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The source of life: activity, capacity, and biology in Aristotle's account of soul

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BOSTON UNIVERSITY
GRADUATE SCHOOL OF ARTS AND SCIENCES

Dissertation

**THE SOURCE OF LIFE:
ACTIVITY, CAPACITY, AND BIOLOGY IN ARISTOTLE'S ACCOUNT OF
SOUL**

by

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B.A., Gutenberg College, 2004

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requirements for the degree of
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To Melanie

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(Order No.)

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ABSTRACT

Aristotle discusses the nature of soul in *De Anima*, defining it as the “form of a natural body having life potentially” or “first actuality of a natural, instrumental body.” I argue that these definitions characterize soul as the capacity for the activity of life. In chapter one I examine key terminology from Aristotle’s account of soul: the terms used to discuss soul, life, and the vital functions. In particular, the soul and life terminology must be kept separate, as must the terms referring to vital capacities and those referring to vital activities. In chapter two I use these terminological distinctions to trace Aristotle’s arguments for his definition of soul, contending that they begin by positing life as the vital activities and soul as the cause of life. From that beginning, Aristotle twice argues for a definition of soul, in *De Anima* 2.1 and 2.2. In the transition between the two arguments Aristotle says that the first is sketched in outline and that a proper definition shows the cause. While this is usually taken to mean that Aristotle prefers the second definition, I argue that the definitions reached are the same. In chapter three I argue that Aristotle’s definitions of soul state that it is the capacity for life. He defines it as a first

actuality, and upon examination this phrase means that it is a capacity. He also defines it as a form and calls form an actuality, but I explain that due to the relativity of actuality and potentiality, it is permissible to view form as a capacity as well. In chapter four I reconcile the general account of soul as a capacity with Aristotle's discussions of a particular kind of soul, examining what he says in *De Anima* and his biological works about the most fundamental kind—the nutritive. Aristotle locates nutritive soul in the heart and says that it is responsible for the size of an organism, but this fits with nutritive soul also being the capacity of an organism to nourish itself. I also discuss why Aristotle says the body is the instrument of soul.

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Abbreviations of Aristotle's works

<i>Cat.</i>	Categories
<i>DA</i>	<i>De Anima</i>
<i>EE</i>	Eudemian Ethics
<i>EN</i>	Nicomachean Ethics (<i>Ethica Nicomachea</i>)
<i>GA</i>	Generation of Animals
<i>GC</i>	On Generation and Corruption
<i>HA</i>	History of Animals
<i>IA</i>	Progression of Animals (<i>De Incessu Animalium</i>)
<i>Metaph.</i>	Metaphysics
<i>Meteor.</i>	<i>Meteorologica</i>
<i>PA</i>	Parts of Animals
<i>Post. An.</i>	Posterior Analytics
<i>PN</i>	<i>Parva Natrualia</i> (Includes the following short works:)
<i>Juv.</i>	On Youth, Old Age, Life, and Death (<i>De Juventute</i>)
<i>Long.</i>	On Length and Shortness of Life (<i>De Longitudine</i>)
<i>Resp.</i>	On Respiration (Chapters 7-27 of <i>Juv.</i> , sometimes separated)
<i>Somn. Vig.</i>	On Sleep and Waking (<i>De Somno et Vigilia</i>)
<i>Top.</i>	Topics

Introduction

Plants grow; rocks do not. Animals see; sand does not. This difference between the living and the non-living draws the attention of inquisitive minds. What makes plants and animals differ from rocks and sand? It should not surprise anyone that Aristotle also wants to answer this question, given that his inquisitiveness appears to have no bounds. His answer, as it was for his predecessors, is soul (ψυχή). Those things which have soul live, and those which don't do not. While this may sound profound, it does not actually get one much closer to the answer sought. It is fine and good to say that it is soul that makes something alive, but what is soul?

In *De Anima*¹ Aristotle sets out to say what soul is. He begins by emphasizing the importance of this inquiry, saying that among the kinds of knowledge “we would reasonably place the study of soul among the first things.”² He also emphasizes its difficulty, for “to attain an assurance about it is in each and every way among the most difficult things.”³ Despite this difficulty, Aristotle manages to state what soul is rather succinctly. It is a substance, the form or actuality of a living thing: “Accordingly, soul must be a substance (οὐσία) as the form (εἶδος) of a natural body having life potentially, and this substance is an actuality (ἐντελέχεια). So it is the actuality of such a body.”⁴

Aristotle appears to overcome the difficulty of determining what soul is, but in doing so

¹ I use the traditional title of Aristotle's work ΠΕΡΙ ΨΥΧΗΣ, although as I will explain in chapter one, words derived from the Latin “anima” obscure Aristotle's discussion of soul for the reader of English.

² *DA* 1.1, 402a3-4. All translations from *De Anima* are my own, unless otherwise noted, based on W. D. Ross, ed., *De Anima*, with an introduction and commentary (Oxford: Oxford University Press, 1961; repr., London: Sandpiper Books Ltd., 1999). The translations of other works of Aristotle are usually those of others, and I have frequently provided the Greek parenthetically within these translations, consulting the following editions: *GA*, H. J. Drossaart Lulofs and A. L. Peck; *HA*, P. Louis, A. L. Peck, and D. M. Balme; *Metaph.*, W. D. Ross; *EN*, I. Bywater; *PA*, P. Louis; *PN*, W. D. Ross; *Top.*, W. D. Ross, E. S. Forster.

³ 1.1, 402a10-11.

⁴ 2.1, 412a19-22.

he creates another for his reader. In order to understand his answer, one must understand what it means for soul to be the form of a living organism.

Aristotle's discussions of form are numerous and well-known, yet this does not make it easy to know what Aristotle means by calling soul a form. For example, form is often explained in terms of shape. Aristotle even does this in the discussion following his definition of soul: since soul is the form or actuality of the body, "one should not investigate whether the soul and the body are one, just as one should not ask whether the wax and the shape (σχήμα) or, in general, the matter of each thing and that of which it is the matter are one."⁵ This way of talking about form is helpful in illustrating the conceptual split between form and matter; a craftsman takes bronze matter and gives it a spherical form, creating a bronze sphere.⁶ The form in this case is the external shape that gives definition to what would otherwise just be a blob of bronze. This sort of analysis is illuminating when it comes to the bronze sphere, but it is less clear how it applies to a human or to another animal—how this notion of form applies to soul. A statue has the shape of a human, but it is not alive. Even more problematically, a corpse has the exact shape of a human, inside and out, yet it is by definition not alive. To understand what Aristotle means by soul, then, it is not enough merely to label it a form. A more thorough explanation is needed.

In this dissertation I explain Aristotle's account by arguing that soul is a capacity. This is his answer to the question "What is soul?", and it is also what he means by calling soul a form. Of course, stating that soul is a capacity is no more helpful than saying it is a

⁵ *DA* 2.1, 412b6-8.

⁶ Aristotle uses the example of the bronze sphere throughout *Metaph.* Z.7-9. See, for example, Z.8, 1033b1-3.

form; I need to say what it means for soul to be a capacity. Because of this, I will be focusing on the details of Aristotle's account. It is this focus on details, moreover, that makes the project needed. Several scholars agree that soul is a capacity,⁷ but the particulars of his account—and even its possible contradictions—are not often discussed. There are several different kinds of details that need to be examined.

First, there are the individual terms Aristotle uses in his account of soul, terms such as 'life', 'first actuality', and the terms for the various vital functions: the capacity to nourish (τὸ θρεπτικόν), perceiving (αἴσθησις), and so on. Some of these terms, such as 'first actuality' have received a fair amount of attention in the literature already, although there is not agreement as to what this term means, or even if it is a technical term. Others, such as 'life' and 'perceiving' have not been adequately discussed in the literature. It is important to have a solid grasp of what Aristotle means by each of these terms, because they are the building blocks of his account and they are one of the keys to understanding that soul is a capacity.

Second, I am arguing that Aristotle defines soul as a capacity—a kind of potentiality—but his definitions state that it is an actuality. He says that soul is “the form of a natural body having life potentially,”⁸ and form is an actuality. Based on this he goes on to define soul as “the first actuality of a natural, instrumental body,”⁹ again emphasizing actuality. Aristotle usually separates actualities from potentialities, so an explanation is needed if soul is somehow both. Such an explanation is crucial to filling out what Aristotle means by calling soul a capacity.

⁷ For lists of scholars who agree or disagree, see chapter three.

⁸ *DA* 2.1, 412a19-21.

⁹ *DA* 2.1, 412b5-6.

Third, Aristotle does not merely state these definitions, but he argues for them. To understand the definitions, then, one must also understand these arguments. There are two arguments to consider, in *De Anima* 2.1 and 2.2, and so it is necessary to examine how the arguments relate to each other. This examination is especially needed because the traditional understanding of their relationship undercuts evidence that soul is a capacity.

Fourth, the definitions of soul so far mentioned are the most general definitions. Aristotle also discusses the particular kinds of soul—nutritive, perceptive, etc.—and with each he includes details about the nature of that kind. The general definitions, then, need to be considered in the light of the particular attributes of particular souls. They must be shown to be compatible, and this includes showing that the particular attributes can be assigned to a capacity. Moreover, looking at a particular kind of soul provides the chance for relating that soul to the corresponding anatomy and biological processes, allowing for a concrete discussion of the relationship between soul and body.

By examining all of these details in what follows, I aim to give a thorough account of Aristotle's definitions of soul, an account that enables one to say more than just "soul is a form" or even "soul is a capacity." I start in chapter one by looking at some of the terminology involved in Aristotle's discussion, particularly the words he uses that relate to soul, life, and the vital functions. In chapter two I build on this foundation, analyzing Aristotle's arguments in *De Anima* 2.1 and 2.2 and explaining how they use the terms from the first chapter. After examining the arguments, I move in chapter three to looking at their conclusions, the definitions of soul. Here I focus on explaining both that

soul is a capacity and how this is compatible with it also being a form and an actuality. In chapter four I conclude by reconciling the particular account of nutritive soul with the general definition of soul as a capacity, as well as by examining the relationship between soul and the body.

Soul lies at the heart of Aristotle's philosophy. For Aristotle the biologist it answers the question of what makes something alive. For Aristotle the metaphysician it supplies a prominent example of a form. For Aristotle the ethicist it plays a role in the human good, which is "an activity of soul in accord with virtue."¹⁰ It is worth enquiring, then, what exactly soul is. As I will argue here, soul is a capacity, the capacity for the activity of life.

¹⁰ *EN* 1.7, 1098a16-17, Bartlett and Collins translation. Robert C. Bartlett and Susan D. Collins, eds. and trans., *Aristotle's Nicomachean Ethics* (Chicago: University of Chicago Press, 2011).

Chapter 1: Soul, Life, and the Vital Functions

In order to examine Aristotle's definition of soul, one must look at the arguments of which it is the conclusion. Throughout these arguments, found in *De Anima* 2.1-2, Aristotle uses several terms that are famous from his other works, words such as 'substance' (οὐσία), 'form' (εἶδος), and 'actuality' (ἐντελέχεια). He coined some of these, such as ἐντελέχεια, while others were originally part of ordinary discourse and appropriated by Aristotle or his predecessors for philosophical use. Despite their different origins, each is used by Aristotle in a manner that is clearly technical, covering a narrowly defined range of meanings and relating to other technical terms in specific ways. For example, at the beginning of *De Anima* 2.1, Aristotle reminds his reader that there are three kinds of substance, one of which is form, and form is actuality relative to matter.¹ Other terms in these same arguments are less famously Aristotelian. Scattered amongst 'substance' and 'actuality' are common words such as 'life' (ζωή) and 'perception' (αἴσθησις). Because these words do not jump out as part of Aristotle's familiar vocabulary, it is easy to assume that they carry over their meanings from ordinary discourse—meanings that are broad and unspecified—and thereby treat them as untechnical. This easy path should be resisted, however. As I will argue in this chapter and the next, Aristotle uses several seemingly ordinary terms in technical ways throughout his arguments establishing the definition of soul, and recognizing this technicality brings the arguments into sharper focus than is often found in commentaries on them.

¹ 412a6-11.

Because the technical use of the terminology is under-discussed, it will be helpful to examine some of the terms before moving on to the arguments. In this chapter I will focus on three sets of terms, those used to discuss the notions of soul, life, and the vital functions. By saying that Aristotle uses the terms technically, I mean that they have narrow meanings within his argument and that they relate to each other in specific ways. This is not so surprising in the case of soul since it is the topic of Aristotle's work. Nevertheless, it is helpful to discuss it along with life and the vital functions, since in the course of Aristotle's argument the relationships between these terms are central. I will only be able to give preliminary accounts of these terms in this chapter, since in some ways examining them can be said to be the project of the whole dissertation, but there are three main ways in which such a preliminary account will be of use.

First, one must pay attention to how these terms are translated from the Greek, and so I will look at the options and explain why I translate them as I do. In particular, the terms must be translated in such a way so as not to obscure the relationships between them. This will be particularly relevant when it comes to translations of soul-terms versus life-terms and with regard to different grammatical forms relating to the vital functions.

Second, I will look at the range of possible meanings for each term and highlight some meanings that Aristotle does not use in the context of *De Anima*. These terms can bring along many connotations, and eliminating some of them makes the terms clearer when they are read in the context of Aristotle's argument. 'Soul' and 'life' are especially in need of such pruning, since they can carry a wide variety associations.

Third, for some terms I will not prune away possible meanings but just lay out a set as a reference when trying to understand the use of the terms in Aristotle's argument. This will be necessary with those terms referring to the vital functions. Having multiple options when looking at the argument helps one to read the meaning of the terms from the argument, rather than into it.

In the next chapter I will look at the arguments for the definition of soul by using the results obtained here. That discussion will bring back in Aristotle's famous terminology, and I can start to consider what it means for the soul to be a form and actuality. The purpose of this chapter is to enable such an examination. By examining the terminology involved with soul, life, and the vital functions, one is able to recognize its technical use in *De Anima*, making the arguments there much easier to follow.

Soul

There are two main reasons to do a preliminary examination of Aristotle's terms relating to soul. The terms in question are ψυχή and ἔμψυχον, which are traditionally translated 'soul' and 'ensouled', and both reasons have to do with their translation. First, it is important that both ψυχή and ἔμψυχον are translated in such a way that they are differentiated from terms such as 'life' and 'living'. While soul is closely related to life, some commentators link it too closely to life, blurring the distinction between the two.² A distinction must be maintained, because Aristotle says that soul is the cause of life and argues for a certain view of the soul on this basis. For example, he argues that soul is a

² I discuss these commentators below.

cause or explanation as substance by invoking this relationship.³ “For the cause of the being (τοῦ εἶναι) of each thing is substance (ἡ οὐσία), and life (τὸ ζῆν) is the being of living things, and the cause and source of this is soul (ἡ ψυχή).”⁴ A cause and that of which it is the cause should not be the same thing in all respects,⁵ so soul and life must be kept separate in translation. Second, several commentators argue that ‘soul’ is a misleading translation of ψυχή.⁶ The word ‘soul’ carries several connotations in contemporary English that are not part of Aristotle’s view of ψυχή. I will argue that while it is helpful to recognize the differences between a modern conception of soul and that of Aristotle, ψυχή is best translated ‘soul’. For the following reasons, then, I will adopt the traditional translations.

‘Life’ is one possible translation of ψυχή—in fact, it is the first possibility listed in LSJ⁷—and various commentators, both ancient and contemporary, have written or translated in such a way so as to merge soul and life. Both Philoponus and Simplicius wrote in Greek and thus had no need to translate Aristotle’s terms, but they also both equate ψυχή and ζωή, a term that is usually translated ‘life’.⁸ Philoponus states that “the soul (ψυχή) is to be seen in those natural bodies that have life (ζωήν). And we call this

³ A note about the translation of αἰτία and αἴτιον: I will move back and forth between translating these as ‘cause’ and as ‘explanation’. Both words have drawbacks, since to a modern ear ‘cause’ sounds too physical and ‘explanation’ sounds too mental. An αἰτία or αἴτιον is the answer to *why* something is, and this does not have to be something physical or material (as we usually think of a cause), but it does have consequences in the physical world (in contrast to how we usually think of an explanation). I will alternate my translation in order to remind the reader that the idea behind the terms is somewhere between the two English words. For a discussion of some of the merits of each as a translation, see Max Hocutt, “Aristotle’s Four Causes,” *Philosophy* 49 (1974), and the reply in G. R. G. Mure, “Cause and Because in Aristotle,” *Philosophy* 50 (1975).

⁴ *DA* 2.4, 415b12-14.

⁵ The cause answers *why* a thing is what it is and does not merely state *the fact that* the thing is, so they must be different. See *Metaph.* Z.17, 1041a10-15.

⁶ See below.

⁷ *The Online Liddell-Scott-Jones Greek-English Lexicon*, <http://www.tlg.uci.edu/lsj/>.

⁸ I will discuss ζωή in the next section.

life ‘soul’ (ταύτην δὲ τὴν ζωὴν ψυχὴν καλοῦμεν).⁹ Simplicius more simply says that “soul is life (ζωὴ ἢ ψυχὴ).”¹⁰ Modern scholars similarly collapse soul and life at times. J. L. Ackrill translates ἔμψυχον as ‘living’: “An animal, [Aristotle] is always saying, is (or is made up of) *psuche* and body. Strictly the same is true of a plant, since a plant is *empsuchon* (living).”¹¹ Gareth Matthews equates ‘soul-powers’ and ‘life-functions’: “Aristotle seems to have been the first thinker to try to understand what it is to be a living thing by reference to a list of characteristic ‘life-functions’ (or, as he called them, ‘psychic powers’ or ‘soul powers’—*dunamis tēs psuchēs*).”¹²

While there are Greek texts where one ought to translate ψυχὴ ‘life’,¹³ this is not a good choice when it comes to Aristotle’s writings. As I already mentioned, he argues at least once for the nature of soul on the basis of its relationship to life, and he appears to do the same thing at the beginning of *De Anima* 2.2. Here Aristotle is starting his account of soul over again in some way,¹⁴ and he chooses life (τὸ ζῆν) as the place to begin: “And

⁹ Philoponus, *On Aristotle’s On the Soul 2.1-6*, trans. William Charlton (Ithaca: Cornell University Press, 2005), 8 (208,17-18). Greek text from Philoponus, *In Aristotelis De Anima Libros Commentaria*, ed. Michael Hayduck, Commentaria in Aristotelem Graeca, vol. 15 (Berlin: G. Reimer, 1897).

¹⁰ Simplicius, *On Aristotle’s On the Soul 1.1-2.4*, trans. J. O. Urmson, (Ithaca: Cornell University Press, 1995), 114 (83,6). Greek text from Simplicius, *In Libros Aristotelis De Anima Commentaria*, ed. Michael Hayduck, Commentaria in Aristotelem Graeca, vol. 11 (Berlin: G. Reimer, 1882).

¹¹ J. L. Ackrill, “Aristotle’s Definitions of *Psuche*,” *Proceedings of the Aristotelian Society*, New Series 73 (1972-1973): 120.

