

Introduction

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The Nature and Goals of the Guide

What sort of work is Aristotle's inquiry into the soul and what is its place within his corpus? Aristotle's *On the Soul* or *De Anima* (*DA*) has sometimes been read as a treatise in the philosophy of mind. Late twentieth-century interpreters often focused on situating Aristotle in relation to dualism and materialism (e.g., much of Nussbaum and Rorty 1995). Such an approach had two flaws. First, it involved assimilating Aristotle's position to dominant views in the philosophy of mind at the time, often ignoring or downplaying the complexities of Aristotle's positions. This is an issue not just in terms of properly interpreting Aristotle but also in terms of appreciating his contributions to understanding life and mind. The value of Aristotle's thought lies at least as much in the highly distinctive approach and positions as it does in the aspects of his views that can be mapped easily onto contemporary debates (even if he is a noteworthy historical antecedent for many such debates). The second flaw of such an approach was its assumption that the philosophy of mind of the time, with its focus on supervenience and functionalism, provided the best vantage point from which to engage with Aristotle. Recent work in the philosophy of biology and philosophy of mind now emphasizes the embodied, enactive, embedded, and extended nature of mind.¹ Philosophers are also increasingly exploring the mutually interacting levels of causation involved in biological processes and mechanisms.² Such approaches accept a wider range of types of causation, beyond just bottom-up supervenience or top-down mental

¹ For "4E" approaches to mind and the move away from focusing just on the brain, see Varela, Thompson, and Rosch 1991; Thompson 2007; Noë 2009; Hutto and Myin 2013.

² The new mechanists provide an influential example of current approaches to causation in the biological and psychological realm: see Machamer, Darden, and Craver 2000; Craver and Tabery 2019 and Daniel De Haan's very helpful discussion of the points of connection between Aristotelian hylomorphism and the new mechanists (2017). Recent broadly Aristotelian approaches to mind and agency include MacIntyre 1999; Boyle 2012; Greco and Groff 2012; Steward 2012; Alvarez 2013.

causation, and they recognize a much wider range of biological and mental phenomena that need explanation, beyond occurrent mental acts that are taken to be transparent. In this respect, Aristotle's emphasis on accounting for the diversity of life processes fits better with current approaches than it does with the narrower range of concerns that characterized mid-late twentieth-century philosophy of mind.

Aristotle does not start from a narrow set of mental phenomena and ask whether these are entirely explained by the body or whether we need to posit an immaterial mind. Instead, the explananda for Aristotle are all the activities of living things that we observe. This work is an investigation into how all these biological phenomena can be given a unified explanation in terms of a single principle, *psychē*, soul, the form by which something lives (on this, see Christopher Frey's Chapter 5). Aristotle's position on the relationship between soul or mind and body is intriguing and subtle, as Christopher Shields shows in contrasting Aristotle's own view with the idea that the soul is an attunement of the body (Chapter 4). Yet there is much more to Aristotle's science. While Aristotle addresses the question of what distinguishes human life from animal life (see *DA* III.4–8), his primary interest in this work is the question of what unifies biological organisms. He aims to show how soul is at work in all living activities: in digestion and movement from place to place as well as thought. Aristotle's object is to define and understand life, an inquiry continuous with current discussions of this question in fields such as astrobiology. For Aristotle, *psychē* is the form that provides an answer to definitional questions about life, serving as final, formal, and moving cause for the activities of all the different kinds of terrestrial beings. It is soul's common role across these different kinds that allows Aristotle to offer a general account of living in this treatise, one that can then be applied to the diverse range of organisms he categorizes in his biological works.

This volume aims to capture Aristotle's views in their complexity. It does this (1) by properly situating him in the context of the theories of life and soul put forward by his predecessors, (2) by drawing on his natural philosophy and first philosophy to elucidate his key philosophical doctrines, and (3) by showing how he uses soul as a unified principle to explain the activities of life and examining the sorts of causation which this involves. It is only once we have completed these tasks that we can appreciate the insights his approach might offer and properly situate his views within contemporary debates. Some of the chapters in this guide begin that work. Jessica Moss, for example, discusses the ways in which Aristotle's account of locomotion resembles Dual Processing Theory,

albeit with some significant differences (Chapter 13) and Klaus Corcilius contrasts Aristotle's causal account of the intentionality of perception with approaches that take perception to involve multi-modal binding performed by the perceiver (Chapter 7). Other authors focus primarily on detailed exposition of the text. The improved grasp on Aristotle's position these chapters provide will allow readers to better evaluate the interest of Aristotle's views and their relation to current theories. The volume's primary intention is to serve as a guide to understanding Aristotle's carefully developed and hugely influential views on life. Such understanding will then inform discussion of whether Aristotle's views offer fresh insights or are still philosophically defensible.³

