating them into Aristotle’s broader metaphysical framework. Finally, understanding common axioms like EQUALS requires a metaphysical perspective—one that acknowledges metaphysics’ key explanatory role within scientific knowledge.

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### **Aristotle's Philosophical Manifesto: The Dialogue *On Philosophy***

As is well known, during the Hellenistic period, Aristotle was primarily recognized for his dialogues. Among these, the work *On Philosophy* stands out as a key text, which Jaeger (1923) famously described as the *Programmschrift* of Aristotle's thought. Scholars have gathered numerous fragments under this title, making it possible to reconstruct the content of the dialogue with greater accuracy than any other lost work of Aristotle. Understanding this dialogue is crucial for fully appreciating the scope of the philosophical revolution Aristotle initiated in the mid-4th century BCE. Whether one adheres to the now increasingly unpopular evolutionary paradigm, or adopts a "unified" view of Aristotle's works, it is necessary to acknowledge that *On Philosophy* was composed prior to his major treatises. As such, it served to introduce, with argumentative rigor and literary mastery, the ideas Aristotle had developed in the preceding years.

In this paper, I will focus on a selection of three or four key fragments from *On Philosophy*, offering a comprehensive overview of the main themes of the work. By examining these specific passages, I aim to provide insights into Aristotle's early philosophical concerns and the foundational ideas that shaped his later treatises. These fragments will highlight his engagement with critical philosophical questions, including his early critique of Platonic Forms, his reflections on the nature of knowledge, and his revision of the Platonic myth of the cave.

This work is therefore pivotal, as it addressed philosophy *tout court* in a manner unlike any other of Aristotle's known works, whether lost or extant. *On Philosophy* engages with philosophy from three perspectives: historical (Book I), critical (Book II), and speculative-theoretical (Book III). It is a monumental philosophical project, and through its dialogical form—stylistically aligning Aristotle with the academic tradition—it sought to present his philosophical conclusions "to the many in an orderly manner, starting from a principle," as Simplicius (fr. 30 Gigon) reports.

Understanding and systematizing the fragments of this dialogue presents significant philological and exegetical challenges. The first task is to define what constitutes a "fragment", to assess the reliability of the witnesses, and to identify which passages can be confidently attributed to the lost dialogue. These issues have long been a subject of scholarly debate. However, by focusing on a selection of more secure fragments, in which ancient witnesses clearly cite the title of the work, it is possible to identify key thematic clusters and attempt to reconstruct a coherent narrative.

These texts provide an intriguing picture of Aristotle engaged in doctrinal discussions concerning the beliefs of the Persian Magi (fr. 23 Gigon), analyzing the generation of geometric forms according to Plato's Academy (frr. 31-32 Gigon), and ascribing the epithet "god" or "divine" to the stars, the mind, and the cosmos (fr. 25 Gigon). Among the fragments, there are also traces of a reformulation of Plato's myth of the cave, now adapted to Aristotle's evolving ontological concerns, where the Forms lose their paradigmatic role (fr. 18 Untersteiner).

The transmission history of *On Philosophy* is equally compelling. If, as many scholars have concluded, the Ai Khanoum papyrus is indeed a remnant of the dialogue, it suggests that Clearco of Soli, a direct disciple of Aristotle, brought a copy of it to Bactria—over 4,000 km from Athens, yet only about 370 km from the present-day border with the People’s Republic of China. Furthermore, it is likely that, more than eight centuries later, Priscian of Lydia transported a copy to Ctesiphon, following the closure of the Platonic Academy in Athens by Justinian in 529 CE, when the last philosophers sought refuge with King Khosrow I in Persia.

In sum, *On Philosophy* emerges as a privileged object of study for understanding a forgotten or neglected chapter in the history of Aristotle’s works. Much of the Aristotelian corpus has been lost due to arbitrary exegetical choices or contingent factors. Despite the loss of these texts, traces remain that are worth pursuing, as they attest to the breadth and depth of Aristotle’s intellectual culture. Drawing on the latest scholarship and discoveries, which offer a more precise reconstruction of the fragments of this dialogue than the broad studies conducted up until the 1960s, we can now glimpse a less familiar Aristotle—one who is younger yet, in many ways, just as mature as the figure emerging from his more esoteric works.



### **On Aristotle's Demonstrative Definition of Composite Substance**

In Aristotle's logic and metaphysics, forms are foremost taken to be the primary objects of definition, since only they can satisfy the strict criteria of definability: existence, simplicity and priority. In *Metaphysics* Z4, Aristotle points out that a definition is a logos or a formula of the essence (1030a6), so what is definable must be the essence or something having essence. Any fictional thing or fake name that does not exist at all is impossible to have a definition. Also, what is definable should be "this something" (τόδε τι) (1030a4-6), which means that it should be simple and not be a thing predicated by something else. Further, what is definable is something primary which must subsist other attributes and affections (1030a10-14). According to these criteria, compounds, such as "white surface" and "musical Socrates", cannot be defined, because they have neither simplicity nor priority. But, whether and how the composite substances coming out of form and matter, such as a house or a human, can be defined remains to be a problem.

Some scholars denied the definability of composite substances as such and conflated their definitions with the definition of forms. Some insisted on the definability of composite substances themselves and argued for the proper ways of giving such a definition. This essay argues against the conflation interpretation and for the possibility of defining composite substances, and argues that the ways of defining them should be a demonstrative definition that Aristotle proposes in *Metaphysics* Z17 and H2-3 and *Posterior Analytics* 2.8-10.

In the recent debate of Aristotelian scholarship, there are mainly three ways for defining a composite substance. I will go through the scholars' viewpoints and arguments respectively to show their difficulties and shed lights on the appropriate way.

The first kind of interpretation was advocated by M. Frede, G. Patzig, and M. Wedin, etc. They thought that Aristotle defines composite substances according to their forms only. The matter of the composite can only be implied by the formal definition, but it cannot be present in the definition.

The second kind of interpretation was presented by D. Devereux, D. Charles and M. Peramatzis, etc. They modified Frede's explanation and defended his view that the definition of a composite substance only consists of its form, not any material parts. But, unlike Frede, Devereux thought that the form within a composite substance has the structure "this in this" or "those things disposed in this way", and Charles suggested that form as such is enmattered and its definition must include a "material principle".

The third kind of interpretation was put forward by a few scholars, including M. L. Gill, G. Grene, M. Ferejohn, D. Bostock, R. Rorty, and D. Balme, etc. They refused the first and the second kinds of interpretation, and thought that the definition of composite substances must include both its form and its matter, in which the formal part is actual and the material part is potential.

I suggest that Aristotle introduces an alternative formula to define composite substance in *Metaphysics* Z11 and Z17. In Z11, 1036b21-32, Socrates the younger



passage, Aristotle uses the phrase “ἐνία γὰρ ἴσως τόδ’ ἐν τῷδ’ ἐστίν” to mean that the essence of the generated substance has a complex structure: the form in the matter. The phrase “ὡδὶ ταδὶ ἔχοντα” seems to mean that some things have some attributes in a necessary way, and “ἔχοντα” indicates Aristotle’s intention that some possession or attributes are necessary with respect to the thing as such. In Z17, Aristotle claims that form (both efficient and final) is the cause of composite substance. When we ask what a composite substance is, we ask for seeking the form that makes the matter having per se attributes.

There are many pieces of evidence to show that *Metaphysics* Z17 is closely connected to the second book of *Posterior Analytics*. In the latter, Aristotle says explicitly that what we are seeking is the middle term of a syllogistic demonstration. In *PoA*. 2. 10, 93b37-94a13, Aristotle puts forward three kinds of definition. The second kind is a deduction of what a thing is, differing in aspect from the syllogistic demonstration. I would like to call it “demonstrative definition”. A demonstration has the structure of a syllogism: B belongs to C, and A belongs to B, so A belongs to C. The demonstrative definition has all the elements of the syllogism, but changes its structure, that is, it removes the inferential steps of a deduction and inserts term B into term A and C. Therefore, the demonstrative definition looks like this: C has A (or A is predicable of C) because of B. As Aristotle’s example shows, the demonstration of thunder is a continuous syllogism, while the definition of thunder is a noise of fire being extinguished in cloud. Generally, the formula of a demonstrative definition should be: a material subject (C) because of the form (B) has a per se attribute (A).

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***(See Abstract – Eleonora Mercati, p. 140)***

## **Language and Happiness in Aristotle**

The aim of this paper is to try to justify the following hypothesis: *for Aristotle, the human being is the only animal that can aspire to a happy life because it is the only one endowed with language.*

There are many studies devoted to the Aristotelian notion of happiness, and also many others on the Aristotelian conception of language (of semantics, of the apophantic character of language, etc.). However, far fewer studies link both issues, as I intend to do in this paper, partly due to the existence of a certain kind of division of scientific work between those who are interested in ethics and those who are interested in the philosophy of language. From this point of view, one of the preliminary aims of this paper is to highlight the limits of this scholarly or disciplinary division, at least as concerning such a unitary thought as Aristotle's.

In order to justify the hypothesis guiding this paper, I examine: (a) the definition of happiness (εὐδαιμονία, μακαρία) offered in *Eth. Nic.* I and X and *Eth. Eud.* VIII. I pay particular attention to the argument of ἔργον ("we postulate as a specific function of man a certain life, viz., an activity of the soul and actions which are performed with the aid of reason" (ἀνθρώπου δὲ τίθεμεν ἔργον ζωὴν τινα, ταύτην δὲ ψυχῆς ἐνέργειαν καὶ πράξεις μετὰ λόγου, *Eth. Nic.* A 7, 1098 a 12–14), used by Aristotle in this context to give content to the notion of happiness.

I accept the canonical translation of λόγος as 'reason', but it is worth realizing that the canonical versions often obscure the undoubted linguistic relevance of many of the Aristotelian passages on happiness. *It is an aim of this paper to explore the relationship between reason and language in such passages.*

The term λόγος is one of the words with the most meanings in the Greek language, although *all of them revolve around language* and are associated with each other by analogy. From its primary meaning of 'what is said', the 'word', λόγος is also 'speech', both individual and shared ('dialogue', 'conversation', 'discussion'), and both oral (including the traditional 'saying', 'mention' or 'fame') and written (the 'treatise'), and in both cases prose expression as opposed to verse or poetry (ἔπος or ποίησις); the 'explanation' offered, the 'account' given or the 'estimate' made in that speech or the 'definition' proposed; the 'account' narrated, the 'assertion' or 'statement' made or the 'maxim' or 'sentence' uttered. On the other hand, λόγος is also 'reason' as a discursive faculty or activity, whether individual, generic (human) or universal (divine or cosmic); the 'thought' or 'concept' that reason forms, the 'judgement' it renders or the 'argument' or 'reasoning' it adduces. Finally, it is also the 'measure' or 'value' that is attributed to something or the 'proportion' or 'relation' that is established between two things.

(b) I also analyse our philosopher's demonstration of the interweaving or articulation, in human animals, of the universe of desires and passions with language. At this point I rely, in addition to both *Ethics*, on some other passages of the *Rhetoric*. I tackle the thesis of the power of language to permeate, mould and create the world of human desires, including in part the pulsional behaviour (in accordance with the explanation given in *Eth. Nic.* A 13, 1102 b 29–1103 a 3 of the

general scheme of the training, by language, of desires and passions).

(c) Finally, I draw out the implications, for the purpose of this paper, of the passage in which Aristotle argues that “the reason why a human being is more of a political animal than a bee or any other gregarious animal is obvious: nature makes nothing pointlessly, as we say, and no animal has speech except a human being” (διότι δὲ πολιτικὸν ὁ ἄνθρωπος ζῶν πάσης μελίττης καὶ παντὸς ἀγελαίου ζώου μᾶλλον, δῆλον. οὐθὲν γάρ, ὥς φαμέν, μάτην ἢ φύσις ποιεῖ: λόγον δὲ μόνον ἄνθρωπος ἔχει τῶν ζώων) (*Pol.* A 2, 1253 a 7–10).

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### **A Problem for Aristotelian Science**

Aristotle makes robust claims about the distinctness and autonomy of sciences. He also sometimes announces that he will not discuss a particular topic because it belongs to a different science. Furthermore, he criticizes others for giving accounts that fail to respect the autonomy of the sciences. Aristotle's insistence on the autonomy of sciences is standardly regarded as a central difference between him and Plato, who views dialectic as the master science and its principles as the principles for every other science, and Speusippus, who thinks that a scientific definition of anything requires knowledge of everything. Many have written about whether there are local failures of the autonomy of Aristotelian sciences, or in other words, whether some principle of a particular Aristotelian science might depend on a principle that falls within the scope of another, for example, about whether Aristotle's biology depends on principles from his metaphysics or cosmology or vice versa, or whether his ethical theory depends on principles from his biology, physics, or psychology. If a particular claim of some science appears to violate Aristotle's pronouncements about the autonomy of sciences, then there is a merely local failure of autonomy. One might respond to a failure of this type by arguing that an apparent claim that one science depends on another is merely apparent, or by restricting the scope of the pronouncements about autonomy. But I want to draw attention to a global challenge to the autonomy of Aristotelian sciences to which such responses to local failures will be obviously inapplicable. One of Aristotle's strongest and most celebrated defenses of the autonomy of the sciences, when paired with basic tenets of his theory of correlatives and of intelligible objects, appears to have the extremely surprising result that no science is autonomous, indeed, that any science must be a science of everything. This defense of the autonomy of the sciences occurs in a celebrated passage from *\*De partibus animalium\** 1.1, where Aristotle argues that although natural science must study at least some kinds or parts of soul, it does not study intellectual soul. That is because if it did then natural science would amount to knowledge of everything. I join most interpreters in thinking that this is a result that Aristotle finds entirely unacceptable and that he therefore rejects the view that natural science studies intellectual soul. Though some commentators have argued that he instead accepts that view, I think that the premises on the basis of which he rejects it express standard Aristotelian doctrine. The trouble is that these premises, when supplemented with minimal assumptions that Aristotle appears to make, evidently support a conclusion that Aristotle should find even more abominable than the claim that natural science studies everything, namely that any science does so. I examine a couple of possible responses to this situation and argue that they do not succeed in addressing this comprehensive threat to the autonomy of Aristotelian sciences. Unless Aristotle can address this problem his claims to the effect that something should not be discussed in the course of a particular inquiry because it belongs to another science will always be illegitimate, as will be his criticisms of other philosophers for failing to respect the autonomy of the sciences. Furthermore, without an answer to this problem what commentators regard as Aristotle's

revolutionary departure from the explanatory systems of Plato and Speusippus will be nothing more than a grand, unfulfilled ambition that has nonetheless determined the way in which we have viewed science ever since. It is therefore important to find a solution.

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### **Non-contradiction: What Aristotle Saw and Sextus Missed**

In this paper, I examine Aristotle's defense of the Principle of Non-Contradiction (PNC) in *Metaphysics* Γ.3 and its implications for Pyrrhonian skepticism, as articulated by Sextus Empiricus, who famously defines skepticism as the ability to "set out oppositions among things that appear and are thought of in any way at all." This ability is utilized by the skeptic in order to induce equipollence: when faced with opposing but equally forceful appearances or arguments, the recognition of their equal strength leads to the suspension of judgment, which results in tranquility. I argue that the ability to 'set out oppositions' requires that the skeptic make use of the PNC. Since they cannot set out an opposition to this principle without in some sense begging the question, they cannot remain skeptical about it.

I begin by outlining the Pyrrhonian method, focusing on its reliance on conflict among appearances and arguments to generate suspension of judgement. I then turn to Aristotle's defense of the PNC as a first principle that underpins intelligibly and distinguishes meaningful discourse from incoherence. Aristotle's negative demonstration reveals that denying the PNC involves self-refutation, as reasoning itself presupposes determinate distinctions, which the PNC guarantees.

I apply Aristotle's argument to Pyrrhonian skepticism, showing that the ability to generate oppositions depends on adherence to the PNC. Without the PNC, skeptics cannot differentiate between opposing accounts, rendering their method incoherent. Moreover, the act of suspending judgment about the PNC involves using it. I address potential objections, such as the use of the Agrippan Mode of Hypothesis, which critiques first principles as unjustified assumptions. I argue that Aristotle anticipates this objection, demonstrating that the PNC is not a hypothesis but a necessary precondition for intelligibility and reasoning. Without the PNC, skeptics cannot meaningfully distinguish between hypothesis and counter-hypothesis or oppose any claims.

Finally, I situate Aristotle's defense within contemporary debates on paraconsistent logics, which allow for true contradictions. I argue that Aristotle's critique applies here as well, as such frameworks must rely on the PNC to distinguish tolerable contradictions from logical collapse. Like skepticism, paraconsistent logics depend on the PNC to maintain coherence, even as they challenge it.

I conclude that Aristotle's defense of the PNC remains robust against both ancient skepticism and modern challenges. By demonstrating that reasoning and opposition collapse without the PNC, Aristotle vindicates its status as the firmest principle of all. While skeptics and paraconsistent logicians may claim to deny or suspend judgment about the PNC, they inevitably rely on it.



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### ***Rhetoric*, I, 10-13: The Etiology of the Unjust Act**

The aim of this paper is to analyze the concept of the unjust act as developed by Aristotle in the *Rhetoric* (*Rhet.*), specifically in the context of his study of forensic speech (*Rhet.*, I, 10-15). Forensic speech is concerned with the defense or accusation of someone who has committed an unjust act, understood as a voluntary harm that goes against the law (*Rhet.*, I, 1368b 7-8). More precisely, in *Rhetoric* I, 10-13, Aristotle carries out a detailed and multi-layered psychological-moral analysis of human behavior and of the various factors that can contribute to or lead a moral agent to commit unjust acts. The philosopher classifies these factors under different causes (fortune, nature, violence, ethos, deliberation, *thymos*, *epithymia*), dispositions (*diakrēimai*), and types of victims. This analysis is accompanied by a general examination of human action and a thorough description of a wide array of particular cases and examples filled with psychological-moral nuances.

Thus, the rhetorician who accuses must analyze which and how many of these factors are present in the accused in order to demonstrate their guilt, while the defending rhetorician must do the opposite. However, this classification does not exhaust the various ethical and psychological intricacies that Aristotle presents. This is because the philosopher assumes ideas—such as habit, character, virtues and vices, the intrinsic connection between vice and injustice, passion, and deliberation—that are scattered throughout other sections of the *Rhetoric* and in other works, such as *De Anima* (*DA*) and the *Nicomachean Ethics* (*EN*). As a result, elucidating all the ethological nuances contained in chapters 10-13 of *Rhetoric* Book I is a complex task.

Nevertheless, the study of the ethology of unjust conduct in Aristotle's philosophy has not received significant scholarly attention. For this reason, the objective of this paper is twofold: (1) first, to clarify and systematically organize the ethical issues related to the ethology of the unjust act; and (2) second, to compare and relate the different ethological causes found in the *Rhetoric* with Aristotle's discussions in other works, particularly in the *Nicomachean Ethics* and in *Politics*.

Finally, the methodology I will follow consists of a meticulous study of Aristotelian texts, as well as a review of specialized secondary literature on Aristotle's practical philosophy. The *Rhetoric*, besides being a mature work, is one of his most realistic texts, offering a pluralistic view of human behavior through numerous examples of particular cases, opinions, and beliefs. These elements can shed light, for instance, on the study of moral character in the *Ethics*. It should be noted that the chapters under analysis do not merely provide isolated reflections that aid in understanding unjust conduct; they may also offer one of the earliest systematic theories or speculations on behavior that goes against the law.

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### **Another Approach Towards an Aristotelian Conception of *Hypolepsis***

The notion of *hypolepsis* has been increasingly recognized as a central concept in Aristotle's psychology and in his theory of knowledge. Not surprisingly, there has also been an ever-increasing debate among scholars regarding its meaning and function – not to mention regarding its remarkably difficult translation.

Recent scholarship (cf. Caujolle-Zaswasky, Moss and Schwab, Reeve), however, has overwhelmingly focused upon the analysis of what is said about *hypolepsis* in *De Anima* III, 3. That tendency is not unjustified. In this chapter, indeed – one of the few passages in the *corpus* where *hypolepsis* appears as a proper theme of discussion – Aristotle explicitly struggles to, on the one hand, lay out the external boundaries of this concept by setting it against *phantasia* and sense-perception, and, on the other, spell out its internal *diaphorai*, i.e. *episteme*, *doxa*, *phronesis* and their contraries (427b16-26). Consideration of this passage, then, does provide a lot in the way of working out a cartography of *hypolepsis*, as it were. In this sense, for instance, rich discussions have arisen concerning the univocity of the term, its possible generic status, in particular, its articulation with *episteme* and *doxa*.

The goal of this work is, nevertheless, to approach the problem from a different perspective, which arises from the privilege given to another passage of the *corpus*. Namely, I will insist upon the centrality of *Metaph.* A, 1, 980a21-981a12 (and, to some extent, of its “twin” passage, *APo.* II, 19, 99b34-100a9) to the understanding of the Aristotelian concept of *hypolepsis*. This is a very well-known passage, and surely it has not gone unnoticed in the discussions of *hypolepsis*. But I will try to show that its importance for this debate has not yet been sufficiently taken into account. More precisely, I will advance the hypothesis that this is the passage which directly presents us with the most distinctive marks of the concept of *hypolepsis*.

There, Aristotle famously expounds something like a scale of cognitive powers. He shows how – in a progressive realization of human beings' innate tendency towards knowledge – sense-perception persists on the soul, giving rise to memory and *phantasia*; how, from memory, humans acquire experience, and then *episteme* and *techné*. It is at this stage of experience and *episteme* that Aristotle introduces the notion of *hypolepsis*, showing how it intervenes, though in different ways, both in experience and in *episteme*.

Now what this passage makes clear is not only a hierarchy of psychic states with respect to their cognitive power, but also, and more decisively, the way in which the more advanced of these states are produced out of the previous ones, how they effectively come about. Accordingly, what such genetic characterization provide us with is an alternative, more pregnant approach to *hypolepsis* as well.

This presentation will try work out this picture and spell out the place of *hypolepsis* inside the genetic psychology of *Metaph.* A, 1. Unlike the static analysis carried out in *DA* III, 3, what the dynamics of this passage shows us are not only the boundaries of the concept, as it were, but the actual causal and generative relations between different psychic acts. What it highlights, then, is that *hypolepsis* must be understood specifically as a cognitive accomplishment in which a multiplicity of

sensory and phantasy-data is brought together into the unity of a single, more powerful, position-taking cognitive act.

We will explore the coherence of this picture of *hypolepsis* and the questions it raises, namely: the question of the extent to which *hypolepsis*, insofar as it consists of a one-over-many, essentially involves some degree of generality; that of the noetic nature of *hypolepsis* and its belonging to the specifically noetic part of the soul; and that of the productive dimension of *hypolepsis* as an active, conscious manipulation of phantasy-data.

Finally, in the last part of the presentation, I will try to show how the insights obtained in this analysis allow us to build a more robust and cogent notion of Aristotelian *hypolepsis*. To begin with, these insights not only ultimately agree with what is said about this notion in the *De Anima*, but they also deepen our understanding of how *hypolepsis* comes about and what it ultimately means for Aristotle.

What is more, when we look towards some of the most important doxographic sections in the *corpus* (including that of the *De Anima* itself) we see that the way in which Aristotle operates with such concept is coherent with the scheme of *Metaph. A*, 1. In fact, Aristotle systematically *employs* the notion of *hypolepsis* to describe the actual reasoning processes by which philosophers come to the acquisition of the principles of their doctrines by means of observation and induction. This concept thus appears, in its full scientific-theoretical significance, as an essential ingredient for an empirical, inductive method – which is also the one favoured and used by Aristotle himself.

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### **The Relationship between *Akrasia* and Universal Knowledge**

Different scholars have extensively examined the concept of *akrasia* as described in Aristotle's *Nicomachean Ethics*, focusing particularly on the paradox within Aristotle's explanation of this phenomenon. This paradox can be summarised as follows: on the one hand, Aristotle accepts the view that *akrasia* results from a weakness of rational desire, where a person, despite having the correct judgment of what is best for them, acts against this knowledge due to their strong appetite—for example, eating sweet food despite knowing it is harmful to their health. On the other hand, Aristotle also maintains a cognitive interpretation, arguing that *akrasia* stems from a temporary cognitive failure of the particular premise—for instance, not knowing that this particular sweet thing, which is harmful to one's health, is sweet.

For this reason, scholars have attempted to resolve the paradox that arises from the tension between *akrasia* as a weakness of will and as a failure in perpetual knowledge. However, these interpretations have given little attention to Aristotle's observation that animals do not show akratic behaviour 'because they have no universal judgement but only imagination and memory of particulars' (*EN*. 1147b1-5). In the same passage, just before explaining why animals do not experience *akrasia*, Aristotle states that an agent 'behaves incontinently under the influence (in a sense) of reason and an opinion' (*EN*. 1147b1-5) when appetite conflicts with correct reason. This passage indicates that a person behaves akratically because they act against their correct deliberation.

This paper, part of a wider project analysing the concept of *akrasia* in Aristotle's *Nicomachean Ethics*, proposes that these lines on why animals are not akratic show that possessing the capacity to reason and deliberate—and thus having universal judgment—is one of the causes, in addition to those mentioned above, that explain the phenomenon of *akrasia*. By this, I mean that as soon as the agent possesses the universal premise (in Aristotle's example, sweet things should be avoided), they get to know what falls outside that knowledge. In other words, proper knowledge as such inaugurates the beyond of it, to wit, the desire to eat sweet things, for this desire steps outside the universal premise. Without the universal premise, the agent does not know about the possibility of eating sweet food *as something to be avoided*; animals, in turn, ignore this because they do not encounter the universal predicament.

Another way to illustrate this with a different example is that the agent, by possessing the capacity of reason, can determine the mean of passions and actions; the knowledge of the intermediate marks that there is something beyond it, that is, its excess and defect, as if these had emerged from knowledge of the mean. Without this knowledge, we cannot know its excess and defect, and consequently, we cannot act accordingly to this knowledge. For example, knowledge of courage as the mean concerning the things that stir confidence and fear (*EN*. 1115a6) creates the possibility of acting according to the knowledge it inaugurates; for instance, in the case of battle, if courage is the mean of confidence, then rashness would be the

excess of the latter.

To support this argument, I will first discuss the difference between the behaviour of animals and that of the vicious concerning *akrasia*. Although in both cases their bodily desires are not in conflict with the universal premise, the vicious acts according to their choice (*EN*. 1151a7), something that animals are incapable of (*EN*. 1111b7-10) since they do not possess the function of reason. Second, I will put Aristotle's passage on animals and *akrasia* into dialogue with his other indications about this phenomenon. Specifically, I will examine the implications of this passage for the argument that akratic behaviour occurs when the agent's strong desires push aside the knowledge they possess (*EN*. 1447a 10-15) and for the claim that it is not universal knowledge but the perceptual premise that is overcome by appetite (*EN*. 1147b16-17). Finally, I will note that if my interpretation of this passage is correct, we can gain a deeper insight into the phenomenon of *akrasia* and its relationship to proper knowledge in Aristotle's *Nicomachean Ethics*.