¹² Gareth B. Matthews, “*De Anima* 2. 2-4 and the Meaning of *Life*,” in *Essays on Aristotle’s De Anima*, ed. Martha C. Nussbaum and Amélie Oksenberg Rorty, paperback ed. (Oxford: Clarendon Press, 1995), 185.

¹³ As two examples, one pre-Aristotle and one post, take Homer and the New Testament. In the *Odyssey*, when the blinded Cyclops is trying to catch Odysseus and his men, Odysseus says to himself, “but I was planning so that things would come out the best way, / and trying to find some release from death, for my companions / and myself too, combining all my resource and treacheries, / as with life (ψυχῆς) at stake, for the great evil was very close to us” (9.420-423). Homer, *The Odyssey of Homer*, trans. Richmond Lattimore (New York: Harper & Row, Publishers, 1967; repr. New York: HarperPerennial, 1991). Likewise, in response to Jesus saying that Peter cannot follow him where he is going, Peter responds, “Lord, why can I not follow you now? I will lay down my life (τὴν ψυχὴν μου) for you.” (John 13:37, English Standard Version.)

¹⁴ I will discuss the nature of this new start in the next chapter.

so, taking up a starting point of the examination, we say that the ensouled (τὸ ἔμψυχον) is distinguished from the unensouled (τοῦ ἀψύχου) by life (τῷ ζῆν). But life (τοῦ ζῆν) is said in many ways, and we say that a thing lives (ζῆν) if any one of these is present in it....”¹⁵ Aristotle is beginning his account by relating the ensouled thing (τὸ ἔμψυχον), and thereby soul (ψυχή), to something else, using this as a starting point for the discussion of soul. The term for this related thing, τὸ ζῆν, is usually translated ‘life’.¹⁶ To also translate ψυχή or ἔμψυχον as ‘life’ or ‘living’ would cover over the argument that Aristotle is beginning here. Other terms must be used.

For the same reason one should avoid translations deriving from *anima*, the Latin translation of ψυχή. While technically the English adjective ‘animate’ should mean ‘having soul’, in practice it is synonymous with ‘living’. Robert Pasnau notes that the same ambiguity is even in a Latin derivative of *anima*: *animatus* comes from *anima*, but “*animatus* also bears the less technical meaning of ‘having life’.”¹⁷ In order to avoid confusion, ἔμψυχον should not be translated ‘animate’,¹⁸ nor ψυχή ‘animator’.¹⁹ Soul and life must be terminologically distinct so that Aristotle’s arguments are not obscured.

¹⁵ 413a20-23.

¹⁶ For a discussion of τὸ ζῆν, see the next section.

¹⁷ In Thomas Aquinas, *A Commentary on Aristotle’s De Anima*, trans. Robert Pasnau (New Haven: Yale University Press, 1999), 5n1.

¹⁸ Both Apostle and Hicks so translate it at *DA* 2.2, 413a21, the passage just discussed above. Hippocrates G. Apostle, trans., *Aristotle’s On the Soul* (Grinnell: The Peripatetic Press, 1981); R. D. Hicks, ed. and trans., *De Anima* (Cambridge: Cambridge University Press, 1907; reprint, New York: Arno Press, 1976).

¹⁹ Jonathan Barnes suggests this as a possible translation: “Since a *psuchē* is what animates, or gives life to, a living thing, the word ‘animator’ (despite its overtones of Disneyland) might be used.” Jonathan Barnes, *Aristotle*, in *Greek Philosophers* (Oxford: Oxford University Press, 1999), 274. This translation works fine in English—soul is the cause of life, as he says—but the etymological connection with *anima* makes the translation less desirable. Soul should not be that which brings soul. In the context Barnes is explaining to his introductory-level audience that Aristotle has something different in mind than we do when we discuss soul, so his proposing such an alternative translation is entirely appropriate. I merely suggest that such a translation would not be appropriate in a scholarly context.

Even if one accepts that ψυχή must be differentiated from life, some commentators think that ‘soul’ is a poor translation when discussing Aristotle, and at first glance they seem right. Many people associate soul with ideas foreign to Aristotle’s concerns. In American²⁰ popular culture we tend to connect soul to questions about the afterlife, wondering if our souls survive the death of the body. In asking these questions we are linking soul with personal identity and one’s core self; we want to know whether we survive death. We assign this sort of inquiry to a particular sphere of discourse, with the questions falling squarely on the religion side of the traditional divide between religion and science. We generally ask these questions only of humans, although sometimes we are willing to grant souls to beloved pets as well.

For the most part these are not Aristotle’s concerns or associations. In *De Anima* he does discuss the question of whether soul survives the destruction of the body, but his interests in asking this do not appear to be the same as ours. According to Aristotle the soul cannot outlast the body, at least in most cases. The two are inseparable, since soul is the form or actuality of the body.²¹ A different kind of actuality could outlast a body, one that is not an actuality *of* the body but merely associated with it in some way. One kind of soul, active intellect, is such an actuality.²² For this reason, of all the varieties of soul, “only this is deathless and eternal.”²³ A person with modern concerns would find this

²⁰ I do not mean to restrict the discussion to just Americans if the following observations apply to other nations and cultures as well. I suspect the same associations with ‘soul’ are spread throughout the west, and perhaps further. I merely restrict my comments here so as to not speak for other cultures of which I am not a part.

²¹ He states this inseparability at *DA* 2.1, 413a3-6.

²² *DA* 2.1, 413a6-7; 3.5, 430a17-18.

²³ *DA* 3.5, 430a23. Of course, what precisely Aristotle means in *DA* 3.5 is the subject of debate. For my present purposes, it is enough just to note that he raises the possibility of some kind of soul being deathless in some way.

statement intriguing and want an extensive explanation. Aristotle instead gives one short parenthetical comment, a comment that raises many more questions than it answers: “but we do not remember, since this [sort of intellect] is not affected, while the intellect that is capable of being affected is perishable.”²⁴ Given that this is the extent of his explicit discussion on the topic, Aristotle is not putting the question of whether we as persons survive death in the front and center the way we would.

Aristotle differs even more greatly from us when it comes to the other concerns discussed above. He does not see a tension between religion and science—or at least between theology and science. God, the unmoved mover, is the cause of the movement of the first heaven, which is responsible for moving other things.²⁵ If he did split science from religion, however, his discussions of soul in *De Anima* fall on the side of science. For Aristotle soul is not a religious notion but a biological one.²⁶ It is also not unique to humans, or even to animals. Anything living, including plants, has a soul.²⁷

Given this discrepancy between Aristotle’s emphases and the associations we bring along with the word ‘soul’, perhaps it would be better to use another word to translate ψυχή. For this reason some scholars choose to just transliterate it as ‘psuche’ or ‘psyche.’ Montgomery Furth prefers ‘psyche’ to ‘soul’, since “the associations of the English word ‘soul’ seems to me to render it ridiculous as a rendering for Aristotle’s *psukhē*, and ‘psyche’ is better as a regular reminder that what is in point here is a highly

²⁴ *DA* 3.5, 430a23-25.

²⁵ *Metaph.* Λ.7.

²⁶ It is the task of the natural philosopher to investigate the soul (*DA* 1.1, 403a27-28).

²⁷ *DA* 2.2, 413a25-31. God may be an exception. He certainly is living (*Metaph.* Λ.7, 1072b26-27), but he is an actuality that cannot be other than he is (1072b7-8), so if he has soul, it must be a different sort than the capacity that I will argue Aristotle assigns to mortal beings.

idiosyncratic theoretical concept.”²⁸ K. V. Wilkes also prefers to leave Aristotle’s word untranslated, as she explains in her essay “*Psuchē* versus the Mind”: “Evidently I could not translate it as ‘mind’, since my ambition is to contrast ‘mind’ and ‘*psuchē*’; but the commonly used ‘soul’ is just as misleading: stinging-nettles have *psuchē*.”²⁹

These transliterations, however, can also be misleading. They bring to mind the English words “psyche” and “psychology,” which in turn carry their own problematic connotations. Both English words are closely associated with the mind,³⁰ but mental phenomena are only a subset of what Aristotle discusses when looking at soul. Both words also are most typically linked to human phenomena. While comparative psychology does study other animals, psychology is definitely not the field to enter if one wants to investigate plants. Furth tacitly acknowledges these defects when he ends his defense of ‘psyche’ by saying, “Thus ‘psychology’, as used here, means the theory of the psyche, as mentioned here.”³¹

Not only do these considerations weaken the argument for transliteration, but there are also positive reasons for translating ψυχή ‘soul’. While Aristotle’s use of the term has its idiosyncrasies, he is nonetheless using a word with a rich history both before and after he adopts it. Disassociating his account from this stream has the advantage of

²⁸ Montgomery Furth, *Substance, Form and Psyche: An Aristotelian Metaphysics* (Cambridge: Cambridge University Press, 1988), 146n1.

²⁹ K. V. Wilkes, “*Psuchē* versus the Mind,” in Nussbaum and Rorty, *Essays on Aristotle’s De Anima*, 109. Amélie Rorty also uses “*psuchē*” in her introduction to the important collection (7-13).

³⁰ The *APA Dictionary of Psychology* defines psyche as “the mind in its totality, as distinguished from the physical organism,” and psychology as “the study of the mind and behavior.” Gary R. VandenBos, ed., *APA Dictionary of Psychology*, 2nd ed. (Washington, DC: American Psychological Association, 2015). ProQuest ebrary.

³¹ Furth, 146n1.

removing foreign associations, at the cost of forgetting the waters in which Aristotle is swimming.

His predecessors discuss ψυχή in many ways, and he can write about it in his idiosyncratic way only by intentionally ignoring some of them. Some of his predecessors even discuss soul in a manner similar to ours. Of particular interest, Plato uses ψυχή in *Phaedo* in ways that connect to both Aristotle and ourselves. The dialogue focuses on whether the soul survives death.³² As we would do, this inquiry seeks to determine whether death obliterates the person or self, a concern emphasized by the first word of the dialogue—the Greek word for self³³—and by Socrates’ final exhortation to his companions to care for themselves.³⁴ Moreover, the discussion touches on religion; it begins with Socrates discussing his going to be with good gods,³⁵ ends with a long description of the afterlife,³⁶ and is followed by Socrates’ final request to offer a sacrifice.³⁷ These discussions of soul are similar to our own, but different from Aristotle’s. At the same time Plato says, in one of the central arguments of the dialogue, that soul is that which, when “present in a body, makes it living (ζῶν ἔσται).”³⁸ That soul

³² The question is first raised by Cebes at 69e5, who agrees at 107a2 that it has been proven deathless and indestructible.

³³ The dialogue opens with the line, “Were you with Socrates yourself (αὐτός), Phaedo, on the day when he drank the poison in prison, or did someone else tell you about it?” (57a1-3) with αὐτός being the first word of the sentence. Plato, *Five Dialogues*, trans. G. M. A. Grube, 2nd ed., rev. John M. Cooper (Indianapolis: Hackett Publishing Company, 2002). Greek text in Plato, *Platonis Opera*, ed. E. A. Duke, et al. (Oxford: Clarendon Press, 1995).

³⁴ Socrates responds to the question of what his companions could do that would please him best by saying, “Nothing new, Crito, ... but what I am always saying, that you will please me and mine and yourselves by taking care of your own selves (αὐτοῖς) in whatever you do...” (115b5-7, Grube translation).

³⁵ 63b5-c4.

³⁶ 107c1-114c9.

³⁷ 118a7-8.

³⁸ 105c8-9, Grube translation. It is, of course, Socrates who says this in the dialogue and not Plato. Since my purpose here is only to illustrate the kinds of discussions about soul that took place prior to Aristotle, it

is the cause of life is central to Aristotle's account of soul. *Phaedo*, then, shows our concerns about soul coexisting with Aristotle's. For Plato, one word could cover all of this territory, so using "soul" both in the modern sense and to translate Aristotle is no problem. What is more, Aristotle references *Phaedo* in other works,³⁹ but in *De Anima* he only discusses *Timaeus*. He must have chosen to ignore the themes from *Phaedo* in his own work on soul. This is also significant because it highlights what he is particularly interested in—and what he is not.

Aristotle could choose which of his predecessors' views to address but had no control over the direction the conversation took after him. While this could be seen as a reason to separate his thought from theirs—that is, from ours—it is worth keeping this subsequent history in mind, because the later writers are addressing many of the same questions. Descartes is a perfect example. On the one hand he influenced modern philosophical notions of the soul, pushing them in a direction Aristotle would not endorse, by confining soul to mind and making the body a machine explainable without soul.⁴⁰ Plants and animals definitely do not have soul, according to Descartes. On the other hand, Descartes is interested in some of the same questions as Aristotle: What explains the processes of the body? What is the relationship of thinking to the body? Comparing the thoughts of each regarding soul can only serve to illuminate both, and it is

does not matter whether Plato himself would accept the views put forward by Socrates; it is enough that, as the author, Plato is responsible for selecting the matters under discussion in the dialogue.

³⁹ *GC* 2.9, 335b10; *Metaph.* A.9, 991b3; M.5, 1080a2; *Meteor.* 2.2, 355b32.

⁴⁰ See, for example, AT VI 45-46 in Part Five of the *Discourse on the Method*. René Descartes, *The Philosophical Writings of Descartes*, vol. 1, trans. John Cottingham, Robert Stoothoff, and Dugald Murdoch (Cambridge: Cambridge University Press, 1985), 134.

worth translating the two discussions using the same English term, so as to preserve the ability to compare.

In order to preserve the distinction between soul and life and to keep the connections to other thinkers, I will translate ψυχή and ἔμψυχον as ‘soul’ and ‘ensouled’, respectively. Now that I have a term for what Aristotle is talking about, the rest of the dissertation is an attempt to say what this term means.

Life

Next I turn to a set of terms denoting life: ζωή, τὸ ζῆν, and βίος. They do not present the same translation issues as the soul-terms did, since they can all be translated ‘life’. Despite this ease of translation, one is still left with the question of what precisely Aristotle means by each of them. ‘Life’ can cover a broad range of ideas. Throughout my life I show signs of having life, and I live the life of a human until the cessation of life. Or in other words, during my lifespan I indicate that I have vital capacities, and I conform to a human lifestyle until the cessation of vital activities. My contention here is that ζωή, τὸ ζῆν, and βίος each have a narrower range of meanings than the English word ‘life’, carving off just a portion of its possible connotations. The question is how much each term covers and how the three relate to each other. In this chapter I will suggest that ζωή and τὸ ζῆν are approximate synonyms, while βίος covers a distinct range from the other two.

I begin with βίος, since discussing it will help to show what Aristotle is not discussing in *De Anima*. This term is of little importance for elucidating soul, since it does not directly relate to it. It is used in the biological works such as *History of Animals*

and *Parts of Animals*, which serve as background to the discussion of soul, and it is used in the ethical and political works, which are ultimately based on Aristotle's account of soul, but it does not appear in *De Anima*. It is useful to look at nonetheless, because it covers some senses of 'life' that help illustrate the contrast with ζωή and τὸ ζῆν.

On the one hand Aristotle uses βίος to mean lifespan or lifetime. It shows up with this meaning several times in *History of Animals*: "The other assertion, that the she-wolf bears only once in her life (ἐν τῷ βίῳ), is patently untrue";⁴¹ "[The halcyon] gives birth throughout life (διὰ βίου)";⁴² "they say the life (βίος) of the lizard is only six months."⁴³ In these cases the term refers to the extent of life of the animal, either to comment on what events take place during the time the animal is alive, or to discuss the duration of this time.

On the other hand, and of more philosophical interest, Aristotle uses βίος to mean life in the sense of way of life, manner of living, or lifestyle. For example, "all birds whose way of life (βίος) includes swamp-dwelling and plant-eating have a flat beak,"⁴⁴ and "for those [birds] that eat flesh lengthiness would be contrary to their way of life (πρὸς τὸν βίον); for a long neck is weak, while for these animals their way of life (βίος) is based on overpowering."⁴⁵ That is, a vegetarian bird with a swamp-dwelling life needs a certain kind of beak, while a carnivorous bird must have a certain kind of neck because of

⁴¹ *HA* 6.35, 580a21-22, Peck translation. A. L. Peck, trans., *History of Animals: Books IV-VI* (Cambridge: Harvard University Press, 1970).

⁴² *HA* 8(9).14, 616a34, Balme translation. D. M. Balme, trans., *History of Animals: Books VII-X* (Cambridge: Harvard University Press, 1991).

⁴³ *HA* 5.33, 558a17. Peck translation, modified.

⁴⁴ *PA* 4.12, 693a15-16, Lennox translation. James G. Lennox, ed. and trans., *On the Parts of Animals I-IV* (Oxford: Clarendon Press, 2001).

⁴⁵ *PA* 4.12, 693a3-5, Lennox translation.

its life of violence. This sense of βίος is important in the biological works, because lifestyle is one of the key ways to differentiate animals, in addition to their activities, dispositions, and parts.⁴⁶ It also plays an important role in Aristotle’s ethical thought, since just like animals, humans can also be distinguished by their manners of life: “For on the basis on the lives (τῶν βίωv) they lead, the many and crudest seem to suppose, not unreasonably, that the good and happiness are pleasure. And thus they cherish the life (τὸν βίωv) of enjoyment. For the especially prominent ways of life are three: the one just mentioned, the political, and, third, the contemplative.”⁴⁷ The kind of life one lives dictates what one views as the good, so this notion of different lives is important to Aristotle’s ethics.

Ζωή and the closely related τὸ ζῆν also mean life, but in a different sense from either of the meanings of βίος. Rather than referring to the lifestyle of an organism or its lifespan, ζωή and τὸ ζῆν are related to the vital functions⁴⁸ of an organism—nourishing, perceiving, and walking are kinds of life. David Keyt affirms this difference between βίος and ζωή by noting that βίος can be said to be nomadic, agricultural, military, or tyrannic, and ζωή is said to be nutritive or sentient, but none of these adjectives can also be applied to the other kind of life. He summarizes by saying, “This suggests that ζωή is more closely tied to the different faculties of the soul than βίος. In Aristotle ζωή seems to refer to different expressions of life whereas βίος often refers to different occupations or

⁴⁶ See *HA* 1.1, 487a11-12.

⁴⁷ *EN* 1.5, 1095b14-19, Bartlett and Collins translation. “Ways of life” in the final sentence does not appear in the Greek.

⁴⁸ I use the term ‘function’ to refer indiscriminately to activities and the corresponding capacities, as I explain at the end of this chapter. It is not meant to refer to a particular word in Aristotle’s Greek.

careers.”⁴⁹ While Keyt is primarily concerned in his article with βίος and the implications of its meaning for Aristotle’s ethics, his quote indicates why ζωή is important to my project. It and the nearly synonymous τὸ ζῆν are tied to soul. They are the starting points from which Aristotle will argue for his definition of soul, and so they are central to his account. Because of this, it is necessary to pin down exactly how ζωή and τὸ ζῆν relate to the vital functions. I cannot explain this, however, until the terms for the functions have been examined.⁵⁰ But before examining the functions I want to remain with ζωή and τὸ ζῆν a little longer, in order to discuss the relationship between them and explain why I will treat them as equivalent in what follows.