If Aristotle's inquiry is meant to uncover *psuchē* as a principle of all biological processes, why does he discuss soul on its own instead of weaving a treatment of it into his consideration of the parts of the body? Part of the answer lies in the fact that Aristotle's predecessors had already offered distinct accounts of *psuchē*, positing a variety of kinds of connection to the body. Engaging with them and drawing on their insights required a full work of its own (see Carter 2019). However, there is a more fundamental answer. Aristotle believes that we need to understand the form before we can understand the matter (*Met. Z 17*). The parts and their function can only properly be grasped when we understand the larger system and its goals. For Aristotle, the soul and the living activities it enables are the goal of the creature (see Frey's Chapter 5). In more complex living things, the lower abilities, such as nutrition, serve the development and functioning of the higher, such as movement in place and thought. Thus we need to grasp the full range of living forms and their activities before we can understand the creature's body. Understanding soul prepares the way for seeing how it works together with body (*Sens. 1*), as Jessica Gelber shows in discussing the relationship between nutritive and generative processes (Chapter 6).

Soul also needs specific consideration because it is a unique sort of form. Like other natural forms, the soul is an internal principle that accounts for the way the substance it informs changes and resists change (*Phys. II.1*). However, it accounts for the activity of the substance in a different way. For Aristotle, nonliving forms either provide passive capacities, whose potential is always present, or active capacities, which produce change whenever they can (*Phys. 255b5-13*; cf. *DA II 4, 416a15-18*; *Met. Θ 2*). The form of copper gives copper the passive ability to be heated or moved, while

³ For a discussion of how broadly Aristotelian views might interact with contemporary biology and psychology, see Simpson, Koons, and Teh 2017, Chapters 7–10 and 12.

the form of fire provides fire with an active capacity to burn which it always exercises (unless something external prevents or impedes it). Soul, by contrast, is responsible not just for giving living things the capacities for growth, movement, and thought, but also for when and how they exercise or refrain from exercising these capacities. For Aristotle, the presence of soul explains the ordered patterns in which living things grow, move, and cognize the world in order to manifest their being. Soul is not to be identified with a single life activity or capacity, but is instead the capacity that underlies and accounts for all the more specific capacities and activities of the living thing. Studying soul, therefore, gives Aristotle the opportunity to make some of his most subtle distinctions about kinds of capacity and activity (e.g., *DA* II 5 and III 7), as Chapters 6–13 of this volume make clear. While souls are paradigmatic instances of forms, they are importantly different from the forms of nonliving things and thus, as Christopher Shields makes clear in his chapter, demand special consideration, beyond the general characteristics Aristotle already laid out in his *Physics*.

As C. D. C. Reeve points out in Chapter 1, Aristotle's science of soul also extends beyond the limits of biology, as it is understood now. For Aristotle, soul is responsible not just for narrowly biological activities such as growth and reproduction but also for complex social and intellectual activities, such as playing music, engaging in political deliberations, and doing geometry. Aristotle also holds that soul is responsible for human activities that he takes to be non-bodily, such as contemplating reality. In this sense, understanding what soul is requires moving beyond natural philosophy and venturing into first philosophy or metaphysics. This volume features three chapters (3, 11, and 12) that discuss *nous*, the power of reason or understanding, which Aristotle takes to define humans. These chapters lay out how it operates and is active in a different way than powers of the soul that are fulfillments of the body.

This guide is set up to cover the breadth of Aristotle's science of soul, closely tracking the subjects and approaches of his *DA*. The arrangement of the chapters follows the order of Aristotle's work. Our authors generally take one of two main approaches. The chapters illuminate Aristotle either by developing our understanding of the context of his claims, especially in relation to his predecessors, or by deepening our understanding of a key concept. Interpreting Aristotle is a conversation with other scholars of our time and with the rich history of Aristotelian philosophy. Because of this, the guide does not adopt a unitary reading of the work. Authors present their own careful interpretations. While most of these are mutually compatible, there are points of disagreement, such as the differing accounts of