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### **Cicero as a Reader of Aristotle's Dialogues**

The existence of the Aristotelian dialogues has suffered a particular exegetical violence that, perhaps, prevents us from being able to read the testimonies we have before our eyes without bias. When reflecting on the dialogic form, of course, the first thing that comes to mind is the figure of Plato. On the other hand, however, Aristotle is identified with the systematic and methodical arrangement that the treatise attests (cf. Jaeger, 1948, p. 24). Hence, thinking about an Aristotelian dialogue is almost an oxymoron. Perhaps this idea animates the special way of conceiving what an Aristotelian dialogue should be: if Aristotle ever wrote a dialogue, it must have been under the influence of the dialogueist par excellence, his teacher Plato. An idea of this type is that of Werner Jaeger when he explains the existence of dialogues with his famous developmental thesis. According to this interpretative position, the presence of dialogues in Aristotle's work is explained because this was the school method used by Plato in his Academy. The dialogues would, then, be a type of production that sought to reproduce Plato in content and style. Thus, during his training period, the Stagirite had to produce this type of text to satisfy the demands of the Platonic school program like all the other members.

In the following lines, I will try to explain why I believe this idea must be fought or, at least, cannot be accepted without reflection. For this, I want to challenge the idea of what dialogue has to be recurring in one of the sources of Aristotle's dialogues: Cicero. The main target of my argument will be the position defended by Chroust (1973 24), according to which Aristotle placed himself as the main interlocutor (questioning, as Socrates) in front of people endorsing positions contrary to him. In defending this reading, Chroust presented some texts as proof, among which we find Cicero and his testimonies on what a dialogue or conversation (*sermo*) in the Aristotelian way is. However, I think that those testimonies can be read differently. By examining the conception that Cicero held about Aristotle's dialogues, I think we can better understand the type of material that we have without assuming or imposing Plato's style. For this, I will review the testimonies present in *Ad Atticum*, *Ad Familiares*, *De Oratore* and *De Divinatione*, where Cicero explicitly reflects on his own writing and the Aristotelian model he is following. By doing this I hope to present a different perspective on the question of what an Aristotelian dialogue is (or should be).



**Giulia Santelli**

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## **The Puzzle of Akrasia: Bridging Aristotelian Philosophy and Computational Neuroscience**

In his *Nicomachean Ethics*, Aristotle provides a seminal analysis of akrasia -the weakness of the will- as a state where an agent acts against their better judgment, failing to live in accordance with the virtues necessary for achieving eudaimonia. While modern philosophy often defines weakness of will as a conflict between judgment and action (e.g., choosing x over y despite judging y to be better), Aristotle's conception of akrasia is narrower, involving actions contrary not only to one's judgment but also to the "true principle and right choice" (1151a29–1151b4). Moreover, Aristotle distinguishes between unqualified akrasia, caused by a desire for bodily pleasures, and akrasia with qualification, where actions arise from passions like anger. This nuanced account contrasts with contemporary theories, which often lack the ethical dimension central to Aristotle's framework. One of the most enduring questions in the Aristotelian tradition concerns the cognitive state of the akratic agent: do the akratic agents act in ignorance of the wrongness of their actions, or does their failure stem from a lack of self-control despite full awareness of their error? Intellectualist interpretations argue that the akratic acts out of ignorance, aligning Aristotle more closely with Socrates non-intellectualist interpretations, however, propose that akrasia involves a clear awareness of wrongdoing, challenging the intellectualist view. This debate frames Aristotle's akrasia as distinct from modern notions, situating it within a broader ethical inquiry into the relationship between rationality and desire. Building on this philosophical foundation, our work examines akrasia through the lens of modern computational and neuroscientific models, focusing on addiction as a paradigmatic case. Addiction exemplifies a condition in which agents repeatedly prioritize harmful behaviors over rational intentions, raising profound questions about self-control, agency, and decision-making. We argue that the Aristotelian framework offers a compelling lens for interpreting addiction and that contemporary models -such as Reinforcement Learning (RL) and the Arbitration Model- provide valuable insights into the neural and computational mechanisms underlying this condition.

Reinforcement Learning, particularly its model-free processes, elucidates how habitual responses emerge from dopaminergic reinforcement, bypassing the more deliberative, goal-oriented strategies of model-based systems. The Arbitration Model further expands this understanding by exploring how the brain dynamically switches between these two systems, depending on their relative reliability and computational cost. Notably, disruptions in this arbitration process -often linked to weakened connectivity in circuits such as the ventrolateral prefrontal cortex (vlPFC) and the putamen- play a crucial role in addiction. These neural impairments parallel Aristotle's description of akrasia as a failure of rational governance over desire, where the akratic agent, despite their best intentions, succumbs to irrational impulses.

However, the relationship between these subpersonal explanatory mechanisms and the personal-level experiences of conflict and self-control remains



underexplored. Aristotle's notion of *akrasia* as a moral and cognitive failure provides a conceptual bridge between the normative frameworks of virtue ethics and the descriptive models of neuroscience and computational theory. For instance, the Aristotelian distinction between different types of *akrasia* -rooted in bodily pleasure versus other passions -offers a rich parallel to the dichotomy between model-free and model-based decision-making systems. Similarly, the ongoing debate about whether *akrasia* involves ignorance or clearheaded error mirrors discussions in computational neuroscience about the interplay between predictive mechanisms and irrational behavior.

By integrating Aristotle's insights with modern paradigms, we propose an interdisciplinary framework that not only deepens our understanding of addiction but also enriches the philosophical discourse on agency, decision-making, and human flourishing. This synthesis underscores the importance of virtue, deliberation, and the dynamic interplay between rationality and desire, demonstrating how ancient philosophy can inform contemporary neuroscience and vice versa. Ultimately, this approach bridges two seemingly disparate domains: the ethical concerns of Aristotle's *akrasia* and the computational models of modern neuroscience. In doing so, it highlights the enduring relevance of Aristotle's thought in addressing contemporary challenges, emphasizing how the ancient puzzle of *akrasia* continues to illuminate the complexities of human behavior, morality, and self-control.

**Margaret Scharle**

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## **Two Aspects of Divine Imitation in Aristotle's Teleology**

In *Metaphysics* XII.10, Aristotle illustrates god's relation to the cosmos through the analogy of an army: just as the goodness of an army is both in its general and in his ordering, so too is the goodness of the cosmos found both in god and in god's ordering (1075a11-25). Unlike the demiurge of Plato's *Timaeus*, who actively imposes order, Aristotle's god orders the cosmos as a final cause—an exemplar that all natural things strive to imitate.

I argue for a new reading of this imitation: while divine activity and divine ordering are unified in god, these aspects are refracted into two sorts of imitative teleology. Natural things aim both (1) to imitate god's activity and (2) to imitate god's ordering. While previous scholarship has recognized the first form of imitation, the second—where natural beings subordinate others within a teleological hierarchy—has been overlooked. I argue that recognizing both aspects is crucial for understanding Aristotle's theory of causation and the unity of Aristotle's natural science.

Each substance's position in the cosmic hierarchy reflects its degree of success in imitating divine activity, which is eternal self-ended contemplation. The best imitators are the heavenly bodies, whose eternal circular motion most closely approximates god (*Physics* VIII.9, 265a28-b9). Human beings follow, capable of intermittent contemplation (*Nicomachean Ethics* X.7, 1177b26-1178a8). Below them, plants and animals imitate divine eternity through reproduction (*De Anima* II.4, 415b2-7), ensuring the perpetuation of their species. At the lowest level, the four elements—earth, air, fire, and water—participate in only the most diminished form of imitation, merely contributing to eternal cycles (*De Generatione et Corruptione* II.10, 337a1-7; *Meteorologica* I.9, 346b16-347a6).

The hierarchy of being reflects not only the extent to which entities imitate divine *activity*, but also reflects their relative success at *ordering* the substances below them. For example, animals and plants actively create and maintain their relationships to their food sources, which subordinates this food to their own benefit: birds develop beaks shaped to accommodate the shape and size of their food (*Parts of Animals* III.14, 674b17-35) and wings for migrating to maintain their access to it (*History of Animals* VIII.12, 596b21-9), while plants grow roots and extend them downwards where water is located (*Physics* II.8, 199a29-30).

This hierarchy of ordering corresponds to Aristotle's repeated distinction between something's being *hou heneka* another (genitive) as aim and something's being *hou heneka* another (dative) as beneficiary (*Eudemian Ethics* 8.8, 1249b9-21, *Metaphysics* XII.7 1072b1-4, *De Anima* 2.4, 415a25-b21, and *Physics* II.2, 194a33-6). As perfect, god cannot be a beneficiary, and orders other things as aim. The circular movement of the heavenly bodies is imitated by the sublunary elements as their aim, yet the heavenly bodies differ from god in that they must actively sustain this relationship as the efficient cause of elemental movement (*De Generatione et Corruptione* II.10, 337a1-7). Next, as I showed

above, animals and plants are the efficient cause of subordinating their food sources, such that water is for the sake of plants (as beneficiary); plants are for the sake of animals (as beneficiary); and animals are for the sake of humans (as beneficiary). At the bottom, the elements—lacking an internal efficient cause—have purely passive natures (*Physics* VIII.4). Since they cannot generate or administer teleological relations, they fail to imitate divine ordering, and imitate only divine activity, marking their lowest status in the cosmic hierarchy.

By distinguishing between the two aspects of divine imitation—activity and ordering—I provide a new framework for understanding cosmic teleology and the relations between efficient and final causation that undergird it.

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### **Chance and Spontaneity in Averroes's philosophy of nature. An Aristotelian Framework**

After putting forward his fourfold causation theory (*Physics*, II, 4-6), Aristotle proceeds to an investigation of what he calls chance (τύχη) and spontaneity (αὐτόματον). Noting that '... chance and spontaneity are reckoned among causes' as many things are supposed 'both to be and to come to be' as a result of them, (*Physics*, 195b 30-35), he then proceeds to investigating whether they can be properly speaking considered causes (αἴτια) and what marks them apart from the four causes.

On the basis of his analysis, Aristotle argues that chance events do exist, but they result from some deviation in the course of efficient causality. Their efficient cause is incidental to the agent's intention to act in a certain way and unconnected to the final cause of the action. Thus, the agent cannot act in the same way in the future to achieve the same result. Aristotle's example is the case of a man whose aim is to collect subscriptions for a festival. He goes to a place unrelated to this purpose, but, as a result, he gets his money by going there. Aristotle concludes that 'It is clear then that chance is an incidental cause in the sphere of those actions for the sake of something which involves purpose.' (*Physics*, 197a).

Spontaneity, on the other hand, is understood by Aristotle as a kind of incidental cause that is present also in lower animals or even inanimate objects. It is 'blind' to human affairs and unrelated to agents intending to act in a certain way. Here he gives the example of a stone that falls thus killing a man. In contradistinction to the case where an agent kills a man by throwing a stone at him, in the spontaneous event the stone falls without any intention to kill. (*Physics*, 197b).

In the 12th century A.D., the Aristotelian conception of chance and spontaneity appeared again in the philosophy of nature put forward by Averroes of Cordoba (Ibn Rushd, 1126-1198). Averroes is heavily influenced by the Aristotelian analysis and follows it very closely in his commentaries, especially in his Long Commentary on the *Physics*. In my paper, I analyze mainly two things:

- a) How the Aristotelian conception of chance and spontaneity is reworked by Averroes within his system of natural philosophy. This is a medieval system that is both deterministic and teleological. My discussion will explore Averroes's view of chance and spontaneous events within such a system. Moreover, unlike Aristotle, Averroes is a theistic thinker who sees the necessary connection of cause and effect as a mark of God's providence and wisdom. With relation to this, I will pay special attention to the character of the relation between God and the causal order of the world, a relation to be categorized under the rubric of 'mere conservationism.'
- b) A second issue I explore is the way in which Averroes' view of chance and spontaneity features in his understanding of miracles.

Averroes' strong emphasis on the logical necessity of the causal link leads him to deny that there can be an interruption in the regularity of nature (Averroes, 1954, 313). His view of miracles, on the other hand, manifests a marked disinclination to go beyond saying that their existence cannot be doubted, even if the mode of this existence is beyond human apprehension (Averroes, 1954, 315). Despite his agnostic view, however, contemporary scholars such as Barry Kogan have entertained the possibility that Averroes may in rare cases accept that miracles do take place – and that such rare occasions are indeed Aristotle's spontaneous events. Kogan argues that Averroes did not consider miracles to be '... freely chosen incursions of the Divine will into the domain of natural causation' (Kogan, 1985, 84). However, according to Kogan, it appears that Averroes conceals his real view of miracles. Thus,

"It appears to be that miracles, insofar as their existence can be verified, are purely spontaneous natural events in the sense that Aristotle describes in Book II of the *Physics*" (Kogan, 1985, 83).

I discuss Kogan's view and argue that if there's something to be said for it, Averroes combines a distinctively Aristotelian causal framework, with a theistic perspective which may allow a degree of divine providence and intervention in the world. Finally, I briefly connect Averroes' view with a strand in contemporary philosophy of religion which attempts to distance itself from the Humean view of miracles as a violation of the laws of nature.

**Riin Sirkel**

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### **Aristotle on Essence and Household Hierarchy**

This paper will examine whether Aristotle's claims about men and women in *Politics* 1 are consistent with his metaphysical views, and specifically with his views on essence. Much of scholarly discussion has focused on evaluating his claims in *Politics* 1 from a contemporary perspective: criticizing his views as antifeminist (or "antifeminist to the core"), explaining why he holds the views he does, or defending him against such criticism. My paper aims to contribute to a different discussion, viz. whether Aristotle's claims about men and women in *Politics* 1 fit with his other philosophical views.

I will focus on Aristotle's views on ontological hierarchy and essence, as they emerge from *Categories*, *Topics*, and *Posterior Analytics*. In recent decades, these views have received increasing attention in both Aristotelian scholarship and the contemporary metaphysics, but their consistency with Aristotle's account of household hierarchy in *Politics* 1 has not yet been systematically examined. The paper will question whether Aristotle's attempt to ground the rule of men over women on differences in their natures is successful. His theoretical commitments lead to a dilemma: if the difference between men and women is essential, then the rule of men is on a firm basis, but there is a conflict with Aristotle's views on essence. If men and women are essentially the same, then there is no such conflict, but it remains unclear why men should rule the household and do so permanently.

I will examine both horns of this dilemma by considering whether the proposed difference between men and women is essential, necessary without being essential, or merely accidental, and show that all these options will run into difficulties. My goal in this paper is not to offer a solution but rather to clearly articulate and examine the difficulties that result from Aristotle's attempt to ground the rule of men over women on differences in their natures. I hope that the paper will hereby help to identify the aspects of Aristotle's thoughts that stand in need of further elaboration (e.g., in relation to possible modifications to Aristotle's metaphysical views, and/or the standard interpretation of his claims in *Politics* 1), and throw new light on Aristotle's views on household hierarchy.

**Alexander Stooshinoff**

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**Is Sex a Heritable Feature of Animals for Aristotle?**

This paper addresses the issue of whether sex is a heritable feature of animals for Aristotle. For Aristotle, the realization of heritable traits in the offspring depends upon certain motions in the fertile residues of male and female. These residues, and the motions within them, are produced by the soul of each parent through the concoction of blood and *pneuma*. The motions then compete for “mastery”, and thus actualization in the offspring, once the reproductive residues meet *in utero*.

One reason to suppose that sex is *not* a heritable feature is Aristotle’s suggestion in *GA* I.18 that “...the same seed is capable of coming to be either female or male”. We find a parallel for this phrase in *Metaphysics* I.9: “That is why the same seed becomes female or male when it is affected in regard to a certain attribute.” Aristotle makes this remark in I.9 in part to justify his assertion that sex is not an essential feature of *individual* animals, even though male and female belong *per se* to the *genus* ‘animal’. Depending on how one wishes to interpret these two phrases, one might think that the male’s semen is capable of realizing either male or female offspring. That is, the father has the power to produce either males or females. One might also think that the determination of sex in the offspring is simply a matter of chance causes. And, like a coin flip, males and females are each produced in about 50% of cases.

At the same time, however, in Aristotle’s considered treatment of inherited traits in *GA* IV.3, he makes clear that the inheritance of the female sex depends upon a motion that exists *only* in the fertile residue (i.e. the *katamēnia*, or *menses*) of the female. This suggests that the production of female offspring depends upon a power that only the female parent possesses. The male parent cannot produce female offspring at all, except accidentally (the converse is true of female parents). In order to resolve the problem, I argue that the *GA* I.18 passage is best read as part of an argument against pangenesis, and I show how the I.9 passage can be read consistently with the text of *GA* IV.3.

My proposal seems to have striking consequences. Minimally it makes clear that the female semen contains motions for the production of traits just as the male’s does, and thus the female fertile residue is ‘seed’ in Aristotle’s technical sense, full stop. But moreover, if we think there is a connection between formal features and heritable features, since what the reproductive motions do is actualize form in the offspring, then it looks like sex may be a formal feature of individual animals, even though it is a non-essential one. This reading may therefore support an “individual forms” interpretation of *GA* IV.3, like that proposed by Salmieri, Balme, Cooper, and others. Taken together these two claims suggest that the female may indeed have a formal causal power, despite Aristotle’s general insistence that the male alone provides the form in reproduction, and that the formal cause is at work in the transmission of non-essential heritable features.



**Eita Sugimoto**

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**Essentialism in the Defense of the Principle of Non-Contradiction in  
Aristotle's *Metaphysics* Γ.4**

In this presentation, I shall argue that Aristotle's defense of the Principle of Non-Contradiction (PNC) in *Metaphysics* Γ.4 significantly relies on a specific form of essentialism. Since Łukasiewicz's seminal article (1910), it has been widely acknowledged that Aristotle in *Metaphysics* treats the PNC not only as a logical principle but also as an ontological one. Nevertheless, mainstream interpretations have often understated the metaphysical commitments underlying his arguments in Γ.4. Commentators typically focus on the first argument, the so-called "elenctic" refutation (Γ.4, 1006a28-1007a20), seeing its reliance on minimal and purely semantic assumptions as the only promising strategy for defending the PNC. By contrast, the subsequent and often more overtly metaphysical arguments are regularly dismissed as either question-begging (e.g., Łukasiewicz 1910) or as offering only a weaker challenge to opponents (e.g., Wedin 2000). However, relegating them to a subordinate status does scant justice to Aristotle's text, since the elenctic refutation comprises only a small portion of the overall case for the PNC in the chapter.

I offer an alternative reading that integrates these additional arguments with the initial elenctic refutation. They illustrate the metaphysical implications of Aristotle's requirement of univocity of an utterance (*sêmeinein hen*) in the elenctic argument, showing that the signification itself presupposes a definite ontological structure. This does not imply that the elenctic argument tacitly presupposes that metaphysical framework and thus succumbs to *petitio principii*; rather, the requirement of univocity functions as a dialectical rule, not as a premise of the argument. Aristotle, in turn, grounds the metaphysical picture on his theory of predication as developed in the *Posterior Analytics* 1.22 (Γ.4, 1007a34-b18), where the parasitic nature of non-essential predications is proved from the logical standpoint. Recognizing these interconnections between language and reality supports the view that, for Aristotle, the PNC is best understood as an essentialist constraint on the predicative structure of the reality. Its denial, I maintain, yields both an untenable metaphysical framework and the collapse of meaningful language. Indeed, Aristotle's metaphysical arguments for the PNC simply invert the elenctic strategy: while the latter proves the PNC from the possibility of language, the former deduces the impossibility of language from the denial of the PNC.

The present interpretation further invites reflection on what type of essentialism is at stake. Examining the relationship between essence and modality in Γ.4 reveals that Aristotle employs a weaker notion of essence, one that does not presuppose a full-fledged causal-explanatory role. This squares with the chapter's dialectical context, where the only material granted to the proponent of the PNC is the opponent's stipulation of a word's meaning (e.g., "human" as a "bipedal animal"). It further indicates that there is no clear basis for claiming the asymmetry of an essence over necessity here (cf. Peramatzis 2024). Finally, drawing on recent scholarship in Aristotelian modal syllogistics (Malink 2013), I suggest that the modal

reasoning in the elenctic refutation underscores this modest essentialism: the often-alleged *de re/de dicto* ambiguity in his argument arises only when we impose modern modal predicate logic to Aristotle's argument, and adopting a more appropriate semantic framework reveals both the strength of Aristotle's argument for the PNC and its proper essentialist background.

### Charis Tabakis

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#### Bidirectional causality in the soul, according to Aristotle

How should we understand the inner realm of the soul through its multiple aspects of activity? In Book III of his treatise *On Soul*, Aristotle examines the nature of intellect and poses a notable question (*DA*, III.4. 430a 5-6): Why does the (human) soul not always think? His answer rests on a general axiom: In every particular nature, he claims, something (one part) serves as matter (teeming with potentiality), while something else (another part) acts as an agent cause similarly to art procedures. Since the soul is a kind of nature (*DA*, I.1), these differences must also underlie it (*DA*, III.5. 430a 10-14). On the basis of this principle, Aristotle establishes that the soul (in general) transitions between potentiality and actuality in its modes of existence, interchanging activity and inertia. At the same time, he introduces a methodological criterion whose implications initially pertain to intellectual functions but may have broader applications.

If the soul belongs to natural realities, we must distinguish between passive and active events within psychic life, depending on how causality manifests (*DA*, II.5. 417a 21 ff.). In order to understand the complexity of this claim, we must admit that some psychic functions arise through passive causality and later serve as a potential substrate (matter) for active functions. Other functions manifest through active causality, where the soul becomes the origin of movement.

Indeed, sensation *per se* manifests only passively, meaning that the external active cause coincides with the internal, passive sensorium (*DA*, III.2. 426a 2-11). Yet the sensitive soul is not limited to sensation but also encompasses imagination, which is not always purely passive. In most of the animals, the imaginative function bifurcates into sensitive and deliberative, depending on the direction of causality. We think that in the formative (or generative) phase of the imaginative appearance (reading thus *DA*, III.3), imagining functions passively, similar to perception. However, when an animal is about to act, causality becomes active, originating in the soul, so appearances (*phantasmata*) and thoughts arise willingly (*MA*, 6. 700b 14-19). After applying the same criterion on temporal cognition, Aristotle distinguishes *memory* from *recollection*, though both belong to the imaginative domain. Memory is passively activated, following features of sensory impressions (imaginative movements, forms or habits). In contrast, recollection originates in the intellect, seeking to retrieve a form (intellectual or sensory) that is not spontaneously accessible (*DA*, III.5. 430a 23-25). Hence, recollection manifests itself as an “active” process that originates in the soul and concludes in some sensory movement (*DA*, I.4. 408b 15-18). Therefore Aristotle attributes memory to all animals possessing imagination and a sense of time, while recollection is unique to humans, as only they possess intellection (*DM*, 2. 453a 7-9).

Generally speaking, when acts such as *recollection*, *will*, *desire*, *deliberate choice*, or *thought* are manifested, the soul *per se* initiates movement, seeking fulfilment within itself or in the outside world. Consequently, Aristotle identifies some pairs of complementary psychic functions: *a)* passive and agent intellection; *b)* sensitive and deliberative-or-calculative imagination; *c)* memory and

recollection. Even ethical action follows this principle, depending on the activation of sensitive mediacy (*DA*, III.7. 431a 10-11). These acts do not necessarily occur simultaneously; passive functions may exist independently as habits, whereas active functions rely on passive ones as their “matter”, in order to occur (*DA*, III.7. 431a 14-17). Hence, in terms of cognition, forms inherent to the soul activate or deactivate depending on the operational mode, who results in varying degrees of abstraction.

Considering soul as a whole, we encounter a well structured environment, whose function is based on transmission of bodily motions that maintain their connection to some original, sensory form (*DA*, III.7. 431a 26-28). Through particular psychic functions, causal mediacy reflects the soul’s activation, mostly in a bidirectional framework. Psychic causality can be reversed for advanced living beings: instead of a passive process, it can become active, with the intimate cognitive soul as its origin. Given psychic mediacy’s functional multiplicity (varying modes of being), each movement affecting the soul yields a distinct function, shaped by its origin and direction. These movements, whether introverted or extroverted, remain commensurable with the rest of the natural world, if undistorted. The human soul, especially, functions as a cognitive mediator: fragmented sensory data engage with rational principles, bridging perception and intellect to attend unifying and novel conceptions, unique to humans.

**Dinis Tomás**

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### **Theophrastus' ἀπορίαι: an insight into the structure of his *Metaphysics***

Much is yet to be discussed regarding Theophrastus' *Metaphysics*. It is specially so regarding the formal aspects of the treatise. Although fuller and wider contributions have been made regarding its completeness (Usener [1861]; Laks and Most [1993, IX-XVIII]), not many remarks are made regarding its internal structure. Still, even among the latter there seems to be no agreement on how the structure of the *Metaphysics* should be understood. On one side of the discussion, some look to the way the ἀπορίαι follow each other as proof of the text being disarranged (Usener 1861), others see the text as a simple succession of ἀπορίαι (Reale 1964), and some among them go as far as stating that Theophrastus didn't have a plan when he wrote them as he did (Battezzato 1989, 51). On the other side, many recognize a *leitmotif* to the work (for instance [Laks & Most 1993, XXV]; [Theiler 1958], [Gutas 2010, 41]), but they disagree in the way they perceive the work's structure, and the parts it can be broken down into.

This paper delves into this discussion while aiming to propose an alternative way of comprehending the structure of Theophrastus' *Metaphysics*.

I will, first, put forward that we find an outline of the structure of the work in the composite question that we find in its first line (*Met.* 4a2-3: "How (πῶς), and in what sort of things (ποίοις), should we define the study of the first principles?"). I will do this by arguing that all of the text's ἀπορίαι are developed in order to answer to one of the two questions that compose the opening sentence of the work, the πῶς (how?) question and the ποίοις (in which sort of things) question.

To achieve this, I will start by pinpointing the way in which Theophrastus understands both the πῶς and the ποίοις question. I will start by advancing that the πῶς question is understood in a twofold manner. Firstly, in a way that is equivalent to the ποίοις question, in that the method of a study is affected by the characteristics of its objects (as it follows from *Met.* 4a2-10). Secondly, in a way that searches for methodological guidelines that a researcher of the study of the first principles should follow.

Next, I will propose that the ποίοις question, as its very formulation implies, asks for the characteristics of the first principles. I will highlight the type of characteristics Theophrastus is looking for, and showcase how he investigates them throughout the work.

I will conclude this analysis by exemplifying how the ἀπορίαι fit both these questions in all their assessments.

This will, finally, allow me to propose a structure of the *Metaphysics* drawn from narrowing down the ἀπορίαι to either of these two queries, further proving the status of *Met.* 4a2-3 as an instrument to unveiling this work's internal layout. From this, I shall be able to put forward that Theophrastus' *Metaphysics* is a well-thought-out work that is both systematic and complete in fulfilling its own goals.

## Luca Torrente

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### *Paradoxos, adoxos, endoxos* in Aristotle and Theophrastus

In the *Topics* and in the *Sophistical Refutations*, Aristotle frequently uses the term “paradox”. Scholars have often opted for a translation choice that may seem quite simple and inconsequential, using the calque of the Greek word in their modern languages (παράδοξος = paradoxical). But *paradoxos* is in some ways opposed to *endoxos*. A better understanding of the meaning of *paradoxos* in the writings of Aristotle and Theophrastus could help clarify what an *endoxon* is, and vice versa. In order to better determine the contours of the notion of *paradoxos*, it will also be important to expand the scope of our investigation to include the notion of *adoxos*, which appears in *Topics* VIII 4-5.