Aristotle explains what each word means by listing vital functions, and the relationship between the two depends on whether the number of functions he lists matters. When explaining ζωή in *De Anima* he lists three: “...we say that life (ζωήν) is self-nourishment, growth, and decay.”⁵¹ These three cover the most basic functions common to all living things and are frequently treated by Aristotle as just one—nutrition. On the other hand he associates τὸ ζῆν with several functions: “Life (τοῦ ζῆν) is said in many ways, and we say that a thing lives (ζῆν) if any one of these is present in it, such as thought, perception, motion and stopping with respect to place, besides motion with respect to nourishment and both decay and growth.”⁵² The question, then, is whether

⁴⁹ David Keyt, “The Meaning of ΒΙΟΣ in Aristotle’s *Ethics* and *Politics*,” *Ancient Philosophy* 9 (1989): 17. Keyt also lists a few passages where in his view ζωή and βίος are used equivalently (*HA* 9.7, 612b18-19; *EN* 9.9, 1170a28-29; *EE* 1.3, 1215a4-5). I would argue that in each case it is plausible to think that Aristotle intends the two terms to refer to different things, with βίος meaning ‘way of life’ and ζωή having the meaning I will give it in the next chapter.

⁵⁰ I will discuss the function terms in the next section of this chapter and their relation to life in chapter two.

⁵¹ 2.1, 412a14-15. Note that I do not think this is the best translation of this passage. The rest of this chapter and the next will explain why and what a better translation would be.

⁵² 2.2, 413a22. This is also an imperfect translation. (See previous note.)

Aristotle lists fewer functions in the case of ζωή because it is more limited in scope than τὸ ζῆν. The answer depends on whether or not one limits the breadth of the inquiry. If one confines the discussion to *De Anima*, then Aristotle may intend for the two terms to be closely related but to have different scopes. When other works are taken into consideration, it appears that Aristotle does not differentiate between the two.

Every time that Aristotle uses ζωή in *De Anima* it is in the context of nutrition, without any mention of the other functions, while τὸ ζῆν is never limited in this way. He uses ζωή several times throughout the first half of 2.1,⁵³ all within the argument containing the definition above. Outside of this chapter he only uses ζωή twice in *De Anima*, both times to say that nothing is nourished (τρέφεται) without sharing (κοινωνεῖ) or partaking (μετέχον) in life (ζωῆς).⁵⁴ By contrast, Aristotle always uses the articular infinitive τὸ ζῆν in a context of either multiple functions or none. He uses it three times in a context that does not specifically mention any functions: Aristotle says that his predecessors defined it as breathing,⁵⁵ gives an etymology of it,⁵⁶ and says that it is the being (τὸ εἶναι) of living things.⁵⁷ Everywhere else it is used in a discussion of multiple functions. At the end of book one he asks whether different functions are due to different parts of the soul, then whether life belongs to one or all of these parts.⁵⁸ In book two he defines it in terms of several functions, as stated above.⁵⁹ Finally, he says twice that life

⁵³ The word occurs six times between 412a13-28.

⁵⁴ 2.4, 415b27 and 416b9.

⁵⁵ 1.2, 404a9.

⁵⁶ 1.2, 405b28.

⁵⁷ 2.4, 415b13.

⁵⁸ 1.5, 411b3. Of course, if his answer ended up being that it just belongs to one part, then τὸ ζῆν could be just related to nourishment. However, the fact that he asks the question shows that the term itself does not automatically exclude all functions but nourishment.

⁵⁹ 2.2, 413a22. He also uses τὸ ζῆν in the previous sentence, which leads him to give this definition.

belongs to living things because of the power of nutrition;⁶⁰ this statement is not restricting life to nutrition, however, for he immediately follows the first statement by adding that animals have it primarily due to sensation. All the uses of ζωή and τὸ ζῆν in *De Anima*, then, support a differentiation between them based on the number of functions each has in view. Ζωή only involves nutrition while τὸ ζῆν covers a wider range.

Aristotle does not maintain the distinction in other works. This is particularly easy to see in *Metaphysics*, where Aristotle says that god has ζωή: “Life (ζωή) also belongs [to god], for the actuality of thought (νοῦ ἐνέργεια) is life and he is the actuality [of thought].”⁶¹ Note the first premise of this argument for god’s life. Aristotle says that the actuality of thought is life—ζωή. If Aristotle were maintaining the definitions from *De Anima*, then he could not say this, for thought is a separate function from nutrition. If ζωή only ever had to do with nutrition, then god, who is just thought, would not have it.

In other works Aristotle also uses τὸ ζῆν in the restricted way he uses ζωή in *De Anima*. In *Parts of Animals* he uses τὸ ζῆν to refer to just nutrition: “It is, then, of the nature of plants, being immobile, not to have many forms of the non-uniform parts... But those things with perception (αἴσθησις) in addition to life (τῷ ζῆν) are more polymorphic in visible character....”⁶² In this passage τὸ ζῆν clearly does not include perception, as it does above in *De Anima*, because it is contrasted with perception. Instead, it refers to the function of a plant—to nutrition.

Nicomachean Ethics further demonstrates that Aristotle does not always distinguish between ζωή and τὸ ζῆν, for here he uses them as synonyms:

⁶⁰ 2.2, 413b1; 2.4, 415a25.

⁶¹ Λ.7, 1072b26-27.

⁶² 2.10, 656a1-4, Lennox translation.

But someone might suppose that all strive for pleasure, because all also aim at being alive (τὸ ζῆν). Living (ζωή) is a certain activity, and each engages in an activity concerned with and by means of those things he is especially fond of—the musical person, for example, engages, by means of hearing, in an activity concerned with melodies; the lover of learning engages, by means of thinking, in an activity concerned with the objects of contemplation; and so on with each of the rest. Pleasure also completes the activities, as indeed it does in being alive (τὸ ζῆν), which people long for. It is reasonable, then, that they aim also at pleasure, since it completes for each what it is to be alive (τὸ ζῆν), which is a choiceworthy thing.⁶³

Aristotle moves from using τὸ ζῆν to using ζωή, then back again, without any discernible difference in meaning. When he switches to ζωή, he does not mean to restrict the discussion to nutrition, since he immediately illustrates his claim that life is an activity by citing instances of perception and thinking.

I conclude from the passages above that Aristotle may intend to differentiate ζωή and τὸ ζῆν in *De Anima*, but that this distinction is not of great importance to his philosophy as a whole. Even within *De Anima*, however, nothing appears to hang on the distinction. None of his arguments would change if ζωή also refers to the complete set of vital functions, although I will have to put off defending this claim until I examine the arguments in the next chapter. For these reasons I feel free to translate both as ‘life’. What is important is that this is life in a different sense from lifespan or lifestyle—

⁶³ 10.4, 1175a10-17, Bartlett and Collins translation.

meanings Aristotle covers with the term βίος—and so these senses should be put to one side when thinking about life in the context of *De Anima*.

The Vital Functions – Capacities and Activities

Since life is defined in terms of vital functions, in order to explain life further I will have to discuss Aristotle's terms for the functions. Doing so will not only clarify life, but it will turn out also to clarify the relationship between soul and life. I will make these clarifications in the next chapter. Before I can do this, I need to lay out the various ways that Aristotle uses function terms.

One must pay close attention to the particular terminology Aristotle uses to discuss the vital functions, for he employs two sets of words that must be distinguished. I will start by differentiating the two sets based on their suffixes:

Table 1: Two kinds of suffix

Set 1 (-τικόν)	Set 2 (-σις)
The capable of thinking (τὸ νοητικόν)	Thought (νόησις)
The capable of perceiving (τὸ αἰσθητικόν)	Perception (αἴσθησις)
The capable of moving (τὸ κινητικόν)	Motion (κίνησις)

More words belong to each of the sets, and once they are organized by meaning rather than by suffix, things will become more complicated. But these three pairs illustrate the place to start.

The words listed above in the first set are all adjectives that have been substantivized by adding the article. These adjectives all share the same -τικόν ending in the nominative, which means they indicate relation, fitness or ability.⁶⁴ When it comes to

⁶⁴ Herbert Weir Smyth, *Greek Grammar*, rev. Gordon M. Messing (Cambridge: Harvard University Press, 1956), 237, sect. 858.6.d.

Aristotle's discussion of soul, it makes most sense to understand them as denoting ability or capacity—capable of thinking, capably of perceiving, and so on.⁶⁵ When one of these is substantivized, however, there are several things that the resulting substantive could mean. William Charlton notes that they are often translated as referring to capacities, such as “the power to perceive,” but this can also be translated by the more concrete expression “that which perceives.”⁶⁶ Myles Burnyeat also considers these two options, labelling them “the perceptive faculty” and “the perceiver,” and he gives examples of passages in *De Anima* where each translation is appropriate.⁶⁷ D. W. Hamlyn provides more options: “that which can perceive” can refer to “the animal, a sense-organ, the soul or a part of it.”⁶⁸ These options should probably be read as filling out the two already discussed. ‘The perceiver’ might be the animal or one of its organs, while ‘the perceptive faculty’ is a part of the soul; the whole soul is one or the other, depending on how one interprets Aristotle's account of soul. Jennifer Whiting adds further possible meanings, distinguishing between the capacity of soul “by which an animal perceives, imagines, and desires,” and the parts of soul “with which an animal does these things.”⁶⁹ It is worth

⁶⁵ “Adjectives formed with the suffix *-ikos* allow for different semantic nuances, but it is generally agreed that in this context they designate that which enables something...” Klaus Corcilius and Pavel Gregoric, “Separability vs. Difference: Parts and Capacities of the Soul in Aristotle”, *Oxford Studies in Ancient Philosophy* 39 (Winter 2010): 87. The context in question is that of *DA* 2.2, 413b11-13, but I am not aware of anyone who argues that in *De Anima* these words indicate relation or fitness instead of ability, so this statement applies more widely.

⁶⁶ Charlton thinks that this latter formulation is the better one, since “the *-ikon* formations are concrete expressions whereas *dunamis*, ‘power’ or ‘capacity’ is abstract,” and “philosophers today are interested in whether the soul should be conceived (and whether it is conceived by Aristotle) as a kind of attribute or as a thing with attributes, a kind of substance” (in Philoponus, trans. Charlton, 135-136 n133).

⁶⁷ M. F. Burnyeat, “*De Anima* II 5,” *Phronesis* 47.1 (2002): 44n41.

⁶⁸ D. W. Hamlyn, ed. and trans., *De Anima: Books II and III (with Passages from Book I)*, new impression with supplementary material by Christopher Shields (Oxford: Clarendon Press, 1993), xvii-xviii.

⁶⁹ Jennifer E. Whiting, “Locomotive Soul: The Parts of Soul in Aristotle's Scientific Works,” *Oxford Studies in Ancient Philosophy* 22 (2002): 142.

keeping in mind all of these possibilities for what a term such as τὸ αἰσθητικόν can mean, but for now I am most interested in illustrating that it can refer to the capacity to perceive.

At times Aristotle makes it clear that he is using such terms to denote capacities, as in the following passage that uses several substantives ending in -τικόν:

“The capacities (δυνάμεις) we spoke of were a capacity to nourish (θρεπτικόν), a capacity to perceive (αἰσθητικόν), a capacity to desire (ὄρεκτικόν), a capacity to move with respect to place (κινητικὸν κατὰ τόπον), a capacity to think (διανοητικόν). Only the capacity to nourish (τὸ θρεπτικόν) belongs to plants, but both this and the capacity to perceive (τὸ αἰσθητικόν) belong to others.”⁷⁰

In the first sentence he calls them capacities or powers. In the second he assigns them to subjects, so they must not be subjects themselves; it makes no sense to say that the nourisher belongs to plants, so Aristotle must mean the capacity to nourish instead. Part of the reason why it is important to recognize that the first set of terms listed above can refer to capacities is that this helps to determine the possible meanings of the second set.

The meaning of the second set of terms also needs to be discussed, since these terms can also mean multiple things. As opposed to the -τικόν words, however, I am aware of no discussion of what the ending in -σις means for Aristotle. Perhaps it is thought that the meaning of these terms is clear, but this is not the case. The suffix of these words, -σι (or -σις with the nominative singular feminine ending), indicates that they denote actions or abstract ideas,⁷¹ and they are usually translated with abstract nouns like “perception” and “movement.” English words like these are problematic because

⁷⁰ *DA* 2.3, 414a31-b1. Aristotle does not use the articles in the first sentence, but the context makes it clear that he is treating each of the -τικόν words in it as substantives rather than as adjectives.

⁷¹ Smyth, *Greek Grammar*, 230, sect. 840.a.2.

they can refer to several different things. For example, is perception what happens when I am seeing or what I have when I sleep? Or is it whatever the act and the latent capacity have in common? This ambiguity is not just in the English translations but is for the most part in Aristotle's Greek as well. Of the three options—capacity, activity, both—he only rarely uses a -σις word to refer to a capacity, since he has the -τικόν words for this purpose. Regarding the other two options I will argue first that Aristotle uses words ending in -σις to refer to activities like seeing, then that he also uses some of these terms to speak generally about activities and capacities grouped together. He uses them in both of the ways indicated by their suffix: as actions and as abstract ideas.

At times he uses these words to refer to activities, and this can be seen from passages where he contrasts capacities and activities.

(A₁) For the activity (ἐνέργεια) of vision (ὄψεως) is called sight (ὄρασις), but the [activity] of color is nameless, and the [activity] of the capacity to taste (τοῦ γευστικοῦ) [is called] taste (γεῦσις), but the [activity] of flavor is nameless.⁷²

This passage involves three words ending in -σις when in the nominative. Aristotle makes the meaning of one of these clear in the second half of the sentence. He discusses taste using the term γεῦσις, and says that it is the activity of the capacity to taste. Since the first half of the sentence parallels the second, “sight” (ὄρασις) also refers to an activity. This leaves “vision” (ὄψις), which must refer to the capacity to see, given the parallel between the halves of the sentence. Using ὄψις to refer to a capacity deviates from his standard course—Aristotle does not usually use terms ending in -σις to refer to capacities—but in

⁷² *DA* 3.2, 426a13-15.

De Anima he does not use any form of ὄρατικόν or ὀπτικόν, which would be the usual forms he would pair with ὄρασις or ὄψις. This leaves him with a need for a term that refers to the capacity to see, and it is clear from (A), as well as from the next passage I will look at, that he uses ὄψις to refer to this capacity.⁷³ Before moving to this second passage, however, here is the first again, retranslated to emphasize the relationships between capacities and activities that take place in it.

(A₂) For the activity of the capacity to see (ὄψεως) is called seeing (ὄρασις), but the [activity] of color is nameless, and the [activity] of the capacity to taste (τοῦ γευστικοῦ) [is called] tasting (γεῦσις), but the [activity] of flavor is nameless.

I use the gerunds “seeing” and “tasting” to highlight the active⁷⁴ nature of what they refer to; similarly, “the capacity to see” makes it clearer what role ὄψις plays in the sentence. One could argue that translating ὄρασις “sight” is preferable because it captures the ambiguity that I will argue is present in Aristotle’s term, but for the purposes of understanding soul I will translate terms ending in -σις with the gerund whenever it is clear that they are referring to activities.

The second passage further supports the idea that Aristotle uses -σις words to refer to activities, as well as that ὄψις is unusual because it refers to a capacity.

(B) As with cutting (τμησις) and seeing (ὄρασις), so also being awake (ἐγρήγορις) is an actuality (ἐντελέχεια), but as with the capacity to see (ὄψις) and the capacity of

⁷³ David Ross also points out that in the next passage (at 413a1) ὄψις refers to the capacity rather than the activity, ὄρασις. Ross, *De Anima*, 214.

⁷⁴ Both “sight” and “seeing” are ambiguous, as each can be used to refer to the capacity, activity, or function encompassing both. However, to my ear “seeing” sounds more active. It is a form of the verb rather than solely a noun, and it is the form used in the progressive mood. In any case, I will be using words with the -ing ending to denote activities.

the instrument (δύναμις τοῦ ὀργάνου) [i.e. of an axe], so is soul [only a first actuality].⁷⁵

For now I will ignore the mention of soul, as well as the implied reference to first actuality; my argument is building up to a discussion of these, so I will not make use of them now.⁷⁶ The rest of the sentence is a contrast between activities and capacities, as several of its features indicate. On the one hand, cutting, seeing, and being awake are all called actualities (ἐντελέχεια). The inclusion of being awake on this list further emphasizes that these items are activities, since earlier in the chapter Aristotle contrasts it with something that is had but not activated—in other words, he contrasts it with a capacity: “Being awake (ἐγρήγορσις) is analogous to contemplation (τῷ θεωρεῖν), while sleep [is analogous] to having (ἔχειν) and not activating (μὴ ἐνεργεῖν) [knowledge (ἐπιστήμη)].”⁷⁷ On the other hand, in (B) the capacity of the axe is specifically called a capacity (δύναμις). This capacity is paired with ὄψις, which indicates that ὄψις is again the capacity to see, a conclusion that is further emphasized by the way the passage contrasts ὄψις and ὄρασις. The opposition in this sentence between activities and capacities gives more evidence that Aristotle uses words ending in -σις to refer to activities, since the words referring to all three activities here do so.

⁷⁵ *DA* 2.1, 412b27-413a1.

⁷⁶ Soul will also turn out to be a capacity and so will first actuality. For soul, see the next chapter. For a discussion of first actuality, see chapter three. I will note that while this passage may seem to suggest that waking is the corresponding activity to soul, that is not entirely correct; waking is specifically tied to perception, and soul must encompass nutrition as well.

⁷⁷ *DA* 2.1, 412a25-26.

Unfortunately for the reader, Aristotle does not always use -σις words to designate activities. Sometimes he uses them to speak of the function generally, not distinguishing between capacity and activity.

Before arguing that Aristotle uses the terms in this way I want to indicate the value of having a general term. Separating the capacity from the activity is conceptually clarifying, so why would someone who has recognized this distinction want to blur it? Sometimes what unites the capacity and activity is more important than what separates them. If I say, “Sight lets colors be perceived, but hearing deals with sounds,” I can mean both that the capacity to see enables the perception of color and that it is in acts of seeing that one perceives color. I do not want to emphasize either of these, however, because in such a statement the distinction between capacity and activity is less important than the fact that the perception of color unites them and distinguishes them from all the other senses. In an ideal situation one would always use a distinct word for the general term, as with “sight” (general), “seeing” (activity), “capacity to see” (capacity). Even in English this does not always happen. There are no good words to distinguish the act of hearing from hearing in general without resorting to archaic-sounding words like “audition.”

As far as I can tell, Aristotle never uses more than two words to serve the three different purposes, but instead reuses the words that refer to the capacity or activity. This can be seen most clearly by comparing two passages. In (A), Aristotle contrasted the capacities to see and to taste with their activities.

(A) For the activity of the capacity to see (ὄψεως) is called seeing (ὄρασις)... and the [activity] of the capacity to taste (τοῦ γευστικοῦ) [is called] tasting (γεῦσις)...

