

Book Proposal

Title: *Knowing Universally: Aristotle on Concepts and Human Knowledge*

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Introduction

Synopsis

The subject of the book is Aristotle's theory of knowledge with an emphasis on his view that the distinctively human forms of knowledge are conceptual, rather than perceptual, but are based on sense-perception. The book explores the respects in which conceptual knowledge is based on sense-perception, and argues that Aristotle represents an approach to epistemology that is importantly distinct from both the rationalist and empiricist traditions.

When I speak of knowledge being "conceptual," I am using a post Aristotelian idiom. Aristotle himself speaks of certain forms of knowledge as "universal" or "of universals." The earlier chapters of the book focus on the questions of how Aristotle understands universality and why he thinks that it is essential to the human forms of knowing. Against the traditional interpretation of Aristotle as a moderate realist, I argue that he held that universals exist only in (or relative to) thought but are based on causally significant likenesses among particulars. Thinking of particulars in universal terms enables us to trace the causal relations between them and to appreciate why they must be as they are. It is this appreciation that sets human beings apart from animals and it is the hallmark of human knowledge.

Having elucidated the conceptual character of human knowledge, the book proceeds to consider how conceptual knowledge arises from sense perception. I argue that, though this was not a central preoccupation of Aristotle's, there is evidence that he thought that conceptual knowledge arises from

perceptual not just in the sense of causally developing out of it, but in the sense of being justified on the basis of it. We find in Aristotle prescriptive norms for the introduction of concepts and establishing of definitions. These norms can be applied (though only in retrospect) to the formation of even our initial concepts on the basis of sense-perception (and related forms of cognition). Thus they reveal how conceptual knowledge can be justified on the basis of sense-perception. The theory of knowledge that emerges from Aristotle's corpus is like traditional empiricism in that it grounds knowledge in sense perception, but the systematic character and the grasp of causal necessity that Aristotle ascribes to the distinctively human forms of knowing are more reminiscent of traditional rationalism. The book concludes by considering what would be required to further develop and defend such a view of knowledge, and I discuss the extent to which Aristotle's corpus provides the resources to do so.

Detailed Summary

Chapter 1: The Degrees of Knowledge and the Promise of an Aristotelian Epistemology

The first chapter provides an overview of Aristotle's theory of knowledge and frames the questions that will be addressed by the book as a whole. It begins by surveying the terms in the Aristotelian corpus that denote knowledge or types of knowledge and sketching the relations between them. The widest of these terms is *gnōsis*. Under it Aristotle includes everything from the indistinct and transient sensations of the most primitive animals to the most precise and far-ranging conclusions of the wisest scientists. However, not all the states that Aristotle identifies as *gnōsis* are equally so: *gnōsis* comes in degrees, with some states being described as "more knowing" (*gnōstikōteron*) than others (and some objects as "more knowable"). The difference between the higher and lower degrees of *gnōsis* is not (or not only) a matter of how certain the knowledge is. It is, rather, a matter of "precision" (*akribēia*) and of the causal depth of the knower's understanding. Perception (and especially the perception of lower organisms) is imprecise, whereas art (*technē*), prudence (*phronēsis*), and science (*epistēmē*) are the most precise forms of knowledge in their respective domains of production, action, and contemplation. These distinctively human forms of knowledge are the subject of the book.

A lesson from *Metaphysics* A.1 and *Posterior Analytics* II.19 is that these high-degree forms of *gnōsis* arise out of the lower forms, which are more common. Both chapters describe how art and science arise for human beings, through a series of intermediate stages from perception, and make clear that, while perception is shared by all animals, each of the successive stages is shared by fewer animals than its predecessor. The last of these intermediate stages which is not the exclusive province of human beings is experience (*empeiria*), and considering its relation to art and science helps to bring out what sets the distinctively human forms of knowing apart from the others. The key text here is *Metaphysics* A.1, which teaches that art and experience are quite alike in the existential actions they enable, but differ in regard to the sort of cognition involved. A doctor who has the art of medicine and someone who lacks this art but is experienced with illness may both be able to specify a course of treatment, predicting correctly the effects it will have on the patient. However, only the doctor views the ailment, the patient, and the treatment in

universal terms, and only he grasps *why* the treatment cures the patient. Universality and causality are what separates the distinctively human forms of knowing from those that are accessible to other animals.