The first part of my paper will be based on the following passages from the *Topics* (I 10, 104a8-37; I 11, 104b19-105a9), of which I will propose a new translation in order to challenge what I will call the “traditional” reading of *paradoxos*. By analyzing these texts and several passages from the *Sophistic Refutations* (1, 165b14-19; 12-15; 17, 176a19-35), I will try to show that a paradoxical proposition, like an *endoxical* proposition, derives its implausibility value not from some degree of objective, intrinsic falsity it contains, but from the subjective, extrinsic sense in which it is not approved by a particular community of human beings. This analysis will also support the idea that the primary meaning of *paradoxos* in Aristotle is not that of a logical impossibility or a proposition leading to contradictions, but that of an opinion contrary to commonly accepted views. I will also consider the following passages (*Metaph.* Γ 7, 1012a18; *NE* VII 3, 1146a22; *Rhet.* II 23, 1400a24) to show how the notion of *paradoxos* is used by Aristotle.

In the second part of my paper, I will question the identification usually made (see, for example, the LSJ) between *adoxos* and *paradoxos*, and attempt to identify a difference in the use of the two terms in Aristotelian texts. For this purpose, I will give a detailed analysis of *Topics* VIII 4-5 (159a15-b35), where the terms *paradoxos*, *adoxos*, and *endoxos* are used, and where for the last two terms we have a further distinction introduced by Aristotle between an absolute sense (ἀπλῶς) and a determinate one (ὠρισμένως). To support my proposal, I will also refer to some occurrences of these terms in the work of Theophrastus (*Metaphysics* 8b4-6; *De ventis* 59; fr. 365A and 676 FHSG). In particular, to show that what is *paralogon* is *atopon*, and therefore requires an argument and an explanation (*logou deitai*, see for example *CP* II 17, 1).

A paradoxical proposition, even if it seems incoherent or contradictory, can play an important role in the philosophical process, and especially in dialectics. This is firstly because it is a *thesis* in the sense of the *Topics*, i.e. a premise which is always also a dialectical problem (*Topics* I 11, 104b29) and which can thus advance thought by being questioned and discussed, and secondly because a certain paradoxical statement may ultimately prove to be true. As Aristotle argues in *Rhetoric* III 11, speaking of metaphor, “it is more evident that one has learned when things are the opposite of what one believed, and it is as if the soul says, ‘How true! it was I who was mistaken’” (1412a20-22). Thus, if a statement contrary to the established

opinion can be true, it must be taken into account in the philosophical process. This is exactly what Aristotle and Theophrastus do when, in the doxographic sections of their works, they refute certain statements that are not supported by the many, nor by the majority of the wise, but only by one of them, who is nevertheless famous. For them, then, the paradox is not only the statement to be avoided, but also the unbelievable but fascinating statement of a certain *sophos*, with which the true philosopher must confront himself.

After analyzing these three terms (*paradoxos*, *adoxos*, *endoxos*), we will be able not only to determine differences in their use, but also to give reasons for their function in the dialectical contexts in which they appear.



## Miira Tuominen

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### Aristotle on Animal Intelligence: A Difference in Degree or by Analogy?

There is a tradition of taking Aristotle to be one of those philosophers who consider non-human animals as lesser beings than humans because they lack reason. And indeed, Aristotle claims in his logical and ethical-political works as well as in the *De anima* and the *Parts of Animals* that humans alone have reason (λόγος) together with the capacity to think (φρονεῖν) and understand (νοεῖν) as well as to deliberate. He also seems to imply in the *History of Animals* 7(8).1, that the difference between human intelligence (φρόνησις) and the intelligence of other animals is one by analogy, thus excluding other animals from intelligence. However, Aristotle also considers some animals as more intelligent (φρονιμώτερα) than others and humans as the most intelligent (φρονιμώτατος) thus seemingly allowing comparison in degree between the intelligence of humans and other animals. Aristotle considers many different ways in which animals are intelligent and for even small birds (e.g. the *sippe* in *HA* 8(9).17, 616b22-25), the reason why they can live good or successful lives is in their reasoning powers and not mere adaptation to the environment.

In this talk, I will reconsider these discrepancies between Aristotle's various pronouncements of human and animal cognitive powers and argue for a version of a combined reading between φρόνησις in humans and other animals. In my view, whereas as a human intellectual virtue, φρόνησις as practical wisdom is defined by reference to the human good and differs in this sense by analogy (as geometrical proportion) from intelligence in other animals, there is a broader sense in which there are cognitive powers in all animals and they can be compared in their degree of abstractness and sophistication. Moreover, human reason is not the only one that differs in kind from the intelligence of other animals but there is a similar difference in kind between animals that are only capable of perception (together with sensitivity to pleasure and pain and desire) and those that remember and can have foresight of their future.

Finally, I articulate an underlying assumption in the scholarship according to which consider the difference in intelligence in degree to allow other animals a higher cognitive status than that by analogy. I argue against this assumption that instead of having a lower degree of human intelligence, other animals have cognitive powers that are fully appropriate to the cognitive challenges that they need to navigate in activities that make up their lives.

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### Aristotle's Theory of Natural Law

In the works of Aristotle, natural law occurs only in the first book of the *Rhetoric* (1373b6, 1375a32) where it is described as a law according to nature (κατὰ φύσιν νόμος). However, due to Aristotle's allusion (*Rh.* 1373b7–8) to a common idea of just and unjust according to nature (φύσει κοινὸν δίκαιον καὶ ἄδικοι), his commentators tend to explicate his reference to natural law within the framework of his general discussion of justice, and, in particular, with reference to political justice (*NE* 1134a–1135a), a part of which is natural, another conventional. Certainly, the just according to nature and law according to nature are related concepts, but *prima facie* it is far from being evident that the just according to nature (φύσει δίκαιον) and natural justice (φυσικὸν δίκαιον) are the same.

The natural justice (φυσικὸν δίκαιον) of *NE* V is a form of political justice, which has the same force everywhere, existing irrespective of our understanding, or opinion of it (*NE* 1134b19–20). Unlike the common law of the *Rhetoric*, political justice is, by definition, posited only between those who are equal and whose mutual relations are governed by law. As such, political justice is entirely unconcerned with the various kinds of justice, introduced earlier in the *NE* V. Moreover, unlike the immutable standards of φύσει δίκαιον, natural justice (φυσικὸν δίκαιον) is also subject to variance (*NE* 1134b29–30).

In this paper, I argue that a proper reading of *NE* V.5–7 rules out the so-called 'horizontal' division, put forth by Tony Burns or George Duke, which is, in my opinion, also incompatible with the context of Aristotle's use of the μέν and δέ clause at *NE* 1134b18–19 and especially with Aristotle's statement about the clarity with which one may discern which rules of justice are by nature and which are not. And, given the logical independence of *NE* V.7, the query cannot be addressed with elaborating on the best form of government, proposed by Ross J. Corbett, Marco Zingano, or Fred D. Miller Jr. either. In other words, the τι δίκαιον πολιτικὸν (certain kind of political justice) of *Politics* (1284b16) is not an allusion to the τι δίκαιον (justice in a metaphorical sense) of the *Ethics* (1134a29), set against τὸ πολιτικὸν δίκαιον understood to be τὸ ἀπλῶς δίκαιον (justice in the absolute sense). What is more, to claim with Miller that at the end of *NE* V.7 (1135a3–5) Aristotle proposed a sense of natural law which could serve 'as a standard by which the laws of different localities may be compared and evaluated' would be a plain disregard of the 'epistemological assumptions of his system.'

In my opinion, Aristotle's criterion for naturalness, which holds always or for the most part good, is a normative criterion, but it is not connected to a theory of natural law within the context of the *Nicomachean Ethics*. In the *Rhetoric*, where natural law is explicitly mentioned, it stands for universal application, but not for a criterion of normative validity. In conclusion, I do think that Aristotle comes short of our criteria for a natural law theory.

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**The Untouchables: The Medium in Aristotle's Theory of Perception**

Aristotle gives a delightfully-strange argument that the flesh could be the medium rather than the organ of touch. He asks us to suppose there were a very thin membrane covering our flesh. In that case, it would seem as though the flesh is in direct contact with tangible objects, yet *ex hypothesi* it is not (422b34-423a6). Perhaps our flesh functions like that membrane, creating the impression of immediacy while separating the organ (presumably the heart) from the tactile object. This argument does not establish that flesh *is* the medium of touch, only that it *could be*. Next he tries to explain why it seems to us that there is no medium:

[T]he part of the body which is of this kind [i.e. flesh] seems to be to us as the air would be if it were naturally attached to us all round; for we should then have thought that we perceived sound, color, and smell by virtue of a single thing, and that sight, hearing, and smell were a single sense. But as things are, because that through which the movements occur is separated from us, the sense-organs mentioned are manifestly different. But in the case of touch, this is, as things are, unclear; for the ensouled body cannot be composed of air or of water, for it must be something solid. (423a6-13)

It is obvious that the distance senses require a medium because the medium is not a part of our bodies; inversely, it is not obvious that the so-called contact senses require a medium because the medium is a part of our bodies. But this argument at best establishes why we would not notice that touch has a medium; it gives us no reason for thinking that it does. So what is his argument?

Earlier in *DA*, Aristotle points out that the so-called distance senses quite obviously require media, and he says that same holds of taste and touch though it is not obvious (419a22-31). Commentators generally assume that Aristotle's commitment to parsimony requires him to hold that touch and taste operate like the other senses: once he establishes that the three distance senses operate at a remove, all that remains to be explained is why it is not obvious that the same is true of touch (and taste). However, Aristotle does not rest his case after explaining why we might not notice that touch has a medium. Instead he gives an argument for the conclusion that all contact is impossible:

Every body has depth, and that is the third dimension, and if between two bodies there exists a third it is not possible for them to touch each other... If this is true, it is impossible for one thing to touch another in water, and similarly in air also. (423a22-9)

He compares our situation to that of fish: we know that there is water between them and everything they 'touch', but they do not; similarly, there is air between us and the things we 'touch'. This argument is surprisingly bold

and has no precedent in Aristotle. Indeed, in many other texts he presumes the possibility of contact. Yet few commentators pay much attention to the passage at all (Ross and Shields don't even mention it). What I think is clear from the radical unprecedentedness of his argument here is that he is deeply committed to all senses having a medium: mere parsimony would not be a sufficient motivation for such a far-reaching argument.

If Aristotle is not motivated by parsimony, then what motivates him? It is my claim that he views that role of the medium as essential in distinguishing perception from 'ordinary' types of alteration, which involve taking on the form with the matter. When he discusses views like those of Empedocles and Democritus, he describes them as collapsing all perception into touch. In fact, it is Aristotle's view that even in the case of the sense of touch, perception must be produced through an intervening medium, not by direct contact. Touch (the sense) is not by touch (contact). In the final section, I argue that Sarah Broadie (1993)'s claim that perceptual qualities can only cause perceptions and no other type of change ignores the difference between mediated affections and unmediated ones: for Aristotle the same quality can have different kinds of effects depending on *how* and *what* it affects (a perceiver, through a medium in an unordinary alteration versus matter through direct contact in ordinary alteration).

## Güncel Oğulcan Ülgen

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### The Other Aristotle: Rethinking the Question of the Animal in Aristotle

In animal studies and philosophy, Aristotle is often criticized as a progenitor of hierarchical and anthropocentric thinking about animals. While this *doxa* has a certain appeal, it overlooks the complexity of his view on animals and animality. Aristotle's works offer two distinct perspectives on the question of the animal. The first perspective, familiar from the traditional history of philosophy, seeks to identify what makes 'the human' unique. In works such as *On the Soul*, *Nicomachean Ethics*, *Eudemian Ethics*, and *Politics*, Aristotle identifies both *nous* (intellect) and *logos* (reason or speech) as the very thing that distinguishes 'the human' from 'the animal.' Though very unusual for a philosopher known for his zest for making too many distinctions, these distinctions broadly serve two purposes: (1) to establish what is proper to 'the human' and (2) to secure a moral community exclusive to humanity. While acknowledging that certain animals might be political, Aristotle uses this seemingly pure distinction to exclude 'the animal' from the ethical realm. This move, inherited by Christianity with the *scala naturae* (the great chain of being) and the tradition of philosophy from Aristotle to Heidegger and Levinas, is made possible by homogenizing 'the animal' and situating it below 'the human.' Consequently, it establishes a hierarchy of beings while prioritizing 'the human' and reinforcing human exceptionalism.

Yet, a closer reading of Aristotle's biological works—such as the *History of Animals*, *Parts of Animals*, and *On the Generation of Animals*—reveals a more intricate and multifaceted framework. Here, we see a different type of Aristotle, whose attempts to classify and distinguish living beings reveal a far more complicated nature. Drawing on Jacques Derrida's concept of *limitrophie*—which emphasizes the multiplicity of boundaries, critiques anthropocentrism, and rejects rigid categories like 'the animal' and 'the human'—I argue that Aristotle's biological investigations reveal a more nuanced understanding of the boundaries between living beings. In these works, Aristotle grapples with the heterogeneous and overlapping limits that challenge any clear-cut distinction between humans and animals or among different species. This complexity is best exemplified in a particular passage in the *History of Animals* where Aristotle says, "Nature proceeds little by little from things lifeless to animal life in such a way that it is impossible to determine the exact line of demarcation" (VIII.1, 588b4-5). Following this passage, he mentions the pinna, razorshell, testaceans, ascidians, sea-anemones, and sponge (VIII.1, 588b15-20) as examples ("but the sponge is in every respect like a vegetable," he notes amazed). This uncertain, marginal framework challenges the hierarchical, more dominant framework that is found in the traditional history of philosophy.

Revisiting Aristotle through this marginal perspective helps us complicate the traditional ethico-political framework, which is based on the exclusion of 'the animal' as such. Rather than attempting to overcome Aristotle, as is usually done in animal philosophy, we should instead destabilize the relatively rigid framework supposedly inherited from him. I argue that this can be achieved by pointing to the

other Aristotle, who, with his broader conception of the political, could serve as an ally for animal ethics and politics. This broader Aristotelian perspective of politics contrasts sharply with the modern conception of politics, particularly as defined by Thomas Hobbes and his successors, who restricted politics exclusively to ‘the human.’ Following Aristotle’s broader definition of politics as attaining a common good, it would be beneficial to inquire how Aristotle’s more complicated biological framework could align with this definition of politics and the political. Building on Matthew Calarco’s concept of *syntheōría*, which contrasts with Aristotle’s *theōría* by emphasizing the communal and embodied nature of ‘seeing-with,’ I will explore how this alternative perspective might deepen the political framework centered on a shared common good between humans and animals. By acknowledging the complexity of life and the interconnectedness of living beings, we can strive to imagine an ethics and politics of “seeing-with” (*syntheōría*)—a way of perceiving the good, the true, and the beautiful rooted in a shared and interdependent world.

Thus, by reading the other Aristotle against the traditional Aristotle, we uncover a rich source for reimagining our relationship with animal-others. When combined with his expansive view of politics, Aristotle’s biological insights offer a foundation for reimagining an ethics and politics rooted in interdependence, mutual recognition, and the shared pursuit of a common good between humans and animals. Such a perspective not only reshapes our understanding of Aristotle but also aligns with Matthew Calarco’s concept of ‘indistinction,’ which calls for the invention of new ways to transcend the human/animal distinction—a move, I argue, is already made in Aristotle’s biological works. This approach opens new avenues for reimagining our ethical and political relationships with animal-others and tackling contemporary challenges in animal philosophy and related fields.



**Aristotle on Truth as Existence: Reconciling *Metaphysics* VI.4 and IX.10**

In the *Metaphysics*, Aristotle presents two seemingly contradictory treatments of truth. In *Metaphysics* VI.4, he excludes truth from the proper scope of first philosophy, arguing that truth resides “in thought rather than in the things” (ἐν διανοίᾳ ἀλλ’ οὐκ ἐν τοῖς πράγμασι), whereas in IX.10, he identifies truth as “being in the strictest sense” (τὸ κυριώτατα ὄν). I argue that previous attempts to reconcile these passages have not fully resolved the issue and propose an alternative interpretation, one that illustrates how Aristotle refashions ordinary concepts to serve a new philosophical purpose. Namely, I show that just as Aristotle repurposes the familiar concepts of capacity and activity to articulate distinct modes of being—some things are *potentially* so, others *actually* so—he likewise exploits the ordinary concept of propositional truth to address the question of what makes a proposition true in the first place. If this is right, by carefully distinguishing between the customary and the derived senses of truth, we can reconcile Aristotle’s initial exclusion of truth from the scope of first philosophy with his subsequent characterization of it as central to ontological inquiry.

Some scholars—most notably Schwegler, Christ, and Jaeger—argue that *Metaphysics* IX.10 disrupts the book’s overall progression, while Ross considers removing or relocating the phrase “being in the strictest sense” as a way to avoid conflict. Yet if we follow the main manuscript tradition, another approach is preferable. To this end, Heidegger suggests that the initial account of truth concerns only cases where something is predicated of something else, while the second account focuses on the truth of simples, but this time Halper objects rightly that such an interpretation fails to explain what is unique about *Metaphysics* IX.10, which extends beyond the truth of simples. In sum, many modern scholars call for removing or modifying the text of IX.10 partly to avoid the identification of truth as “being in the strictest sense,” or else grant this identification by restricting the scope to simples. A comprehensive solution would keep IX.10 intact and clarify how Aristotle situates truth in relation to being, easing the tension without restricting the chapter’s scope.

In *Metaphysics* IX.1–6, Aristotle takes the already familiar concepts of capacity (δύναμις) and activity (ἐνέργεια)—counterparts of which can be found in Plato’s dialogues—and reworks them to articulate a novel distinction between two modes of being: some things are potentially so, others actually so. Unlike capacity and activity, these are not beings so much as ways of being. Likewise, I propose that Aristotle repurposes the everyday notion of truth (a proposition deemed true or false) to ask what *makes* a proposition true—that is, shifting the focus from what we now call the truth-bearer to the truth-maker. Aristotle’s example in IX.10 captures this shift: “It is not because we think that you are white, that you are white, but rather because you *are* white that we who say this have the truth” (1051b5). In this sense, truth lies primarily in things rather than in thought, and Halper is right that this kind of truth closely anticipates what later philosophers call “existence.”

A potential objection is that identifying truth with existence conflates



actuality and truth, but this mistake arises from failing to see that actuality concerns *how* something obtains (potentially or actually), while truth concerns *whether* it obtains at all. Put differently, there is a difference between stressing that something is *actual* (meaning it obtains actually rather than potentially) and stressing that something *is* actual (meaning it is rather than is not). Far from conflating these roles, the proposed reading clarifies how the senses of being cohere. Truth—now understood as existence—complements the other *per se* senses of being, and together they correspond to three distinct ontological questions: *what* obtains (being in the sense of the categories), *how* it obtains (being as potentiality and actuality), and *whether* it obtains (being as truth). While Aristotle’s privileging of the third as “being in the strictest sense” will always remain philosophically provocative, viewing truth in this way helps mitigate the tension and brings its importance within Aristotelian ontology into sharp relief.

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**Pneumatic body and its soul. The notion of pneuma in Philoponus' commentary on Aristotle's *De anima***

My presentation is devoted to Philoponus' theory of pneuma in his Commentary on Aristotle's *De anima*. In his theory of the soul and activity of living beings, Aristotle unfolds two functions of pneuma: 1) Pneuma is the matter of desire, which imparts the locomotive impulse to the bodily parts; 2) Pneuma is the matter of generation that is contained in the seed. In the second case, Aristotle claims that pneuma contains the potentiality of the soul. In the theory of animal generation, Aristotle distinguishes pneuma not only as a certain functional part of the body, which, like blood, is associated with the implementation of the capacity of the animal soul, but also as a special matter that is more perfect than the matter of the organic body. Therefore, in Aristotle's theory of living beings, pneuma can be considered as an intermediate part necessary for the soul-body relation, while in Philoponus, the function of pneuma as an instrument connecting the sensitive soul with the organic body becomes to play an enormous role.

Thus, Philoponus endows pneuma with the functions associated with sense perception and locomotion and emphasizes the pneumatic body as an underlying subject of the animal soul. Indeed, he proposes to consider pneuma not just as some matter distinct from a solid organic body but as a separate body, a separate subject of all the animal soul capacities. At the same time, the pneumatic body itself does not possess its own organs: it is a heterogeneous matter similar to blood that is integrated into a solid organic body and acts in it. According to Philoponus, the activity of pneuma is necessary for the activity of sense perception. How, then, could pneuma, or the pneumatic body, be considered as the underlying subject of the animal soul? For the soul is, by definition, the entelechy of the organic body. To answer this question, I will take into account Aristotle's theory of the soul parts and its reception in Philoponus.

In his theory of the soul as the principle of life, Aristotle differentiates between three parts of the soul, which are the principles of vegetative, animal, and rational life. The division of the soul into parts leads to the question of the unity of the soul itself and the unity of the definition of the soul as well. Aristotle claims that "in the same way there could be one account for both soul and figure" (*DA* 414b20); that is, the parts of the soul are related not as species of the genus but rather in some other way, and that is why the common account of the soul is specific to none of the souls. While examining the question of the common account of the soul, Philoponus interprets it unambiguously – as equivocation. The term "soul" is equivocal for three types of soul, therefore, the soul does not have a definition in the strict sense, and "the first *entelechy* of a natural body, which has life in potentiality" is only a description that suits all souls, while the actual meaning of *entelechy* in relation to the three types of the soul is different in every case.

Three types of soul are the principle of the three types of life, but they are also three types of form related to each other in an ensouled being. The question of the equivocality of the soul concerns an issue of the unity of the soul as an actual form of

an animated being – that is, not only the unity of the concept but also the unity of the soul as such. Philoponus believes that the three types of the soul are different forms, which coexist in one being while having three different underlying subjects: the matter for the nourishing soul is the solid organic body, the matter for the sensitive one is pneumatic, and the matter for the rational soul is the so-called astral body. Philoponus' interpretation of the doctrine of the parts of the soul leads to the question of the potential separability of these parts from each other after death. In my report, I'll consider two questions as connected: the question of how the parts of the soul and their underlying subjects are related in the actual animate body and the question of the function of pneuma as the underlying matter that ensures the activity of the animal soul.

**Marco Vespa**

***(See Abstract – Orly Lewis, p. 119)***

**Filippo Vezzani**

*(See Abstract – Clara Costa, p. 50)*

**Laura Viidebaum**

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### **Aristotle's style: the ancient perspectives**

This presentation examines Aristotle's writings with a particular attention to his style of writing. Treated in scholarship now almost universally as a 'lecture note' style, that is exhibiting a type of writing so bad that one has to assume it as an unintentional side product (and thus, presumably, unpublished) of a teaching environment, Aristotle's corpus is often taken as an unfaithful representation of the philosopher's actual words. A lot of scholarly work intervenes in the text and proposes emendations and rearrangements that, arguably, stand closer to, and better represent, Aristotle's own thought. And yet, Aristotle's whole corpus demonstrates a remarkable degree of consistent structure (thematic, syntactic and lexical), to an extent that appears impossible without deliberate composition. Furthermore, ancient sources seem to praise his style without qualification (i.e. without suggesting that the style of his *dialogues* were great, but not that of the so-called esoteric works or *pragmateiai* that we now have) and for a very long time, until the 19th century, Aristotle's corpus was considered a prime example of philosophical/scientific prose.

This presentation is part of a larger project that aims to examine afresh the influential (and surprisingly not particularly controversial) mainstream position that Aristotle's 'esoteric works' are best understood as lecture notes. As a first stepping point, this presentation will focus on the widely shared, at least in contemporary scholarship, view that the style of Aristotle's works that we have is bad and cannot be fruitfully compared to other masterpieces of fourth century BCE philosophy, history, and science. In order to set aside our own preconceived ideas of good and bad prose, this presentation will review and closely examine all ancient sources (from Ps. Demetrius, Philodemus, Cicero, Dionysius of Halicarnassus to the later ancient commentators) that express an opinion on Aristotle's writing style. It is surprising how uniform is the ancient verdict on Aristotle's style: it is consistently praised as excellent and some authors even emphasize certain elements of his style as exemplary! A question then naturally arises – what is the source and reason for the modern contempt for Aristotle's style? We will review some potential explanations for this state of affairs. The paper concludes by drawing out in more generic terms the general characteristics of Aristotle's style (as perceived by the ancient authors) and, to better exemplify the results, offers a case study that maps the markers of Aristotle's style on his corpus as we have it.

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**Gabali, Legano, Carbodo, Fisemon: Buridan's and Leibniz's  
Extensions of Aristotle's Logic**

Aristotelian syllogistic, also called traditional logic, has been the dominant logical system from antiquity until the late 19th century and the emergence of modern formal systems. As a part of the medieval *trivium*, the study of syllogistic was also one of the main means of disciplining the mind, and its various systematic regularities were religiously cataloged by medieval scholars in the form of a mnemonic device starting with the famous *Barbara, Celarent...* (see [4]). These mnemonic names of valid syllogistic moods, invented in the first half of the 13th century, were then widely used when referring to syllogistic, and soon became its identification mark. Along with the nineteen names present in the first versions of the mnemonic, additional names were soon proposed: first, corresponding to the fourth-figure syllogistic moods (instead of indirect first-figure ones included in the first versions, see [5]); second, corresponding to the subalternated moods (consult [1, p. 215]).

Apart from the development of names forced by the historical discussions happening on the fourth-figure and subalternated moods, there were also other developments taking place, which were themselves stretching the boundaries of syllogistic logic. Two most notable of such developments are those of Jean Buridan and G. W. Leibniz. The present talk is aimed at explicating them and commenting on them, as well as at describing the context of their creation, their influence on the subsequent developments of syllogistic, and the mutual differences between them.

Jean Buridan proposed new names for syllogistic moods twice, and both of these times they were supposed to stand for new moods invented by him. His first proposition appears in *Tractatus de consequentiis* [3], the second one in his opus magnum, *Summulae de dialectica* [2]. Apart from being among the first European logicians to admit the fourth figure as an autonomous one instead of treating it as an indirect first-figure [6], he was also eager to consider indirect moods from the second and the third figure. Both in *Tractatus...* (see [3, p. 93]) and in *Summulae...* [2, p. 331–334], he proposes new names for those moods such as *Tifesno*, *Carbodo*, *Fisemon*, and *Fapemton*. And whereas in *Tractatus...*, they are made up solely by switching relevant portions of the usual mnemonic names and do not align with the rule that every mood from figures II–IV should begin with the same letter as its “mother” mood from figure I, in *Summulae...*, they are already “upgraded” according to this rule, which shows that Buridan must have acquired a greater understanding of the mnemonic in the meantime.

Leibniz, in turn, proposed entirely new names for syllogistic moods already well-settled in his time, such as *Gabali* and *Legano* for *Barbari* and *Celaront*, and *Gaceno* with *Lesaro* for *Camestros* and *Cesaro*. Unlike Buridan, from the beginning he is very careful about the initial letters of the mnemonic names – his reasoning for using **G** and **L** as initials stems from a rigid sticking to the aforementioned rule that every mood from figures II–IV should begin with the same letter as its “mother” mood from figure I; and as he shows how *Camestros* is reduced to *Barbari* and *Cesaro*



to *Celaront*, he treats *Barbari* and *Celaront* as legitimate first-figure “mother” moods that ought to have their own initial mnemonic letter.