In this passage ὄψις denotes a capacity, and it is used in parallel with τὸ γευστικόν rather than with γεῦσις, because γεῦσις refers to an activity. In a different passage, however, Aristotle treats ὄψις and γεῦσις as comparable terms.

(C) Just as sight (ὄψις) is of both the visible and the invisible... so taste (γεῦσις) is of both the tasteable and untasteable...⁷⁸

Here Aristotle is speaking generally in precisely the way I indicated. The visible is the object of both the capacity to see and the activity of seeing. Since he does not have a third set of terms, he just reuses ὄψις and γεῦσις. The context makes it clear that they should be translated as the general “sight” and “taste” as opposed to “the capacity to see” and “tasting.”

Similarly, just as Aristotle uses αἴσθησις to mean perceiving, the activity of the capacity to perceive (τὸ αἰσθητικόν), he also uses it as a general term, “perception.”

(D) Since we say “to perceive” (τὸ αἰσθάνεσθαι) in two ways—for we say of that which hears or sees potentially (δυνάμει) that it hears or sees, even if it happens to sleep, and [we also say of] that which is already active (τὸ ἤδη ἐνεργοῦν) [that it hears or sees]—perception (αἴσθησις) also may be said in two ways, as in capacity (δυνάμει) or as active (ἐνεργεία).⁷⁹

In this passage Aristotle is saying that both the verb “to perceive” and the noun αἴσθησις have an active sense and a potential sense. It makes no sense to translate αἴσθησις “perceiving,” the activity, because the point of the passage is to say that it can refer to the activity or the capacity. It is better to translate it “perception.”

⁷⁸ *DA* 2.10, 422a20-30.

⁷⁹ *DA* 2.5, 417a9-13.

When it comes to the vital functions, then, Aristotle has at least three different ways that he talks about each—as a capacity, as an activity, and as a general function—and he has only two terms for each. Capacities and activities are clearly contrasted in the terminology, but the same words that refer to these can be used to refer to the function that encompasses both. Here is a chart summarizing the functions discussed so far, as well as a few others:

Table 2: Three kinds of function words⁸⁰

Capacities	Activities	Functions
Capacity to think (τὸ νοητικόν)	Thinking (νόησις)	Thought
Capacity to perceive (τὸ αἰσθητικόν)	Perceiving (αἴσθησις)	Perception (αἴσθησις)
Capacity to see (ὄψις)	Seeing (ὄρασις)	Sight (ὄψις)
Capacity to taste (τὸ γευστικόν)	Tasting (γεῦσις)	Taste (γεῦσις)
Capacity to move (τὸ κινητικόν)	Moving (κίνησις)	Motion
Capacity to nourish (τὸ θρεπτικόν)	Nourishing (τροφή) ⁸¹	Nourishment

This chart is a convenient summary of what I have discussed about the vital functions so far, and it also lists some of the key functions that will be discussed in the next chapter.

My practice will be to translate Aristotle's terms as capacities or activities as I examine Aristotle's arguments in *De Anima* 2.1-3 in the next chapter, unless the context makes it clear that he has the overarching function in view. This will turn out to make sense out of what Aristotle is doing in these chapters, since his focus here is to explain

⁸⁰ I have not filled in the Greek for some of the functions, because I have not yet found evidence of what words Aristotle uses in these ways.

⁸¹ This term, τροφή, does not fit in with either set of suffixes, but at *DA* 2.1, 412a14-15 Aristotle indicates that it refers to the activity of nourishing, as I will argue in the next chapter.

the activities in terms of the capacities. This explanation, in turn, will be the key to begin to understand soul. Soul is the set of the vital capacities, while life is the set of activities, making soul the capacity for life.

Chapter 2: From Life as Activity to Soul as Form

In this chapter I will focus on the arguments that Aristotle uses to establish his definition of soul as the form or actuality of the body. In particular I want to highlight the way that the arguments of both *De Anima* 2.1 and 2.2 start from life and depend upon the relationship between life and soul. Because of the prominence of life in Aristotle's arguments, it is important to continue the discussion started in the last chapter and decide exactly how life relates to the vital functions. I will suggest that it is best understood as being equivalent to the vital activities. From this starting point Aristotle will argue that soul is form and actuality, based on the notion that soul is the cause of these life activities. Aristotle does not always make it clear that this is the relationship he is assuming, and commentators sometimes miss the places where he mentions it, so I will highlight the evidence that this is his position and that it is central to his arguments. Looking at these arguments will provide part of the evidence that I will use in the next chapter to argue that soul is the vital capacities. My intention here is to illustrate what Aristotle means by life and the importance of this view for his argument that soul is form.

Life is the Vital Activities

I will begin by fleshing out the two suggestions mentioned above: life is the vital activities and soul is the cause of life. It is important to begin a discussion of soul by first understanding what Aristotle means by 'life', because life is the place where he begins his account of soul. On the one hand, Aristotle makes this easy to do, because he says what life is twice. Life is the vital activities. On the other hand, he appears to take the notion of life to be well-understood, and so he says very little about it besides these two

statements. The statements themselves, moreover, are liable to multiple interpretations and are best understood in the context of his discussion of soul. This creates a bit of a chicken-and-egg problem for the presentation of Aristotle's account of life. Recognizing this, I will present here some of the evidence for understanding life to be the vital activities, but further evidence depends upon the account of soul that will be defended in the rest of this chapter and in the next. Because of this dependence, the argument for how Aristotle views both soul and life will ultimately rest on the coherence of the account I will present.

In the previous chapter I gave two quotes showing that Aristotle links life to the vital functions. In these passages he uses either words ending in *-σις* or words whose endings are unusual when it comes to discussions of the functions.¹ Because of these endings, the passages could be taken to identify life with either the vital activities or the functions in general. Here they are again, this time with the terms translated as activities.

... we say that life (*ζωήν*) is self-nourishing (*τὴν δι' αὐτοῦ τροφήν*), growing (*αὔξησιν*), and decaying (*φθίσιν*).²

Life (*τοῦ ζῆν*) is said in many ways, and we say that a thing lives (*ζῆν*) if any one of these is present in it, such as thinking (*νοῦς*), perceiving (*αἴσθησις*), moving and stopping with respect to place (*κίνησις καὶ στάσις ἢ κατὰ τόπον*), besides

¹ The unusual words are *τροφή* and *νοῦς*. The first passage also provides evidence that by *τροφή* Aristotle means the activity of nourishing, since it is placed along two words ending in *-σις*. William Charlton agrees that *τροφή* refers to this activity (in Philoponus, trans. Charlton, 131n 37). On the other hand, *νοῦς* is apparently one of the few terms that can refer to both a capacity and an activity. At DA 2.2, 413a23 it appears in a list of activities, while at 414b18 it appears along with other capacities.

² DA 2.1, 412a14-15.

moving with respect to nourishment (κίνησις ἢ κατὰ τροφήν) and both decaying (φθίσις) and growing (αὔξεισις).³

I will argue that he does mean to say that life is the vital activities, but the other option has its attractions as well. For Aristotle to be saying that life is the vital functions—both the activities and capacities—would mean he is making a less specific claim, and this could be considered a reason for interpreting him in this manner. When we speak of life, we generally have something broad and unspecified in mind. A tree lives both because it grows and because it has the capacity to grow. Anything in the realm of the vital functions seems appropriate to call life. However, elsewhere the text suggests that Aristotle has the more restrictive claim in view. Life is just the vital activities. Interpreting the passages in this way makes the subsequent claims about soul make sense. Just as life is the vital activities, soul is the vital capacities.

Stipulating for a moment that Aristotle's conclusion will be that soul is the vital capacities, as the text continues it provides evidence that life is the activities. Following the second passage above, Aristotle says that soul is the source of life.

Because of this all plants are also thought to live (ζῆν), for they manifestly have in themselves such a power (δύναμιν) and source (ἀρχήν) through which they come to have both growing (αὔξεισίν) and decaying (φθίσιν) in opposite directions. ... No other power of soul (δύναμις... ψυχῆς) [besides this capacity to nourish] belongs to them [i.e. plants].⁴

³ DA 2.2, 413a22-25.

⁴ 413a25-b1.

If Aristotle were saying here that soul is the source of growth considered as both capacity and activity, then soul—which is the capacity—would somehow be the origin of itself. It makes more sense for Aristotle to be saying that soul as capacity is responsible for vital activities. This evidence is, of course, backwards. In *De Anima* 2.1 and 2.2 Aristotle argues *from* life *to* soul, not the other way around. In what follows I will offer evidence that does not rely on me stipulating the nature of soul, but it is still the case that all the evidence will have to come from places where Aristotle relates life to soul. He never argues for a particular way of conceiving life, because he appears to assume that everyone already knows what it is. This leaves the modern reader the task of deciphering his meaning from the context.

Before proceeding to the text of *De Anima*, I want to emphasize what it means to say that life is the vital activities by contrasting it with other ways to speak of Aristotle's view of life. In these discussions life either is said to be the vital capacities or is described in ambiguous terms, terms that leave it open whether life is an activity or a capacity. I am arguing that to speak of life in a way that captures Aristotle's meaning, one needs to make it clear that it is just an activity and not in any way a capacity.

First, some scholars define life in terms of the vital capacities. D. W. Hamlyn writes, for example, that Aristotle's "approach to his subject-matter is that of one concerned with general forms of life, i.e. the general capacities and potentialities which living things possess."⁵ Similarly, Gareth Matthews states that "what it means to say that an organism is alive is that it can exercise at least one psychic power; that is, at least one

⁵ Hamlyn, x.

of the powers that organisms of its species must, in general, be able to exercise for the species to survive,” and so life should be defined as “ x is alive $=_{df}$ there is a species s , and a psychic power p , such that x belongs to s , p is a psychic power for species s , and x can exercise p .”⁶ This definition uses exclusively capacity-language: a living organism “*can* exercise at least one psychic power”; organisms must “*be able* to exercise” a power; “ x *can* exercise p .” Because these definitions are in terms of capacities, however, they are not defining what Aristotle means by ‘life’. To have life an organism’s vital capacities must be active.

Second, others discuss life using terminology that is ambiguous with respect to the distinction between capacities and activities. One such term is ‘system’, as when Christopher Shields defines life as “ x is alive $=_{chdf}$ x is an intentional system.”⁷ Is a system a set of capacities or of activities? On the one hand, just before giving this definition Shields says that “the core of life is a form of enriched intentional activity,”⁸ suggesting that he has activity in mind.⁹ On the other hand, the word “system” does not emphasize activity but brings to mind accounting systems, organizational systems, computer operating systems—that is, structures that *enable* one to keep track of money, organize stuff, or compute. These latter associations make ‘system’ a somewhat problematic term to use when discussing life. Though it is not as clearly incorrect as

⁶ Matthews, 191.

⁷ Christopher Shields, *Order in Multiplicity: Homonymy in the Philosophy of Aristotle* (Oxford: Oxford University Press, 1999), 189. The “chdf” stands for “core-homonymous definition,” a term of importance to his book but not directly relevant to the discussion here. He also later specifies that life is a *native* intentional system (191-92).

⁸ Shields, *Order*, 189.

⁹ Yet he does not have activity so clearly in mind that he objects to the way Matthews defines life in terms of capacities, despite criticizing Matthews’s position in other ways (Shields, *Order*, 182).

‘capacity’ when discussing Aristotle, it nonetheless does not fully capture Aristotle’s meaning.

Another term used ambiguously is ‘function’. In his commentary on *De Anima* Ronald Polansky says that soul provides “an account of the life of the body—that is, it is posited to explain certain functions.”¹⁰ ‘Function’ is ambiguous, however, possibly referring either to what something has or to what it does. This ambiguity is evidenced in Polansky’s commentary, as he says both that certain beings are classed as living “because they perform certain natural functions,”¹¹ and that soul unites body “much as a function like vision or capability of cutting unites with what supports it.”¹² In the first case ‘performing functions’ is equivalent to ‘engaging in activities’, while in the second the function is said to be like a capacity. Because ‘function’ is ambiguous, defining life in terms of function leaves it up in the air whether life is certain capacities, certain activities, or both. Because of this it fails to express what Aristotle has in mind.

I do not mean to suggest by these comments that no one speaks correctly of life. Some other scholars write in a way that conveys clearly that life is an activity. For example, Stephen Menn speaks of “the different activities that constitute life,”¹³ and Klaus Corcilus and Pavel Gregoric write that “the presence of any one of these types of activity... is sufficient for the ascription of life.”¹⁴ There is sufficient confusion in the

¹⁰ Ronald Polansky, *Aristotle’s De Anima* (Cambridge: Cambridge University Press, 2007), 154.

¹¹ Polansky, 151.

¹² Polansky, 167. In the paragraph before that in which this statement is found, he clarifies that vision and the power of the tool to cut are dispositions that allow for the operation (167). That is, they are capacities.

¹³ Stephen Menn, “Aristotle’s Definition of Soul and the Programme of the *De Anima*,” *Oxford studies in Ancient Philosophy* 22 (2002): 107. As with many commentators, however, he does not recognize the implications of this view when discussing the body having life potentially—see below.

¹⁴ Corcilus and Gregoric, 86.

terminology used to discuss Aristotle view of life, however, to warrant emphasizing here what Aristotle does and does not mean.¹⁵ Of course, I have up to this point asserted several times that Aristotle views life as the vital activities, but I have not yet given much evidence. As I proceed to discuss his arguments in *De Anima* 2.1 and 2.2 I will highlight more reasons to see life as an activity.

Soul is the Cause of Life

Next I turn to the relation of life to soul. Aristotle's position on this relation is clear, for as he says in 2.4,¹⁶ soul is the cause or explanation of life. While this means I do not need to argue further as to how Aristotle thinks soul and life relate, I wish to make two additional assertions about this relationship. First, Aristotle also takes his predecessors to hold this position, and to hold it with 'life' meaning the vital activities. Second, this relationship is a key part of Aristotle's arguments for the definition of soul and the reason why they start from life.

As to the first contention, others have pointed out that seeing soul as the explanation of life was commonplace in Greek culture. Both D. W. Hamlyn and Thomas Johansen note that in Greek thought prior to Aristotle there was already a connection between life and soul, that his predecessors also saw soul as the cause of life: "Aristotle starts from the principle which runs through most of earlier Greek thought—that the soul, whatever else it is, is the principle of life, i.e. that which makes living things alive, and is

¹⁵ And I have not seen such an emphasis elsewhere. I am aware of two prolonged discussions of what Aristotle means by life in *De Anima*, those of Matthews and of Shields, and as I argue above, they both have flaws.

¹⁶ 415b12-14.

responsible, in some sense, for the different living functions.”¹⁷ As with his own view of life, however, Aristotle indicates that he understood his predecessors not to have in mind the general functions, but specifically the life activities.¹⁸ When he begins to examine them in 1.2, he says that they ascribed soul to those things which exhibited two main activities: “The ensouled (τὸ ἔμψυχον) seems to differ from the unensouled (τοῦ ἀψύχου) most of all in two ways: by moving (κινήσει) and by perceiving (τῷ αἰσθάνεσθαι).”¹⁹ Both of the terms κίνησις and τὸ αἰσθάνεσθαι can be used either in a specific way to denote activities or in a general way to refer to capacities and activities taken together.²⁰ From what he goes on to say, it makes most sense that Aristotle is saying his predecessors were focused on the activities. For example, Aristotle says of them that “some say that soul is most of all and primarily the mover (τὸ κινουῶν), and thinking that the thing that is not itself moving (τὸ μὴ κινούμενον) would not be able to move another, they supposed that soul is one of the things that are moving (τῶν κινουμένων τι).”²¹ These thinkers are concerned to explain how something comes to be in motion. They want an explanation of the activity of moving, not of how something comes to be able to move. Further, it is soul that they look to in order to explain this activity, making the premise that soul is the cause of life a natural part of the arguments Aristotle will offer.

¹⁷ Hamlyn, ix-x. Johansen: “For Aristotle, as for other ancients, the most fundamental feature of the soul was that it was the cause of life.” Thomas Kjeller Johansen, *The Powers of Aristotle’s Soul* (Oxford: Oxford University Press, 2012), 3, doi:10.1093/acprof:oso/9780199658435.001.0001.

¹⁸ For my purposes here I am not interested in the question as to whether Aristotle was correct in assigning this view to his predecessors. It is enough that he did, and that because he did it serves as a good starting place for his own arguments.

¹⁹ *DA* 1.2, 403b25-27.

²⁰ For κίνησις, see the discussion of -σις words in chapter one. For τὸ αἰσθάνεσθαι used to denote an activity, see *DA* 2.4, 415a16-20, where activities and capacities are contrasted, and τὸ αἰσθάνεσθαι is contrasted with τὸ αἰσθητικὸν. For τὸ αἰσθάνεσθαι used in a general sense, see *DA* 2.5, 417a9-13, where it is said to have both a potential and an active sense.

²¹ 404a28-31.

Because his predecessors share his view on the relationship between soul and the activities of life, this makes life the natural starting point for Aristotle's arguments for the definition of soul, with a key premise of the arguments being that soul is its cause. While a natural way to proceed, I cannot argue that in fact this is what Aristotle does, until I begin to look at the arguments themselves. As I proceed, though, I will argue that this does describe the structure of the arguments. They start from life and arrive at the nature of soul by considering the nature of the cause of life. For the rest of the chapter I am going to examine the arguments in *De Anima* 2.1 and 2.2 as they move from life to the conclusion that soul is the form or actuality of the body. I will focus on the moves of the arguments that get him to these conclusions, and I will put off until the next chapter discussion of what it means for soul to be form and actuality.

***DA* 2.1 and 2.2 – Introduction**

Before looking at the arguments in 2.1 and 2.2, it is helpful to step back and take stock of their structure. Aristotle calls attention to the most notable structural feature at the transition point between the two chapters. In 2.1 he gives a definition of soul, but at the end he says, “So then, let soul be defined and sketched like this in outline (τύπω).”²² He then begins 2.2 by saying, “Since what is clear and more known with respect to reason comes to be from what is unclear but more evident, it is necessary to try to go over the soul again (πάλιν) in this way....”²³ The account of 2.1 is an outline in some way, and that of 2.2 is somehow a restart. There are various opinions as to the significance of this transition, and after looking at the argument in 2.1 I will examine the transition in

²² 413a9-10.

²³ 413a11-13.

detail.²⁴ For now it is important when thinking about 2.1 just to keep in mind that its argument is inadequate or incomplete in some way, and that Aristotle goes over some of the same material in 2.2.

From Life to Soul in *DA* 2.1

Before the argument proper, Aristotle begins 2.1 by clarifying some of the terminology he will be using, outlining the three kinds of substance and their relationship to potentiality and actuality.²⁵ The form and matter of a thing are each kinds of substance, as well as the thing, which is a composite of the two. While matter is potentiality, form is actuality (ἐντελέχεια). There are two kinds of actuality, however, exemplified by knowledge (ἐπιστήμη) and the exercise of knowledge (τὸ θεωρεῖν). Aristotle then puts these distinctions to use in what follows and argues first that soul is form and then that it is an actuality in the first sense, analogous to knowledge.²⁶

One may ask why Aristotle discusses the kinds of substance before arguing that soul is a substance. In fact, Aristotle never argues in 2.1 that soul is a substance. Commentators offer different explanations for this omission. Philoponus thinks that Aristotle has already eliminated the other categories besides substance in book one of *De Anima*.²⁷ Averroes argues instead that soul's status as substance is clear from the principles of nature. "For to assert that the soul is an accident is unacceptable in view of what primary natural knowledge provides us. For we hold the opinion that substance is more noble than accident and that the soul is more noble than all the accidents existing

²⁴ See "2.1 vs. 2.2" below.