Since what one is experienced with is a *kind* of object rather than with a particular, clearly there is a sense in which experience can be said to be universal, and since the merely experienced medic can predict the outcomes of certain treatments, there is a sense in which his knowledge could be said to be causal; so the chapter proceeds to bring out what Aristotle means when he denies that the merely experienced person has universal or causal knowledge. It does this by comparing Aristotle's view of the merely experienced subject with the views of modern empiricists (chiefly Hume) who deny that we are capable of general ideas and of the sort of causal knowledge that we often think we possess. Like a Humean subject, Aristotle's merely experienced person, by associating perceptibly similar particulars, acquires dispositions to form expectations about how such particulars will behave in the future. What he lacks is any abstract representation of the *kind* of object in question and any grasp of what it is about such objects that *makes* them behave in the expected manner. It is this sort of universal and causal knowledge that distinguish art and science from mere experience.

Significantly, the name "empiricism" derives ultimately from a school of ancient doctors (including Sextus Empiricus) that relied explicitly on *empeiria* and eschewed any pretense of or search for the sort of universal causal knowledge that Aristotle thought would be necessary to render medicine an art. One promise of Aristotelian epistemology is that it is possible to attain the sort of knowledge eschewed by these ancient doctors and thought impossible by modern empiricists. (Indeed, in later chapters, I will ultimately argue that Aristotle held that even people who do not possess science or art have in many of their ordinary-language concepts a rudimentary form of the sort of knowledge denied by the empiricist tradition; they have an imprecise grasp of causal necessity, which can be refined by the process of analysis.)

Aristotle was not alone in holding that there is a distinctively human form of knowledge that grasps its objects as necessary. The aspiration to such knowledge is a central feature of the philosophical tradition to which Aristotle was heir. Complaints in Heraclitus and Parmenides that earlier cosmologists

lack understanding can be seen as manifestations of this aspiration, as can many of Plato's criticisms of the sophists (most notably his dismissal in the *Gorgias* of rhetoric as an *empeiria* rather than an art). It also motivates much of Plato's fascination with both mathematics and final causes and figures prominently in his argument for the existence of forms. For Plato and the rationalist tradition he epitomizes, causal and universal knowledge is possible only because reason has access to certain objects independently of sense-perception. In Plato's case in particular, it has access to transcendental forms.

Aristotle, of course, denies the existence of such forms and emphasizes the role of perception and experience in the development and functioning of the distinctively human forms of thought and knowing. An Aristotelian epistemology essentially distinct from both rationalism and empiricism would be one that held that genuinely universal and causal knowledge (of the type denied by the empiricists) could be grounded in sense-perception (in a way denied by the rationalists). A central question of the book as a whole is the extent to which Aristotle himself provided us with such an epistemology. The first chapter ends by elaborating on this question and discussing different things that it might mean for knowledge to be grounded in sense-perception.

Chapter 2: The Problem of Universals in Socrates, Plato, and Aristotle

The second chapter discusses "The Problem of Universals in Plato and Aristotle," arguing that the problem arises out of the epistemic issues already discussed in the first chapter. Socrates inquires in many of Plato's early dialogues are motivated by the premise that knowledge (at least knowledge of the sort being claimed or sought by his interlocutors) must be universal rather than particular. For example, knowledge of virtue must be of virtue *in general* rather than of the virtues taken severally. Such knowledge will be organized around a definition of virtue that can serve as a starting-point in (what Aristotle will later call) demonstrative reasoning that will reveal (and establish as necessary) virtue's attributes. The chapter discusses how Plato's theory of forms grows out of reflection on the ontological presuppositions of such a theory of knowledge.

Though we often speak of a single “theory of forms,” Plato’s dialogues and letters contain several distinct views of the forms, and there is evidence that additional views had currency in the Academy. During Aristotle’s tenure there, there seems to have been an ongoing debate about the nature of forms and their relation to perceptible objects. In this context Aristotle coined or adopted the term “universal” (*katholou*) to denote the central role forms were meant to play in making knowledge possible. A universal is a single item that can be predicated of many. Such items are required to serve as terms in demonstrations, and Aristotle held that demonstration is our means of appreciating causal necessity and, thus, of achieving *epistēmē*. Though Aristotle rejected the various theories of forms, he found in the arguments offered for them a compelling case that there must be universals of some sort—that something must fill the relevant role.