dialectic and its relevance to the *DA* that Reeve (Chapter 1) and Carter (Chapter 2) offer or the different readings that Corcilius (Chapter 7) and Johnstone (Chapter 8) give of the way in which bodies are perceived. Such points of tension illustrate key interpretive decisions that must be made, both about the specifics of key passages and about how they fit with Aristotle's other commitments. Interpreting Aristotle properly usually requires weighing a number of difficult texts from across his corpus. This means that getting a definitive grasp on Aristotle's overall vision of reality is challenging. Given this, presenting a picture of unanimity would be misleading. Instead, this guide highlights the interpretive decisions that are made and their reasons in order to show both the significant extent to which there is a scholarly consensus on many key topics and the places where reaching an agreement on Aristotle's views is exceedingly difficult. In such cases, disagreements often go back to first principles, both philosophical and interpretive, in a way that does not allow of straightforward resolution.

With that said, each chapter stands on its own, setting out a clearly delimited question and providing the author's response to that question, taking into account the relevant scholarship. The chapters are interconnected, not only insofar as they often touch on the same passages or topics but also insofar as changing our understanding of any one life activity or power has implications for how we understand all the rest of Aristotle's science of life. Instead of simply following up on previous treatments of much-discussed topics such as Aristotle's definition of soul and body or the kind of alteration involved in perception, the chapters dealing with such topics consider these questions from different angles that allow for fresh insights. Thus Shields in Chapter 4 illuminates Aristotle's conception of soul by contrasting it with the attunement account of soul discussed in *DA* I, instead of rehashing scholarly debates about *DA* II.1. In Chapter 7, Corcilius considers Aristotle's theory of alteration in *Phys.* VII and lays out a causal theory of intentionality, which provide the proper foundation from which to address the fiercely contested debate about which sort of alteration is involved in perception.

Overview of Chapters

Reeve's Chapter 1 discusses the vexed question of where the study of the soul fits into Aristotle's order of the sciences in order to better understand the scope of Aristotelian psychology and the use it makes of dialectic. Reeve argues that, for Aristotle, there is a universal science of life that investigates

soul, the principle responsible for living. This science operates by analogy, since the activities the soul is responsible for vary so much across different living things. The *DA* does not present a worked out demonstrative science, but instead contributes to knowledge by helping us grasp the correct definition of soul and the other starting points or principles (*archai*) of the science of life. This understanding enables us to see how soul explains the various other features of embodied living things. For Reeve, we come to grasp a starting point as a starting point by assembling scientific observations about the attributes of living things and comparing them to the *endoxa* (reputable opinions) of those who have previously studied the matter. On Reeve's reading, there is no opposition between examining *endoxa* and collecting scientific observations. For Aristotle, both play an important role in helping us formulate candidate scientific definitions. These definitions are then tested against the expert consensus but, most of all, against reality.

Chapter 2, by Jason W. Carter, situates Aristotle's positions on soul by examining *DA* I.2–5's engagement with earlier views. These chapters are commonly thought to be dialectical in the sort of sense Reeve discusses. Carter argues that these chapters operate in a way which does not comply with Aristotle's standard definition of dialectic. First of all, previous views on soul do not give us a reputable consensus to build on but are mutually inconsistent. They provide *contradoxa*, "beliefs about which the many and the wise disagree amongst themselves," instead of *endoxa*. Carter then argues that Aristotle does not resolve these tensions merely by appealing to reputable views, but instead draws on his own views about the truth of the matter, including controversial and characteristically Aristotelian views such as the possibility of an unmoved mover and the distinction between being alike something potentially and being alike something actually. Aristotle is engaging with his predecessors fairly, not just to show them up. However, he does so in a way that draws on his own positive philosophical commitments. Aristotle's use of his predecessors is not simply negative. Carter shows that Aristotle resolves several puzzles about the soul from *DA* I.1 through carefully examining the views of his predecessors. Aristotle considers whether soul is uniform (*homoeidēs*) in kind and whether soul is divisible (*meristē*). Using appropriate starting points, Aristotle shows that soul is uniform within a given living thing but not uniform across different kinds of living things. Similarly, Aristotle uses his characteristic distinctions to argue that soul is not spatially divisible (*meristē*) while leaving room for parts of soul in an extended sense.