In the talk, after going through both of these propositions in more detail, I comment on their historical context and on how they stand in the history of syllogistic. I also show that the developments of names done by Leibniz can be viewed as a next step forward relative to those of Buridan: whereas Buridan is advancing the doctrine while taking into consideration only the division between *direct* and *indirect* moods, Leibniz is talking about the nature of the *subalternated* moods. This, in turn, aligns with a general tendency in the history of syllogistic logic, where the discussion on the subalternated moods has taken place after the questions concerning the (in)direct moods had been settled.

I end by stating that what these extensions show is that, contrary to the popular belief, Aristotelian syllogistic was not a mortified system, but was alive and ardently debated even in the time of Leibniz, with various extensions of it being proposed by scholars. The nature of these extensions, as dictated almost solely by the nature of the syllogistic mnemonic, should, in turn, remind us of the crucial role the mnemonic system have played in the history of syllogistic and induce us to study syllogistic logic not by reducing it to modern formal notation, but by engaging with its rich historical tradition.

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Aurora Yu

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**The Nature of the Whole:  
*Suntaxis* and the Teleological Order of the *Cosmos* in Aristotle's  
*Metaphysics* Λ 10**

This paper discusses Aristotle's teleology through the lens of what I term the *suntaxis* of the *cosmos*—its integrated, interdependent, and hierarchical order—as articulated primarily in *Metaphysics* Λ 10. I argue that Aristotle's teleology is global, with the *cosmos* itself as the ultimate beneficiary of its teleological structure, rather than any single species or part within it. This interpretation emphasizes the relational and systemic nature of Aristotle's teleology, where the *cosmos* functions as a unified whole oriented toward its own flourishing and perpetuity. At the same time, I show that the Prime Mover serves as the ultimate final cause, providing the metaphysical grounding for the universe's ordered motion and orientation toward the good.

I begin by situating Aristotle's teleology within the broader philosophical framework of his metaphysics and cosmology, drawing comparisons with Plato's vision in the *Timaeus*. Both philosophers conceive of the *cosmos* as a living, ordered whole, but Aristotle's view internalizes the teleological principle within the natural processes of the *cosmos* itself, replacing Plato's Demiurge with the Prime Mover as the metaphysical and teleological foundation. I argue that Aristotle's description of the "nature of the whole" (ἡ τοῦ ὅλου φύσις) in *Metaphysics* Λ 10 articulates a formal cause that specifies the *taxis*—or more accurately, *suntaxis*—of the *cosmos*: an integrated and teleological system in which each part is oriented not only toward the Prime Mover but also toward one another, thereby contributing to the well-being of the whole.

I further analyze Aristotle's distinction between final causes as "that for the sake of which" and "that for the benefit of which". While the Prime Mover remains the ultimate final cause, I argue that the *suntaxis* itself is the proximate beneficiary of the teleological structure of the *cosmos*. Drawing on Aristotle's analogies of the army and the household, I demonstrate how the *cosmos*, like these entities, achieves its coherence and perpetuity through the ordered relationships among its parts, which are hierarchically arranged yet mutually interdependent. Just as the general directs the army's *taxis* while the army itself benefits from its order, the Prime Mover inspires the *suntaxis* of the *cosmos*, which in turn sustains the flourishing of the whole. This interpretation foregrounds the systemic interdependence within Aristotle's teleology, highlighting the essential relationality of the cosmic order.

To support this reading, I provide a close analysis of *Metaphysics* Λ 10, focusing on Aristotle's use of the phrase "order together" (συντέτακται πῶς), which underscores the interconnectedness and relational orientation of the *cosmos*' parts. This interpretation is reinforced through Aristotle's examples of natural interdependence—such as the relationships between plants, herbivores, and carnivores—which reveal a teleological framework that integrates individual goods into the flourishing of the *cosmos* as an eternal and harmonious system. Additionally, I address the metaphysical challenges posed by Aristotle's claim that no actual

substance can be composed of other substances, clarifying that the *cosmos*' unity is functional and teleological rather than substantial.

The paper also engages with scholarly debates on anthropocentrism in Aristotle's teleology. While some interpretations, such as Sedley's, position humanity as the ultimate beneficiary of natural processes, I argue that Aristotle's framework accommodates a more inclusive view. For Aristotle, the rain cycle and other natural phenomena sustain not only human agriculture but the broader ecosystem, underscoring the global teleology that benefits the entire *suntaxis*. I critique anthropocentric readings by emphasizing the hierarchical and relational nature of the *cosmos*, where the well-being of individual species is nested within the interdependent order of the whole.

Finally, I explore the implications of Aristotle's teleology for understanding the "nature of the whole" as a principle that coordinates the parts of the cosmos into a unified system. Just as an animal's nature integrates its material, formal, and efficient causes to realize its final cause, the nature of the *cosmos* specifies its essence as a teleologically ordered whole. This principle ensures that the parts of the *cosmos* contribute to its flourishing, perpetuity, and harmony. By likening the *cosmos* to an organism in its coherence and purposiveness, I argue that Aristotle offers a vision of global teleology that surpasses anthropocentric frameworks, presenting the *suntaxis* itself as the realized good of the universe.

In conclusion, this paper provides a novel interpretation of Aristotle's teleology by foregrounding the *suntaxis* as the proximate final cause and beneficiary of the cosmic order. This reading not only preserves the causal priority of the Prime Mover but also emphasizes the relational and systemic dimensions of Aristotle's teleology, offering a comprehensive account of the *cosmos* as a dynamic, interdependent whole oriented toward its own flourishing and eternity.

**Rossana Zanetti**

Ph.D. Candidate, Universities of Pisa and Florence, Italy

**From πάθη to πράξεις: The role of the emotions in the Aristotelian virtue of courage**

In the *Nicomachean Ethics*, Aristotle describes the virtue of courage as the readiness to sacrifice one's life for a noble cause, such as defending one's homeland in battle. Moreover, the courageous agent is often characterised as fearless (ἄφοβος, ἀδείης) or impassive (ἀτάραχος), suggesting an apparent absence of emotions in the face of death. However, in Aristotle's account, the role of emotions connected to this virtue remains a complex issue: what πάθη does the courageous experience in the face of danger? And how do they contribute to the realisation of the courageous action? To answer these questions, this paper is divided into three parts. First, it examines a preliminary question: that of the moral appropriateness of emotions in Aristotle. Since every character virtue is a ἕξις that implies not only correct πράξεις, but also the ability to feel πάθη appropriate to the situation, it follows that the moral subject must have some form of control over his or her emotions. I therefore investigate whether, and to what extent, Aristotle conceives of a deliberative influence on the emotional sphere, particularly in the case of courage. Aristotle's ethical framework, indeed, suggests that emotions are not simply passive responses but can be reshaped and regulated during character formation, which involves habituation through pleasure and pain. Secondly, I analyse the two opposed πάθη associated with courage: φόβος (fear) and θάρσος (confidence). Through textual analysis, I show that Aristotle's courageous agent does not lack emotions but rather experiences a co-presence of φόβος and θάρσος. The seeming absence of φόβος, then, should be understood in a behavioural sense – namely, as the ability to act correctly *as if* fearless – rather than as a complete lack of fear. Finally, I propose a psychophysical model that clarifies the specific function of φόβος and θάρσος in courageous action and their reciprocal interaction. I show that φόβος, in its physiological aspect, is overcome by the emergence of its contrary, θάρσος, while, in its cognitive aspect, it is emptied of its typical desiderative component (viz. the desire to flee). This is because the two emotions, in this case, are originated by two different faculties: fear arises from the faculty of representation (φαντασία), whereas θάρσος arises from the faculty of opinion (δόξα). I argue that the courageous person experiences a form of “representational” fear similar to that of the spectator at a play or someone who *imagines* a frightening event without *believing* it to be imminent. Likewise, the courageous agent has a φαντασία of noble death as a bad thing (and, therefore, experiences fear) but, at the same time, does not consider it a bad thing (and, therefore, experiences confidence). In this way, the presence of fear can be accounted for without it being an impediment to virtuous action.

**Lorenzo Zemolin**

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### **Aristotle on the Causes of Generation and Corruption in *GC* II 10**

In this paper, I propose a new interpretation of the aim of *GC* II 10 and its role within the treatise.

According to the prevailing scholarly consensus, in *GC* II 9 Aristotle first explains the material and formal causes of natural generation and corruption and then critiques the account of the efficient cause given by his predecessors. In II 10 he then completes the work begun in the previous chapter by expounding his own account of the efficient cause and, additionally, of the final cause. Thus, the standard interpretation divides the labour between II 9 and II 10 as follows: the material and formal causes are addressed in the former, while the efficient and final causes in the latter.

This interpretation faces at least three major issues. First, it aligns poorly with Aristotle's actual words marking the transition from one chapter to the other. There, he declares that, having dealt with the causes of generation and corruption (particularly matter and form), he will now show that generation is continuous. Thus, he seems to shift to a partially different *explanandum* rather than merely a different *explanans* of the same thing. Second, it makes it harder to understand how the causes expounded in II 10 actually work. There, Aristotle identifies the efficient cause (my primary focus in this paper) with the motion of the sun along the ecliptic. However, this does not match the efficient cause called for in II 9, which (following the standard account of *Phys.* II) must be the same in form as the things it causes. Lastly, upon closer inspections, it becomes apparent that Aristotle already outlines *all* the causes of generation and corruption in II 9, including the efficient and final ones. Therefore, there seems to be no open task in need of completion for the following chapter.

For these reasons, I challenge the standard interpretation of the chapter and argue for a new one. The picture I propose is as follows. Having provided a general illustration of the causes of particular instances of natural generation up to II 9, Aristotle shifts in II 10 to explaining the *continuity* of generation and corruption, identifying its efficient and final causes. This *explanandum* is different from, yet structurally connected to the one addressed in the previous chapters. It is different in that the sun is the cause of a different *aspect* of natural generation: rather than explaining the occurrences of particular instances, it explains why these form a continuous series of generations. Such continuity, however, is a structural feature of natural generation, on grounds that Aristotle outlines in *GC* I 3: there, he argues that the possibility of there being unqualified generation in the first place is contingent upon the possibility of generation being continuous, and he explicitly references II 10 for a discussion of the efficient cause that grants such continuity (a reference largely missed by readers of II 10). Thus, in II 10, Aristotle secures the very possibility of generation by identifying the causes of its continuity, thereby completing his investigation into generation and corruption as a whole.

The interpretation I put forth is both less problematic and more insightful than the standard one. On the one hand, on this reading the argument of II 10 is in

keeping with its programmatic opening lines and not at odds with the claims of the chapter before. On the other, the role of the chapter within the treatise as a whole can be grasped on a deeper level: by highlighting its structural connection with I 3, it becomes clear how II 10 completes the study of generation and corruption by providing its ultimate foundation for it—namely, the cause of continuous generation.



**Antoni Żrebiec**

Ph.D. Student, University of Warsaw, Poland

## **The Early Medieval Ontological Square: Alcuin and Eriugena on Aristotle's *Categories*, Chapter 2**

In the second chapter of the *Categories*, Aristotle presented his famous ontological square: the fourfold classification of beings. This classical division has become the subject of numerous studies and continues to inspire metaphysicians today. The paper aims to present the reception of the ontological square in the Early Middle Ages, namely in the *De dialectica* of Alcuin and the writings of John Scottus Eriugena (*Periphyseon* and *Annotationes in Martianum*). The authors knew Aristotelian *Categories* through the Latin paraphrase – *Categoriae Decem*, an authoritative text attributed at that time to Saint Augustine, which I will also analyze in my presentation. The fourfold division was also mentioned in a handbook of logic and liberal arts, the *De nuptiis* of Martianus Capella, which was widely read in the Carolingian times.

Although the account of the ontological square in the *Categoriae Decem* is a fairly faithful paraphrase of Aristotle, the paragraphs that precede it may confuse the reader. Unlike Aristotle, although in line with late antique Roman philosophy, the author connects substantiality with corporeality. He writes that philosophers “have chosen to name ‘ousia’ (οὐσία) that which is known through the senses and ‘sumbebekos’ (συμβεβηκός), that is, accident, that which is reached through consideration of the mind and changes often” (*Categoriae Decem* 29, trans. Ch. Erismann). When Alcuin mentions the Aristotelian ontological square in his *De dialectica* he literally follows the argument of *Categoriae Decem*. Commenting on the same passage in his *Periphyseon* and *Annotationes in Martianum* Eriugena comes to radically different conclusions. Following Maximus the Confessor, he regards substance as completely unknowable and considers the remaining nine categories to be the only things that can be known, whether intellectually or sensually.

At first, the accounts of the ontological square in the texts of Alcuin and Eriugena may seem similar. They both reduce the four groups of beings to two – substances (either primary or secondary) and non-substantial categories (either individual or universal). However, the reasons behind this reduction are distinct. Alcuin simply neglects the meaning of the ontological square, his interests lie in a basic division into substances and accidents. Eriugena finds the solution in his ontological perspective on universals, the so-called immanent realism, or hyperrealism. For him, the universal “man” is wholly in the individual man and vice versa (*species tota et una est individuaque in numeris et numeri unum individuum sunt in specie*) so that there is no need to distinguish between primary and secondary substances. Consequently, the qualities of the individual and the universal man are also the same, so there is no need to separate them.

In the 11th and 12th centuries, as it became increasingly common to read Aristotle's *Categories* in Boethius' faithful translation, interpretations of the ontological square began to follow their Aristotelian original. The reception of the *Categories* in the early Middle Ages, mediated through Latin paraphrases, allowed for an original and creative approach to a classical theme. It is remarkable that Alcuin



and Eriugena, although living so close to each other in time and historical context, presented markedly different perspectives on this subject.

**Diego Zucca**

Associate Professor, University of Sassari, Italy

### **Aristotle's "History of Philosophy" and an Eliminativist Trend in the Presocratic Philosophy of Nature**

My proposal is concerned with Aristotle's reception of the Predecessors and the broad question whether there is or not an eliminativist trend in Presocratic philosophy of Nature. But its more limited aim is that of considering some key-passages related to Aristotle's critical doxography concerning Presocratic philosophy of Nature and assessing whether – and to what extent – he seems to envisage in these philosophical perspectives an implicit or explicit commitment to the inexistence of worldly 'things', namely, to the inexistence of anything other than the Principle (in the case of Monist models) or the Principles (in the case of Pluralist models).

By taking into critical account some relevant passages from the *loci classici* of Aristotle's 'history of Presocratic philosophy' (especially the first book of *Metaphysics*, the first book of *Physics*, and the first book of *De generatione et corruptione*), I will argue that Aristotle attributes to both Monists (such as Thales, Anaximander, Anaximenes, Heraclitus and others) and Pluralists (such as Empedocles, Anaxagoras, Democritus and others) an eliminativist commitment, either explicit or implicit, such that the Underlying Nature they posit ultimately tends to be conceived by them as the only existent Entity at all. In other terms, Aristotle recognizes a sort of common pattern in the 'Presocratic framework', a deep thought that underlies the huge differences between their views, such that the Principle (or the Principles) they posit ends up 'absorbing' the reality of what is was meant to be Principle of. The Underlying Reality turns out to be not only something that accounts for the deep causal structure of the apparent world - call it the Manifest World - but it is more or less surreptitiously conceived of as the only existing entity at all, so that the Manifest World, is just *not there*, it is illusory: the *explanandum* is eliminated or explained away, substituted by what was originally supposed to be its *explanans*. Things have no intrinsic nature, their nature is a borrowed nature from the Principle(s), but since their deep nature is the Principle itself, they are no more than accidental modifications of the Principle, which means that they have no *per se* existence, their purported existence is merely epiphenomenal. Regardless of whether the underlying Reality is Thales' Water, Anaximander's *Apeiron*, Anaximenes' Air, or Heraclitus' Fire, in Aristotle's reading the basic approach remains the same, even when the underlying Reality is conceived of as originally plural – Empedocles' four Roots, Democritus' Atoms, and Anaxagoras' Homeomerias: *nothing* comes to be and passes away, because what truly exists is eternal, so the purportedly changing world is not what truly exists. To put it more clearly, I would try to show that Aristotle's critical doxography attributes to *all* Presocratic thinkers what has been traditionally attributed to Parmenides and more generally to the Eleatic philosophy.

Although, some other Aristotelian passages show that Presocratics are oscillating (and Aristotle is on its own oscillating in reconstructing their 'deep thoughts') about whether the 'Manifest World' has an objective existence, or it turns

out to be absorbed by the Principle/Principles with respect to its reality. Of course, it is well-known that Aristotle's doxography is often 'theory-laden' and dependent on his own categories and philosophical aims, but his tendentially eliminativist interpretation of the main Presocratic philosophers of Nature, not only is a useful preliminary entry into the more general question, concerning the hypothesis of an eliminativist trend in Presocratic philosophy as such, but it is also an important starting point to shed light on Aristotle's very anti-eliminativist ontology (at least, on the emphasis he places on the 'defense' of the genuine, existence of individual things falling under our pre-theoretical experience).

**Book Discussions**  
*(In Alphabetical Order)*

### **Book Discussion 1**

**Reece, Bryan C. *Aristotle on Happiness, Virtue, and Wisdom*. Cambridge University Press (2023).**

**Reece, Bryan C. *Aristotle on Happiness, Virtue, and Wisdom*. Cambridge University Press (2023).**

### **Significance**

According to published reviews, *Aristotle on Happiness, Virtue, and Wisdom* “offers an innovative solution to a longstanding interpretive challenge in Aristotle’s *Nicomachean Ethics*” (*British Journal for the History of Philosophy*), “persuasively bridges the gap between exclusive and inclusive readings of Aristotle’s text” (*Review of Metaphysics*), “contains top-notch and rigorous philosophical distinctions and arguments,” is “bold, nuanced, and original, ...incredibly rich and exciting” (*Notre Dame Philosophical Reviews*), and is such that “any further interpretation of the *Nicomachean Ethics* will have to deal with it in one way or another” (*Review of Metaphysics*).

### **Session description**

We propose a 90-minute book discussion session in English comprising a brief summary of the book by its author, commentaries by Tom Angier, David Charles, and Daniel Ferguson, a brief response by the author to their comments, and then questions from the audience for the author and commentators.

### **Participants (in alphabetical order)**

Tom Angier (Commentator), University of Cape Town, South Africa

David Charles (Commentator), Yale University, USA

Daniel Ferguson (Commentator), King’s College London, England

Bryan Reece (Author), Baylor University, USA

**Round Tables**  
*(In Alphabetical Order)*



**Round Table 1**

**On WKC Guthrie's Evolution Stages of Aristotle's Theology**

**Gregory L. Scott and Cláudio William Veloso**

**Gregory L. Scott**  
Independent Scholar

**Why WKC Guthrie's 3-Stage Evolution of Aristotle's Theology Should be 2-Stage. — Or Is it Impious to Dance on the Grave of the Non-existent Unmoved Mover of Lambda 6?**

In previous work, especially in *Aristotle's "Not to Fear" Proof for the Necessary Eternality of the Universe* (2019) with its eight "digital extensions," I demonstrate that Aristotle dropped the youthful Unmoved Mover ("UM") of *Metaphysics* Lambda 6, which was his attempt to advance both Platonic metaphysics and two previous "Unmoved Movers" by Anaxagoras and Xenophanes. The Northern Greek from Stagira evolved instead to the divine fifth element of *De Caelo* I & II ("DC"). I supplemented the proofs in *DC* for the universe being ungenerated and indestructible with one that concluded with the ontological necessity of the universe as opposed to a mere logical necessity. *None of these proofs involve the Northern Greek employing an UM.*

My proof makes use (i) of the "two-sided" notion of possibility in the *Prior Analytics*, in which necessity and impossibility are the opposites in a triangular scheme, rather than of "one-sided" possibility, in which impossibility is the only opposite. Necessity means "omnitemporal," impossibility "never happening in eternity," and possibility "happening at least once in eternity but *finitely*." The proof also relies in its fullest form—to account for finite instantiations of eternal kinds like "human" and "art"—on (ii) the Principle of Plenitude of *Physics* III 4 (and not the version that Leibniz and other, more recent scholars have formulated based on mere thinking) and (iii) the infinite past. The Stagirite presents some of the proof, including the conclusion that we need not fear the sun and stars will ever stop, in *Metaphysics* Theta 8.

Like the other four elements, the fifth does not and cannot have a soul in *DC* and therefore cannot desire the UM in a way that Lambda requires for the eternal motion of the universe. Recent additional findings for my position based, e.g., on Eudemus of Rhodes and *Peri Kosmou* were presented at the University of Ottawa's conference on Aristotle's *Metaphysics* in November 2024 in "The Final Nails in the Coffin of Aristotle's Unmoved Mover of *Metaphysics* Lambda 6" (<https://www.epspress.com/NTF/Ottawa2024.pdf>), and I also mentioned then how WKC Guthrie held that the Northern Greek had three theological stages: Aristotle first accepted that the outer spheres have souls in *On Philosophy*, following Plato, then evolved to *DC*, which Guthrie admits is incompatible with the outer spheres having a soul (because elements have no souls).

However, for two reasons that I did not have time to present in Ottawa, Guthrie believes that the Northern Greek moved to a third stage, championing the UM. In this session, I summarize Guthrie's view and present the reasons that completely undercut his arguments for Aristotle evolving to the third stage. Truly, the *DC* and the divine fifth element were the Northern Greek's final theological position, as confirmed by 500 years of subsequent Peripatetic writings and history until Alexander of Aphrodisias and Plotinus mistakenly took Lambda to be the one and only theology, establishing the distorted tradition for generations to come,

without, to my knowledge, either commentator weighing the UM against the divine fifth element.

**Cláudio William Veloso**

Professor, Académie de Normandie, Caen, France

**A Reply to Gregory L. Scott, “Why WKC Guthrie’s 3-Stage Evolution of Aristotle’s Theology Should be 2- Stage — or Is it Impious to Dance on the Grave of the Non-existent Unmoved Mover of Lambda 6?”**

I recently did an extended work on *Metaphysics* Beta, which is soon to be published (Paris, Vrin, collection *Aristote. La Métaphysique*). This work consists of a translation with an introduction, a commentary, an appendix, a postface and annexes. In my introduction, I suggest that Beta seems to be a test or an exercise for its reader-listener, a kind of “spot the difference game”. Beta is known as the “book of puzzles (*aporiai*)”, certainly, but there is no indication of what is or is not well said in this book. It’s the reader-listener’s task to establish it. Beta would thus be the “book of errors” rather than the “book of puzzles”. The rest of *Metaphysics* is supposed to correct these errors. However, the “correct version” of Beta is itself very problematic, and thus needs review, especially with regard to the last two *aporiai* of Beta. Indeed, the scientific project of Aristotle of a “first philosophy”, prior to physics, is a total failure, and this is because the science to which Beta should prepare its reader-listener is simply an impossible science as conceived by Aristotle. This is precisely the subject of my postface.

Scott and I share the same observation: the main thesis defended by Aristotle in *Metaphysics* Lambda, namely that of the existence of a first immobile motor is an absolute disaster. However, Scott argues that *Metaphysics* Theta 8 offers part of a more mature proof justifying eternal celestial motion. For him, this proof *supplements* the similarly more mature arguments of *De Caelo* I and II for the nature of the ether qua celestial eternal motion. Scott agrees with William Guthrie about the incompatibility between these conceptions and the theory of the first immobile motor. Their disagreement concerns the direction of the change of conceptions: from the theory of the first unmoved mover to a more mature one (Scott) or from a less mature theory to that of the first unmoved mover (Guthrie). Now I show that Theta 8 and Lambda 6 are not at all incompatible, even if Theta 8 is no help to Lambda 6 for some flaws of the latter. Similarly *De Caelo* I and II.

Instead of seeing an evolution in the thought of Aristotle on this point – from the ether to the first unmoved mover (Guthrie) or from the first unmoved mover to the ether (Scott) –, I steadfastly maintain the total failure of the Aristotelian project of a first philosophy.

## **Round Table 2**

### **Purity of Forms**

**Organised by: Reier Helle and Samuel Meister**

## Purity of Forms

In the past years, one of the central debates about Aristotle's metaphysics has concerned the connection between the matter and form of a matter-form composite. In particular, it has been debated whether the form of a composite depends definitionally (and hence, explanatorily) on the matter of the composite, and thus is *impure* – or whether there is no such dependence, and the form is *pure*. In this round table, we would like to discuss the philosophical consequences of each view, from both impurist and purist perspectives. For instance, would the impurity of forms help explain how the form (that is, in the case of organisms, the soul) can act on the composite? Or is the purity of form required to secure the status of form as the primary substance of a composite and thus as its formal cause? Further and relatedly, how does the form in each case fare in regard to explaining the causal powers of a material composite? In our view, it is the right moment to discuss such questions since, although both the purist and the impurist readings of Aristotle have been worked out in reasonable textual detail, the philosophical merits of the two views are still vigorously debated.

### Participants (in alphabetical order)

Andreas Anagnostopoulos, Akademischer Rat, LMU Munich, Germany

Reier Helle, Assistant professor, LMU Munich, Germany

Samuel Meister, Assistant professor, University of Geneva, Switzerland

Giulia Mingucci, Postdoctoral researcher, Ca' Foscari University of Venice, Italy

Michail Peramatzis, Associate professor, Worcester College, Oxford, England

Christian Pfeiffer, Associate professor, University of Toronto, Canada

**Panels**  
*(In Scheduled Order of Presentation)*



**Panel 1**

New Research on Aristotle' *Protrepticus*—Evidence, Form, and  
Philosophical Merit

**Organised by: Ronja Hildebrandt and Justin Vlasits**

## Panel Description

Aristotle's *Protrepticus*—a lost but well-attested work—argues that philosophy is essential to leading a good life. As such, it holds special appeal for moral philosophers, metaphilosophers, and historians of philosophy. Since Jaeger, the hotly debated issues around Aristotle's development have been the dominant lens through which the *Protrepticus* has been studied. Although developmentalism is no longer at the forefront of scholarship, significant disagreement about the work persists. Some question how to approach the fragmentary evidence, others debate its literary form, and still others wonder whether the text's philosophical content warrants extensive study. This panel brings together cutting-edge research addressing these concerns.

The first paper examines the linguistic features of the fragments to argue that the *Protrepticus* was likely composed as a dialogue. The second paper analyses the text's most famous argument—the φιλοσοφητέον argument—and explores what we can learn from it even though the evidence transmits conflicting versions. The third paper takes a different perspective, suggesting that the evidence for the φιλοσοφητέον argument fits more straightforwardly into Aristotle's logical doctrine than has been previously thought. The fourth paper evaluates the plausibility of a lesser known but nevertheless intriguing argument from the *Protrepticus*: that philosophy is easy because it requires few external resources. The fifth paper considers Aristotle's apparently conflicting claims about the usefulness of philosophy, suggesting a new solution for solving the conflict, namely that the claims are directed at different audiences. Finally, the sixth paper highlights an especially philosophically compelling aspect of the *Protrepticus*, focusing on a key idea: the introduction of a comparative method in Aristotle's thought that reshapes our understanding of passages in his esoteric works, particularly those addressing degrees of knowledge. Together, these papers point to new and promising directions in the study of Aristotle's lost work.