Aristotle’s introduction of the term “universal” was a significant conceptual advance, and it is one that has been largely lost, as the word “universal” has come to be used approximately as the word “form” had in the Academy, to denote a sort of entity posited by certain ontological theories. I devote some time to explaining how Aristotle’s usage of “universal” differs both from the way “form” was used by the Academics and from the way the word “universal” is most often used in contemporary analytic philosophy. What is at issue here is not directly what theory of universals one accepts, but what it is that a theory of universals is a theory *of*. Throughout I emphasize that Aristotle himself thought that there were several very different sorts of universals, which may call for different sorts of accounts. In addition to species and genera (or forms and kinds), which are the paradigmatic sorts of universals, Aristotle recognized what he called successions (ἐφεξῆς) and what have come to be called “focal unities.” (There are also groups that are alike by analogy; though Aristotle denies that there are universals comprising such groups, he maintains that a sort of universal cognition is, none the less, possible in these cases.)

Chapter 3: Is Aristotle a Realist about Universals?

The third chapter argues against the traditional understanding of Aristotle as a “moderate realist” about universals. In fact, this label has been used as a name for at least two distinct views, associated with

different understandings of the problem of universals, and both views have been ascribed to Aristotle by different authors. The two views called “moderate realism” share a common commitment, which I argue is incorrect—namely, that the particulars that fall under a universal do so in virtue of sharing some identical component or aspect that exists independently of any thought or speech about the universal and provides a basis in reality for universal thought and speech. However, despite this shared commitment there are important differences between the views which must be discussed to clear up some confusions that have developed in the secondary literature due to the (rarely distinguished) senses in which “moderate realism” and related terminology are used by different traditions.

The term “moderate realism” originates with the Neo-Thomists (mostly from the Louvain school), who wrote a number of widely used histories of philosophy in the late 19th and early 20th century. They used the term for a position they both endorsed and attributed to Aristotle. According to this view, universals are real, not in the sense of existing independent of the mind, but in the sense of having an objective, mind-independent basis. This basis consists in a qualitatively identical element or feature shared by all the particulars falling under a universal. Though some of these authors will sometimes speak of the relevant element or feature as “the universal,” when speaking more strictly they write that it becomes universal in thought when it is abstracted from the context of differing features with which it is co-present in each particular. Thus, strictly speaking, what exists extra-mentally is a basis of universals, rather than a universal itself. The realism in question is “moderate” in that the objective basis for universality can be found in the perceptible world rather than outside of it (as was held by “extreme realists”).

In the second half of the 20th Century, analytic metaphysicians came increasingly to use the phrase “moderate realism” to name the view that universals exist as numerically singular, mind-independent objects that are multiply instantiated. This view differs from the neo-Thomist view in two respects: first the universal is itself a mind-independent object, rather than based on one; and second the sort of identity involved in the existence of a universal is numerical rather than qualitative. Some scholars (e.g. Loux) attribute this position to Aristotle. Among those who deny that Aristotle held this view, most

(e.g., A. C. Lloyd, Gerson, Witt, Frede) attribute to him either the neo-Thomist view (often under a different name) or another position that shares the commitment I described earlier.

After canvassing the range of views in secondary literature that share this commitment, I first argue against the view that Aristotle held that universals exist *as such*, independent of the mind. Drawing primarily on *Metaphysics* Λ and Μ and on passages from the *Posterior Analytics*, I show that Aristotle thought that universals are mind-dependent existents with a mind-independent basis. Thus far I agree with the neo-Thomists, whose position I then turn to.

Much of the appeal to the neo-Thomists of moderate realism (as they understood that term) was that it made intelligible how universal concepts could be founded on sense-perception. However, the form of abstractionism involved in this position is subject to a number of well-known and I think insuperable objections (perhaps best formulated by Peter Geach in chapters six through 11 of *Mental Acts*). Aside from being indefensible in its own right, the position cannot have been Aristotle's, because Aristotle maintains in a number of different passages (most explicitly in *Metaphysics* I.8 and 10) that species of genera need not share any (even qualitatively) identical features and that the feature in virtue of which several species belong to the same genus is non-accidentally different from one species to the next. Indeed, Aristotle had important reasons for this view (clearest from *Metaphysics* Z.12, H.6), which I proceed to explore.

Chapter 4: The Basis of Concepts

Drawing on work by David Balme and James Lennox, Chapter 4 develops and defends my alternative interpretation of Aristotle's view of the ontological basis for universal concepts. I begin with the case of genera, and argue that the species of a genus are alike not by sharing any identical features or components but by lying near to one another along some continuum (or interrelated set of continua). Items that are alike in this way are properly classed together into a genus when the likeness is causally significant—that is, when the particular causes or effects of the like particulars are themselves alike and fall under some other universal. The chapter goes on to discuss the special case of the least universal

universals, infima species, arguing that the account developed for genera applies to them as well and that they cannot be divided into narrower species precisely because the fine-grained likenesses on which such divisions would have to be based would not be causally significant.