²⁵ 412a6-11.

²⁶ In this chapter I will only look at the conclusion that soul is form. In the next I will discuss actuality.

²⁷ Philoponus, trans. Charlton, 7 (207,19-33).

here.”²⁸ Neither of these explanations is adequate. Aristotle begins book two by differentiating it from the discussion of his predecessors in book one and saying that he is starting again from the beginning.²⁹ In addition, Aristotle will offer an argument that soul is a substance in 2.2, but this argument neither appeals to book one nor to the reasoning suggested by Averroes. In contrast to these views that supply the missing argument for Aristotle, Polansky takes the view that Aristotle merely assumes soul to be a substance, although he thinks this position is lent justification by the arguments in book one as well as the plausibility of the account built on the basis of it.³⁰ This view is better, but it will turn out best to understand Aristotle as making an unsupported assumption here. It is not lent justification by its plausibility or what precedes it. Since Aristotle will explicitly argue that soul is a substance later, when it comes to the argument of 2.1 one should see it as a bare, undeclared assumption. In fact, this is not the only assumption Aristotle will make. In the course of this argument he relies on several hidden premises. These premises are not minor pieces of the puzzle he fails to fully discuss but major assumptions that he does not mention. I will offer an explanation for this phenomenon when discussing the relationship between 2.1 and 2.2, but for now I will just note the assumptions as they appear. Here is the first: soul is a substance.

Aristotle next gives an argument for his account of soul, starting from the assumption that it is a substance and employing the distinctions just made.

²⁸ Averroes (Ibn Rushd) of Cordoba, *Long Commentary on the De Anima of Aristotle*, trans. Richard C. Taylor, subed. Thérèse-Anne Druart (New Haven: Yale University Press, 2009), 107.

²⁹ 2.1, 412a3-6.

³⁰ Polansky, 147.

(1) Bodies are thought to be substances most of all, and of these the natural bodies [are especially thought so], for these are the sources (ἀρχαί) of the others. (2) Some of the natural bodies have life (ζωήν), and some do not; (3) we say that life is self-nourishing, growing, and decaying.³¹ (4) So every natural body partaking in life would be a substance, a substance as composite. (5) Since this is a body and one of a certain kind—one having life—(6) soul would not be a body; (7) for body is not among the things [predicated] of a subject, but rather it [is] as a subject and matter. (8) Thus soul must be a substance as form of a natural body having life potentially (δυνάμει ζωὴν ἔχοντος).³²

This argument is very compressed, and besides the assumptions already discussed, a few more gaps will need to be filled in as well.

Aristotle begins by observing that (1) bodies, especially natural bodies, are commonly held to be substances. (2) Some of these bodies have life, and so (4) these living bodies are also substances, being a kind of natural body. He also adds in (4) that of the three kinds of substance, living bodies are composites, but there are at least two options regarding how he drew this conclusion. It might follow from the fact that (2) these bodies have life, with body and life creating the composite. This is the solution given by both Hamlyn and Polansky. “That this living natural body is a *composite* substantial being... means in this context that it is a natural body together with life, that is, a combination of substantial form and matter.”³³ This explanation sounds like a natural reading of the passage, but it must be rejected because it conflates soul and life. Aristotle

³¹ I translate these terms as activities, as discussed in the section on life above.

³² *DA* 2.1, 412a11-21. I have added numbers for ease of reference.

³³ Polansky, 152. Hamlyn takes the same position (83, comment on 412a11).

never says anywhere, unless here, that life is the form of the body, but always that the form is soul. Once again, it is important to maintain the distinction between soul and life. Johansen proposes a better solution when he suggests that the natural body having life is a composite because it is natural.³⁴ Aristotle clearly holds this position in *Physics*; a natural thing has two aspects—form and matter—and so it is a composite.³⁵ Presumably, then, this is implied in the first premise of the argument here: (1) natural bodies are substances (and as we know from *Physics* they are substances in the sense of composites). It then follows that since (2) natural bodies having life are a kind of natural body, (4) they are also substances as composites. This information that natural bodies are composite substances is a second assumption Aristotle is making in the course of the argument, although it differs from the first in that it is not an assumption about soul but is instead a principle from natural philosophy more generally.

He has actually made a third assumption as well. The statement that (3) life is self-nourishing, growing, and decaying does not play a role in the argument,³⁶ but despite its parenthetical nature, it is a surprising comment for Aristotle to make. This is not because he is saying that life is activity; I already discussed how he thinks that his predecessors share this belief with him. It is surprising because he is assuming that nourishing is a relevant sense of life to discuss when examining soul. In book one he said that in their accounts of soul his predecessors primarily sought to explain moving and

³⁴ Johansen, 12.

³⁵ See especially 2.1, 193a28-31.

³⁶ Because this comment is parenthetical, it would not matter if he had listed more activities here besides those related to nourishing. Thus, as I suggested in the last chapter, nothing would change if Aristotle were, instead of ζωή, to talk of τὸ ζῆν and all the vital activities. There is no reason to think that he is intentionally opposing the two terms, but instead they can be treated as synonyms in *De Anima*.

perceiving,³⁷ and he only brings up any activities related to nourishing at the end of the book when discussing whether different activities belong to different parts of soul,³⁸ suggesting that his predecessors did not discuss it much. The book ends with a statement that the principle in plants seems to be a kind of soul,³⁹ but at the beginning of 2.1 Aristotle addresses the issue again, implying that he had not yet settled it.⁴⁰ At the end of book one, then, how nourishing relates to soul is still a live question. Since he has not yet argued that nourishing is the activity of the soul, this is yet another assumption he makes in the course of the argument.

Having established that the living body is a composite, he proceeds to argue for the nature of soul via a process of elimination. As already discussed, he assumes that soul is some sort of substance, and substance comes in three varieties. The argument proceeds by eliminating options until one remains. It is important to recognize, however, that when considering what sort of substance soul is, Aristotle is not considering whether soul is form, matter, or a composite in the abstract. He is asking whether it is the form, matter, or composite *of the living thing*. This can be seen in his argument that soul is not substance as matter, since he says here that it is not *body*, rather than that it is not *matter*.

So far the argument has been talking about bodies with *life*, but in the next part Aristotle will make a conclusion about *soul*, which has not been mentioned since the beginning of the chapter when Aristotle says he is going to try “to determine what soul is

³⁷ 1.2, 403b25-27.

³⁸ He mentions growing and decaying at 1.5, 411a30. The reference to life (τὸ ζῆν) at 411b2 likely refers to the narrow sense of life, to nourishing. This mention of life occurs in a question about its relation to the soul, further indicating that Aristotle still has to discuss the issue.

³⁹ 1.5, 411b27-28.

⁴⁰ 413a25-31.

and what would be its most common account.”⁴¹ This raises the question of what justifies his drawing a conclusion about soul from a discussion of life. The best answer is that Aristotle is resting on the shared assumption that soul is the cause of life.⁴² Not everyone agrees, however. Philoponus gives the simple answer that “life is soul,”⁴³ but this answer is to be avoided because it conflates life and soul. Johansen acknowledges that Aristotle holds soul to be the cause of life, but he sees Aristotle here as merely appealing to a correlation between the two, rather than the stronger relation of causation.⁴⁴ There is reason to think from the way the argument proceeds, however, that Aristotle is relying on causation between soul and life. Additionally, the best way to understand the relationship of 2.1 to 2.2 will also suggest that Aristotle has the stronger relation in view here. I will explain this reasoning as I proceed, but the first view is correct. Aristotle is making a fourth assumption here, albeit one that he shares with his predecessors: soul is the cause of life.

Aristotle proceeds with his argument by elimination by first reiterating that (5) the living body is a body of a certain type, which means that life is something added to the body. This would also mean that soul, since it is the cause of life, is something added to the body as well; those bodies that live have soul, while those that do not live do not have it. Soul, then, is something predicated of the body, for I can only say of certain bodies

⁴¹ 412a5-6.

⁴² Polansky (154) and Aquinas (123) do not mention the views of the other Greeks but still see Aristotle as making use here of the principle that soul is the cause of life. Hamlyn appeals to the traditional Greek association between soul and life—one which he previously characterized as soul being the “principle of life” (ix)—but here he treats this relationship as more of an equality, saying that “since to have life is to have soul” it “must be related to the body as life is related to it” (83, comment on 412a16). This puts him more in line with Johansen, below.

⁴³ Philoponus, trans. Charlton, 14 (215,6).

⁴⁴ Johansen, 12.

that they have it. On the other hand, (7) body is not something predicated of something else; it is the subject upon which other things are predicated. This means that (6) soul cannot be body, because it must be predicated of something else. Soul, then, is not the matter of the living thing.

Aristotle immediately concludes from this that soul is form, without first explaining why it is not a composite, another option left open to him. Filling in his reasoning here is aided by recognizing that he is arguing that soul is not the composite living thing. Aristotle gives no clues as to his reasoning here, but Ronald Polansky makes the reasonable suggestion⁴⁵ that Aristotle has in mind the principle in *Metaphysics Z.17* that “to ask why something is itself is to inquire into nothing” but instead one should ask “Why does something belong to something else?”⁴⁶ Just as the composite cannot explain itself, it likewise could not explain one of its aspects—life; this aspect is one of the things that makes the composite what it is. If Aristotle were not examining whether soul is the composite living thing, but instead was considering whether soul is any sort of composite, then this argument would not work. The fact that something cannot be its own explanation would not eliminate the possibility that soul is a composite, for it could be a different composite from the living thing.

When it comes to the living thing, then, soul is neither the composite nor the matter. So (8) soul must be the form, and this is the form of the body. This statement needs unpacking, however. There are options as to which body is in view here—the matter or the composite—for Aristotle has used ‘body’ to refer to both over the course of

⁴⁵ Polansky, 154.

⁴⁶ 1041a10-15, Apostle translation. Hippocrates G. Apostle, trans., *Aristotle’s Metaphysics* (Des Moines: The Peripatetic Press, 1979; first published 1966 by Indiana University Press).

this argument. But before answering this question I need to explain what Aristotle means saying that the body is “a natural body having life potentially.” Such an explanation is needed because several people have noted or tried to solve a possible contradiction between Aristotle’s statement that the body has life potentially and statements he makes elsewhere. However, this contradiction only arises because the original statement is usually misunderstood.

The problem raised by scholars has to do particularly with the fact that Aristotle says this body has life *potentially*. It is well-known that Aristotle thinks that a part of the body is not really that part unless it has soul, nor without soul is the whole body really that body.⁴⁷ It appears, then, that the body of an organism must be ensouled *essentially*, *necessarily*, or at least *actually*. If this is the case, these scholars ask, then what is Aristotle doing saying that the body has life *potentially*?⁴⁸ This problem is easily solved, however, because it arises from a misunderstanding of ‘life’. The majority of scholars all agree on what ‘life’ means here, both those who discuss the problem mentioned and those who just comment on the meaning of this passage. Hamlyn concisely states the majority view—“The body will have life potentially in the sense that it is the sort of body which can be living; the presence of soul makes it actually living.”⁴⁹—but many others say comparable things.⁵⁰ This view has a problem, though, because it conflates soul and life.

⁴⁷ For example, see *PA* 1.1, 640b35-641a5, 641a17-21. Aristotle also discusses this later in the chapter presently under examination, using the example of an eye (*DA* 2.1, 412b18-27).

⁴⁸ Jennifer E. Whiting, “Living Bodies,” in Nussbaum and Rorty, *Essays on Aristotle’s De Anima*, 88; Ackrill, “Definitions,” 126; Polansky, 154-155, incl. n13; Johansen, 12-13.

⁴⁹ Hamlyn, 84.

⁵⁰ Aquinas: “Now Aristotle says ‘potentially having life,’ and not, unconditionally, ‘having life,’ because a body having life is understood as the living composite substance. Yet it is the matter, not the composite, that is included in the definition of form” (123). Ross: “... the soul is the form of that which without it has life potentially...and with it has life actually” (*De Anima*, 213). Polansky: “In speaking of the body having

It assumes that when Aristotle says this body has life potentially, it is equivalent to saying that the body is one having *soul* potentially. That is, soul makes the body actually living because it makes it actually ensouled. As I have been arguing, though, it is important to keep soul and life separate from each other conceptually. This means that a new explanation is needed for what Aristotle means here, and this new explanation will happily eliminate the perceived contradiction between this passage and others.

When Aristotle says that soul is “substance as form of a natural body having life potentially,” he does not mean that this body has soul potentially but instead means that this body has the potential to engage in the vital activities of life. Soul is the cause of life, not synonymous with it, and life is the vital activities. This reading of the passage not only preserves the distinction between Aristotle’s terms, but it also fits perfectly with what he says elsewhere. For something to have the potential for life activities, it needs to already have the cause of these activities, the soul. This means that the body Aristotle is discussing has soul actually, not potentially. In fact, Aristotle says this later in the chapter: “It is not that which has lost the soul that is the thing potentially living (τὸ δυνάμει ὄν ὥστε ζῆν), but that which has it.”⁵¹ Thus, the problem raised by scholars does

life *in potentiality*, Aristotle refers just to the body as matter in relation to form rather than as composite. This potentiality is the potentiality of the body *presently actualized* by the soul” (154). Menn: “To say that the soul is the ἐντελέχεια of a natural body potentially having life is to say that it is whatever completes such a body so that it becomes actually alive, i.e. capable of carrying out vital activities” (110). Johansen: “By virtue of being ensouled it has actual life, but by virtue simply of being matter it is not a determinate living thing and so only has potential for life” (16).

⁵¹ *DA* 2.1, 412b25-26.

not in fact arise. The body can have soul essentially, because it has soul actually, and both of these facts are compatible with the body also having life potentially.⁵²

Returning to the question of whether the body in view is the matter or the composite, the following must be kept in mind. For those who conflate soul and life, saying that the body with life actually will be one with soul actually, the body in view must be the matter. Since it has life—and thus soul—potentially, it does not yet have soul and so it cannot be the composite. But as I have just argued, this is the wrong way to understand the passage. Instead, for this body to have life potentially, it must be actually ensouled. This would suggest that the composite is in view, since the composite is the combination of the matter with soul. On the other hand, immediately preceding the present statement, Aristotle argued that soul must be predicated of body, and this was body in the sense of matter. Since he is now predicating soul of a particular kind of body, this makes it sound like the matter is in view. The best way to reconcile these is to realize that there are more than two options, since there are multiple ways in which to consider the matter. When Aristotle says soul is “substance as form of a natural body having life potentially,” this body is the matter of the actual organism, not matter prior to the organism’s coming to be.⁵³ This means that the matter has soul already, and can thus be said to have life potentially.

Understanding the body as the matter of the existing organism also fits with what Aristotle goes on to say. As I already discussed, later in the chapter he says that the thing

⁵² This view raises the question whether there can exist a body with soul actually but life only potentially or whether discussing such a body is only conceptually clarifying. I will address this question in chapter four, after looking at the biology of the nutritive system.

⁵³ Polansky also takes this position (166).

with life potentially is not what has lost the soul, but that which has it. This eliminates the dead body from being an option as to what he has in mind. Right after this he adds, “But the seed and the fruit are such a body potentially.”⁵⁴ I take this to be discussing the other end of the spectrum. The dead body comes to be after the ensouled body, while the seed and fruit are bodies existing before the ensouled body. Neither is a body having life potentially, however. Instead, the seed has the potential to be an ensouled body—the potential to have life potentially—while with respect to soul or life the dead body has no potential at all.

This understanding of the statement also fits with its role as the conclusion of the argument. Aristotle has been looking at the three sorts of substance present in the living thing. Soul is its form, the form of its matter. The body in question, then, should be the matter of the living thing, and this is ensouled matter. One may ask why Aristotle does not simply say that soul is substance as form of the ensouled body. There are at least two reasons why it makes sense for him to give the more roundabout definition of soul as the “substance as form of a natural body having life potentially.” First, the argument has been moving from talking of life to talking of soul, so Aristotle brings back in the initial term at the conclusion. Second, this is a definition of soul, and so the term ‘soul’ should not occur in it. That Aristotle states the conclusion in this way is also evidence that Aristotle intends for the relationship between soul and life to be one of causation in this argument, and not simply one of correlation, because this concluding statement has the body with

⁵⁴ *DA* 2.1, 412b26-27.

soul being able to perform the activities of life and therefore having the requisite cause of life.

This conclusion is far from the end of 2.1, and the chapter has much important, relevant content in its remainder, including restatements of this definition in other terms. At this point, however, I am going to move on to 2.2. I will look at more of 2.1 in the next chapter. As I move forward here, it should hopefully become clear why I am switching at this point.

2.1 vs. 2.2

In the transition from 2.1 to 2.2 Aristotle gives quite a bit of information about how to understand the nature of the arguments he presents in these chapters. This information is not unproblematic, however. A few commentators have noted that there is a tension between what he appears to say in the introduction to 2.2 and what he does in the rest of the chapter. Additionally, not everyone agrees how to interpret the information Aristotle gives in the transition, and this leads to different interpretations of the arguments. I am going to suggest a way to understand the transition between chapters that alleviates the potential problems and offers an account of 2.1 and 2.2 that makes them cohere with each other.

The transition indicates that the account given in 2.1 is lacking in some way, while the account of 2.2 follows the appropriate model for a definition. Aristotle ends 2.1 by saying, “So then, let soul be defined and sketched like this in outline (τύπον).”⁵⁵ Presumably what follows will fill in this sketch or outline. Immediately following this, he

⁵⁵ 413a9-10.

begins 2.2 by expressing his intent to start afresh and giving some requirements for a definition.

Since what is clear and more known with respect to reason (κατὰ τὸν λόγον) comes to be from what is unclear but more evident (φανερωτέρων), it is necessary to try to go over the soul again in this way, for the defining account (τὸν ὀριστικὸν λόγον) must not only show what is the case (τὸ ὄτι), as most of the definitions do, but it must contain and make evident the cause (τὴν αἰτίαν). But nowadays the accounts of definitions are like conclusions.⁵⁶

Here Aristotle lists two features to look for in his fresh account. First, he will proceed from what is unclear but more evident to what is more known with respect to reason, or as he puts it in *Metaphysics*, one should “start from what is more known to the individual and proceed to make known to the individual what is known by nature.”⁵⁷ By beginning with the familiar, one can work up to the principles that actually articulate the world. Second, the definition given will do more than just show the facts. It will state the explanation for those facts.

Aristotle goes on to further clarify this last point, giving both an example of a definition that only says what is the case and the corresponding improved definition that shows the cause.

⁵⁶ 413a11-16.

⁵⁷ Z.3, 1029b7-8, Apostle translation.

For example, what is squaring? An equilateral rectangle being equal to an oblong.