**Jakob Leth Fink**  
University of Copenhagen, Denmark

### **Indications of Dialogue in Aristotle's *Protrepticus***

Most scholars have relied on external evidence to argue that the *Protrepticus* was a dialogue, referring to Cicero's *Hortensius*—a dialogue that may have been modelled on the *Protrepticus*—and the fact that the *Protrepticus* appears in ancient catalogues alongside works known to be dialogues. However, these arguments were previously challenged and ultimately rejected by Rudolf Hirzel and Gerson Rabinowitz. This paper advances a stronger case for the view that the *Protrepticus* was a dialogue by drawing on internal linguistic rather than external evidence. A comparison between the remains of Aristotle's dialogues and his *Protrepticus* reveals a very high degree of common dialogical features between these text corpora. Such common internal features are best explained on the hypothesis that the *Protrepticus* was a dialogue.

**Sophie Van der Meeren**  
Professor, University of Rennes 2, France

**Aristotle's *Protrepticus* in Neoplatonic Prolegomena to Philosophy: A study of the φιλοσοφητέον argument in the context of Alexandrian Neoplatonic exegesis**

The φιλοσοφητέον ('one must philosophise') and dilemmatic argument (Testimonia A, 2-6 Düring) is not reported by the supposed main source of Aristotle's *Protrepticus*, namely Iamblichus' *Protrepticus* or *Exhortation to Philosophy*. But it is attested by several authors from the second century AD, with the *In Top.* of Alexander of Aphrodisias, to Late Antiquity (sixth, even seventh century AD), with Elias and David, both certainly linked to the philosophical school of Alexandria, perhaps pupils of Olympiodorus, and authors of prolegomena to philosophy.

The φιλοσοφητέον argument is encountered in different forms depending on the authors who cite it. On the one hand, the different structures of the argument, as well as its meaning and validity have been the subject of several studies, some of them recent (see Castagnoli, *Ancient Self-Refutation: the logic and history of self-refutation from Democritus to Augustine* 2010, and Hutchinson-Johnson, "Apotreptic speeches against philosophy and their refutation in Aristotle's lost dialogue the *Protrepticus*" 2018), with sometimes divergent results. On the other hand, it seems difficult to reconstruct the original *Protrepticus* argument.

This is why the paper will adopt a partly opposite approach, showing, in the passages of Elias' and David's *Prolegomena* (A 5-6 Düring) that report the φιλοσοφητέον argument, the elements that fall specifically within the use of Alexandrian professors, in the context of their general introductions to philosophy. In particular, the paper intends to highlight two main points. First, Elias and David's re-functionalisation of the argument in the specific structure of the *Prolegomena*, which is characterised by two sets of dialectical modes (a. Four Aristotelian questions, beginning with the question 'whether philosophy exists'; b. Dialectical methods, including demonstration), and by a scholastic use of argument. Second, the interest in argument as part of the protreptic aim of the prolegomena to the philosophy of Elias and David.

**Justin Vlasits**

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### **To Philosophize or Not to Philosophize**

Aristotle's notorious argument that one is to philosophize has attracted significant attention from ancient and modern logicians alike. Our ancient sources agree that his argument has the form: if p, p. If not p, p. Therefore, p, where p stands for the proposition "one is to philosophize". Their focus was on the justification of the second premise. William Kneale alone among the major modern interpreters agrees with this reconstruction. Others, such as Rabinowitz, Hutchinson and Johnson, Castagnoli, and Keeling, all reject this ancient consensus. Two major considerations push them in this direction: 1) the argument form appears to fit better into Stoic than Aristotelian logic and 2) Aristotle's considered doctrine in *Prior Analytics* II.4 suggests that the premise "if not p, p" is necessarily false. The aim of this paper is to solve the two problems of the moderns, by showing that, despite appearances, neither the language nor logical doctrine in our sources is especially Stoic and that, given the dialectical context of the *Protrepticus*, it is not necessary for Aristotle's premises to be true, but only plausible to the interlocutor. Finally, I turn to the issue that puzzled the ancient sources and, building on recent work, I suggest that Aristotle may have motivated "if not p, p" by making use of the fact that in a binary choice of lives between philosophy and non-philosophy, not choosing philosophy is tantamount to choosing non-philosophy.

**Matthew D. Walker**

Associate Professor, National University of Singapore, Singapore

**Aristotle's *Protrepticus* on Philosophy and External Resources**

At *Protrepticus* 40.15-41.2/B55-56 (cf. DCMS 26, 82.17-83.2), Aristotle offers three arguments for philosophy's easiness, arguments that aim to respond to worries that philosophy is unduly laborious. At *Protrepticus* 6, 40.24-41.2/B56 (cf. DCMS 26, 82.26-83.2), Aristotle's argument appeals to the view that activities that do not require burdensome external resources are prone to be easy. Since philosophers do not require such resources (i.e., special tools or workspaces), but can philosophize in any setting, philosophy, Aristotle concludes, is prone to be easy. This paper will examine, and aims to make sense of, this argument in the light of three worries that it naturally invites: (1) only a tenuous connection holds between an activity's easiness and its not requiring external resources; (2) philosophy does seem to require work spaces, such as schools; philosophy also seems to require resources such as friends and colleagues; (3) philosophy seems to require other external resources as background preconditions for securing leisure. While considering how best to understand Aristotle's argument, the paper explores what sorts of external resources Aristotle thinks that philosophy requires.

**Joshua Mendelsohn**

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### **Aristotle's *Protrepticus* as a Philosophical Ladder**

The *Protrepticus* fragments appear to defend philosophy both on the basis of its uselessness and on the basis of its practical utility. This tension is most apparent between the fragments in chapters IX and X of Iamblichus's *Protrepticus*. The former presents the uselessness of theoretical contemplation as indicative of its status as the ultimate goal of human life, ridiculing the demand for any practical benefit from it, yet the latter apparently proceeds to defend theoretical wisdom precisely on account of its utility in politics and other crafts. Some commentators have proposed to explain away this tension by arguing that Aristotle does not ultimately present philosophy as useless (Ward 2022). Others have dismissed Aristotle's acknowledgement of the use of philosophy as a remnant of his early Platonism (Nightingale 2004).

Against both of these approaches, I emphasize the pedagogical and, indeed, protreptic function of the *Protrepticus* as an invitation to philosophy rather than the presentation of a consistent philosophical theory. The inconsistencies of the *Protrepticus* on this point are real, but they should not be viewed as a wrinkle reflecting the immaturity of Aristotle's thought. They are rather part of a carefully crafted rhetorical strategy. The need to engage with those who are not yet committed to the value of philosophy presents a problem, since Aristotle cannot rely on this audience being convinced by an argument from philosophically superior premises. Aristotle responds to this problem, I argue, by developing his arguments *ad hominem*. Different arguments are intended for people with different background assumptions regarding the ultimate goal of life. Their premises are therefore not necessarily claims which Aristotle takes to be true, and we should not expect them to be consistent from one argument to the next.

Specifically, the arguments of *Protr.* IX leverage the commitment of Pythagoreans and Anaxagoreans to astronomical observation as an intrinsically worthwhile activity in order to motivate the value of philosophy as an analogous activity with an immaterial and therefore superior object. On the other hand, the arguments of *Protr.* X are directed towards those who (erroneously in Aristotle's view) require all value to be practical.

This argumentative strategy is legitimate since the goal of the *Protrepticus* is merely to convince the reader to begin philosophy rather than to present the entire philosophical truth. Although they proceed from incompatible premises, the conclusions of these arguments do contribute to a coherent conception of philosophy that Aristotle both accepts and encourages the reader to engage in. Having been convinced to undertake this practice, readers can be expected to interrogate and correct the premises of the arguments, ultimately arriving at the true argument for philosophy for themselves. Some of the central arguments of the *Protrepticus* therefore function as ladders to be kicked away once they have exhausted their persuasive function even while they hint towards superior views.



**Ronja Hildebrandt**

Assistant Professor, TU Dortmund University, Germany

**Is the *Protrepticus* Philosophically Interesting? A Case Study Concerning  
Aristotle's Comparisons of Degrees of Knowledge**

This paper addresses current scepticism about the philosophical merit of Aristotle's *Protrepticus*. It begins with a brief overview of the text's most interesting philosophical claims before focusing on explaining one of those claims in greater detail: Aristotle's introduction of two distinct types of comparisons (Iamb. *Protr.* 11, 57,12–19 Pistelli). The paper argues that understanding the difference between these comparisons not only illuminates certain passages in the *Protrepticus* but also sheds light on key aspects of Aristotle's broader philosophical corpus.

The two types of comparison that Aristotle distinguishes in the *Protrepticus* are as follows: (a) comparisons of the degree with which a property applies, as in "my knife is sharper than my scissors," and (b) comparisons of the degree of priority with which a property applies, which involve determining the causal or explanatory precedence of one property over another. While the latter type of comparison may initially appear perplexing and unfamiliar, the paper will demonstrate that Aristotle employs it in several of his works. To substantiate this claim, I will discuss one set of examples: comparisons in the *Posterior Analytics*, *Physics*, and the *Metaphysics* where Aristotle compares entities as being "more knowledge" or "more knowable". In this case, I contend that Aristotle is not comparing the degree to which the properties "knowledge" and "knowable" apply, but rather the degree of priority with which the properties are instantiated. Knowledge of prior causes is the cause of knowledge of its effects, and thus it is "more knowledge" in the sense of "knowledge in a prior way", rather than in the sense of "knowledge to a higher degree". The *Protrepticus* provides a framework that prevents misreading these passages as simple, but mysterious, comparisons of degrees of knowledge.

## **Panel 2**

Efficient Causation

**Organised by: Thomas Tuozzo**

## Panel Description

It is often said that, of Aristotle's four causes, the efficient cause is the one that most resembles our modern, post-scientific revolution conception of cause. Back in the 20<sup>th</sup> century, when our modern conception of cause was generally speaking a Humean one, the resemblance, it must be said, did not go very deep. While Aristotle sometimes mentions events as efficient causes, and in doing so may seem to approach the Humean picture, he more frequently counts such things as the art of medicine as efficient causes, and that is very hard to make sense of in a Humean framework. But with the return of causal powers in 21<sup>st</sup>-century metaphysics, Aristotelian efficient causation no longer seems so alien. It is time to re-examine and re-assess Aristotle's views, and in particular to ascertain the ways in which Aristotelian efficient causes actually work. The contributors to this panel explore the ways efficient causes bring about change in four different domains of Aristotle's philosophy. Speaker 1 takes up the question of how crafts such as medicine function as efficient causes, and argues that the standard scholarly view of them as unmoved movers runs the risk of making them vulnerable to Aristotle's own objections to Platonic Forms as efficient causes. Speaker 2 considers the way nature acts as efficient cause in embryological development, unpacking the philosophical significance of Aristotle's metaphor of the "good housekeeper" and giving a philosophical interpretation of the priority Aristotle gives the development of "honorable" organs over the development of "necessary" ones in *Generation of Animals* 2.6. Speaker 3 addresses the causal role of the Active Intellect in *DA* 3.5, reading the metaphors of "craft" and "light" Aristotle there uses in light of his theory of sense-perception, and arguing that the two metaphors represent two distinct efficient-causal roles performed by the Active Intellect. Speaker 4 distinguishes two quite distinct ways that something can be responsible for motion and so count as what the tradition calls an "efficient cause," and argues that recognizing how each plays an important role in the account of elemental motion in *Physics* 8.4 helps resolve long-standing difficulties in understanding Aristotle's argumentation there.

**Tyler Huismann**

Visiting Assistant Professor, University of Oklahoma, USA

### **Aristotle and the Nature of Power Activation**

The causal structure of expert activity is a central piece of Aristotle's causal theory: time after time, he speaks of builders building, doctors healing, and sculptors sculpting. They are central examples of efficient causes, and cases that can be relied upon when considering more intricate causal issues. Now, it appears that we have a good grasp of these examples, due to the widespread scholarly agreement regarding the mechanics of these cases: the art or skill characteristic of experts is a causal power that initiates a change that results in the product associated with experts; more concisely, when the arts these experts possess are actualized, they efficiently cause expert products. But little attention has been paid to *why* this is Aristotle's view, and this deficit has led to a misunderstanding of the nature of these powers when they are being activated. Many scholars describe causal powers as unchanged when they are activated, saying that "strictly, an art is unmoved when it acts" and "the art is an unmoved mover in a robust sense" (Menn (2002, 96) and Fernandez & Mittleman (2017, 151), respectively). In short, many scholars take Aristotle's powers to be quite Platonic, and in doing so characterize powers in a way that, according to Aristotle, prevents them from being an efficient cause.

The goal of this talk is to reorient our understanding of what causal powers are like when they are activated. I begin with a basic overview of efficient causation and experts (§1). As we will see, he regularly takes both experts and their characteristic skills to be efficiently causal. But although both experts and their skills are efficient causes of expert products, Aristotle prioritizes skills and their role in causal processes; and so, I consider next a scholarly characterization of these skills, namely that they do not change when they efficiently cause their effects (§2). Aristotle's own terminology invites such a depiction, but if we take skills to be unchanging, we generate a puzzle of sorts. Aristotle objects to Platonic candidates for efficient causes on the grounds that they do not change: efficient causation, according to Aristotle, requires being *temporally contrastive*. Temporal contrastiveness is the condition that causes do their causing at one time in contrast to others. For instance, a doctor healed yesterday rather than last week because she made the decision to do so yesterday, but not the week prior. Being temporally contrastive requires, minimally, being changeable, such that Platonic Forms cannot be temporally contrastive. But expert skills being unchangeable also would block them from playing the role of efficient cause, on account of failing to be temporally contrastive. Ultimately, I argue that the way out of this puzzle lies in a distinction between ways of being unchanged and unmoved that is latent in *On Generation and Corruption* (§3). Expert skills are unchanged by what they act on, but they are yet changeable by other items. In Aristotle's considered view, skills do change in the course of their efficient causing (§4).

Emily Kress

Jr. Assistant Professor, Brown University, USA

### The Housekeeper's Priorities: The Structure of Aristotle's *GA* 2.6.

In *Generation of Animals* 2.6, Aristotle claims that in making certain animal parts nature acts like “a good housekeeper” (744b16). These parts fall into two groups: “those that are most honourable and that share in the most authoritative principle” and “the parts that are necessary and for the sake of these” (744b12-15). Appealing to the housekeeper analogy, Aristotle argues that parts in the first group come to be earlier on and out of better and purer materials, and parts in the second later and out “out of the worse and the remainders” (744b13-7). In making them, he contends, nature acts “like a good housekeeper” who “is accustomed to throw out nothing from which it is possible to make something useful” (744b16-17).

This paper aims to identify the philosophical *work* these points are meant to do—in their immediate context. Importantly, this question is distinct from one that has received more attention (especially from Leunissen, Gotthelf): how to work out the details of the analogy and Aristotle's application of them to particular cases. It concerns the sorts of theoretical considerations that push Aristotle to even consider the possibility that nature does different things in making different parts in the first place, and how they arise in the argument of *GA* 2.6. Why, at *this* particular point in Aristotle's investigation into animal generation, is it important to claim that certain parts are made at a late stage, out of leftovers, in a process that exhibits nature's ability to “make something useful”?

This question is surprisingly hard to answer. *GA* 2.6 is a long and complex chapter, and while it ends by announcing that “how each of the parts is organized, and what the cause of coming-to-be is, has been said” (745b21-2), there are real questions about how it fits together. Moreover, while these difficulties have sometimes been noted, the project of answering them—in a way that brings out what is at stake philosophically—has also been neglected. As a result, I argue, we have missed the extent to which *GA* 2.6 is structured around working out crucial aspects of Aristotle's account of end-directed *per se* efficient causation.

One important part of that account emerges in *GA* 2.6's account of different kinds of *priority* (742a16-b17). This is the view, I argue (building on Quarantotto's suggestions), that there is a special connection between the *sort* of part something is and how it can (non-accidentally) *come to be*. Some parts are useful to a user for a use—and they cannot come to be until their user is ready. (Otherwise, what comes to be will not be *them*, except homonymously.) Moreover, to come to be non-accidentally, they must come to be when they do in part *because* the user is ready then: via a *process* that takes account of the *user's* development and needs. The role of the housekeeper analogy, I argue, is thus to characterize the agency nature must exercise if it is to respond to these considerations of priority.

**Mary Louise Gill**

David Benedict Professor, Brown University, USA

### **Active Intellect as Efficient Cause in Aristotle's *De Anima* III.5**

*De Anima* III.5 distinguishes active intellect from passive intellect, likening passive νοῦς to matter and active νοῦς to craft and light. The two analogies—craft and light—are remarkable in their difference: while both aim to clarify how active intellect is productive by making all things, craft and light operate in different ways as efficient causes. Aristotle often compares nature to craft to show how an organism's nature—its inner source of motion and rest—behaves in the replication of its kind, acting on matter other than its own, much as the art of carpentry possessed by the carpenter's soul operates on wood. Crafts are first unmoved movers. Light makes colors, which are visible, actually seen and does so by illuminating the medium. Although light is a necessary condition for a color, which is visible, to be actually seen, it is not the principal efficient cause of that activity. That role is contested by more than one causal factor involved in the scenario: by the object of sight and by the perceiver's perceptive soul.

Since Aristotle routinely compares thought to perception, my paper will start by laying out the main features of Aristotle's theory of perception as a framework for his treatment of intellect. Section 1 will analyze Aristotle's three-tiered system of potentiality and actuality in *De Anima* II.5 and the continuation of his treatment in *De Anima* II, and sketch the role of perceptive soul, bodily sense organs, and perceptible object in Aristotle's theory and argue that perceptive soul is a first moving cause and that it uses the perceptible object as a subordinate cause.

Sections 2 and 3 will spell out the details of Aristotle's two analogies in *De Anima* III.5 and offer an account of Aristotle's mechanics of thought. I will argue that the analogies characterize active intellect in two causal relations: In relation to passive intellect, active intellect resembles a craft which produces a product by imposing form on determinable matter. In relation to the intelligible object, active νοῦς resembles light which makes the intelligible object actively thought by the passive νοῦς. The two analogies capture two productive roles active νοῦς plays simultaneously, not two phases of its production. I will later argue that active νοῦς plays a further role, which does constitute a second stage of its production. The simple activity of active intellect—νοῦς νοεῖ νοῦν (intellect thinks itself)—imposes logical structure on human thought and thus enables us to attain truth.

Section 4 will consider the vexed question as to whether active νοῦς in *De Anima* III.5 is to be identified with divine substance in *Metaphysics* Λ. I will argue that active intellect is distinct from divine substance and that each of us has our own.

### **Unravelling the strands of efficient causation: The case of elemental motion**

What counts as an efficient cause? The heterogeneity of the examples Aristotle offers might suggest that the notion is a flexible one, deployed variously for various purposes. I argue rather that Aristotle operates with two distinct concepts of how something can be responsible for motion, and that interpretative difficulties arise from our using “efficient cause” as a blanket term for both. I shall sketch out these two concepts, using as my main text a much-disputed Aristotelian passage: the account of elemental natural motion in *Physics* VIII 4. Caveat: Aristotle does not assign distinct technical terms to the different concepts I shall discuss; some terms are used for both. Careful attention to argumentative context, however, reveals what concept is in play.

The *first* concept of something responsible for motion is that of its metaphysical source what in contemporary metaphysics would be called a “causal power” and for which Aristotle frequently (but not exclusively) uses *archē tēs kinēsōs*. The *second* notion is that of what brings it about that a motion occur at all; that is, what *initiates* it. The causal power to heat may power something’s being heated up, but for that process to get started, the hot thing has somehow to be brought close to what is to be heated. Here, as in the case of all causal powers residing in things other than what they cause to move (Aristotelian *dynameis*), the initiating element is quite distinct from the causal power. Both count as Aristotelian movers (*kinounta*), but in different senses: metaphysical source and initiator. Both are needed; but while the particular sort of causal power is essential to the motion produced, the role of initiator can typically be played by an indefinite number of things. The former, accordingly, is a *per se* mover, the latter, an incidental one.

Among causal powers internal to what they move (Aristotelian natures), however, some are able also to initiate the motion they power: a cat’s soul initiates as well as powers its lunge for a bird. It performs both functions in virtue of what it is: that is, it is in both respects a mover *per se*. But other natures require an external initiator: the nature of a boulder can power its descent to the valley, but something else must initiate it (e.g., by pushing it off the cliff). As in the case of *dynameis*, here we have one thing *essentially* responsible for a motion, its metaphysical source, and another, its initiator, only incidentally responsible for it. What has obscured matters is Aristotle’s refusal to call the metaphysical source in this case a mover (*kinoun*) at all, and so not a mover *per se*. I shall offer an explanation of why he does not. Unable to call the element’s nature a mover *per se*, Aristotle instead makes use of an otherwise very general locution to express its essential responsibility for the motion: it is that “on account of which” (*di’ ho*) the element undergoes motion (cf. *Phys.* 255b14, 25614-5).



**Panel 3**

Wonder and the Continuity of Truth-seeking  
Two Part-Whole Relations in *Met* α.1

**Organised by: Nojan Komeyli and Dashan Xu**

## Panel Description

In *Metaphysics*  $\alpha.1$ , 993a19-b7, Aristotle presents two part-whole relations concerning the inquiry of truth. This panel aims to clarify how these two part-whole relations elucidate the *continuity* of truth-seeking across human generations and cognitive faculties: how it is possible that different cognitive faculties all contribute to the inquiry of truth and how it is possible that new generations of truth-seekers are able to continue the work done by their predecessors.

The first part-whole relation is present in the discrepancy between the initial grasp of the whole and the lack of grasp of the parts. According to Aristotle, in order to begin the inquiry of truth, one must grasp the whole in some way, even though knowledge of the parts that constitute the whole truth is still lacking. We explain this discrepancy by pointing to two different kinds of grasping: the grasp of the whole through perception and experience, and the grasp of parts through thinking and knowledge. This interpretation is supported by Aristotle's scheme of the hierarchy of cognitive faculties from perception to wisdom in *Met* A.1-2. In particular, we argue that the initial grasp of the whole is tantamount to the perception of the universals and the emergence of intelligible objects in experience. We call this interplay between the experiential whole and its intelligible parts, the inter-cognitive part-whole relation. In this way, Aristotle explains the development of knowledge across different cognitive faculties.

The second part-whole relation captures the whole human inquiry of truth as consisting of individual inquiries as its parts. Despite the insignificance of these individual contributions, taken collectively, they are of considerable magnitude. Thus we can envision the progress of human knowledge as traversing a path: the individual contributions to it are the tiny steps made towards the end. This is what we call the interpersonal part-whole relation. Through this dimension we come to understand the unified function of doxography in *Meta* A.3-10 and aporias in *Meta* B as for the continuing path of seeking truth. Underlying our presentation is the idea that wonder is given a dual role in Aristotle. In the case of doxography, it stimulates a retrospective doubt on the authority of the singular parts constituting the current state of philosophy. In the case of aporia, wonder is concomitant with the awareness of the lack in the accumulative understanding of truth, which leaves the possibility of further progress. It is this very possibility that gives us the criteria to assess preceding accomplishments and propels us to conceive of the impasses whose resolution amounts to advancing on the path.

**Dashan Xu**

Ph.D. Student, KU Leuven, Belgium

**From Experiential Wholes to Explanatory Parts  
The Beginning of Truth-seeking in *Met* α.1**

We first introduce the two aforementioned kinds of part-whole relation in *Metaphysics* α.1 as the guiding concern of this panel. We then focus on the inter-cognitive part-whole relation between experiential whole and the intellectual parts. We argue that an initial grasp of the whole is part of having an experience. And experience gives rise to an initial understanding of a universal as presented in *Met* A.1 and given ‘a universal is a kind of whole’ (*Phys* I.1), the initial grasp of the whole is tantamount to the perception of the universal. However, initial understanding of a universal does not yield explanatory power over the particular, but only recognitional power: initial grasping of a universal allows one to *recognise* something *as* something. Therefore, the difference between the initial grasping of a whole, and the grasping of its parts in the latter stage is between knowing *that* and knowing *why*. Experience enables us to grasp the *that* but not the *why*. However, grasping the *why*, or what explains the essence of something, requires understanding things in terms of its parts, for example, in terms of its genus and differentia. We aim to show that the inter-cognitive part-whole relation maps onto Aristotle’s account of how experience gives rise to the universal and his claim that the path to truth is from the universal to the particular, namely, from perceptual and experiential wholes to explanatory and intelligible parts.

**Nojan Komeyli**

Ph.D. Student, Munich School of Ancient Philosophy of LMU, Germany

**“Becoming aware of the knots to be untied”  
Critique as a methodical path to reach *aporiai* in the doxography of  
Aristotle’s *Met A***

The second paper takes up the aforesaid interpersonal part-whole scheme inferred from *Met* α.1, 993a19-b7, by specifically looking into the role of critique as opposed to historiography in the doxography in *Meta* A.3-10. This paper further studies the relation between the doxography of *Met A* and the articulation of the *aporiai* in *Met B* that Aristotle likens to ‘the knots to be untied’ in 995a25-30. The goal here is to explore Aristotle’s critique of the prior philosophers and reflect on its connection with both the dialectical purpose of the text and its doxographical aspects. Our point of departure is to ask how the doxography in question is at the service of the leading purpose of the methodical inquiry of *sophia*, as 983b1-5 tells us to be the case. We suggest that Aristotle’s use of doxography towards corroborating his own theory of four causes does not aim at the absolute negation of the prior theories; rather, it entails their subsumption as parts of the same methodical path. The *aporias* complete the doxography by articulating the problematic parts of the whole that are remnants of the previous steps in the path (‘the knots to be untied’), of which we have become aware thanks to the critical doxography.

**Panel 4**

Aristotle on Epagōgē—A Unitary Concept?

**Organised by: Harry Alanen**

## Panel Description

Aristotle's use of *epagōgē*—often translated as induction—remains an understudied concept in the Philosopher's corpus. Roughly he has three somewhat different ways to characterize *epagōgē*: (A) as a way of reasoning in which one proceeds from particular cases to a universal generalization (see for instance *Top* I.12 and *APr* II.23); (B) as a way of acquiring general concepts based on sense perception, memory, and experience (see for instance *Rhet* I.2 and *APo* II.19); and (C) as a kind of recognition of particulars under universals already known (cf. *APr* II.21; *APo* I.1; *EN* VI.8 C VI.11). It is highly controversial how these ways are related to each other. Indeed, the different uses raise the question if these cases of *epagōgē* are unified, or if *epagōgē* means something different in different cases (making the uses homonymous). We explore some of the different uses of *epagōgē* in the corpus, arguing that a case can be made for understanding the term as a unitary concept.