Some of the texts I appeal to in developing this interpretation concern cases in which Aristotle recommends for or against introducing a name for a putative genus. (Most notable are *Parts of Animals* I.4, *Topics* VIII.2, and *Posterior Analytics* II.14.) I go on to explore other passages in which Aristotle deals with this same issue, in order to confirm the account and make clearer the relation between language and universals. In the process, I discuss briefly the cases of universals other than genera and species, and I make some preliminary remarks on the prospects for grounding concepts in sense-perception (a topic which will come to the fore in chapters 6 through 8).

Chapter 5: The Structure of Thought and Knowledge

The fifth and sixth chapters deal with the psychological aspects of thought and knowledge, as discussed in *De Anima* III and related texts. Chapter 5 in particular focuses on the composition of thought and knowledge. In several passages (most explicitly in *De Interpretatione* 1 and *De Anima* III.6), Aristotle speaks of thought, like language, as being composed of units that are “without combination or division” and to which the alternative between truth and falsity does not apply. These units are what we have been calling concepts, and I argue that, though Aristotle thinks there is an important sense in which they are atomic and in which the true-false alternative doesn’t apply to them, the position of the *De Anima* and the central books of the *Metaphysics* is that there is a respect in which most concepts are complex and in which the true-false alternative (or some close relative of it) does apply to them. Some concepts are composed from others, and it is only because of this complexity that they can fail to refer. There are primary concepts which are components of other concepts without having components themselves, and these cannot fail to refer. To have such a concept at all is to be acquainted with its referents. I argue that this acquaintance is *nous*, the cognitive state that Aristotle identifies as the principle of the arts and sciences.

Since *nous* is a type of knowledge from which conclusions are supposed to be demonstrated, it would seem that it needs to be propositional in form, so the identification of *nous* with the possession of concepts raises questions about how Aristotle understands the relation between concept possession and propositional knowledge, which the chapter goes on to explore. I argue that Aristotle thinks of knowledge (*gnōsis*) as the discrimination of objects. This helps to make sense of the idea (discussed earlier) that knowledge comes in degrees with precision being a factor that makes some states more knowing than others. Discriminations of objects can be (at least partially) expressed in propositional form, which, for Aristotle, means in the form of an affirmation or denial that a predicate belongs to a subject. However, these propositions play different roles in the cases of the knowledge of different types of objects. Complex objects, on Aristotle's view, consist of an attribute's inhering in a subject, so the most precise and articulate knowledge of these objects takes the form of a proposition predicating the attribute of the subject. By contrast, the primary objects—the ultimate subjects and the simple attributes pertaining to them—are not composed of simpler units, so they cannot be known in the way the complex objects are. To know them is simply to discriminate them as wholes from other objects (both from other simples and from the complexes that arise out of them). Such discriminations are not inherently propositional, but can be expressed propositionally (most often in the form of denials).

The chapter closes by sketching some implications of the points already made for the issue of how a knower could progress from an initially imprecise awareness of complex objects to a grasp of principles, and an understanding of the complex objects as constituted from them. These issues are discussed in greater depth in the following chapters.

Chapter 6: Perception and the Genesis of Thought and Science

Aristotle maintains that the perceptual faculty is involved in all (human) thinking. Chapter 6 explores this claim, beginning with *De Anima* III.4's difficult discussion of the coming to be of thought. I maintain that the discussion implies that thought arises when one identifies the causes of perceptible features. These causes are the objects of thought, but we are able to think them only by holding their

perceptible (or imaginable) effects or manifestations in mind. Perception gives us access to a causal chain which can then be traced back to its principles and cognized in the distinctively human way. Even at the culmination of this process, however, when the principle is grasped, our access to it depends on the perceptual faculty. For human knowers, even *nous*, the most precise form of thought, is inextricably linked to perception, because it is only in or relative to a perceptual image that we can discern and contemplate the causally primary items.

The concluding section of Chapter 6 returns the focus to the issue of universality. It was argued in Chapter 2 that Aristotle does not think that the universality of knowledge (or thought) requires mind-independent universal objects, just that particular objects admit of being regarded universally. Chapter 4 then established that part of the basis of this universal thinking consists of relations of commensurability between objects. Chapter 6 draws on Aristotle's discussion of thought in the first chapter of *On Memory and Reminiscence* to describe the psychological mechanics of viewing (or imagining) a particular and thinking it universally.