But such a definition is a statement of the conclusion. The one who says that squaring is finding the mean proportional states the cause of the thing.⁵⁸

Squaring is in fact making a square that is equal in area to a given rectangle. There is a prescribed set of steps one can follow in order to construct such a square. One can follow these steps, however, without understanding why it is that the construction works. The reason they work—the reason that squaring takes place—is that in following them one finds the mean proportional.⁵⁹ Saying that squaring is making a square equal to a rectangle is only giving the end result of the process and not illuminating why it is that this square is equal to the rectangle. This is, however, all that someone might give if she has only a rudimentary grasp of geometry. This answer, then, is the one that is more evident to us, while the definition showing the cause is what is known by nature. The two features Aristotle discusses here tie together.

In *Posterior Analytics* Aristotle gives another useful example and further illustrates what he means by a definition that is like a conclusion. He gives a few different kinds of definition of thunder, one of which he says is like a conclusion: “Again, a definition of thunder is noise in the clouds; and this is a conclusion of the demonstration of what it is.”⁶⁰ This is, of course, the familiar definition of thunder. Just as with the

⁵⁸ 413a17-20.

⁵⁹ There are different ways to understand what Aristotle means here. See, for example, Robert Bolton’s account in Bolton, “Aristotle’s Definitions of the Soul: ‘De Anima’ ii, 1-3,” *Phronesis* 23.3 (1978): 268-269. I found the comment of Joe Sachs particularly helpful in illuminating Aristotle’s meaning. Joe Sachs, trans., *Aristotle’s On the Soul and On Memory and Recollection*, second printing with minor revisions (Santa Fe: Green Lion Press, 2004), 84n 2.

⁶⁰ *Post. An.* 2.10, 94a7-9, Barnes translation. Jonathan Barnes, ed. and trans., *Posterior Analytics*, 2nd ed. (Oxford: Clarendon Press, 1993).

squaring example, the definition that is like a conclusion is also that which is more evident to us. He also gives the definition which shows the cause.

Another definition is an account which shows why something exists. ... [This sort] will clearly be like a demonstration of what something is, differing in arrangement from a demonstration. For there is a difference between saying why it thunders and what thunder is. In the one case you will say: Because the fire is extinguished in the clouds. But: What is thunder?—A noise of fire being extinguished in the clouds. Hence the same account is given in different ways: in one way it is a continuous demonstration, in the other a definition.⁶¹

This second definition includes the information about the cause of the thing being defined. This information comes from the demonstration of which the first definition is the conclusion.

1) Extinction of fire belongs to the clouds.

2) Noise belongs to the extinction of fire.

Therefore: Noise belongs to the clouds.⁶²

Thunder is a noise in the clouds because it is an extinction of fire there, and such extinctions produce noise. ‘Extinction of fire’ is the middle term—the term that appears in both premises—and consequently it is the cause. Knowing this cause, that thunder is an extinction of fire in the clouds, is a scientific achievement (assuming it is true), and is therefore what is known by nature rather than what is known to the individual.

⁶¹ 2.10, 93b38-94a7, Barnes translation.

⁶² This is based on the reconstruction of David Charles, *Aristotle on Meaning and Essence* (Oxford: Clarendon Press, 2000), 43.

With this in mind the majority of commentators take the beginning of 2.2 to be clarifying the end of 2.1. The definition given in 2.1 is an outline because it is like a conclusion, and the account of 2.2 will remedy this by giving a definition that shows the cause and is more known with respect to reason.⁶³ There are problems with this view, however. Rosamond Kent Sprague raises one such problem, noting a tension between the beginning of 2.2 and what Aristotle goes on to do in the rest of the chapter. According to the majority understanding of the beginning, what is lacking is a middle term showing the cause of the definition given in 2.1, a term that is further from our ordinary understanding and closer to what is known with respect to reason. Kent Sprague finds a likely middle term in the body of 2.2, since a prominent part of Aristotle's argument is that "the soul is this: that by which we live, perceive, and think primarily";⁶⁴ the middle term, then, would be 'that by which we live, perceive, and think primarily.' She immediately points out, however, that this conception of soul is closer *to us* than the definition given in 2.1 that soul is the form of a body having life potentially.⁶⁵ This is the wrong direction to go, since the cause should be further from us and closer to the structure of reality. This observation does not lead her to abandon the traditional understanding of the transition from 2.1 to 2.2, but she does find the need to posit two principles of argumentation that

⁶³ See, for example: Philoponus, trans. Charlton, 27 (225,34-226,6); Averroes, 122; Aquinas, 119; Bolton, 259; Rosamond Kent Sprague, "A Missing Middle Term: 'De Anima' II,2," *Phronesis* 41.1 (1996): 104; Menn, 103-104; Rebekah Johnston, "Aristotle's *De Anima*: On Why the Soul is Not a Set of Capacities," *British Journal for the History of Philosophy* 19.2 (2011): 194-195.

⁶⁴ 414a12-13.

⁶⁵ Kent Sprague, 106.

Aristotle must be applying here, principles for which, she admits, there is no evidence elsewhere.⁶⁶

Johansen goes further than Kent Sprague and abandons the majority view of the transition. He observes that even when just looking at the account of 2.1 it is problematic to call it merely a conclusion. Unlike the examples of thunder as a sound in the clouds and squaring as finding an equilateral rectangle equal to an oblong, to say that soul is the substance as form of a body having life potentially—or the first actuality of a natural, instrumental body as he also says—is to give a definition that is already quite theoretically informed.⁶⁷ This appears to be a different sort of account from the other definitions. He parts ways, then, with the standard way of reading the transition by saying that when Aristotle criticizes definitions for being like conclusions, it is best to read him as having just his predecessors in mind, and not the accounts he gave in 2.1.⁶⁸ This new reading has two consequences for the interpretation of 2.1 and 2.2. First, since the account of 2.1 should not be viewed as being like the conclusion of a syllogism, it must play a different sort of role in the overall structure of *De Anima*. Johansen sees it as not a definition but a preliminary outline showing what sort of definition is appropriate for soul. It is the answer to two questions raised in the first book of *De Anima*: Under what category does soul fall? Does soul exist potentially or actually?⁶⁹ The outline in 2.1

⁶⁶ Ibid., 107-108. The principles are that 1) in a definition showing the cause, the middle term may be what is better known to us, and 2) a definition showing the cause should be a complete syllogism, one where the premises are still open to inspection. In my view the first of these is particularly problematic, and my account below avoids it.

⁶⁷ Johansen, 36.

⁶⁸ Ibid., 36.

⁶⁹ *DA* 1.1, 402a23-26.

establishes that soul is a substance and an actuality.⁷⁰ Second, because the account of 2.1 is not a definition, 2.2 will need to supply the definition that is like a conclusion in addition to giving the definition that shows the cause. Johansen takes the first to be the statement “We say that the ensouled (τὸ ἔμψυχον) is distinguished from the unensouled by life,”⁷¹ and the causal definition to be one that explains why ensouled things are alive.⁷² There are many ways for a thing to be alive, however, so this means that there are going to be multiple accounts of the cause of this life. The definition of soul, then, will ultimately be the accounts of each of the capacities that *De Anima* goes on to provide.⁷³

These criticisms from Kent Sprague and Johansen are devastating to the traditional view of Aristotle’s transition from 2.1 to 2.2. The account in 2.1 does not look like a definition as conclusion, and 2.2 does not yield up an obvious cause of it. At the same time, neither solution by Kent Sprague or Johansen is ideal. It would be preferable to find an account of what Aristotle is doing that fits with the definition of squaring and the discussion in *Posterior Analytics* better than Kent Sprague’s proposed principles. On the other hand, it would also be nice to end up with a definition for soul along the lines of the causal definitions of squaring and thunder, rather than saying along with Johansen that the closest we are going to get is the accounts of the individual capacities.

Additionally, the account of soul in 2.1 has attracted a lot of attention, likely because it sounds so very Aristotelian with all the talk of form, first actuality, and so on. In Johansen’s view this account becomes preliminary, and it would be preferable to have a

⁷⁰ Johansen, 34.

⁷¹ 413a20-22.

⁷² Johansen, 37.

⁷³ *Ibid.*, 39-40.

story of what Aristotle is doing that preserves the importance of this account that most readers naturally perceive. Of course, interpretations often have to sacrifice something somewhere, and without an alternative, perhaps the route of Kent Sprague or Johansen would be the way to go. I will argue, however, that there is an alternative that preserves their insights as well as gives all the things desired above. The definition of 2.1 is not a definition as conclusion. It is in fact the more important causal definition.⁷⁴

The first part of the transition to examine is the end of 2.1, where Aristotle says that what preceded is in outline (τύπω). Clearly this means that the account given is lacking in some way, but the question is in what way. Robert Bolton offers an explanation of the meaning of τύπω that supports the majority view of the transition. He argues forcefully for the view that the definition in 2.1 is only a nominal definition of the kind that serves as a conclusion. In fact, he sees four separate definitions in this chapter, and finds these definitions to have significant differences from each other.⁷⁵ The upshot of his argument is that we should recognize the limited scope of these definitions and that doing so will eliminate some of the traditional problems that arise with respect to them.⁷⁶ Since my conclusion is quite different from his, it will be beneficial to contrast his interpretation of τύπω with mine.

Bolton says that “an account ‘in outline’ (τύπω) is, according to the *Topics*, a general (καθόλου) account which does not give an ‘accurate definition’ (ἀκριβῆς λόγος) but which does permit us to know (γνωρίζειν) the thing described in some way (101 a 18-

⁷⁴ Polansky also finds the definition of 2.1 not to be a conclusion, but one dealing with the reason (see, for example, 186). However, his explanation of Aristotle’s arguments and their significance is quite different from the account I offer here.

⁷⁵ Bolton, 260-262.

⁷⁶ *Ibid.*, 264-266.

24).”⁷⁷ He then ties this to the distinction between an account that references what is more known to us and one that appeals to what is known by nature. The account appealing to what is intelligible in itself will be the accurate one, while the account that relies on what is closer to us is the one in outline. He then supports this view further by referencing *History of Animals* 491a7-14, which “further describes an account ‘in outline’ as one which gives derivative facts (τὰ συμβεβηκότα) about something in contrast to giving the theoretical principles (αἰτίαι) by reference to which such facts are explained.”⁷⁸ In order to evaluate Bolton’s view, it is necessary to look at these two passages referenced.

The passage from *History of Animals* contains, as Bolton points out, a contrast between an account in outline (τύπων) and one that is detailed (δι’ ἀκριβείας). The passage also contrasts collecting facts with finding causes, which could also be described as ascertaining what is known to us and what is known by nature.

What has just been said has been stated thus by way of outline (τύπων), so as to give a foretaste of the matters and subjects which we have to examine; detailed (δι’ ἀκριβείας) statements will follow later; our object being to determine first of all the differences that exist and the actual facts in the case (τὰ συμβεβηκότα) of all of them. Having done this, we must attempt to discover the causes (τὰς αἰτίας). And, after all, this is the natural method of procedure—to do this only after we have before us the ascertained facts (τῆς ἱστορίας) about each item, for this will

⁷⁷ Ibid., 259.

⁷⁸ Ibid., 259.

give us a clear indication of the subjects with which our exposition is to be concerned and the principles upon which it must be based.⁷⁹

In this passage the contrast between an outline and having detail runs parallel to the contrast between determining facts and discovering causes. Aristotle seems to suggest that he has so far spoken in outline because he wants to first lay out the facts; then he will speak in detail and discuss causes. While this may in fact be Aristotle's intent here, I would like to argue that the distinction between an outline and having detail does not necessarily carry along the second distinction. Instead, just as with the words in the English translation above, the difference between an outline account and a detailed one merely has to do with the quantity of information imparted. An outline presents only some of the content, while a detailed account presents more. One can then add on a second claim about the quality of the two sets of information, as Aristotle does here, but this is new information. One way that an outline can differ from a detailed account is that the outline can leave out some of the most important information, but this is by no means true of all outlines.

The first passage Bolton discusses, from *Topics*, lends support to this view. It also contrasts an account *τύπῳ* with one that is *ἀκριβῆς*, but there is no implication that the first account leaves out what is known by nature.

In general, as regards all those [kinds of reasoning] already mentioned and to be mentioned hereafter, let this much (*τοσοῦτον*) distinction suffice for us, since we do not propose to give the exact definition (*τὸν ἀκριβῆ λόγον*) of any of them but

⁷⁹ *HA* 1.6, 491a7-14, Peck translation. A. L. Peck, trans., *History of Animals, Books I-III* (Cambridge: Harvard University Press, 1965).

merely wish to describe them in outline (τύπω), considering it quite enough, in accordance with the method which we have set before us, to be able to recognize each of them in some way or other.⁸⁰

Not only does Aristotle leave out any mention of what is more known to us or known by nature, but when describing the outline account he has given, Aristotle uses specifically quantitative language, saying that ‘this much’ (τοσοῦτον) distinction will suffice. He only gave enough in the outline account so that the things described could be recognized. There is more that could be said about each, but to say it would be to give a detailed account, one that is unnecessary for the purposes at hand. This understanding of the passage suggests that the phrase ἀκριβῆ λόγον, translated above as ‘exact definition’, would be better translated ‘detailed definition’ or ‘detailed account’, in line with the translation from *History of Animals* above.

Two passages from *Generation of Animals* further support this understanding of ‘in outline’, as each uses the antonym ‘detailed’ (δι’ ἀκριβείας) in the way just described. After discussing the occurrence or absence of a menstrual discharge in a few kinds of animals, Aristotle says, “A detailed (δι’ ἀκριβείας) account of this matter, as it concerns every sort of animal, is to be found in the *Researches upon Animals*.”⁸¹ Not only does he here specify that the detailed account will concern all the animals—a quantitative change—but in the discussion immediately preceding he explains the cause of certain animals lacking a discharge. The detailed account is only giving more information, not a

⁸⁰ *Top.* 1.1, 101a18-24, Forster translation. E. S. Forster, trans., *Topica*, in *Posterior Analytics and Topica* (Cambridge: Harvard University Press, 1960).

⁸¹ *GA* 1.20, 728b12-14, Peck translation, modified by substituting ‘detailed’ for ‘exact’. A. L. Peck, trans., *Generation of Animals* (Cambridge: Harvard University Press, 1942).

better kind. Similarly, when discussing eggs later on, Aristotle explains why the yolk and the white are separate from each other and then says, “For a detailed (δι’ ἀκριβείας) account of how these stand to one another both at the beginning of the process of generation and during the process of the young animals’ formation, ... what is written in the Researches should be studied.”⁸² Again, the detailed account is just adding more information.⁸³

If τύπῳ is understood in these quantitative terms—if it is truly understood to mean ‘in outline’ as it is usually translated—then this has implications for the interpretation of *De Anima* 2.1 and 2.2. Aristotle ends 2.1 by saying that the account was in outline and then begins 2.2 by distinguishing between what is known to us and what is known by nature. Now one could argue that in this transition as a whole Aristotle makes the same move he does in the *History of Animals* passage above, clarifying that he means the account in 2.1 is not only quantitatively lacking, but also qualitatively. However, it is better not to understand him in this way. First, if he does not mean to say that the definition in 2.1 is qualitatively deficient, then the problems raised by Kent Sprague and Johansen do not arise. He is not saying that the definition is like a conclusion, and he is not looking for its cause in 2.2. Second, as I laid out the argument in 2.1 for the definition of soul, I emphasized several times that Aristotle was making rather large assumptions. He assumes that soul is a substance, that natural substances are composites, that nourishing is a relevant sense of life to consider when discussing soul, and that soul is the

⁸² *GA* 3.2, 753b14-17, Peck translation, modified by substituting ‘detailed’ for ‘exact’.

⁸³ I do not intend to argue that ἀκριβής and ἀκριβεία always speak solely in quantitative terms. Aristotle may use them in other ways, too. I just want to illustrate that he does use them to discuss quantity and that τύπῳ can be an antonym to this sense.

cause of life. The second of these is a principle of physics and receives no further comment in the rest of *De Anima*. The other three are assumptions about soul, though, and Aristotle discusses all three more thoroughly in 2.2. There is a difference in the quantity of information between the two chapters. I take Aristotle to have this difference in mind when he says that 2.1 is in outline. The definition of soul as the form of a natural body having life potentially should be understood, then, to be Aristotle's ultimate account of soul. The argument establishing it needs some more discussion, and this is what he goes on to provide.

In 2.2 Aristotle fills in the details lacking from 2.1. As he says at the start of 2.2, he does this by “going over the soul again”—that is, he is starting again from the beginning. This time, “since what is clear and more known with respect to reason comes to be from what is unclear but more evident,” he is going to move from what is known to us up to what is known by nature. In 2.1 he jumped right to the summit, but now he is going to lead us there step by step. It is important to keep this destination in mind, because when Aristotle's predecessors tried to define things, they often stayed at ground-level, the level of what is familiar to us. Their definitions only showed “what is the case.” This sort of definition is like the conclusion of an argument. A good definition will “contain and make evident the cause,” which is more known with respect to reason. When looking at 2.2, then, we should expect Aristotle to give us a familiar definition of soul and then lead us from there up to the definition from 2.1, all the while filling in details left out of the discussion in 2.1. And this is in fact what he does.

From Life to Soul in *DA* 2.2

Aristotle begins his fresh account of soul from life once again. In fact, he more truly starts from life in chapter two, since he does not preface the argument by assuming soul is a substance but jumps right into his description of life. This description is also fuller than it was in 2.1, encompassing more activities.

And so, taking it as a start of the inquiry, we say that the ensouled (τὸ ἔμψυχον) is distinguished from the unensouled by life (τῷ ζῆν). Life (τοῦ ζῆν) is said in many ways, and we say that a thing lives (ζῆν) if any one of these is present in it, such as thinking (νοῦς), perceiving (αἴσθησις), moving and stopping with respect to place (κίνησις καὶ στάσις ἢ κατὰ τόπον), besides moving with respect to nourishment (κίνησις ἢ κατὰ τροφήν) and both decaying (φθίσις) and growing (αὔξεισις).⁸⁴

From this starting point Aristotle goes on to give a familiar definition of soul and then to argue for its cause. He does not, however, do this right away. He just stated his intent to restart the account of soul and to do so by moving from the common definition to the one showing the cause, but he discusses several other issues first. It is not until the end of 2.2 that he finally gives this new account.

But before looking at Aristotle's argument for the definition of soul, it is worth mentioning the intervening sections. While they do not contribute to establishing the definition, they do fill in some of the assumptions in 2.1. Immediately after giving this

⁸⁴ *DA* 2.2, 413a20-25.

description of life, Aristotle argues that plants are also living.⁸⁵ Just like other living things, they perform activities—those of growing and nourishing—and they do so based on some internal principle. Thus, the discussion of soul must account for more than just moving and perceiving, the activities on which his opponents tended to focus. It must also account for nourishing. This discussion, then, addresses one of the assumptions in 2.1, since there Aristotle just asserted that nourishing is a relevant kind of life when it comes to soul. After this look at plants, he begins to discuss the relationships between the various capacities.⁸⁶ Specifically, he looks at which ones are separable from the others and at their status as parts of soul. In the middle of this discussion he fills in another gap from 2.1, when he says “For now let only so much be said, that soul is the source (ἀρχή) of these things that were mentioned (τῶν εἰρημένων τούτων)...”⁸⁷ The things mentioned were the activities of life,⁸⁸ so Aristotle makes explicit here what he left implicit in 2.1. Soul is the source or cause of life. After this lengthy intervening material, he moves on and finally gives the argument for the definition of soul promised at the beginning of the chapter.