The proposal to be studied is the following. Aristotle contrasts *epagōgē* and syllogism by reference to the direction of epistemic progression: while *epagōgē* proceeds from what is better known to us to what is better known to nature, syllogism proceeds the other way round (see for instance *APr* II.23 68b8–37). Although Aristotle admits that there are different kinds of syllogism (e.g., demonstration, syllogism, dialectical syllogism and rhetorical syllogism), he takes them to point in the same direction, i.e., from that which is better known to nature to that which better known to us (there are some exceptions, e.g., in *APo* I.1 where he discusses demonstrations which are both deductive and from things better known to us). We suggest that a similar consideration applies to *epagōgē*. Although Aristotle acknowledges that *epagōgē* can be applied in different ways in, e.g., science and rhetoric, he assumes that all applications start with that which better known to us and end with that which is better known to nature. However, there are still several issues that need to be addressed: In which sense is the concept of *epagōgē* a unity? Are different applications of *epagōgē* species of a single genus? Are the uses analogical? Or do they stand in a *pros hen* relation to one another?

The panel proposes to tackle these issues based on Aristotle's considerations in the *Analytics*, *Topics*, *Physics*, and *Ethics*. The themes of the panel covers a wide range of philosophical issues that fit the themes of the conference, including logic, epistemology and philosophy of science, philosophy of nature and ethics. Since the panel consists of six presentations, and since the aim of the panel is to raise discussion on *epagōgē*, we request two one-and-a-half-hour slots which would leave ample room for discussion. However, two one hour-slots would allow the panel to present the proposed papers (but would leave less time for a meaningful QCA).

**Michail Peramatzis**  
Associate Professor, University of Oxford, England

**Aristotle on 'Inductive Recognition' (*epagōgē*) and Knowledge: *Posterior Analytics* I.1 and *Prior Analytics* II.21**

Aristotle uses an example of an idiosyncratic syllogism twice in his *Analytics*, in *Prior Analytics* II.21 and *Posterior Analytics* I.1. In it, while the major premiss is universal, the minor premiss and the conclusion are singular. In both cases he uses the terminology of *epagōgē* to describe our way of grasping certain parts of the sample syllogism. I shall argue, first, in agreement with McKirahan, LaBarge, and others, and against Ross, Barnes, and Bronstein, that we should understand Aristotle's use of the term *epagōgē* in these passages not as describing a deductive inference. Rather, this sort of *epagōgē* has important links to a form of induction, though it is not an inductive inference in any recognisable modern sense. I shall render it as 'inductive recognition'. The inductive aspect of this notion consists in a thought-transition from a particular, normally a perceptible particular, to the relevant or salient universal it falls under. Inductive recognition is equivalent to knowing a particular as being of a certain kind or falling under a universal. I shall develop this view in a way that applies not only to knowing objects – knowing a particular (as being of a certain kind) – but also to propositions – knowing that a particular is of a certain kind. Second, I shall discuss how Aristotle's sample syllogism relates to his prior-knowledge principle, with which he opens his *Posterior Analytics*: 'all teaching and all intellectual learning come to be from pre-existing knowledge' (71a1-2). I shall challenge interpreters' tendency to construe such claims in a temporal fashion. I shall suggest that while such claims clearly have temporal implications, their core meaning is about necessary conditions for knowing certain things – what I shall label 'logico-epistemic' conditions. Aristotle's main point is that inductive recognition is a necessary condition for knowing that this particular has certain important features. This picture applies not only to knowing propositional truths about particulars but also to knowing particulars themselves (non-propositional items): knowing this particular requires a type of perceptual interaction with it, universal knowledge of the relevant or salient universal, and a combination of these two cognitive acts into inductively recognising or knowing this particular as being of a certain kind.



**Mika Perälä**

Adjunct Professor, University of Helsinki, Finland

***Epagōgē and archai in Aristotle's ethics***

Aristotle asserts that we acquire the *archai* (starting points) for ethical inquiry through *epagōgē*, perception, habituation, and other methods (*Ethica Nicomachea* I.7, 1098b3– 4). However, his precise meaning and understanding of these terms remain open to interpretation. In this presentation, I seek to elucidate Aristotle's view on the relationship between *epagōgē* and *archai*. Specifically, I examine how *epagōgē* generates general concepts and universal claims from particular instances. One such claim is: "Virtue is the best state, condition, or capacity of all things that have a use or function" (*Ethica Eudemia* 2.1, 1218b38–1219a1). How does Aristotle arrive at this conclusion through *epagōgē*? I argue that addressing this question sheds light not only on his function argument within this context but also on the broader role of *epagōgē* in providing premises for demonstrations. I shall point out that the role of *epagōgē* is not limited to providing premises for demonstrations because it can also be employed, as in the case of geometry (e.g., *APo* I.1, 71a17–29), to identify particulars as instances of a universal. I argue that the two applications are related as they both guide us from that which is better known to us, i.e., particulars, to what is better known to nature, i.e., the universals.

**Harry Alanen**  
Stipendiary Lecturer, Merton College, Oxford, England

***Epagōgē*, Perception, and Scientific Method in Aristotle's *Physics***

In *Physics* I.2, Aristotle notes that the apparent fact that all or some natural things are changing is clear from *epagōgē*. In *Physics* V.1 and 5 Aristotle claims that that change is between contraries is clear from *epagōgē*. I suggest that in these cases we should understand *epagōgē* as involving a process of recognition where particular cases are recognized as belonging to a common kind. Here particulars need not be understood as individuals but can also include types (of change or subject). It is in virtue of this kind of survey that Aristotle moves from particular cases to a general claim regarding all change/subjects of change. This kind of survey relies on perception, and on moving from what is more familiar to us to what is more familiar by nature (as noted by Aristotle's methodological remarks in *Physics* I.1). However, a problem arises when we consider *epagōgē* (understood as moving from particulars to universals) and the method of study as outlined in *Physics* I.1 184a21-26 where Aristotle claims we must proceed from the universal to the particular. I show that this claim need not be seen as conflicting with our understanding of *epagōgē*.

**Benjamin Wilck**

Postdoctoral Researcher, The Hebrew University of Jerusalem, Israel

**Aristotle on Dialectical Inductions: *Topics* I.12**

I highlight and examine a use of induction in Aristotle that has been largely neglected—or even denied—by scholarship. The prevailing view among commentators is that Aristotle confines dialectical arguments to deductive reasoning, thereby precluding inductive dialectical arguments. Even those who recognize Aristotle's acknowledgment of induction in dialectic deny that he considers it a form of dialectical argumentation in its own right. Instead, they interpret him as treating inductive arguments in dialectic as merely subordinate, auxiliary methods for establishing deductive premises in subsequent dialectical argument. I argue that, contrary to this view, in *Topics* I.12 Aristotle acknowledges a form of dialectical argument that is entirely inductive. As Aristotle explains, inductive dialectic is even necessary for debates with those inept at deductive reasoning. Moreover, I demonstrate that dialectical induction can effectively refute the respondent in debate. In sum, Aristotle considers inductive dialectic to be (i) possible, (ii) necessary, and (iii) effective.

**Antonio S. Ferro**

Wissenschaftlicher Mitarbeiter, Ruprecht-Karls-Universität Heidelberg, Germany

### **The Wonders of Aristotelian X-duction**

In this paper, I set out to shed light on the nature and role of Aristotelian *epagōgē* and illustrate distinct applications thereof. The main claim I want to put forward is roughly that *epagōgē* is helpful when it comes to addressing questions of (non-deductive) epistemic justification, i.e. of why we are *bona fide* committed to the truth of a proposition from which we then argue deductively (e.g., a definition in a proof). Unlike *epagōgē*, demonstration (*apodeixis*) is the deductive form in which any genuine scientific explanation should be cast so as to yield a maximally perspicuous account of why something necessarily is the case. In the case of genuine (i.e. genuinely explanatory) scientific knowledge (*epistēmē*) as opposed to mere ‘doxastic’ knowledge, the question *epagōgē* helps tackle is not just why we are justified in taking the demonstrative premises to be true, but rather also why the premises themselves are ultimately true.

The paper falls into three sections: In the first, I argue that the two most influential readings of Aristotelian *epagōgē*, i.e. both the ‘expert’ (Ps.-Philoponus, Ross 1957, Kahn 1981) and the ‘amateur’ reading (Hamlyn 1976; Engberg-Pedersen 1979; McKirahan 1983; Gasser-Wingate 2019) misrepresent the nature and scope of Aristotelian *epagōgē*. In the second, I go through Aristotle’s examples of *epagōgē* in scientific and non-scientific contexts and show that, in spite of substantial differences, there is an important sense in which they both qualify as instances of one and the same procedure of non-deductive justification. In the third, I attend to the alleged role *epagōgē* plays in the acquisition of reason or intellect (*nous*).

**Panel 5**

Pneumatic Puzzles: Aristotle on Life, Pneuma, and Vital Heat

**Organised by: Léa Derome**

## Panel Description

This panel offers fresh perspectives on Aristotle's conceptions of *pneuma* and vital heat, contributing new insights to ongoing scholarly discussions about these fundamental yet elusive concepts in Aristotelian biology. Through three targeted investigations, the papers address how *pneuma* and vital heat function across different life activities: plant nutrition, animal reproduction, and human cognition.

The first paper investigates the distinctive character of plant nutrition in Aristotle, and its relation to plants' inability to locomote. Unlike animals, which use their own, proper heat to separate useful nutriment from useless and concoct it into blood, plants rely on the alien heat of the earth for digestion. The paper explores the tradeoffs between the nutritive efficiency and metabolic independence that characterize plant and animal life respectively.

The second paper examines a crucial passage from GA II.3 where Aristotle draws an analogy between *pneuma* in semen and the element of the stars. Through textual analysis and comparison with competing theories of animal generation, particularly the model presented in the Hippocratic text *On Fleshes*, the paper argues that Aristotle establishes only an analogical, rather than material, identity between generative heat and celestial substance, unified by their shared capacity to enable specific forms of immortality in their respective domains.

The third paper reconstructs Aristotle's blood typology by carefully distinguishing between blood's thermal properties and its material composition. Against the prevailing view that links hot blood with superior intelligence, this analysis shows that blood's purity and thinness, rather than its temperature, determine cognitive capacity. The paper argues that the desirability of warm blood in humans specifically relates to the role of vital heat in fostering brave and spirited dispositions, rather than any intellectual advantages.

Together, these papers illuminate how *pneuma* and vital heat support various life processes, enhancing our understanding of these foundational concepts in Aristotelian biology.

**Emily Perry**

Assistant professor, Concordia University, Montreal, Canada

### **Staying Put: Aristotle on Plant Nutrition**

Twice when contrasting plant and animal nutrition, Aristotle highlights the fact that plants don't locomote while animals do (*PA* II.3 650a23-7, *GA* II.4 740a24-30; cf. *DA* III.12 434a33-b4). This paper examines the connection between a plant's mode of nutrition and its inability to locomote. For Aristotle, plants are nutritionally dependent on the earth: they use their own, proper heat to assimilate nutriment to themselves (*DA* II.4 416b25- 9), but rely on the earth and its heat for the separation of useful nutriment from useless and for digestion; for this reason, Aristotle likens the earth to an external stomach (*PA* II.3 650a20-3). A plant's nutritional dependence on the earth and its inability to locomote are mutually reinforcing: because a plant is plugged into the earth as an energy source, it can't locomote, and because it can't locomote, it can't hunt or forage for food, but has to eat where it is. This picture has two upshots. First, the view that plants have immediate and continuous access to pre-digested food fits a wider pattern on which plants are presented as more successful – or, at a minimum, more efficient – than animals are at self-nourishment. Second, the fact that plants are functionally dependent on their environment to a greater degree than animals are – animals have an inner sun (the heart) and an inner earth (the stomach) – suggests that whereas an animal is a microcosm, a plant is a part of the cosmos.

**Kosta Gligorijevic**  
Ph.D. Student, McGill University, Montreal, Canada

### **The *pneuma*-aether analogy in *Generation of Animals* II.3**

This paper examines Aristotle's puzzling claim that the seminal residues of animals contain something "analogous to the element of the stars" (*GA* II.3 736b37-737a1). I argue that this statement should not be interpreted as importing a divine material into the sublunary world, but rather as Aristotle's attempt to position his account of generation in relation to his more materialistically inclined predecessors. By comparing this passage with the theory of biological generation found in the Hippocratic *On Fleshes*, I show that: (i) Aristotle denies that the heat in animals' generative residues is the same in kind as the material of the heavenly bodies (contrary to theories such as the one found in *On Fleshes*); and (ii) Aristotle claims only that the generative heat of animals is analogous to the material of the heavens, thus opting for a weaker form of identity between the two. This analogy, I argue, can be understood by examining the comparable functions of generative heat in animals and aether in the heavenly bodies: in both cases, the *tertium comparationis* is a particular kind of immortality that generative heat provides to animals and the fifth element provides to the heavenly bodies.



**Léa Derome**

Postdoctoral fellow, University of Toronto, Canada

### **Too Hot to Think? Blood Types and Cognition in Aristotle**

This paper offers a novel interpretation of Aristotle's blood typology, focusing on the impact of blood types κατὰ τὸ ῥῆθος and κατὰ τὴν αἵσθησιν. Through examination of the textual evidence (HA III 19; PA II 2-4, IV 10; *Pol.* VII 7), I argue that blood temperature primarily influences character traits, while blood purity determines cognitive potential. This challenges the prevailing view that Aristotle sees hot blood as conducive to superior intelligence (cf. Althoff 1992; Freudenthal 1995; Connell 2019). In the interpretation I defend, blood temperature is intertwined with emotions and desires, thereby partly determining the ends toward which intelligence is directed and coloring how mental resources are deployed. With cold blood, intelligence devolves into mere cleverness; with appropriate levels of heat, it works in service of noble pursuits. However, heat alone does not determine whether a species or individual is cognitively gifted. This distinction resolves apparent contradictions in Aristotle's cognitive typology, including why both warm- and cold-blooded animals can exhibit cognitive excellence, and thus offers a more coherent framework for understanding blood's influence on personality and animal intelligence.

**Panel 6**

Before, During, and After the *Poetics*

**Organised by: Luisa Buarque and Fernando Maciel Gazoni**

## Panel Description

Many questions were inherited by the *Poetics* and even more questions were left over as an inheritance from the *Poetics*. We are dealing with a treatise whose importance is inversely proportional to its size. The panel entitled 'Before, during and after the *Poetics*' proposes to address a recurring topic in texts that, having preceded or succeeded the Aristotelian treatise, were dedicated to providing some kind of explanation for poetic composition: the relationship between poetry and reality. On the one hand, the theme encompasses many issues central to the Aristotelian *Poetics* – such as the notion of *mimesis*, the relationship between *poiesis* and *ethos*, the problems surrounding tragic *mythos*, etc. – but, on the other hand, it can be approached from analyses concentrated in a few chapters of the work; more specifically in chapters 3-4 and 7-9. As for the third and fourth chapters, it is in this context that, having defined what he means by poetry, Aristotle tackles issues that will have an influence on the whole of his argument, such as the problem of the so-called poetic 'modes', the problem of the subject and object of poetic *mimesis* and the problem of the genesis of poetic production in general and of poetic species in particular. As for chapters 7-9, this is where Aristotle presents necessity (*to anankaion*) and plausibility (*to eikos*) as criteria that should govern the composition of *mythos*. Therefore, special attention to these chapters has the potential to focus on the most relevant notions for a treatment of the theme in question.

The panel entitled "Before, during and after the *Poetics*" aims to discuss the theme of the relationship between poetry and reality within the framework mentioned above and grounded on a methodological unit, based on the idea that the interpretation of certain topics in the *Poetics* can be enriched when the Aristotelian text is put into dialogue with others. This is a somewhat banal starting point, but one that takes on special relevance when it comes to a lacunar text. In the absence of internal reference points, it becomes even more important to resort to external elements that can become enlightening. In this sense, a procedure will be adopted that can be called 'coordinated readings', that is, proposals of interpretations strongly based on the *Poetics*' links with other texts. Considering the *Poetics* both as a subject that inherits and as an inherited object, texts will be evoked that predate the Aristotelian treatise, texts by Aristotle himself and, finally, some later texts that confirm the longevity of Aristotelian intuitions regarding the issues in focus. In all cases, the methodology will seek to confirm that it is hermeneutically fruitful to coordinate the reading of the *Poetics* with the reading of texts that approach the same problems from different but complementary perspectives. In short, the panel's proposal consists of using a specific methodology to address different aspects of a transversal axis, which articulates unavoidable notions of the Aristotelian treatise.

**Luisa Buarque**

Associate Professor, Pontifical Catholic University of Rio de Janeiro, Brazil

**Representation of the other and self-expression in Aristophanes and Aristotle**

Two scenes from the Aristophanic *corpus* have been considered together as a kind of proto-theory of dramaturgical – comic and tragic – production: the scenes in which Euripides (in *Acharnians*) and Agathon (in *Thesmophoriazusai*) are shown composing their tragedies. In the first case, there is a brief allusion to Euripides' way of composing and style, but in the second case there is a more consistent situation: a poet-character presenting an elaborate vision of poetic making. His speech even contains the earliest appearance of the noun "mimesis" used in an explicitly theatrical context.

However, as far as this second scene is concerned, the comic 'theory' presented there contains an internal tension that, although it can be reasonably pacified depending on how it is read, nevertheless requires a great deal of hermeneutic work. This tension consists of an alternating emphasis between, on the one hand, mimesis as a way of acquiring what one doesn't naturally have and, on the other hand, the direct correlation between the poet's nature (both character and acquired modes) and his dramaturgical production. Now, the fourth chapter of the Aristotelian *Poetics* presents a tension similar to the Aristophanic one, but at the same time it shows that it is possible to make the two apparently conflicting aspects of poetic composition coexist in harmony. This paper will focus on a comparative analysis between the comic and the philosophical contexts, analysing passages from the fourth chapter of the *Poetics* that seem not only to echo Aristophanes' proposals but also to shed light on them retroactively. It fits into the panel entitled 'Before, during and after the *Poetics*', and contributes to it insofar as it proposes a coordinated reading of two comic scenes with a chapter from the Aristotelian treatise, selecting passages from the two authors that address common topics, and showing not only how much certain notions and problems addressed by the *Poetics* circulated before Aristotle, but also how much the Aristotelian vision is capable of organise, articulate and clarify philosophically such problems.

**Eduardo Wolf**  
Professor, University of Brasília, Brazil

**Inner and Outer Workings of Mimesis: Reassessing *Poetics* 2-3 and the Mimetic Mechanism in Aristotle's *Poetics* and some Modern Aesthetic Theories**

*Poetics* 1448 a1 states that Ἐπεὶ δὲ μιμοῦνται οἱ μιμούμενοι πράττοντας, ἀνάγκη δὲ τούτους ἢ σπουδαίους ἢ φαύλους εἶναι. Before considering the relationship between *mimesis* and *ethos* introduced by the adjectives (virtuous and vicious), the Aristotelian formulation requires a more general consideration of the nature of *mimesis* for the Stagirite. There seems to be an ambiguity in both the subject οἱ μιμούμενοι and the object πράττοντας. In the first case, one can have poets in mind, but also actors and similar performers. More importantly, in the second case, the expression can be taken on two different levels: (i) “agents” can refer to an element external to the poetic artifact, namely the very object of poetic *mimesis*—human action in the world; (ii) “agents” can refer to the individuals on stage (actors and others responsible for the performance) and/or internal to the poetic artifact, as Aristotle oscillates between these two uses throughout the *Poetics*.

The tension, which had already been observed by certain commentators (Lucas, 1972, though not always correctly), is accentuated by occurrences where the ambiguity seems to disappear, giving way to a clear choice: πράττοντας καὶ ἐνεργοῦντας in 1448a23, as well as πράττοντας γὰρ μιμοῦνται καὶ δρῶντας ἄμφω (a27-28). Here, the agents indeed perform on stage—they are the actors (*pace* Lucas), despite more general uses. In this paper, I intend to analyze these two possibilities and suggest an intermediate solution via Halliwell (2002).

The prevalence of level (i) is noticeable in interpretations that are committed to some kind of ontology of the artistic object, placing it in a representational relationship with elements extrinsic to it—whether in the Latin reception of Aristotelian *mimesis* as *imitatio naturae* or expressed in terms of poetry's ability to represent “the patterns of life” (Halliwell, 1987).

On the other hand, the prevalence of level (ii), under certain conditions, can lead to an interpretation that is not restricted to dramatic staging. Being generally valid for the poetic phenomenon, this dissociates it, in its Aristotelian sense, from the notion of a “mirror of the world” and reinforces the internal character of *mimesis* (Kosman, 1992).

I intend to argue that, considering a broader interpretation of Aristotelian *mimesis*, some common ground must be reached to accommodate the many nuances of the theme in the *Poetics*. This paper fits into the panel ‘Before, during and after the *Poetics*’, insofar as it examines possibilities for interpreting the relationship between mimetic products and the realities they refer to, and at the same time the realities they create.

**Fernando Maciel Gazoni**

Associate Professor, Federal University of São Paulo – Unifesp, Brazil

**The Role of the *eikós* in the *Poetics***

The notion of εἰκός plays a fundamental role in the *Poetics*. It is introduced at 1451 a12, at the end of chapter 7, where Aristotle characterizes plot structure as requiring beginning, middle, and end. In this context, it seems to be analogous to the expression ὥς ἐπὶ τὸ πολὺ (for the most part), mentioned earlier at 1450 b30, introduced as the operator that governs the relationship between some parts of the plot. Additionally, in the *Rhetoric*, the εἰκός is said to be the ὥς ἐπὶ τὸ πολὺ γινόμενον (what happens for the most part) (1357 a34).

Even if we adopt a modal interpretation of the ὥς ἐπὶ τὸ πολὺ (for the most part), rather than a statistical one, the notion of εἰκός seems incompatible with events that happen ‘against expectation’ (παρὰ τὴν δόξαν – 1452 a4), which Aristotle praises as the most effective for eliciting the feelings of pity and fear. This leads to a potential flaw in the Aristotelian plot theory. How can an event be considered εἰκός and, at the same time, παρὰ τὴν δόξαν?

We propose to closely examine this notion, highlighting its role in Aristotelian Ethics, *Rhetoric*, and *Analytics*. We will address this apparent flaw by considering that events occurring παρὰ τὴν δόξαν (against expectation) must also occur δι’ ἄλληλα (through each other) (1452 a4). This topic will be addressed in the panel titled “Before, during and after the *Poetics*”, which focuses on key concepts in the *Poetics*, particularly the relationship between poetry and reality. If there is some reality on stage, even if it is a merely possible reality, the εἰκός, along with the ἀναγκάϊον, seems to be the responsible for it.

**Cláudio William Veloso**  
Professor, Académie de Normandie, Caen, France

### **The radiant future of Aristotle, *Poetics* 4**

The importance of the first part of the fourth chapter of the *Poetics* for understanding not only the reflection underlying this work, but even the whole of Aristotelian thought cannot be overstated. To put it plainly and without pretentious academic politeness, only the incompetence or intellectual dishonesty of some exegetes – this disjunction is not exclusive – explain how this may have been denied. In the first part of this chapter, the author examines the natural causes of the emergence of the technique of composition (so I translate *poiètiké*), namely the technique of stories (or plots) composition, more precisely the technique of composition of a specific type of story: the transition from prosperity to misfortune, and vice versa.

However, the beginning of *Poetics* 4, in particular what is said about imitation, *mimèsis*, goes far beyond the mere exegesis of the Aristotelian corpus. Having already dedicated several works to the interpretation of this passage, my main goal in the proposed presentation is to show, on the one hand, that different branches of contemporary science (prehistory, paleoanthropology, cognitive sciences, ethology, etc.) have confirmed certain intuitions of Aristotle, and, on the other hand, how a careful reading of this and other Aristotelian passages can contribute positively to the modern enterprise to define art, an enterprise that seems too often vain or useless.

Being in charge of the translation of the *Poetics* for the collection of the complete works of Aristotle in Portuguese (Biblioteca de Autores Clássicos, Imprensa Nacional-Casa da Moeda e Centro de Filosofia da Universidade de Lisboa), I also intend to submit for the examination of colleagues the work carried out on lines 1448b 4-27. Although not very extensive, this passage has many problems regarding text and translation. My presentation will be part of the panel 'Before, during and after the *Poetics*'.

**Panel 7**

Multiple Perspectives on Aristotelian Mereology

**Organised by: Raffaella Antonini**



## Panel Description

As Varzi aptly states, ‘mereology (from the Greek μέρος, ‘part’) is the theory of parthood relations: the relations of part to whole and the relations of parts to one another within a whole’. This type of relationship is not confined just to ancient or medieval thought, not even to contemporary analytical debates. It is rather one of those diachronic topics that continually challenge thinkers across different eras.

Plato addressed the notions of ὅλον and μέρος, particularly in the *Theaetetus* and the *Parmenides*. Plato recognised the problematic nature of the parthood relation, as it is closely tied to the so-called ‘Problem of the One and the Many’. With Aristotle, the parthood relationship is explicitly thematised (cf. *Metaphysics*, Δ25-26; Ζ7-9, 17). Aristotle seeks to understand parthood relations, classify them, and determine the specific type of relationship they represent. His approach is particularly valuable because it is clear from the outset that these relations involve complexities that span both the logical and ontological domains.

This panel aims to shed light on the issue of mereology within Aristotelian thought, exploring it through two complementary perspectives:

1. A historical and textual approach, focusing primarily—but not exclusively—on Aristotle’s *Organon* (especially the *Categories* and *Topics*).
2. A theoretical perspective, examining how contemporary logic and metaphysics engage with Aristotle’s mereological ideas, particularly those found in the *Metaphysics*.

The goal is to ensure that both approaches remain firmly rooted in Aristotle’s texts, fostering dialogue between scholars of ancient philosophy and researchers in contemporary metaphysics and mereology. Among the topics to be addressed are:

- The roles that the concepts of part and whole play in the analysis of various categories in chapters 5 and 6 of the *Categories*.
- The connection between the notion of part and the process of mixture, insofar as mixture can be seen as a process in which parts fit together to form a whole (*Topics* and *On Generation and Corruption*).
- The distinction between concrete heaplike composites, such as a bunch of bricks, and concrete non-heaplike composites, like a house: while entities in both categories possess parts, they differ in how they are unified and how they can be composed and decomposed.
- The use of part-whole relations in the semantics of Aristotle’s syllogistic, drawing connections with broader issues such as fundamentality and ontological dependence in Aristotelian metaphysics.

The panel's experiment lies in bringing together different perspectives to engage in dialogue, using Aristotle's texts as a common ground. This approach aims to foster stimulating and productive exchanges, highlighting points of convergence and divergence between ancient and modern perspectives in interpreting Aristotelian views on the notion of parts and wholes.

The panel will feature four speakers, and it will be structured to fit into two one-hour time slots.

**Annamaria Schiaparelli**  
Independent Scholar

### **Parts and Wholes in Aristotle's *Categories***

In the *Categories*, Aristotle lays the foundation for his ontology. He distinguishes between two important relations. On the one hand, some entities are said of other entities; that is to say, some entities bear to other entities the relation of *being said of*. On the other hand, some entities are in other entities; that is to say, they bear to other entities the relation of *being in*. These two relations have been discussed at length by ancient and modern commentators. But the conceptual apparatus used by Aristotle to describe the relation of *being in* deserves to be further explored. He is adamant that the relation of *being in* does not imply the relation of *being a part*. Thus, the concept of part shows up early on in the treatise and is mentioned in the description of one the two basic relations. The purpose of this study is to investigate the roles that the concepts of part and whole play in the analysis of various categories. My investigation will raise a series of important questions: In the *Categories* and in other early logical works, what is a part of a substance? How can Aristotle explain the claim that the parts of substances are substances? What is a part of a quantity? Is there any difference between the parts of substances and those of quantities? Does an entity's persistence depend on its parts? I shall analyse passages of chapters 5 and 6 of the *Categories* with the aim of answering these questions. This paper contributes to a panel on Aristotle's mereology by discussing the role of parts and wholes in Aristotle's early logical works.