In Chapter 3, Krisanna Scheiter examines Aristotle's attack on the idea that *nous*, the power of reason or understanding, could be a magnitude (*megethos*), an idea Aristotle associates with Plato, given the insistence of the *Timaeus* that *nous* is self-moving. Aristotle's method of argument and the suppositions it employs about thought, the soul, and body provide important context for Aristotle's own views on *nous* and its separation from the body. Scheiter notes that Aristotle agrees with several earlier thinkers who thought that *nous* did not use the body, but he maintains that they did not give an account which could explain how *nous* can operate or how it could be a mover without being some sort of body itself. The *Timaeus* does not give us a model for how a non-bodily thing could be in motion or cause motion. Aristotle's project involves showing that his definition of soul, on which soul is not a magnitude or body of any kind, can explain the characteristic living attributes of perception, thought, and motion and can do so better than his predecessors' materialist accounts. In this way, his critique in I.3 is meant to highlight the superiority of his own explanation. It prepares the way for his account of *nous*, on which it, unlike the other capacities of soul, is neither a body nor a fulfillment of the body or its parts.

In Chapter 4, Christopher Shields deepens our understanding of Aristotle's views on soul by contrasting Aristotle's own position, on which the soul is the fulfillment or actuality of the body, with the view that the soul is a *harmonia*, an attunement of the body. These two views initially appear similar. Indeed, Shields notes that Alexander of Aphrodisias, the most distinguished of the ancient Aristotelian commentators, holds that soul is the power that emerges from the attunement or ratio (*logos*) of the bodily parts. Shields shows that Aristotle distinguishes his view from attunement theories by emphasizing the soul's causal and teleological priority over the body. For Aristotle, the soul is a substance as form: it is something that has powers, not a capacity that results from certain bodily states and supervenes on them. Unlike an attunement, the soul selects and organizes the bodily parts that are suitable for its realization. The soul is also a final cause of the body, insofar it is itself the beneficiary of the body's attunement. The living activities that are accomplished through the body's arrangement are both good for the soul and done for its sake, as a being with its own intrinsic good, unlike attunements.

In Chapter 5, Christopher Frey also draws on the soul's role as a formal and final cause to explain the unity between the soul and its powers. Frey examines what Aristotle means in claiming that one soul can be present in

capacity (*dunamei*) in another, as nutritive soul is present in animal soul. Frey canvasses other cases in which Aristotle thinks something is present in capacity and finds the closest parallel to be ingredients in a mixture. For Aristotle, a true chemical composition, like a unified organism, shares in the powers of its constituent elements but has its own unified form which explains the activities and properties of the whole. Frey then shows that all the activities that make up a creature's life are unified by being directed toward its overall form or nature, which serves as a goal. The animal's soul is, therefore, the formal and final cause of all its activities, including those of its powers. Nutritive soul is present in capacity in the whole soul insofar as its development and exercise has the whole soul and its form in views as its goal. The dolphin eats for the sake of its dolphin form, the life activity that makes it a dolphin. Its eating is not the expression of a separate and lower nutritive life.

Aristotle takes nutritive soul to be a single capacity responsible for three different living activities: nutrition, growth, and reproduction. Many interpreters account for the unity of these activities in terms of their contribution to a shared overall end of self-preservation or (re)production of form. In Chapter 6, Jessica Gelber offers a different but complementary way of seeing why Aristotle takes all these activities to be caused by a single psychic capacity. These three form a single biological process with different stages, with the same sort of efficient and material causes involved in the production of both nourishment and seed. Gelber argues that the motions by which the organism transforms food into the nourishment that grows and maintains it are continuous with the motions by which the parents generate a new organism with the same form. For female parents, the processes by which the menses is produced are continuous with (and, indeed, the final form of) the production of nourishment. For male parents, semen's active capacity to maintain and grow a living body, which it conveys to the seed via its motions, is partially explained by the fact that semen is produced via processes continuous with those of self-nourishment. The three activities that Aristotle thinks are explained by the nutritive power share an underlying physiological basis and form a continuous cycle.