Aristotle begins this argument at 414a4, and he proceeds by restating the common definition in a new way and arguing from there to the causal definition he gave in 2.1.

(1) Since that by which we live and perceive (ὃ ζῶμεν καὶ αἰσθανόμεθα) is said in two ways, (2) just as that by which we know (ὃ ἐπιστάμεθα) is—(3) we say on the one hand that it is knowledge, on the other that it is soul, for we say that we

⁸⁵ 413a25-31.

⁸⁶ 413a31-414a3. He continues this discussion in 2.3.

⁸⁷ 413b11-12.

⁸⁸ For a detailed discussion of this passage, see chapter 3.

know by each of these—(4) and similarly as we are healthy (ὕγιαίνομεν) on the one hand by health and on the other by some part of the body or even the whole, (5) and of these both knowledge and health are shape (μορφή) and a certain form (εἶδος τι) and ratio (λόγος) and a kind of actuality⁸⁹ of what is receptive (οἷον ἐνέργεια τοῦ δεκτικοῦ), (6) in the one case of that which is capable of knowledge (τοῦ ἐπιστημονικοῦ), (7) in the other of that which is capable of health (τοῦ ὑγιαστοῦ)—(8) for the actuality (ἐνέργεια) of the things capable of acting (τῶν ποιητικῶν) appears to belong in that which is acted on and arranged (τῷ πάσχοντι καὶ διατιθεμένῳ)—(9) and the soul is this: that by which we live, perceive, and think (ᾧ ζῶμεν καὶ αἰσθανόμεθα καὶ διανοούμεθα) primarily (πρώτως)—(10) so that it would be a certain ratio (λόγος τις) and form (εἶδος), but not matter (ὄλη) and the subject (τὸ ὑποκείμενον).⁹⁰

Soul is that by which we live and perceive, but (1) this can mean two different things.

Before looking at the two meanings, though, I need to clarify another aspect of the terms.

In (1) Aristotle mentions that by which we live and perceive, but in (9) he expands to that by which we live, perceive, and think. There does not appear to be any reason given between (1) and (9) for why he adds thinking, which suggests that he did not mean to exclude it from (1). The whole argument can be said to start from a discussion of that by which we live, perceive, and think. But there is an even more concise way to put this. In the last chapter I discussed how Aristotle can use “life” to refer either to all the vital

⁸⁹ In this passage it is better to translate ἐνέργεια as “actuality” rather than “activity.” Knowledge and health are each said to be an ἐνέργεια, and these are that by which we perform the activities of knowing and being healthy, not the activities themselves. It would be confusing to call both knowledge and the knowing it enables “activities.”

⁹⁰ 414a4-14, numbers added.

activities or to just the activity of nourishing. Given the placement of “live” here beside “perceive” and “think,” and given that nourishing, perceiving, and thinking are the three main levels of vital activities, it makes the most sense to see “live” here as referring to just the activity of nourishing. In that case, since nourishing, perceiving, and thinking cover the spectrum of life, rather than “that by which we live, perceive, and think,” one can just say “that by which we live,” using the wider sense of “live.” In what follows I will do this, in order to simplify the discussion.

Having clarified this, “that by which we live” (1) can still mean two different things. Aristotle illustrates what he means through examples. First, (2) “that by which we know” has a similar ability to mean two different things. We know (3) in one sense by knowledge and in another sense by soul. Of these two options, Aristotle makes it clear that (5) knowledge plays the role of form, and presumably this means that soul here plays the role of matter. Soul is the subject that receives the knowledge, and we can be said to know by either the soul or the knowledge. On the one hand, we are in a position to be able to know anything because we have a soul. Rocks do not know stuff. On the other hand, having a soul is not sufficient for knowing. We must have the piece of knowledge in our soul as well. A newborn soul does not know math, but it will once it has learned it. Since the soul is just a sort of receptacle for knowledge, it is more proper to say that we know by means of knowledge. This will become important as the argument progresses. Aristotle goes on to elaborate that knowledge, as form, (5) is also actuality. It is the actuality (6) of the soul, which is capable of having this knowledge, because (8) the

actuality of that which knows, the composite knower, is in that matter which is capable of being altered so as to have this knowledge.

Aristotle's second example is that by which we are healthy, and (4) this can either be said to be health or the body. Our body must be in a certain state for us to be said to be healthy, so it is appropriate to say we are healthy by means of it. On the other hand, it is the state—health—that makes us healthy. We are not healthy by just any sort of body. It must have health. Of the two, (5) health is the form and the actuality (7) of the body, which is capable of receiving this health.

Just as knowledge and health are the primary things by which we know and are healthy, (9) soul is also that by which we live in the primary sense. It is true that we are able to live because we have a body. A disembodied spirit could neither nourish itself nor perceive, because these activities require bodily instruments. However, just as not every soul has knowledge of math and not every body is healthy, not every body lives—only those with souls. Thus, soul is that by which we live primarily. Given the parallel with knowledge and health, (10) soul is also a form.

Having established this, Aristotle proceeds to discuss the sort of body it is of which soul is the form. His discussion is not very helpful when it comes to the definition of soul, because instead of giving concrete information about the kind of body necessary, he focuses on refuting a mistaken view held by his predecessors. Still, it is worth looking at what he has to say. The argument starts with the sort of argumentation found in 2.1, but Aristotle uses it for a different end.

(11) For as substance is said in three ways, as we said, one way being form (εἶδος), one matter (ὕλη), and one that which is from both, and of these, the matter is potentiality (δύναμις), the form actuality (ἐντελέχεια)—(12) since that which is from both is ensouled (ἔμψυχον), (13) it is not the body that is the actuality (ἐντελέχεια) of soul, but soul [is the actuality] of a certain body (σώματός τινος). (14) And because of this, those who think that soul is neither without body nor a certain body understand well. (15) For it is not a body, but something of a body, (16) and because of this it belongs in a body, and in a body of a certain kind (τοιούτῳ), (17) and not as the earlier thinkers inserted it into a body, not at all specifying in what [body] and what kind, (18) although it appears (φαινομένου) that some chance thing does not receive another chance thing. (19) And so it happens also according to reason (κατὰ λόγον), for the actuality of each naturally comes to be in that which is potentially and in the proper matter. (20) From these things, then, it is clear that [soul] is a certain actuality (ἐντελέχειά τις) and ratio (λόγος) of that which has the potentiality to be of this kind (τοῦ δύνανμιν ἔχοντος εἶναι τοιούτου).⁹¹

This part of the argument continues from the first by saying that soul is actuality, but its main focus is on the body.

He begins by listing (11) the three kinds of substance and their ties to potentiality and actuality, the same distinctions he made in 2.1. Matter is potentiality while form is actuality. Since he had just said that (10) soul is form, it is a simple move to conclude that

⁹¹ 414a14-28, numbers added.

soul is actuality. Before he does this, however, he inserts that (12) the composite is ensouled, and this insertion begins with “since” (ἐπεὶ), suggesting that it plays a role in establishing the claim that follows. This claim is that (13) body is not the actuality of soul, but soul is the actuality of a certain body. Up until this point the body had not been mentioned in relation to the soul, and what follows focuses on it. Because of this, it is best to see Aristotle as mentioning the three kinds of substance and that the composite is ensouled, not in order to make the point that soul is actuality, but in order to categorize body. Soul is form, the ensouled thing is the composite, so body is the matter, or as it is emphasized here, it is that of which soul is the actuality. Because of this relationship between body and soul, (14) soul is not body but requires a body. It is the actuality (15) of a body, so (16) it needs to be in not just any body, but in a particular body. Aristotle’s predecessors (17) missed this point, thinking instead that the type of body did not matter. However, that it matters is confirmed both (18) by observation and (19) reason. It can be observed in nature that random things do not regularly go together to form wholes. Likewise, reason shows that an actuality must come to be only in the proper potentiality, not a random one. Aristotle sums up this discussion by saying that (20) soul is the actuality of that which has the corresponding potentiality.

While this is the conclusion of the argument and his statement of the causal definition of soul, this definition is not as informative as the one in 2.1 because it does not introduce any terms different from soul. Comparing the conclusion here, where the body is “that which has the potentiality to be of this kind,” to the body in 2.1, “a natural body having life potentially,” one notices that the terms ‘natural’ and ‘life’ are missing

from the new statement. Instead, Aristotle says that soul is the actuality of that which has the potentiality to have soul, a seemingly vacuous statement, though in this argument the statement does in fact have content, since it is meant to disqualify some bodies from having soul, bodies that Aristotle's predecessors would have allowed. It does not, however, specify anything about what makes a body suitable for having soul. It is not even shorthand for the more informative statement in 2.1. As I argued earlier, the body having life potentially is the ensouled matter. On the other hand, this body at the end of 2.2 is the matter without soul. It has *soul* potentially, not *life*. Aristotle is likely focusing on the matter without soul because this is what his opponents have in mind. They are picturing pre-existing bodies that happen to receive soul, and Aristotle is pointing out that not all bodies can be ensouled. Given all this, Aristotle's description of the body at the end of 2.2 is not very informative at first glance, and it contains no hidden depths.⁹²

The first part of the argument does what is promised in the transition to 2.2, however. It proceeds by induction, going from what is more evident to what is known by reason. What is evident, granted by everyone, is that soul is the primary cause of life. In other cases, that which is the primary cause of an activity—knowing or being healthy, for example—is the form. Therefore, soul is a form. Reversing the inductive argument, and bringing back in the information that the ensouled body is a natural one, we get the deductive argument sought in the transition.

⁹² Someone may ask why Aristotle's grand conclusion is so anemic, but this is really in keeping with the rest of the chapter. After the beginning where he lays out the kind of definition he is seeking and how he will get there, for some reason he decides to discuss separability and parthood before getting around to the argument for the definition. That the definition ends by trailing off into another digression is perhaps not surprising.

- 1) Form belongs to a natural body.
- 2) The primary cause of life belongs to form.

Therefore: The primary cause of life belongs to a natural body.

The conclusion of this argument is the common definition of soul, as it should be: soul is the primary cause of life in a natural body. The middle term—the cause of the conclusion—is ‘form’. Therefore, just as the common definition of thunder is “a noise in the clouds” and the definition showing the cause is “a noise of fire being extinguished in the clouds”, the proper definition of soul also incorporates all three terms: soul is the cause of life as the form of a natural body. But a natural body having the cause of life is one having life potentially. Thus, soul is the form of a natural body having life potentially. We are led back to 2.1, then, and there Aristotle unpacks both the notion of form and that of the body having life potentially, bringing in the notions of a first actuality and an instrument. This is what I will examine in the next two chapters.

Chapter 3: Soul as Actuality and Capacity

In the previous chapter I focused on the arguments Aristotle gives for his definition of soul and the place from which he begins the arguments. In this chapter I will turn to the definition itself. As I have argued, Aristotle states his final definition, the one showing the cause, both at the end of *De Anima* 2.2 and in 2.1. The discussion in 2.1 is much more extensive, however, so this is a natural place to dig into Aristotle's account. The account is deeper because Aristotle moves his definition through a series of iterations, and not only does the changing language help to fill out what Aristotle means, but he explains the changes. He begins the series with the version I mentioned in the previous chapter: "soul must be a substance as form of a natural body having life potentially."¹ He then points out that such a substance is an actuality, and he modifies the definition to "soul is the first actuality (*ἐντελέχεια ἢ πρώτη*) of a natural body having life potentially."² In order to explain Aristotle's account of soul, then, one must say what it means for it to be a form and a first actuality.

I will not begin by looking at these definitions, however. It is helpful first to look at other language Aristotle uses to discuss soul, language that treats soul as a capacity. In particular, I will make use of the distinction I discussed in chapter one between *-τικόν* and *-σις* words in Aristotle's talk of vital functions. I will argue that he associates the former with soul and contrasts these with the latter, which refer to life. This contrast should not be surprising, since in the previous chapter I argued that Aristotle begins his

¹ *DA* 2.1, 412a19-21.

² 412a27-28. There is a third iteration as well, which I will discuss in the next chapter.

account of soul from the shared assumption that it is the explanation for the activities of life. Life is the vital activities, so soul is the capacities for these activities.

It is potentially problematic, however, to say that soul is the vital capacities. As I just noted, Aristotle defines soul as an actuality. A capacity, on the other hand, is a potentiality.³ Aristotle often distinguishes actualities from potentialities, as in his argument for the necessity of god⁴ or in the distinction between form and matter.⁵ It is strange that he would talk about soul using the language of potentiality yet call it an actuality. This requires explanation. Most of this chapter, then, will be spent explaining how Aristotle's definitions of soul fit with the fact that soul is a capacity. I will look at what it means for soul to be a first actuality as well as the role played by form in defining a thing. Reconciling the capacity and actuality language turns out to clarify Aristotle's discussion of soul, since thinking of soul as a capacity does not conflict with his definitions but ultimately illuminates them. Soul is both an actuality and a capacity.

Soul is a Capacity

Aristotle uses capacity language to discuss soul throughout the early chapters of *De Anima* 2, but to see that this is the case one must pay close attention to the different words he uses to discuss vital functions. I will provide such a detailed analysis in what follows, but it is worth noting two additional features of the passages under discussion. First, some of the sections using capacity language immediately follow Aristotle's definitions of soul in terms of actuality, which indicates that this language is in no way to

³ Aristotle's one word, δύναντες, is translated as 'potentiality' and 'capacity' in different contexts. Perhaps, then, a more precise way to say the above is that 'capacity' is one meaning of δύναντες, which is always contrasted with actuality.

⁴ *Metaph.* Λ.6-7.

⁵ *DA* 2.1, 412a9-10.

be superseded or negated by the definitions. In the first half of 2.1 he states that soul is the form of a body having life potentially and then that it is a first actuality. However, he spends the second half of the chapter explaining these definitions by using capacity language. Likewise, the definition showing the cause appears at the end of 2.2, but he refers to soul as a capacity immediately afterward, at the beginning of 2.3. Second, it is also worth noting that in 2.2 Aristotle gives the clearest statement he makes anywhere relating soul, life, the vital capacities, and the vital activities. This passage provides additional evidence for the position I argued for in the previous chapter, that life is the vital activities, but it has often been misunderstood, which is one reason why it is necessary to look at all of these passages and pay careful attention to the language Aristotle uses. If one does this, it becomes clear that soul is a capacity.

After arguing in 2.1 that soul is the form of the body and that this means it is the actuality of a particular sort of body, Aristotle goes on to illustrate what he means through a set of analogies, and in his discussion he compares the soul to capacities. First he compares the living organism to an axe, and says that if the axe were a living thing, its soul would be its essence. The axe, however, is the wrong sort of body, because it does not have an internal source of moving and stopping. That is, it does not really have a soul. Next he compares the living organism to an eye, and says that “if the eye were an animal, its soul would be the capacity to see (ὄψις).”⁶ I have translated ὄψις as ‘the capacity to see’ here, but as I argued in chapter one, the term may refer either to the capacity to see or to the function of sight more generally. As Aristotle proceeds, he makes it clear that

⁶ *DA* 2.1, 412b18-19.

the first is what he means, and that which would be analogous to the soul of an eye is a capacity. He emphasizes this link between soul and capacities when he says that soul is not only analogous to the capacity to see, but also to the capacity or power of the axe. “As with cutting (τμησις) and seeing (ὄρασις), so also being awake (ἐγρήγορσις) is an actuality (ἐντελέχεια), but as with the capacity to see (ὄψις) and the capacity of the instrument (δύναμις τοῦ ὀργάνου) [i.e. of an axe], so is soul [a capacity].”⁷ Not only does Aristotle compare soul to two capacities here, but he specifically contrasts it with three activities—cutting, seeing, and being awake.

Following this and a few other remarks, Aristotle transitions to the new start in 2.2. Partway through the discussion he makes the following summary statement:

For now let only so much be said, that soul is the source (ἀρχή) of these things that were mentioned (τῶν εἰρημένων τούτων), and it is defined (ὁρίζεται) by these (τούτοις): the capacity to nourish (θρεπτικῶ), the capacity to perceive (αἰσθητικῶ), the capacity to think (διανοητικῶ), and moving (κινήσει).⁸

This sentence requires extra interpretive work on the part of the reader because it contains two demonstratives, the referents of which need to be determined. Aristotle discusses both “these things that were mentioned” and the “these” that define soul. Because of this, the passage has often been misunderstood by translators and commentators. Quite a lot of people take the two demonstratives to refer to the same thing, as in the following translation by J. A. Smith from *The Revised Oxford Translation*:

⁷ DA 2.1, 412b27-413a1.

⁸ DA 2.2, 413b11-13.

At present we must confine ourselves to saying that soul is the source of these phenomena and is characterized by them, viz. by the powers of self-nutrition, perception, thinking, and movement.⁹

As here, the majority of translations indicate that the two demonstratives refer to the same thing, either by translating the second demonstrative as ‘them’¹⁰ or in some other way.¹¹ This understanding of the passage is problematic, however, because it holds that soul is both defined by the vital capacities as well as being their source. But to be that which is responsible for something is very different from being that thing; if they were the same, then the thing would be the cause of itself. A different interpretation is needed.

The problem is solved by keeping the two demonstratives separate. The second clearly refers to what follows, as most translations recognize, and what follows is a list of capacities.¹² The first, on the other hand, refers back to what had already been mentioned, so one must decide what this is. Since the new inquiry started, Aristotle has been discussing both activities and capacities. He begins by defining life in terms of activities—thinking (νοῦς), perceiving (αἴσθησις), and various sorts of moving (κίνησις).¹³ Shortly after this he focuses on plants and shifts to discussing the “capacity (δύναμιν) and source (ἀρχήν) through which they have growing (αὐξήσιν) and decaying

⁹ J. A. Smith, trans., *On the Soul*, in *The Complete Works of Aristotle: The Revised Oxford Translation*, ed. Jonathan Barnes, vol. 1 (Princeton: Princeton University Press, 1984).

¹⁰ See the *De Anima* translations of Hamlyn, Sachs, Hicks, Irwin and Fine (Terence Irwin and Gail Fine, trans., *Aristotle: Selections* (Indianapolis: Hackett Publishing Company, 1995), and Hett (W. S. Hett, trans., *On the Soul, Parva Naturalia, On Breath*, rev. ed., (Cambridge: Harvard University Press, 1957)). Barnes also translates the passage in this way in Barnes, *Aristotle*, 275.

¹¹ Bolton’s paraphrase: “source of and is delimited by any one or more of the life functions” (267); Ross: “the soul is the source of, and is distinguished by, the faculties” (*De Anima*, 216); Simplicius’s summary is also in this vein: “he said not only that it is the principle of these facts but that it is determined by them” (Simplicius, trans. Urmson, 134-135 (100,22-23)).