Chapter 7: Methods of Inquiry and Justification

Chapter 7 explores Aristotle's discussions of the process by which science comes to be. The aim of some of these discussions (most notably *Posterior Analytics* II.19) is to shed light on how it is possible for higher degree *gnōseis* to emerge from lower. In others (such as the rest of *Posterior Analytics* II, *Prior Analytics* I.27-31, the *Topics*, and initial chapters of several of the scientific treatises) the aim is to provide guidance for those seeking to bring it about in themselves. In both contexts, I argue, Aristotle describes a process in which one progressively articulates an initially imprecise awareness of an object, analyzing it into ever simpler and more causally fundamental aspects, until one arrives at its principles, which are not susceptible to further analysis. Aspects of this process (and many of the key passages concerning it) have been described in chapters 4 and 6, but it is now reconsidered as a process that is performed deliberately under the guidance of a method.

A central concern for the chapter is whether the methods involved serve to justify the knowledge reached by them, or whether they are merely heuristic methods that result in our coming to know without themselves being integral to the act of knowing. (The methods of education discussed by Plato in the central books of the *Republic* are a paradigm case of methods of this latter sort.) Though this is not a distinction Aristotle himself seems to have drawn, and a concern with justification is not as central to Aristotle's thought as it is to modern epistemologists (or even Hellenistic thinkers), I argue that Aristotle's discussions of method do show a significant concern both with the justification of principles on the basis of knowledge that is nearer to perception, and with the role of principles in justifying (as well as explaining) the conclusions that can be demonstrated from them.

Chapter 8: Towards an Aristotelian Epistemology

The book concludes by returning to the question of whether we find in Aristotle an alternative to the empiricist and rationalist traditions in epistemology. I review the findings of the previous chapters and argue that what we find in Aristotle is at least the germ of a distinct approach. I then identify questions that would need to be answered for this approach to be further developed and defended. Chief among these are whether the knowledge—ultimately perception—on the basis of which principles are established contains the sort of content necessary, by Aristotle's lights, to justify the formation and definition of concepts. In particular it seems that causal relations must be grasped in order to ground concepts, but also that it is only via concepts that we can apprehend causal relations. What is needed is a way for causality to be grasped perceptually or at least pre-conceptually. Aristotle denies that perception (or even experience) can itself grasp causes (*Posterior Analytics* I.31, *Metaphysics* A.1) because neither is universal in the relevant sense. However, he allows that in certain situations a grasp of causes can arise immediately out of sense-perception, and he certainly thinks that experience plays a crucial role in the discovery of causes. This transition from a perceptual-level, particularistic, pre-causal knowledge of a domain to a causal one could be understood to be a merely natural or causal transition. But the material discussed in Chapter 7 concerning the justification of principles suggests that it is to be understood as a

logical or rational process akin to inference. I argue that if we attribute a sort of proto-causal content to perception and experience, there is room for the inference-like transition to knowledge of causal factors that Aristotle seems to want, and there is some evidence that Aristotle understood experience in this way. In particular, by considering Aristotle's treatment of how the arts develop, I suggest that experience is to be understood as a state that approximates to science, and which enables less precise analogs of the cognitive activities that one is able to perform once one has grasped the principles. Through this activity one is able to rationally discriminate the principles and thereby to elevate one's knowledge to a new level of precision.

The arguments in this section are more speculative than those in the previous chapters. I do not maintain that Aristotle held this determinate view of the role of experience in the advent of science and art. Indeed, as discussed in the previous chapter, it is not clear that he himself distinguished between merely natural transitions and rational ones, and so he did not directly address the question of how the transition to grasping principles can be rational. But I argue that the view I suggest is very much in keeping with Aristotle's conception of experience, that it provides a way in which Aristotle might account for the rationality of the transition, and that this a promising route along which a contemporary epistemologist could develop Aristotle's view.

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Status

The book is a reorganized and revised version of my 2008 University of Pittsburgh doctoral dissertation (*Aristotle and the Problem of Concepts*), incorporating material from several more recent papers and talks. I am now in the early stages of revising and repurposing the material to form the book. The sections that will comprise chapters 2 through 4 require only minor editing to put them into the form in which I intend them for the book. This is true for some of the sections in Chapters 5-8 as well, though others will require more significant reworking. Much of Chapter 1 and some of Chapter 8 will be made up of new material, which is yet to be written. I estimate that it will take approximately twelve months of additional work to complete the manuscript.