In Chapter 7, Klaus Corcilius offers a new interpretation of what Aristotle means in claiming that perception consists in receiving the form of the thing perceived "without the matter" (*DA II 12*). Corcilius argues that Aristotle has a causal theory of intentionality on which the role of bodies in causing perception means that bodies or "3-D objects" are perceived in their own right. They are the first and most unqualified

perceptibles, since all animals perceive bodies insofar as they are affected by the qualities of these bodies. On this causal reading, the horse perceives an apple by being causally affected by its redness, whether or not it has the cognitive sophistication required to identify an apple *as* an apple. Corcilius' interpretation explains the need for an important feature of Aristotle's theory of perception: mediation. On Corcilius' reading, Aristotle holds that perceptible bodies use the sense-medium as a causal conduit, giving the medium the power to reproduce the body's perceptual quality in the perceiver. For Aristotle, a sense power is able to take on the qualitative proportions of the object because it is in a mean state between the relevant contraries. A perceiver sees red by taking on the precise proportion of white and dark that is the apple's red. Yet, for Corcilius, red is not taken on by the embodied perceiver as its proximate matter. The horse does not itself become red, instead it sees *the apple* because the apple's form of red is received "without the matter." The matter of the eye's red is the matter of the 3-D object that caused it. The causal history of the perceived form fixes its content as being about a particular body. In receiving the perceptual qualities of bodies without their matter, we perceive bodies as external objects with those qualities. The horse sees the apple's red precisely because the proportion its sight takes on is caused by the apple's action on the eye via the medium.

In Chapter 8, Mark Johnstone contributes to our understanding of perception by carefully examining the three types of perceptibles (*aisthēta*) Aristotle outlines in *DA* II.6. Aristotle distinguishes between coincidental (*kata sumbebēkos*) perceptibles, such as the son of Diare, and things perceived in their own right (*kath' hautō*). The latter include both special (*idia*) perceptibles which are perceived by a single sense, such as colors, tastes, and sounds, and common (*koīna*) perceptibles, such as motion, shape, and number, which are perceived by more than one sense. Johnstone argues that this distinction is a causal one: special and common objects cause perception as such, by making the perceiver like them, while incidental perceptibles coincide with the object perceived but do not bring about perception or affect the senses as such. Aristotle claims that special perceptibles are perceived "primarily" (*kuriōs*). Johnstone gives an account of why Aristotle gives them priority over the other two types. Unlike many early modern thinkers, Aristotle takes perceptible qualities such as colors and odors to be real and causally effective properties of bodies. Indeed, Johnstone shows that Aristotle takes the special qualities to be features of bodies *qua* homoiomerous or uniform and thus embedded in Aristotle's chemistry and his account of bodies. They are not reducible to the

geometric and kinetic features of things, which are perceived by more than one sense. Johnstone also shows that the interaction of special perceptibles with our sense powers explains how common perceptibles are perceived. Animals perceive by receiving a form of a special perceptible, which is always a particular proportion on a spectrum between contraries. For example, red, for Aristotle, is a proportion at a certain point on the continuum between white and black. Johnstone argues that common perceptibles are then perceived based on the way this special form varies. It is through registering the way that *this red* stays the same or changes across time and space that we perceive shape, motion, rest, and the other common perceptibles.

Johnstone, along with many other interpreters, classes bodies as incidental perceptibles, things that are not perceived in their own right, but in virtue of the qualities they have. This suggests that bodies or substances do not, as such, bring about perception. Corcilius' discussion in Chapter 7 argues against this reading, appealing to the priority of substance over qualities in Aristotle's ontology and to the fact that Aristotle often speaks of bodies as perceptible. Corcilius agrees with Johnstone in thinking coincidental perceptibles do not cause perception as such and he agrees that bodies are perceived through their qualities. However, Corcilius argues that Aristotle's division into three sorts of perceptibles is only meant to apply to modally specific qualities. Special perceptibles have priority in relation to the different sense modalities, where they are more definitional than the common perceptibles or coincidental ones, but bodies are the primary perceptibles and come before the modally specific qualities delimited in II 6, since they are the causal grounds for all perception.

This guide does not attempt the difficult task of surveying the various ways in which Aristotle's psychology has been appropriated by subsequent thinkers. Instead, Katerina Ierodiakonou's Chapter 9 gives a sense of how Aristotle's thought was fruitfully developed and engaged with by focusing on one specific case: perceptual awareness. Ierodiakonou brings out the nature of the common sense, as Aristotle conceives it, by presenting an interpretation of its role in attention. For Aristotle, the common sense is the capacity of the sense power to receive perceptibles from different special senses at the same time and discriminate between them. Ierodiakonou notes that the question of the role and limits of the common sense goes back to antiquity. While Platonic commentators insist that rational soul is required to explain attention, Ierodiakonou, like the ancient Peripatetic commentators, takes the common sense to be sufficient for explaining directed awareness. Ierodiakonou argues that the common sense, not the