**Raffaella Antonini**

Postdoctoral Research Fellow, University of Lisbon, Portugal

### **The Theory of Parts and the Problem of Mixture**

The contribution of this paper to the general topic of the panel, namely Aristotelian mereology, is somewhat tangential but still significant. My aim is to illuminate the subtle connection between mereological interests and the process of mixture. In a broad sense, mixture can be defined as the process by which things combine. If this is the case, an equally fundamental question arises: how do compounds come into existence from pre-existing ingredients? The problem of mixture lies precisely in this ‘how’. I will explore the notion of parts through the lens of mixture, as Aristotle frames the question in *De Generatione et Corruptione* I.10.

Here, Aristotle’s investigation into mixture focuses on understanding what μίξις is, which entities can combine, and under what conditions (*de gen. et corr.* 327a30-33). He first distinguishes, even terminologically, between composition (σύνθεσις) and mixture (μίξις) (*de gen. et corr.* 328a6). Composition involves the mere juxtaposition of each part of one constituent with each part of the other. An example is the combination of wheat and barley: ‘We speak, e.g., of wheat having been combined with barley when each grain of the one is juxtaposed to a grain of the other. But everybody is divisible and therefore, since body combined with body is uniform, any and every part of each constituent ought to be juxtaposed to a part of the other’ (*de gen. et corr.* 328a2-5, Williams’ translation).

Composition or juxtaposition may appear to be a genuine mixture only to perception. However, humans lack the capacity to observe every part of both wheat and barley to discern that they are merely juxtaposed, rather than truly mixed. For a genuine mixture (μίξις) to occur, the constituent parts must share the same nature as the whole. If μίξις has taken place, the compound must be homogeneous (τὸ μιχθὲν ὁμοιομερὲς), as in the case of water, where all parts are uniformly water.

This paper first seeks to disambiguate Aristotle’s use of σύνθεσις and μίξις (with reference to a similar distinction in *Topics* Δ, 122b25–36). In doing so, it aims to clarify the distinction between composition and mixture, and, consequently, the status of being a part. It appears that we must account for at least two different notions of parts: (i) parts or particles of a non-homogeneous aggregate, which correspond to a compositional outcome and always retain their integrity; and (ii) parts of a homogeneous mixture, such as parts of water, which share τὸν αὐτὸν λόγον with the whole (*De Gen. et Corr.* 328a9)—that is, most likely, the same definition, though not necessarily the same proportion (following Frede, contra Joachim and Williams).

**Alessandro Giordani**  
Full Professor, Cattolica University of Milan, Italy

### **An Aristotelian Mereology of Substances**

In *Metaphysics* Z 17, Aristotle introduces a fundamental distinction between concrete heaplike composites, such as a bunch of bricks, and concrete non-heaplike composites, like a house. This distinction arises from the intuitive judgment that, while entities in both categories possess parts and are therefore composite, they differ in how they are unified and how they can be composed and decomposed. In recent years, some attempts have been made to articulate this difference in mereological terms. Two notable approaches are characteristically Aristotelian, relying on a primitive contrast between actual and potential parts of an entity, and a distinction between an entity and its matter. In this contribution, we develop a new mereology of concrete non-heaplike entities aimed at avoiding the conflation of the notions of substance, structured entity, and non-structured heap that results from the accounts just mentioned. The system is also supported by the fact that it is provably equivalent to a mereological framework where the notion of a substantial whole is treated as undefinable, aligning with Aristotle's idea that what constitutes a structured whole as a substance is nothing more than its status of substance. This work aims to contribute to the panel's objectives by both shedding light on the argument developed by Aristotle in Z17 and eliciting a critical discussion about the consistency of Aristotle's position with recent advances in the mereology of structured and substantial wholes.

**Phil Corkum**

Associate Professor, University of Alberta, Canada

### **Two Notions of Fundamentality in Aristotelian Mereology**

There are two notions of fundamentality: on one, the fundamental is that which is itself unbuilt, ungrounded or ontologically independent; and on the other, the fundamental is that from which all else is built, or on which all else is grounded or ontologically dependent. These two notions are extensionally equivalent, provided grounding (building, dependence, etc.) is well-founded and transitive. Aristotle also speaks of the fundamental as what is ungrounded, independent or, in his own terminology, separate; and he speaks of the fundamental as what grounds all else, as that on which all else depends, or as what is prior. Does he view these notions of separation and priority as extensionally equivalent? The talk concerns a case study: the part-whole relation used in the semantics with which Aristotle models the syllogistic. I will examine the evidence to view this relation as both transitive and well-founded. And so, for this restricted case, the two notions of fundamentality are extensionally equivalent: it is the unbuilt mereological atoms that build all relevant wholes. The talk contributes to a panel on Aristotelian mereology by discussing the formal features of one mereological relation in Aristotle, and by drawing connections with broader issues of fundamentality and ontological dependence in Aristotelian metaphysics.

**Panel 8**

Aristotle's logic in and out of the *Organon*

**Organised by: Colin G. King and Zoe McConaughey**

## Panel Description

When W.D. Ross wrote that Aristotle “has himself shown a better way, the way of science; it is his own *Analytics* that has made his *Topics* out of date” (Ross, 1995, p. 57), he expressed an influential approach to Aristotle’s *Organon* which focused on the *Analytics* and disregarded the *Topics*, especially its central books and the *topoi* or places of argumentation. More recent readings of the *Prior Analytics* and the *Topics* challenge this approach. Following Ernst Kapp, *Greek Foundations of Traditional Logic* (1942), recent interpreters such as Michel Crubellier (2011), Helge Rückert (2016), George Karamanolis (ed. Forthcoming), have stressed the importance of the dialectical background of the *Analytics* and its links with the *Topics*. Others have opened the way to reading Aristotle’s scientific work with the dialectical tools of the *Topics*, showing the relevance of the *Topics* for scientific inquiries; this is the case for instance of Robert Bolton (1990, 2012) for epistemology; William Wians (2023) on *Physics* VIII; Keimpe Algra (1994, 2018) on *Physics* IV and Han Balthussen (2000) on the *Physics* and its posterity, in line with the readings of Jaap Mansfeld (2009) and David Runia (1999) on the use of doxography in scientific works.

In line with these challenges to the traditional reading of Aristotle’s logic, in and out of the *Organon*, this panel explores various and complementary ways of reassessing Aristotle’s logic. Its contributions aim at showing how the standard narrative, exemplified by Ross’s quotation, is the product of a specific historical context and propose alternative interpretations of the *Prior Analytics* and the *Topics* (contributions 5 and 6); this broad reassessment of the *Organon* is pushed to the *Categories* and *De Interpretatione* (contribution 4); the contributions also intend to show how the logical instruments theorized in the *Organon*, such as the *topoi* of the *Topics*, are used in actual scientific and philosophical inquiries (contributions 1 and 2). The role of dialectic in philosophical inquiries is also reassessed (contribution 3).



**Colin G. King**  
Associate Professor, Providence College, USA

**“Obtaining premisses”: A dialectical tool and its philosophical use (part 1)**

In a joint paper, we explore how Aristotle uses the “dialectical organa” —the tools of dialectic—outside of the *Topics*. Our focus will be on Aristotle’s paradigmatic organon: the obtaining of premisses (προτάσεις λαβεῖν: introduced in Top. A13, treated in Top. A14). In the *Topics* we read that this tool includes three others, i.e. the study of things said in many ways, the study of the same, and the study of the different (105a20–33). By seeing how this works within the *Topics*, we have a concrete *comparandum* for the study of how this dialectical tool is used in philosophical inquiry.

**David Merry**  
Lecturer, National University of Singapore, Singapore

**“Obtaining premisses”: A dialectical tool and its philosophical use (part 2)**

Through an analysis of *Nicomachean Ethics* A5, where Aristotle argues that pleasure and honour cannot be the end goal of human life, and *De Caelo* B13, where Aristotle discusses the contested question of the earth’s location in the universe, we will show how and why Aristotle employs the dialectical tool presented in part 1. In these contexts, Aristotle is not following a “dialectical methodology”. He is applying dialectical tools to the examination of problems (or “theses”) which are typically dialectical in the sense that there are conflicting views concerning them (*Top.* A11, 104b34–36).

**Anna Tigani**

Professor, University of Athens, Greece

### **Philosophers in Aristotle's dialectical lab**

In *Topics* VIII 5-6 Aristotle codifies rules for a type of dialectical practice aimed at γυμνάσιον (training), πείραν (testing) and σκέψιν (investigation). This practice provided controlled conditions for dialectical debates, where, as I will argue, agonistic or sophistic techniques served the cooperation between the questioner and the answerer in formulating the best possible arguments for the theses under debate. Parts of Aristotle's philosophical undertaking, such as his criticism of other philosophers, were informed by this practice; it served as the dialectical "laboratory" in which Aristotle along with his co-philosophers and co-researchers in the Academy, used to test theories, theses, beliefs, and arguments, obtaining the necessary πείραι ("trial data") for developing philosophy.

**Mathieu Marion**  
Professor, UQAM, Montreal, Canada

**The dialectical orientation of the *Categories* and the *De Interpretatione***

Against the standard narrative of which Ross is a leading figure, this paper contributes to the general endeavor of providing an alternative construal of the books forming the *Organon* which rehabilitates the pole of 'dialectic' by focusing on the *Categories* and the *De Interpretatione*. The aim of the talk is to show that these studies are geared towards solving problems arising in dialectical bouts – see, e.g., Whitaker, *Aristotle's De Interpretatione, Contradiction and Dialectic* (OUP 1996).

**Zoe McConaughey**  
Assistant Professor, University of Lille, France

### **Aristotle's dialogical syllogistic**

Challenging the traditional reading of the Organon which separates the *Topics* and the *Analytics*, recent scholars have stressed the role of dialogues in Aristotelian logic. Building on the work of Michel Crubellier, this talk will insist (in a first part) on the role of objections (*enstaseis*) in dialectic in order to bridge the gap between the *Topics* and the *Prior Analytics*. In a second part I sketch a new formalization of syllogistic, using the modern framework of “dialogical logic” (Lorenzen&Lorenz), which shows how syllogistic can be cast within an explicitly dialogical framework.

**Doukas Kapantais**

Director of Research at the Centre for Greek Philosophy, Academy of Athens,  
RCGPh, Greece

**To which logical system does Aristotle's syllogistic correspond?**

Among modern logicians in the past century, the pivotal interest has been to single out the logical system corresponding to Aristotle's informal presentation in the *Prior Analytics*. The focus has been on finding the optimal way to formalize the informal exposition in the same treatise. We propose that the *Prior Analytics* is a treatise assuming a contentual metatheory, based on which Aristotle constructs (i) the formal system modernity tends to identify the Syllogistic with, (ii) its deductively equivalent set of 14 syllogisms that tradition tends to identify the Syllogistic with, and (iii) an algorithmic machine (the *pons asinorum*) meant to put the Syllogistic to work. Hence the need for (ii), i.e., one cannot go directly from (i) to (iii).

**Panel 9**

Prime Matter in Medieval and Early Modern Hebrew Scientific Literature

**Organised by: Suf Amichay, Hanna Gentili and Yoav Meyrav**

## **Panel Description**

The concept of Prime Matter was at the centre of some of the most contested philosophical and metaphysical discussions in the medieval tradition. Although contemporary opinions differ regarding Aristotle's own commitment to Prime Matter, medieval thinkers saw it as integral to Aristotelian natural philosophy. Hebrew sources represent an important link in the chain of transmission that shaped the view of Prime Matter in medieval and early modern thought and played an important role by both inheriting and reverberating Arabic debates and developing an original tradition specific to the Jewish context. It also demonstrates how a philosophical notion can stray so far away from the context in which it was originally developed and still be of philosophical value.

Our panel addresses the multilayered contribution of Hebrew sources to the debates on Prime Matter as concerns the legacy of the Arabic tradition in the context of medieval and early modern Jewish philosophy as well as the original elements that the Jewish tradition added to it. Based mainly on underresearched manuscript sources that have never been printed, the three talks will provide new material for the discussion of the importance of Prime Matter in issues of cosmogony, natural philosophy and theory of science.

The talks will address respectively a) new material preserved in the Hebrew manuscript tradition that sheds light on the debates around Prime Matter in the Arabic world; b) the long- term influence of the Arabic debates in the Hebrew reception of Aristotelian natural philosophy; and c) new ways in which the notion of Prime Matter was integrated into the rabbinic and mystical tradition in the Jewish medieval and early modern context.



**Hanna Gentili**

Research Associate, University of Hamburg, Germany

**Prime Matter in Averroes' circle: New sources in Hebrew manuscripts**

This paper examines the discussion of Prime Matter in two medieval treatises originally written in Arabic by abū Jaʿfar ibn Sabāq and abū al-Qāsim ibn Idrīs, both likely associated with the intellectual circle of Averroes. Preserved only through an anonymous Hebrew translation, these treatises circulated with Averroes' Questions in Physics, a collection which comprises of treatises on physics and metaphysics and is transmitted with the commentary by the 14th-century Jewish Aristotelian philosopher Moses Narboni. By analyzing these treatises, this paper sheds light on lesser-known contributors to Arabic philosophy and deepens our understanding of the debates around Prime Matter in the circle of Averroes.

Furthermore, the investigation into the multiple layers of the Hebrew transmission of these treatises and their larger impact on Moses Narboni's thought will reveal their wider impact on medieval Jewish philosophy.

**Yoav Meyrav**

P.I., ERC project HEPMASITE, University of Hamburg, Germany

### **Medieval Hebrew philosophers and the scientific status of Prime Matter**

Medieval Hebrew authors encountered the question of the scientific status of Prime Matter—specifically, which science proves its existence and in which science it is discussed once its existence is proven—mainly in the context of Averroes’s commentaries on Aristotle’s *Physics*. This question was raised in connection with Averroes’s critical discussion of Avicenna’s division of labor between physics and metaphysics and also tied to the scientific status of Prime Matter’s counterpart, the First Mover (or the First Form). The proposed presentation will examine Hebrew philosophers’ positions on this question through two medieval genres: [1] supercommentaries on Averroes’s commentaries on Aristotle, whose authors—due to the limitations of this genre—were bound to follow Averroes’s line of discussion and decisions on where and in what contexts to address this question; and [2] encyclopedias, whose authors adopted a synthetic approach to their various sources and—due to the limitations of this genre—had to introduce and follow a clear distinction between sciences, making their positioning and analysis of Prime Matter indicative of their approach.

**Suf Amichay**

Junior Research Fellow, Trinity Hall, University of Cambridge, England

**The evolving role of Prime Matter (Hyle) in the esoteric Jewish intellectual tradition**

I examine the evolving importance of Prime Matter (hyle) in the Jewish intellectual tradition, specifically within a tradition of esoteric Jewish science. For background, I give a short overview of the reception of the Aristotelian theory of matter in the Jewish tradition in late antiquity, and its integration into Jewish sciences in the Middle Ages. The main part of the talk then focuses on a shift in the role Prime Matter played in esoteric traditions of science. Referring to both known texts and specific findings from manuscripts and marginalia, I show how in the Middle Ages, a commitment to an Aristotelian concept was taken in the esoteric tradition to be a commitment to the eternity of the world. I then show how following the scientific revolution, the Aristotelian concept of matter was ironically canonised as the official concept of matter by Rabbinic Jews.

**Panel 10**

The Fragments of Aristotle: Trends in Current Research

**Organised by: Gertjan Verhasselt**

## Panel Description

2016 marked the 2400-year anniversary of Aristotle's birth. The UNESCO declared that year the Jubilee year of Aristotle. On this occasion, a series of conferences were organized around the world that year under the name "Aristotle Today: International Multiple Congress." One of these was organized at the University of Lisbon and centered on the fragments of Aristotle. The conference exposed a major research gap: the fragments of Aristotle's lost works remain woefully neglected. Only a fraction of Aristotle's oeuvre survives today. The works that have been preserved in medieval manuscripts (his so-called esoteric works) go back to college lectures and were written for his own small circle of students. But Aristotle also wrote many other works that were initially more influential but were ultimately lost.

This panel takes up the thread from that 2016 conference and focuses on the fragments of Aristotle, bringing together papers covering the wide range of Aristotle's polymathic expertise and their reception: his dialogues, doxographical works, rhetorical and literary studies and his scientific works. The overall goal is to advance the study of Aristotle's lost works in anticipation of a new edition of the fragments of Aristotle. It offers both methodological reflections and case studies of specific lost works of Aristotle. At the same time, the papers offer critical reflections on previous editions, particularly Rose and Gigon.

One set of papers focuses on the philosophical fragments and explores problems related to the lost works *On Philosophy*, *On Ideas*, the *Eudemus* and the *Protrepticus* and the doxographical section on Aristotle in Diogenes Laertius. Two further papers address Aristotle's literary-rhetorical activity with the *Homeric Problems* and the fragments of the lost rhetorical works. Another two papers focus on Aristotle's scientific works with the lost works *On Weather Signs* and the epitome of Aristotle's biological works by Aristophanes of Byzantium. Finally, one paper presents an ERC project specifically devoted to the edition and study of the fragments of Aristotle.

**The Unmoved Mover in Aristotle's Lost Dialogue *Peri Philosophias*: A Preliminary Reassessment of the Evidence**

The presence and role of the Unmoved Mover in Aristotle's lost dialogue *Peri Philosophias* has received two opposite interpretations. Some scholars, adopting an immanentist view, rule out the Unmoved Mover from the dialogue and identify the highest god with the outermost sphere of the heavens or the sphere soul (e.g. von Arnim; Guthrie). On this view, and much in a Platonic fashion, Aristotle established a Self-Mover as the origin of motion. Other scholars claim that a transcendent and changeless deity was already present in the *Peri Philosophias*, but they differ significantly in (1) the way they connect the Unmoved Mover with the dialogue's distinctive doctrine that the heavenly bodies move by virtue of being ensouled creatures, capable of choosing their motions voluntarily (F 21b Ross = Cic. *Nat. deor.* II xvi.44); and (2) the way they spell out various points of detail, the most consequential of which is whether the *Peri Philosophias* already featured a plurality of Unmoved Movers, like *Metaph.*  $\Lambda$  8 (a view supported e.g. by Cherniss and Untersteiner). The issue is complicated by its relevance for the question of the development of Aristotle's thought: the immanentist interpretation restores for the *Peri Philosophias* a view that is significantly at variance with Aristotle's "mature" theology, whereas the latter option brings the two into closer alignment.

This paper offers a preliminary reassessment of the extant evidence for the Unmoved Mover in the dialogue, which consists chiefly of the following texts:

- (i) Simplicius, In Aristotelis *De caelo* commentaria, p. 288.28-289.16 Heiberg (= F 16 Ross)
- (ii) Aristoteles, *Physica* II 2.194a27-36 (= F 28 Ross)
- (iii) Scholia In Proverbia Salomonis, Parisinus Gr. 174, fol. 45v-46r (= F 17 Ross)
- (iv) Cicero, *De natura deorum* I xiii.33 (= F 26 Ross)

The paper authenticates texts i, ii, and iv as genuine testimonies of the *Peri Philosophias* (though with different degrees of reliability) and discards text iii by identifying for the first time its provenance: iii is nothing but an abridged version of an argument to be found in David's (or Elias' (?)) Commentary on the *Categories*, which deals with the arrangement of the Movers in *Metaph.*  $\Lambda$  and is explicitly prefaced with the words ὁ Ἀριστοτέλης ἐν τῇ Μετὰ τὰ φυσικά. Accordingly, the paper argues that there is evidence for the presence of the Unmoved Mover in the *Peri Philosophias*, but that there is none for a plurality of Unmoved Movers. Based on these preliminary findings, the paper reviews various options for the interpretation of the famous "god of the *replicatio*" in text iv and tentatively advances an account of the "backward rotation" that does not appeal to another Unmoved Mover but connects it with the demonstration of the absolute necessity of the planetary motions to safeguard the motion of the whole heaven in *De caelo* II 3.286b. The paper ends with some further remarks about the relation between the heavenly bodies and the Unmoved Mover.

**Aristotle, *On Ideas* (F 189 Rose3): A More Extensive Source**

This paper argues for the inclusion of a passage from Alexander's commentary on *Metaph. A 9* (p. 104.20-105.23 Hayduck) among the fragments of *On Ideas*. Previous editors do not seem to have realized that this passage presents a fuller version of the arguments set out in a passage of Alexander's commentary already included in several collections of these fragments (p. 98.9-16 Hayduck). To all appearances, the shorter passage is a summary of the longer one, so if the shorter passage merits recognition as a fragment of *On Ideas*, then *a fortiori* so does the longer one.

The arguments in both passages purport to show that it follows from the Theory of Ideas that any particular human being participates in several Ideas, that each Idea is composite, that the several Ideas are ordered by priority, and that each Idea too participates in several Ideas. In the longer passage they are brought forward in support of Aristotle's claims (*Metaph. A 9.991a27-b1*) that it follows from the theory of Ideas that "there will be several models of the same thing," "the Ideas will be models of Ideas too," and consequently "the same thing will be model and likeness." In the shorter passage they serve as examples of the "many impossible consequences" that according to Aristotle (*Metaph. A 9.991a14-19*) follow from the theory that the Ideas cause perceptible things by being mixed with them. They do not seem optimally suited for either role, which strengthens the case for thinking that they were in both cases adapted from an independent source. At p. 98.21-24 Hayduck, Alexander seems to reveal that the source for the shorter passage was Aristotle's *On Ideas*.

Unfortunately, the longer passage has suffered extensive corruption in the course of transmission, and previous editors have not been able to emend it satisfactorily. I attempt to shed new light on the textual issues by comparing the passage with four indirect witnesses, in particular the parallel passage in an anonymous commentary on *Metaphysics A-E* (traditionally referred to as a "recensio altera" of Alexander's commentary), which differs from the passage in Alexander in several interesting respects. It is not unlikely that this commentator made changes to fit his own needs and desires; but since his commentary is datable to the sixth or early seventh century (and is preserved in a manuscript which predates the oldest manuscripts of Alexander's commentary by about 200 years), it has to be assessed on a case-to-case basis whether its deviations may reflect a more pristine text of Alexander's commentary than that available in the direct tradition. Such an assessment necessarily involves careful consideration not only of paleographic and linguistic minutiae, but above all of the arguments presented in the respective commentaries (especially if we accept that they ultimately derive from Aristotle). Apart from claiming the passage for *On Ideas* and contributing to the restoration of its text, the paper thus offers a case study of the relationship between Alexander's commentary and the anonymous one, which has been the subject of debate in recent years.

**Fragmenta et Testimonia Dubia in the Reconstruction of Aristotle's  
*Eudemus*: Some Case-Studies**

According to the wide-ranging methods employed by Rose and his successors, the number of fragments referring to Aristotle's dialogue περὶ ψυχῆς comprises between 10 (Rose<sup>1</sup>) and 16 (Flashar 2006). By the mid-twentieth century, the scholarly consensus had identified a dozen of texts (Ross 1955) as the core forming the *recensio recepta* of the *Eudemus*, which was overall confirmed by Olof Gigon in his 1987 edition. This paper asks where there is any chance to increase or reduce the number of passages preserving useful information for the reconstruction of this lost work? This investigation aims at reassessing selected relevant texts that have been tentatively assigned to the *Eudemus*.

In particular, the analysis will be focused on the following case-studies:

- (1) Arist. *Protr.* F 10b Ross = F 73 Gigon = Iambl. *Protr.* VIII p. 77.27-78.11 des Places. The eighth chapter of Iamblichus' *Protrepticus* has been authenticated as Aristotelian and in particular as deriving from the *Protrepticus* by Hutchinson-Johnson (2005). Several other scholars, however, have attributed some sections of the chapter to the *Eudemus* on the basis of thematic and philosophical arguments. Further, K. Jazdzweska (2015) has recently added a new parallel, Dio Chrys. *Or.* XXX 10, which points toward the consolatory τόποι clearly attested for the *Eudemus*. A discussion of such a text as a *fragmentum dubium* elicits key questions about the possible nature of the *Eudemus*.
- (2) Arist. F 855-856 Gigon = Damasc. *in Phaed.* I 530 + II 138 Westerink. Included by Rose<sup>3</sup> as F 42 of the *Eudemus*, these texts are now unambiguously assigned not to Aristotle himself but to his character as depicted by Clearchus in the Περὶ ὕπνου (now F 9A-B Dorandi-White). Still, as noted by Dorandi (2018, 490), Clearchus could preserve information about Aristotle's early psychology.
- (3) Arist. F 908 Gigon = F 47 Rose<sup>3</sup> = F 25 Ross = F 37 Untersteiner = [Plut.] *De mus.* 1138c. This fragment has been attributed to different works, including *Eudemus* (Rose<sup>1,2,3</sup>, Heitz 1869), *De philosophia* (Walzer 1934, Ross 1955, Untersteiner 1963) and Aristotelian treatises about Pythagoreans (Timpanaro-Cardini 1962, Barker 2007, 333-334, Rocconi 2011 hypothesizing an imperial intermediate source). It presents a literal quotation from Aristotle about ἀρμονία and its musical implications. The analysis will explore the possible relationship of such a text with Aristotle's discussion of the ψυχὴ-ἀρμονία theory in the *Eudemus*.

Though not exhaustive, these case studies will hopefully stimulate debate about the scope and the textual consistency of the *Eudemus*.



### **The Exposition of Aristotle's Philosophy in Diogenes Laertius V 27-34**

The exposition of Aristotle's philosophy appended to the catalogue of Aristotle's writings by Diogenes Laertius in his *Life of Aristotle* (Diog. Laert. V 27-34) is one of the earliest surveys of Aristotle's doctrines and writings. As demonstrated by Moraux 1949 and Bodéüs 1995, the source from which Diogenes' passage stems, precedes Andronicus of Rhodes' treatise on Aristotle's works (first century BCE) and well antedates the earliest extant commentaries on the philosopher's treatises (second century CE). It therefore provides us with a precious window into the early history of Aristotelianism and into the formation of Aristotle's corpus. Unfortunately, this passage is fraught with textual and interpretative difficulties that hinder its full appreciation.

The first part of this paper will discuss the main textual problems and present a revised critical edition of the passage. The second part discusses three main questions: 1) the unity of this section; 2) the philosophical background of the source(s); 3) the definition of the soul given in ch. 33-34.

- 1) Following in the footsteps of Bodéüs and against Moraux, the paper argues for the general unity and coherence of this section, showing that Diogenes did not carelessly assemble pieces of information scattered in different sources but, for the most part, reported what he read in one single source. What the source originally produced was a beginner's "guide" to the philosophy of Aristotle, possibly part of a larger treatise on his body of works of the kind Andronicus and Adrastus of Aphrodisias will later produce.
- 2) The paper aims to show that the source was a Stoic living sometime before the first century BCE. His main intent was to harmonize Aristotle's production with the tenets of Stoic philosophy. The knowledge that the source shows of Aristotle's esoteric corpus also disproves ancient and modern opinions according to which the treatises of Aristotle did not circulate during the Hellenistic Period.
- 3) Finally, attention is drawn to the underappreciated portion (Diog. Laert. V 33-34) that discusses Aristotle's definition of the soul. This passage is a lemmatic commentary (*hypomnema*) on *De an.* II 1.412a28. It represents the earliest evidence of a word-by-word commentary on a treatise of Aristotle. In conclusion, the importance of this section of Aristotle's life lies in the fact that it provides us with an insight into a time, the Hellenistic Period, in which our knowledge of Aristotle's reception is extremely sparse. This text, furthermore, helps us to disprove at least two preconceived notions about the history of Aristotelianism: 1) that the esoteric works of Aristotle did not circulate until Andronicus' time; 2) that commentaries on Aristotle's works only started to be produced from the second century CE onward.

**Christof Rapp**  
LMU Munich, Germany

### **Aristotle's Rhetorical Fragments and the *Theodekteia***

The ancient catalogues of the works of Aristotle mention several titles that seem to be related to rhetoric. Among these titles is also the so-called “Collection of the Art of Theodectes” (Τέχνης τῆς Θεοδέκτου συναγωγή), also simply called *Theodekteia*. Diogenes Laertius has this work down as a one-book compilation, while the *Vita Hesychii* instead cites three books. Aristotle himself mentions a work of the same title in his *Rhetoric*. The title refers to a historical person by the name of Theodectes, a tragic poet and rhetorician, who was at the same time a student of the orator Isocrates and a friend of Aristotle's. In the scholarship on Aristotle's *Rhetoric*, it is debated whether “Theodekteia” refers to a work by Aristotle dedicated to his friend Theodectes (perhaps an earlier version of the *Rhetoric*) or to a work written by Theodectes. Also, the *Theodekteia* has been associated with the second part of the third book of Aristotle's *Rhetoric*, which seems to engage with an Isocratean division of the parts of speech. This paper scrutinizes the extant testimonies concerning the *Theodekteia* and its relation to Aristotle's *Rhetoric*.

### **Prolegomena to a Study of Aristotle's Lost *On Signs* (Περὶ σημείων)**

According to Diogenes Laertius, Aristotle wrote a *Σημεῖα χειμώνων* (*Signs of Storms*) in one book, and Theophrastus a *Περὶ σημείων* in one book. The briefest work in the *corpus Aristotelicum* is called *Ἀνέμων θέσεις καὶ προσηγορίαι* (*Positions and Names of the Winds*), and the most authoritative manuscript has the title *ἐκ τῶν Ἀριστοτέλους Περὶ σημείων* (from Aristotle's *On Signs*). Further, there is a work that, presumably through a fluke in its publication history, was never included by Bekker in his edition of the works of Aristotle, but rather came to be attributed to Theophrastus, even though in the most authoritative manuscripts it is either attributed to Aristotle or left anonymous: *Περὶ σημείων ὑδάτων καὶ πνευμάτων* (*On Signs of Rains and Winds*), usually referred to as *De signis*.

Earlier editors of the fragments of Aristotle (Rose 1863, 1870, 1886; Heitz 1869; Gigon 1987) all assigned to Aristotle's *Περὶ σημείων* three fragments: Aelian's *De natura animalium* 7.7, a scholion to Aratus' *Phaenomena* 1094 and a passage in Geminus' *Introduction to Aratus' Phaenomena*; and two of them (Rose and Gigon) included the aforementioned *Ἀνέμων θέσεις καὶ προσηγορίαι* as well. But very little scholarship has been devoted to the precise nature of this work. The *De signis* has received some attention recently (Cronin 1992, Sider-Brunschön 2007, Amigues 2019), but the focus has been on its sources, and the guiding assumption has been that it is not (likely) a work of Aristotle but is rather a collection of excerpts from (*inter alia*) the works of Aristotle and Theophrastus on weather signs.

This paper is a first step in reassessing the evidence for Aristotle's lost *Σημεῖα* or *Περὶ σημείων*. A fresh approach involves not only a thorough search for possible new fragments and an evaluation of all fragments unhampered by possibly erroneous assumptions but also a reassessment of both the *Positions and Names of the Winds* and the *De signis*, taking seriously the hypothesis (without yet ruling out any alternative hypotheses) that they might have a significant relationship to this lost work and can shed light on the role it played in Aristotelian scientific inquiry. The working hypothesis of this paper is that Aristotle's *Σημεῖα* was a notebook of *endoxa* about weather signs, from the data collection stage of scientific inquiry (Gotthelf 2012), compiled under the direction of Aristotle with the aim of contributing to the study in the Lyceum of meteorological phenomena.

### **The Description of the Lion in the Second Book of Aristophanes' *Epitome* of Aristotle's Biological Works**

The Συλλογή περὶ ζώων is a Byzantine anthology of zoological texts commissioned by Emperor Constantine VII Porphyrogenitus. It includes excerpts from a variety of authors, notably the now lost epitome by Aristophanes of Byzantium as well Aelian, Timotheus, Basilius and "others." Aristophanes' epitome draws on a range of sources, mainly, but not exclusively, the surviving biological works of Aristotle, such as the *History of Animals*, *On Parts of Animals* and *On Generation of Animals*. It also seems to have incorporated material from Aristotle's lost writings.

One of the nine animals discussed in detail among the twenty-two animals covered in Aristophanes' *Epitome* is the lion. This detailed treatment follows a specific structure outlined at the beginning of Book 2. By analyzing the description of the lion as presented in the second book of the *Epitome*, this study highlights both the similarities and differences between the passages of the Byzantine text attributed to Aristophanes of Byzantium and corresponding descriptions in the Aristotelian corpus, particularly in *History of Animals*.

One notable divergence concerns the lifespan of the lion. While the *History of Animals* omits information regarding the lion's lifespan, the *Epitome* supplements this by referencing the case of the dog, even though this connection is absent in the Aristotelian text. Whether this information was introduced by Aristophanes himself or by an intermediary in the textual tradition between Aristophanes and the Byzantine *Sylloge* remains uncertain. Nevertheless, this inclusion is significant, as it invites a deeper exploration of the broader role of the dog within the *Epitome*. Interestingly, the dog is the most frequently mentioned animal in this text, with 134 occurrences across the entire Byzantine *Sylloge* – 46 more than its mentions in *History of Animals*. This suggests that the dog plays a pivotal role in Aristophanes' approach to animal classification and description, serving as a comparative reference point across multiple entries. By examining these intertextual dynamics, the study not only elucidates the relationship between the *Epitome* and Aristotelian zoology but also explores the methodological strategies used to address gaps and enrich our existing knowledge.

### **FragArist: Toward a New Edition of the Fragments of Aristotle**

Aristotle is known to have written over 200 works, but only about 10% of these have actually survived. The preserved works go back to college lectures and were written for his small circle of students. But Aristotle also wrote numerous works for a wider audience, which survive only in “fragments,” i.e. citations in later authors, and a number of epitomes. In fact, what is preserved today is *not* what Aristotle was famous for throughout most of antiquity or even what he intended to be known for. Yet modern research focuses almost exclusively on the extant works. The result is that the Aristotle one often meets in contemporary scholarship is really only the Aristotle of the preserved school writings. In order to fully understand his views on politics, ethics, poetry, rhetoric, logic and the soul or his approach as a scientist and historian, we must also study the lost works. These include dialogues, letters, speeches, poems, doxographical works, works on logic, ethics, rhetoric, poetry, science, historical collections, catalogues and notes on the dramatic contests in Athens.

This paper will present the ERC-funded project “FragArist – The Fragments of Aristotle: A Reconstruction of his Lost Works,” hosted at the University of Padua. This project focuses the attention on what were initially Aristotle’s most influential works. The main goal is to create a new critical edition of the fragments of Aristotle that will replace the outdated edition of Rose and the problematic edition of Gigon. To this purpose, we are systematically collecting, editing, translating and contextualizing all the fragments and assessing their reliability. For the first time, we are also incorporating the fragments in Syriac and Arabic sources. Based on this new edition, we aim to then reconstruct the lost works and trace their reception. Another important aspect is assessing the authenticity of the individual fragments and of the lost works. For not all works transmitted under Aristotle’s name were actually written by him. Furthermore, the project aims to study the relation of the lost to the esoteric works, challenging in particular Jaeger’s developmentalist view on the lost Aristotle, according to which Aristotle was initially a Platonic philosopher and later became an empiricist who developed his own system, presented in the esoteric works. Finally, the project devotes special attention to Aristotle as a scholar. Indeed, Aristotle was not only a philosopher but also a scientist and researcher, and many lost works were collections he drew on when writing the esoteric works.

By investigating all these aspects, the project thus aims to create a new perspective on Aristotle’s personality and elucidate his influence on later authors, including the Alexandrian grammarians, Roman philosophers, Neoplatonic philosophers, Christian authors and Arabic philosophers. At the same time, this research will further enhance our knowledge of the history of literature, rhetoric and science and the history and organization of the Greek city-states.

**Panel 11**

East of Athens: Transmission of Aristotle's Philosophy in Armenian  
and Arabic

**Organised by: Geneviève Lachance**

## **Panel Description**

This panel examines the transmission, reception, and transformation of Aristotle's philosophy within the Armenian and Arabic intellectual traditions, illuminating the complex ways in which his ideas were interpreted, adapted, and woven into the cultural and philosophical landscapes of the Caucasus and the Near East. While the Greek Aristotelian tradition has been extensively studied, Aristotle's influence beyond the Hellenic world remains an area of growing yet still underexplored scholarly inquiry. This panel seeks to underscore the pivotal role of Armenian and Arabic scholars in the preservation, reinterpretation, and development of Aristotelian thought.

Through an exploration of key translations, commentaries, and original philosophical works produced in these languages, we aim to uncover the intellectual networks that facilitated the transmission of Aristotelian philosophy across linguistic, religious, and cultural boundaries. By convening specialists in Armenian and Arabic philosophy, this panel fosters an interdisciplinary dialogue that deepens our understanding of the cross-cultural dynamics that shaped the evolution of Aristotelianism. In doing so, it offers fresh perspectives on the enduring legacy of Aristotle's thought beyond its Greek origins, demonstrating how his philosophy was continuously reinterpreted and revitalized in the intellectual traditions of the East.

This panel will engage with several key questions: How were Aristotle's texts translated and transmitted within Armenian and Arabic traditions? In what ways did these translations reflect the intellectual priorities and concerns of their respective cultures? How did Armenian and Arabic thinkers integrate Aristotle's philosophy with their own religious and metaphysical frameworks? Where did these traditions diverge, and where did they converge in their interpretations of Aristotelian thought?

By addressing these questions, this panel will contribute to a more nuanced understanding of Aristotle's far-reaching influence and the vibrant philosophical exchanges that shaped the intellectual history of the medieval world.



## Hakan Ahmet Genç

Postdoctoral Research Fellow, Ludwig Maximilian University of Munich, Germany

### The Demonstrative Relations Between Natural Science and Metaphysics in al-Fārābī

The medieval Arabic philosopher al-Fārābī's (d. 950/1) *Attainment of Happiness* (*Tahṣīl al-Sa'āda*) contains an outline account of demonstrative explanations within a science and demonstrative relations among sciences. More detailed and nuanced discussions of these are found in his *Book of Demonstration* (*Kitāb al-Burhān*), which is his reworking of *APo.* Aristotle does not explain clearly the structure of metaphysics as a science and the explanatory relations between natural science and metaphysics. Based on his reading of *APo.*, al-Fārābī articulates a view of the demonstrative order within and between the theoretical sciences, and using it, he interprets the explanatory relations between natural science and metaphysics. Al-Fārābī starts from the discussions of the unmoved movers in *Met. A* and the *nous poiētikos* in *DA* III.5 to explain the causal relations between natural phenomena and the immaterial things studied in metaphysics. In this paper, I spell out the easier-to-survey outline account in the *Attainment*, adding explanations and qualifications from the *Book of Demonstration*, and with the help of al-Fārābī's other works.

In the *Attainment*, al-Fārābī describes a chain of demonstrative explanations: using the principles of a science, we move up demonstrating the *that* (*inna = hotī*) of a cause from an effect; turning back, from the cause we demonstrate the *why* (*lima = dioti*) of the effect and we might also discover other effects, demonstrating both their *that* and *why*. For example, from the fact that the moon displays its phases, we can demonstrate *that* the moon is spherical; in return, from the fact that the moon is spherical, we can demonstrate *why* the moon displays its phases, and from this we can demonstrate other facts about the moon too. Actual demonstrations are more complicated and not all perfectly conform to the simplified *Attainment* picture of moving up from effects to causes and then down to effects, but this seems to be the main arch in the demonstrative structure of a science.

According to the *Attainment*, we can use the knowledge of the highest causes in a science to demonstrate the *that* of their causes which are outside the domain of this science but studied in a higher science. In the *Attainment*, there seems to be only two kinds of principles of a science: the "primary premises [*al-muqaddimāt al-uwal*]," i.e., innate ideas, which are appropriate for the subject-matter of this science, and the claims demonstrated in a lower science about the *that* of what is studied in this science. So the *Attainment* account comments on how a lower science can provide some principles of a higher science but not on the other way around. In addition to this, the more comprehensive *Book of Demonstration* account explains that some principles of the lower science are taken from the principles of the higher science or demonstrated in the higher science.

In the *Attainment*, metaphysics is such a higher science above natural science. The subject-matter of natural science is bodies and things in bodies. As explained more extensively in another work, the external causes of corporeal change in the sublunar world are the motions of the heavenly bodies. Also, human rationality is independent from corporeal change. So the highest causes in nature are the heavenly



bodies and our rationality. Al-Fārābī thinks that there must be causes for the existence of the heavenly bodies, which are the separate intellects (ultimately inspiration: unmoved movers of *Met.* Λ), and a cause of our rationality, which is the Agent Intellect (ultimate inspiration: the *nous poiētikos* of *DA* III.5).

In the *Attainment*, some principles of metaphysics are the claims about the existence of the separate intellects and the Agent Intellect with their features, demonstrated from natural science; other principles of metaphysics are the innate ideas which are appropriate for the subject-matter of metaphysics. In al-Fārābī's other works, the subject-matter of metaphysics is presented as the ontological features (the most general features of all that is: being, unity, their opposites, their *per se* attributes and kinds), and the theological entities (the immaterial highest causes: the separate intellects, the Agent Intellect, and the uncaused cause of everything else, i.e., God, whose existence with His attributes is demonstrated within metaphysics). The innate principles of metaphysics seem to include the common principles shared by all sciences (e.g., the principle of non-contradiction) but also some premises about the ontological features. Al-Fārābī seems to think that ontology serves theology because using claims about the ontological features we demonstrate the relevant features of the theological entities. Moreover, the ontological features are studied in metaphysics and not in other "particular" sciences like natural science apparently because these other sciences study things under the ten categories but both the ontological features and the theological entities are outside the categories; since the theological entities are outside the categories, it seems that their features demonstrated in metaphysics will be primarily outside the categories.

**Geneviève Lachance**  
Research Assistant, University of Lisbon, Portugal

### **Aristotle's *De Interpretation* I-IV in its Armenian translation**

Aristotle's *De Interpretatione* was translated from Greek into Armenian between the late fifth and early sixth centuries. This translation, first edited and studied by the English scholar F.C. Conybeare, was later taken into account in the Greek edition of the *Oxford Classical Texts* (OCT) prepared by L. Minio-Paluello in 1949, with its textual variants noted in the *apparatus*. In 1979, A. Tessier revised Conybeare's recension of the Armenian text, and this revision was subsequently considered in H. Weidemann's 2014 Teubner edition, the most recent critical edition of the Greek text.

In 2016, a new edition of the Armenian translation of *De Interpretatione* was published in Yerevan by Aram Topchyan. This edition includes not only the Armenian translation of Aristotle's text but also an Armenian commentary, originally composed in Greek by a scholar unaffiliated with the Neoplatonic school of Alexandria. Crucially, Topchyan's work is based on manuscripts unknown to both Conybeare and Tessier, offering fresh insights into the transmission history of Aristotle's second treatise of the *Organon*.

This paper will examine the first four chapters of the Armenian translation of *De Interpretatione*, illustrating how the study of this new edition provides fresh insights into the Aristotelian text and its transmission. It will also consider the anonymous commentary that accompanies the Armenian translation, exploring its significance in the broader context of Aristotelian scholarship.

**Alexander Lamprakis**

Research Associate, Ludwig-Maximilians University, Munich, Germany

**The transformation of Aristotle's *Sophistical Refutations* in its early Arabic reception. The case of al-Fārābī's *On Deceptive Topoi*.**

No logical work of Aristotle has survived in more Arabic translations than his *Sophistical Refutations*. The famous Ms. Paris, BnF ar. 2346 has no fewer than three extant translations, which is due to the obscurity of Aristotle's thought in this treatise, as the compiler of the manuscript explains. This curiosity in the Arabic reception of Aristotle's logic shows both the importance that the group of translators and commentators commonly referred to as the "Baghdad School" (10th/11<sup>th</sup> c. CE) attached to this treatise and its perceived difficulty. Against this background, it is not surprising that the treatise underwent a significant transformation under al-Fārābī (d. 950-1 CE), who dedicated an entire treatise to its content, the *K. al-amkina al-mughallīṭa* (*On Deceptive Topoi*) and discussed its content in a series of other works of his. This paper examines some of the most intriguing aspects of al-Fārābī's reworking of this material and compares a number of Aristotle's fallacies with al-Fārābī's interpretation. As will be shown, al-Fārābī took liberties in modifying the overall outline of Aristotle's oeuvre, combining the *Sophistical Refutations* with a number of passages from Aristotle's work and his late antique commentators.

**Ruizhi Ma**

Ph.D. Candidate, HU Berlin, Germany

### **Aristotle's Light in the Arabic *De Anima* II.7 and Its Reception in Avicenna**

In this paper, I explain how Avicenna developed his own theory of light from Aristotle's conception of incorporeal light in *De Anima* II.7. I challenge the prevailing interpretation offered by Dag N. Hasse, which portrays Avicenna as a rebel against Aristotle. Hasse's argument rests on two main points: first, that Avicenna abandoned Aristotle's definition of light; and second, that Avicenna employs multiple types of light, contrasting with Aristotle's single, static light. I refute both of these claims and argue for a continuity between the two philosophers in their understandings of light. I interpret Avicenna's theory as a coherent and innovative account, positing three kinds of light to explain various light-related phenomena. As a robust interpretation and development of Aristotle's theory, Avicenna's approach demonstrates the enduring relevance of Aristotle's ideas. It also helps explain why the Aristotelian model of light continues to find support throughout a long period of intellectual history. My philosophical analysis is grounded in a philological inquiry into the reception of Aristotle's *De Anima* II.7 in Arabic, based on its translations and commentaries by John Philoponus Arabus and pseudo Ḥunain ibn Ishāq.

**Sarah Virgi**

Assistant Professor, Utrecht University, Netherlands

**What's *pneuma* made of? The reception and aftermath of GA II.3 in the Islamic world.**

Aristotle's discussion of the connate *pneuma* in *Generation of Animals* II.3 remains one of the most enigmatic aspects of his natural philosophy, intriguing readers from antiquity to the present. Described as present in male semen and a foamy substance on wet soil, the *pneuma* is said to carry a special kind of heat, distinct from and "more divine" than the four elements, resembling "the element of the stars."

The extant medieval Arabic translation of GA, attributed to Yaḥyā ibn al-Biṭrīq (d. c. 860), presents some remarkable translation discrepancies. It offers a subtly altered version of the Greek text, with crucial impact on its meaning, diminishing the *pneuma*'s extraordinary nature. Some manuscripts even omit it altogether, referring only to vital heat. Could this reflect the influence of the Galenic view of the *pneuma* as mere hot air stemming from the heart? Despite this alteration, it appears to have had little impact on later interpretations in the Islamic world. Many scholars continued to regard the *pneuma* (rūḥ in Arabic) as a distinct, divine body, often expanding its attributed powers.

In this talk, I will examine two key theories of the *pneuma* in the Arabic tradition: that of Avicenna (d. 1037) and his later critic Fakhr al-Dīn al-Rāzī (d. 1210). By analyzing their readings of GA II.3, I will explore how they build on Aristotle's analogy between the *pneuma* and the heavenly bodies to introduce the concept of a special kind body—one that accounts for generation, growth, and, crucially, the connection between body and soul, as well as the possibility of a bodily afterlife. This analysis contributes to the broader theme of the panel by tracing how Aristotle's ideas were not merely transmitted but actively reshaped within the Arabic intellectual tradition. It highlights the complex interplay between philosophy in the Greek and the Islamic worlds, demonstrating how translation and interpretation shaped evolving metaphysical and physiological conceptions of the *pneuma*.

**Plenary (Keynote) Sessions**  
*(In Alphabetical Order)*

**David Charles**  
Professor Emeritus, Yale University, USA

### **Human Thought and Enmattered Form: Problems in Aristotle's Soul**

My talk will focus on the following problem:

Is Aristotle's account of human thought (as presented in *De Anima* 3.4-8) in tension with his view of the human soul as developed elsewhere in *De Anima* if understood as constituted by three claims:

[A] Psychological phenomena (such as fearing, desiring, perceiving and imagining) are defined as inextricably psycho-physical phenomena, not definable by decomposition into two independently definable types of phenomena, one purely psychological, one purely physical. Their form is inextricably psycho-physical [enmattered form thesis],

[B] The relevant type of physical/ bodily phenomenon in these cases is defined as an inextricably physico-psychic activity: the realization of essentially enmattered capacities of essentially embodied substances, and

[C] the human soul is a properly integrated unity?

**Marguerite Deslauriers**  
Professor, McGill University, Canada

### **The Reception of Aristotle in Pro-Woman Works of the Sixteenth Century**

Aristotle's reputation as a misogynist emerged during the Renaissance, in the debate about the nature and worth of women termed the *Querelle des femmes*, in which some authors argued for a view of women as intellectually incompetent and morally deficient, and others aimed to refute those arguments. This article argues that a number of Renaissance pro-woman authors used the work of Aristotle to contest his own assertion that the female is somehow imperfect, and thus to argue that contemporary misogynists were mistaken in accepting on Aristotle's authority that women were inferior to men. It focuses on pro-woman interpretations of certain passages in Aristotle's *Categories* and *Metaphysics* that were advanced to establish the status of women as human beings capable of rational activity. It shows that pro-woman authors maintained an understanding of Aristotle as misogynist, even as they made use of his own philosophical claims to respond to that misogyny.



**Pavel Gregorić**

Senior Research Fellow, Institute of Philosophy in Zagreb, Croatia

### **The Last Aristotelian Cosmologist: Antonius Medus Ragusinus**

Antonius Medus (Dubrovnik, c. 1540–1603) is a virtually unknown representative of late Renaissance Aristotelianism. He was an autodidact who published three books in Venice, two commentaries on Aristotle's *Metaphysics* – on Book XII (1598) and on Book VII (1599) – and a polemical commentary on Porphyry's *Isagoge* (1600). In his commentary on *Metaphysics* XII.8, Medus criticizes the current cosmological theories. He dismisses the concentric theories of Eudoxus, Callipus and Fracastoro (Aristotle included) as mechanistic, he criticises the Ptolemaic theory of epicycles on doctrinal and empirical grounds, and brushes aside the Copernican heliocentric theory as mathematically elegant but unsupported either by Aristotle or by facts. Medus then elaborates an “organistic” version of the Aristotelian concentric cosmological theory, one which he believes is better aligned with both Aristotle's metaphysics and the astronomical knowledge of his time.

In this talk I will present Medus' cosmological theory that features 31 celestial orbs moved by a total of 24 unmoved movers. I will discuss the structure and the principles of Medus' theory, I will show how it is meant to explain various astronomical facts, and I will indicate its shortcomings. Despite its limitations, Medus' theory addresses some gaps in the cosmology *Metaphysics* XII.8 and offers an interesting way of fixing them. Moreover, Medus' text bears witness to the enduring influence of Aristotelian cosmology and serves as a reminder that the three major astronomical models – the Aristotelian, the Ptolemaic, and the Copernican – were still vying for dominance at the turn of the 17th century.

**Mariska Leunissen**

Professor, The University of North Carolina at Chapel Hill, USA

### **Maternal Love, Motherly Virtue, and Tragic Tropes in Aristotle's Ethics**

This paper discusses Aristotle's conceptualization of maternal love (*philêsis*) in two argument-pairs preserved in his discussions of friendship (*philia*) in the *Eudemian Ethics* (*EE*) and *Nicomachean Ethics* (*EN*) and argues that his invocation of tragic tropes in these contexts suggests that for Aristotle and his contemporaries, mothers—and perhaps especially 'good' ones who love their children deeply and unconditionally—are morally ambiguous figures. According to my reading of Aristotle, human mothers love their children by nature the most of all animals, but given the 'extremity' of their love, mothers do not qualify as friends of their children, nor does Aristotle think that maternal friendship is or involves virtue. I will first examine Aristotle's examples of maternal love in the context of his discussions of friendship and virtue in his ethical treatises, and then show how his descriptions of maternal love invoke tragic tropes that signal the moral complexity involved in thinking about the roles and virtues of women in the context of friendships and of the adage that one should always help one's friends and harm one's enemies when women are most attached to their own children.

**Marilù Papandreou**

Postdoctoral Fellow, University of Bergen, Norway

**Aristotle's *Metaphysics* and Democritus' Project**

Democritus is commonly presented as a crude materialist, and Aristotle is often said to be his chief critic. In this talk I shall argue that the books on substance of the *Metaphysics* offer a different story. Here, Aristotle explicitly mentions Democritus twice. In Z 13, he argues against the Platonists that a substance cannot be composed of substances and praises Democritus for having grasped this criterion. In H 2, Aristotle begins none other than the inquiry into substance as *energeia* by citing Democritus' three differentiae. I shall begin by discussing these two passages and contend that they should be considered as evidence that a different story can be told. On the one hand, Aristotle does not think of Democritus as a crude materialist; on the other, he is not his chief critic but rather builds on his intuitions both in arguing against the Platonists and in developing his own metaphysics. I shall show how the different story looks like in the *Metaphysics* more generally, even where Democritus is not explicitly mentioned, and how it relates to Aristotle's explicit appreciation and criticism of Democritus elsewhere.

**Gabriela Rossi**

Associate Professor, Universidad de los Andes, Chile

**The argument for a Final End in *Nicomachean Ethics* 1. 1-2: A Normative Reading**

I focus mainly on Aristotle's argument in *Nicomachean Ethics* 1. 1-2 (1094a1–26) and argue for the reading that the Aristotelian proposal of a final end to human life should be treated as a normative-practical thesis, rather than as a theoretical one. Even when at this point in Aristotle's argument this final end does not yet have a determinate content, the thesis nevertheless has normative meaning: if I am right, it states that a human life is better lived when it is rationally lived, or (in different words) when one has what we would today call a practical identity. For this I also take into account some passages of *Eudemian Ethics*. One of the advantages of my reading is that it saves Aristotle from a famous accusation of committing a fallacy in 1094a18-22.