¹² I will complicate this statement shortly.

¹³ *DA* 2.2, 413a22-25.

(φθίσιν) in opposite directions,”¹⁴ and this eventually leads him to talk about the capacity to nourish (τὸ θρεπτικόν).¹⁵ It is possible, then, that the referent of “these things that were mentioned” is either activities or capacities, but it should be understood as the former. As in the case of plants, where the capacity is a source of the vital activities of growing and decaying, so also soul is defined by the vital capacities, so it is the source of the vital activities that were mentioned at the beginning of the section.¹⁶

With this understanding of the passage, there are two lessons to draw. First, this passage and its context provide more evidence that life is to be understood as the vital activities, rather than as the vital functions considered generally. At the beginning of this section Aristotle defines life by using a series of words ending in -σις. As I discussed in chapter one, these may refer either to activities or to the general functions. The passage following the definition makes it clear that he has activities in mind. He says that soul is defined by the capacities and the source of the activities or functions that are referred to by the terms ending in -σις. The general function includes the capacity, however, so if that was in view, then the capacities would be the source of themselves, and the problem I raised above would reappear. Therefore, these terms should be understood to refer to activities, and life is an activity. Second, this passage also specifically states that soul is

¹⁴ 413a26-28.

¹⁵ 413b5.

¹⁶ In their translations of the passage, Whiting (“Locomotive Soul”, 149) and Corcilius and Gregoric (83) both make it explicit that soul is defined by the capacities and is the source of activities. Philoponus, citing Alexander, also emphasizes that soul is not the source of the capacities, but it is the source of the activities (which he distinguishes by using the articular infinitive) and is defined by the capacities (Philoponus, trans. Charlton, 39 (237,11-25)). Johansen translates the passage in this way in chapter two of his book (40), but then translates it differently in chapter three and makes a point of saying that the things referred to by the first demonstrative are the living beings (52-53, incl. n15). Lawson-Tancred (Hugh Lawson-Tancred, trans., *De Anima* (London: Penguin Books, 1986)) and Apostle both avoid translating the second demonstrative ‘them’, thereby preserving the option of this interpretation, although at the beginning of the chapter Apostle translates the activities defining life as powers.

the vital capacities, for Aristotle says it is defined by them. It *is* these capacities, not their source or cause, since only the second demonstrative refers to the capacities.

This last point has a small complication, however, since only three of the four words said to define soul have the usual -τικόν suffix of a capacity term (or in this case –τικῶ)—θεραπευτικῶ, αισθητικῶ, διανοητικῶ. The fourth item is κινήσει, moving, rather than the expected κινητικῶ, capacity to move. Some scholars have also noted this discrepancy and offered an explanation for it. They suggest that Aristotle differentiates movement from the other capacities because, while the others are to be considered separate parts of a soul, movement is not.¹⁷ If they are right—and I have no better explanation to offer—then it would appear that Aristotle has sacrificed clarity about the relationship of soul to the vital capacities for the sake of making clear that movement is a different sort of capacity.

Before moving on from this passage there is one more issue to consider. Aristotle appears to slide easily here from stating that life is an activity to saying soul is a capacity. One might think that he has the following argument in view: life is the vital activities; soul is the cause of life; therefore, soul is the vital capacities. This cannot be what he has in mind, however, because if this argument were valid, then his predecessors would assent too easily to Aristotle's account of soul. I argued in the previous chapter that Aristotle takes his predecessors to hold both the premises of the argument: they agree that life is the vital activities and soul is its cause. Therefore, they ought to assent to the conclusion readily. But as I have already stated and will argue in the rest of this chapter,

¹⁷ Whiting, "Locomotive Soul", 149n8; Corcilius and Gregoric, 106, 110.

when Aristotle says that soul is the vital capacities, this is his considered position, equivalent to saying that soul is a form. If his predecessors agreed with this position that easily, it would render superfluous his more complicated arguments that soul is a form, and it would call into question whether there is even a difference between his position and theirs. In light of this, it appears that Aristotle is not making this argument; in fact, the argument is invalid. Something could be the explanation of the vital activities yet not be a capacity, as in the case where it is atoms bouncing around that makes the organism active in the required ways. It is best, then, to understand this passage as informed by Aristotle's ultimate position, not as arguing for it.¹⁸

Aristotle provides still more evidence that soul is a capacity in 2.3. He starts this chapter by observing that different organisms have different numbers of capacities of the soul, and by the end of the chapter it is clear that these are not just capacities belonging to the soul but capacities constituting it. The words he chooses make it clear that the chapter is concerned with capacities. At the beginning of the discussion he uses a series of capacity-words ending in -τικόν, and he also calls them 'capacities' (δυνάμεις) twice.

Of the capacities of the soul (δυνάμεων τῆς ψυχῆς) that have been mentioned, all belong to some [living things], just as we said, some of them belong to some, and only one belongs to others. The capacities (δυνάμεις) we spoke of were a capacity to nourish (θρεπτικόν), a capacity to perceive (αἰσθητικόν), a capacity to desire

¹⁸ In fact, it makes most sense to understand 2.2 as mostly consisting of a long digression. Aristotle starts the chapter saying what kind of definition he is looking for, then he gives the very first step—stating that life is the vital activities. From there, he immediately digresses into a discussion of the relationship between the various capacities, and this discussion is already informed by the conclusion that soul is a capacity. Finally, at 414a4, he again picks up the argument announced at the beginning and argues for this conclusion.

(ὄρεκτικόν), a capacity to move with respect to place (κινητικὸν κατὰ τόπον), a capacity to think (διανοητικόν). Only the capacity to nourish (τὸ θρεπτικόν) belongs to plants, but both this and the capacity to perceive (τὸ αἰσθητικόν) belong to others.”¹⁹

Immediately after this Aristotle switches from using words ending in -τικόν to words ending in -σις. This use of words that seem to refer to activities might call into question the assertion that 2.3 is concerned with capacities, but it must be kept in mind that Aristotle uses words ending in -σις to denote the general function as well. The context shows that this is in fact what he is doing here.

But if the capacity to perceive (τὸ αἰσθητικόν) [belongs to an organism], [so does] the capacity to desire (τὸ ὄρεκτικόν), for desire (ὄρεξις) [consists of] appetite (ἐπιθυμία), passion (θυμός), and wish (βούλησις), ... and to that which belongs perception (αἴσθησις), to this [also belongs] pleasure and pain, as well as the pleasant and painful; but to that which these belong, appetite (ἐπιθυμία) also belongs, for it is a desire (ὄρεξις) for the pleasant.²⁰

When Aristotle switches from τὸ ὄρεκτικόν (the capacity to desire) to ὄρεξις, he is not intending to contrast the activity of desiring with its capacity. Rather, he goes on to discuss features of the general function—it has three components—and to relate the functions of desire and perception. This is similar to the general use of ‘sight’ I discussed in chapter one; saying that sight perceives colors is not restricting the statement to either the capacity to see or the activity of seeing. Likewise here, Aristotle employs ὄρεξις and

¹⁹ 414a29-b1.

²⁰ 414b1-6.

αἴσθησις because he is discussing features of the general functions. Once the discussion is over, he returns to speaking of capacities.

In addition to these [capacities] to some [organisms] belong also the capacity to move with respect to place (τὸ κατὰ τόπον κινητικόν), and to others also both the capacity to think (τὸ διανοητικόν) and intellect (νοῦς)...²¹

After this, Aristotle describes that there are two sorts of accounts of the soul that one could give, and the discussion makes it clear that soul is the capacities that he has been discussing.²² One can either focus on accounts of the particular sorts of soul or on an account common to all of them. Aristotle compares this situation to the way one can either discuss triangles and quadrilaterals, or one can discuss figure. The way he states this comparison shows that by particular souls he has in mind the capacities he has just discussed: “for neither in that situation [of the figures] is there a figure besides the triangle and those succeeding, nor in this situation [of the souls] is there a soul besides those that have been discussed (ψυχὴ παρὰ τὰς εἰρημένους).”²³ What have just been discussed are the capacities, so they must be what he is calling soul. He repeats the identification of soul and what he previously discussed as he continues. One can give a common account encompassing all the various figures, but such an account would not describe any particular figure. “Similarly [one could] also [generate such an account] for

²¹ 414b16-18. Νοῦς appears to have a wider range of meanings than Aristotle’s other function terms, since it is able to refer both to a capacity and to an actuality. Here it refers to a capacity, as is made clear by the parallel with τὸ διανοητικόν. By contrast, Aristotle uses the term to denote an activity at DA 2.2, 413a23, where it is listed along with various words ending in -σις.

²² Beginning at 414b20 and running to the end of the chapter at 415a13.

²³ 414b21-22.

the souls discussed (ταῖς εἰρημέναις ψυχαῖς).²⁴ As the comparison between souls and figures continues, Aristotle confirms that by referring to what he previously discussed he means to refer to the capacities. There is a hierarchy with both figures and souls, with those higher on the ladder containing all the lower potentially. His example shows that the sorts of souls are the vital capacities. “Just as a triangle is in a quadrilateral, the capacity to nourish (τὸ θρεπτικὸν) is in the capacity to perceive (ἐν αἰσθητικῷ).”²⁵ The chapter continues by relating various capacities,²⁶ and concludes by saying, “It is clear that certainly the account of each of these [capacities] is also the most appropriate [account] of soul.”²⁷ This final statement reinforces what is implicit in the structure of the whole chapter: soul is the vital capacities.

While many commentators have agreed that soul is a capacity,²⁸ others have disagreed,²⁹ and I will be looking at some of these disagreements as I proceed. Before

²⁴ 414b24-25.

²⁵ 414b31-32.

²⁶ Aristotle employs a variety of words denoting capacities in the section from 414b31 to the end of the chapter at 415a13, including a few that denote the capacity for particular senses, such as τοῦ ἀπτικοῦ (the capacity to touch) at 415a3 and ὄψιν (the capacity to see) at 415a5. He uses αἰσθησις twice, at 415a4 and 415a6, but in neither case is he referring to the activity of perceiving or even the function, perception; each time it means “sense” as in “the five senses.” He also uses a few words having to do with thinking: νοῦς (415a12), δῖανοια (415a8), λογισμὸς (415a8, 9, 10), φαντασία (415a11); none of these terms straightforwardly mark capacities, but it makes most sense if they refer to capacities here, and I know of no reason why they cannot.

²⁷ 415a12-13.

²⁸ Richard Sorabji, “Body and Soul in Aristotle,” *Philosophy* 49 (1974): 64-65; Whiting, “Living Bodies,” 87; Barnes, *Aristotle*, 275; Stephen Everson, *Aristotle on Perception* (Oxford: Clarendon Press, 1997), 62-63; Johansen, 2-3.

²⁹ In particular, Rebekah Johnston argues this in her article subtitled “On Why the Soul is Not a Set of Capacities.” She argues that soul is what accounts for the capacities, not a capacity itself; it accounts for the capacities by being a first actuality (186, 197). While it should be clear by now that I disagree with her conclusion, I have found her article very stimulating, as it is one of the few to consider in depth the question of what it would mean for soul to be a capacity. Much of what I say below has been inspired by its provocations, and as I go I will note places where what I have to say is a response to it. In addition to Johnston, King also states that soul is not a capacity but an activity, the activity of nutrition. R. A. H. King, *Aristotle on Life and Death* (London: Duckworth, 2001), 5, 8. Polansky does not argue specifically that soul is not a capacity, but like Johnston he sometimes speaks of the soul as giving the capacities, rather than

moving forward, however, there are two related issues I would like to address. They both stem from saying that soul is the vital capacities. First, I am not taking a stand one way or the other whether the different capacities constitute the parts of the soul. Corcilius and Gregoric argue that while most commentators treat the capacities as parts, this is incorrect; only those capacities that can be defined without reference to another should be considered parts of the soul.³⁰ I am only concerned at this point to argue that soul is the vital capacities, and I am not making any claims about how these capacities relate to each other or which, if any, should be viewed as parts of the soul. Second, as Christopher Shields observes, one should not say that soul is a *set* of capacities. A set is something that requires external unity, and soul is itself a unity. Shields goes on to explain that Aristotle describes an organism having multiple capacities in terms of the lower capacities being in the higher *potentially*.³¹ Thus there is a sense in which even when an organism has multiple capacities it should really be said to have one, and the others are somehow subsidiary. In light of this, when I say that soul is the vital capacities, I just mean that it covers a range of capacities and I am not saying that it is a set. Even with these clarifications out of the way and with it clear that Aristotle speaks of soul as the vital capacities, the question still remains as to how this fits with Aristotle's definition of soul.

being them. "The ancients observe or postulate certain operations and functions; for example, animals engage in voluntary motions and *have perceptive capacities*, and humans seem perhaps to *have some capacity* for survival after death. Soul is then posited as necessary for *explaining such functions as their source or cause*" (1-2, emphasis added). "The incapacity is explicable by the absence of soul and the capacities it gives" (7).

³⁰ Corcilius and Gregoric, 102.

³¹ Christopher Shields, "The Aristotelian *Psuchê*," in *A Companion to Aristotle*, ed. Georgios Anagnostopoulos (Malden, MA: Blackwell Publishing, 2009), 305.

First Actuality = Capacity

The definition fits with the talk of soul as a capacity, because upon inspection it defines soul as a capacity when it calls it a first actuality. Many people have shared the view,³² but it is nevertheless worth the time to look at exactly why a first actuality is a capacity, since there is disagreement as to what exactly the phrase ‘first actuality’ means.³³ In the previous chapter I discussed Aristotle’s argument in 2.1 up to the point where he concluded that soul is a form. Immediately after this, he infers that it is also an actuality (ἐντελέχεια),³⁴ an inference following from his previous statement that as opposed to matter, which is potentiality, form is actuality.³⁵ He had also mentioned previously that there are two sorts of actuality, and he brings this back up after concluding that soul is actuality: “But this [i.e. actuality] is said in two ways, on the one hand as in the case of knowledge (ἐπιστήμη), on the other hand as in the case of contemplating (τὸ θεωρεῖν)”.³⁶ The question, then, is which sort of actuality soul is. He decides that it is an actuality as in the case of knowledge, and there are three ways that he indicates what this is supposed to mean for soul: he explains the relationship between

³² Aquinas, 131; Ackrill, “Definitions,” 121; Sorabji, 64-65; Everson, 62-63. Several scholars call first actuality a *hexis*, which is another way to say it is a capacity: Hamlyn, x; Philoponus, trans. Charlton, 11 (211,29-212,1); Menn, 105.

³³ In particular, does the ‘first’ refer to 1) priority in time or development, 2) a priority that relates to being, 3) both, or 4) neither. All four positions are advocated. 1) Polansky (159) and Hicks (313) both say it is prior in development. 2) Hamlyn says it does not refer to priority in time, but ‘first actuality’ refers to a *hexis* (85); this means it relates to being. 3) Johansen explains priority in time in terms of a relationship to being (16-17). 4) Charlton argues that ‘first actuality’ is not a technical term, but the ‘first’ merely points back to the first of the two senses of actuality Aristotle had just discussed. William Charlton, “Aristotle’s Definition of Soul,” *Phronesis* 25.2 (1980): 174.

³⁴ 412a21.

³⁵ 412a9-10.

³⁶ 412a22-23.

knowledge and contemplating; he discusses what depends on soul; and he labels soul a first actuality. All three show soul to be a capacity.

Aristotle goes into much more detail about the relationship between knowledge and contemplating in 2.5. It is important to note that in 2.1 he calls both actualities, but in the more extensive discussion of 2.5, their relationship is one of actuality and corresponding potentiality.³⁷ Saying that they are actualities is not enough, then; what Aristotle has to say about knowledge, in particular, is more nuanced. He discusses the relationship between knowledge and contemplating in 2.5 by examining three different ways in which someone may be said to be a knower.

For something is a knower (ἐπιστήμων) in one way, as we might say **(1)** a human is a knower because humanity is among the knowers and things having knowledge (ἐπιστήμην), but something is [also a knower in another way], as we say that **(2)** the one having knowledge of letters (τὴν γραμματικὴν) already is a knower. Each of these is capable (δυνατός), though not in the same way, but **(1)** one because it is a certain sort of thing and because of the matter, while **(2)** the other because it is capable (δυνατός) of contemplating (θεωρεῖν) when it wishes, should nothing external hinder. **(3)** Another is contemplating (θεωρῶν) already, being in actuality (ἐντελεχεία) and knowing (ἐπιστάμενος) this particular letter A in the primary sense. Therefore both the first **(1&2)** are knowers potentially (κατὰ δύναμιν)...³⁸

³⁷ Burnyeat also notes that 2.1 emphasizes actuality and 2.5 potentiality (50).

³⁸ 417a22-30, numbers added for clarity.

In this passage the relevant cases are (2) and (3). The knower in sense (2) has knowledge of something particular—in this case of letters. She has more than the knower of case (1), who differs in that he can be classed as a knower due to the fact that he is human—a species whose members are able to have knowledge—but he does not presently have the knowledge. Because knower (2) has knowledge already, she is capable of contemplating, but is not actually doing so. It is knower (3) who contemplates. Knower (2), then, has knowledge, while knower (3) is contemplating. It is because of the knowledge she has that knower (2) can become knower (3). Knowledge is potential contemplating, and contemplating actualized knowledge. Aristotle emphasizes this relationship of potentiality to actuality both through the use of the term ‘capable’ (*δυνατός*) and by saying that (1) and (2) are both knowers potentially. This description of knowledge categorizes it as a capacity: it is something actual that a person has, but its actuality is a potential for the activity of contemplating.³⁹ Since Aristotle associates soul with actuality as in the case of knowledge, soul is a capacity.

Aristotle’s argument linking soul to knowledge also establishes that soul is a capacity. He connects the two in 2.1 by bringing in another pair of examples besides knowledge and contemplating, and he argues based on the way that these new activities depend upon soul.

³⁹ This statement raises a concern voiced by Johnston, who grants that knowledge is described as both an actuality and a potentiality, but she maintains that it is still different things to be an actuality and to be a potentiality (187-188). Thus, she would object to me saying that the actuality is a potential. As I will argue below, however, a first actuality—of which knowledge is an example—is defined at the same time by both its actuality and its potentiality; they must be considered together. In this case an actuality may be simultaneously considered a potentiality.

It is clear then that [soul is actuality] as in the case of knowledge, for both sleep (ὕπνος) and waking (ἐγρήγορσις) depend on soul belonging [to a thing], and waking is analogous to contemplating, while sleep [is analogous] to having [knowledge] and not exercising (ἐνεργεῖν) it.⁴⁰

Sleeping is the lack of waking,⁴¹ although not everything that lacks waking is asleep. A rock is not awake, but neither does it sleep. The same can be said of a corpse. When the animal lived, it would go through periods where it was not awake—periods of sleep—but then it would wake back up. Once the animal is dead, however, it is not awake, but it is also not asleep. In order for something to be considered sleeping it has to have the capacity to wake again. Sleep and waking are therefore analogous to having knowledge and contemplating. In both cases the second term denotes an activity, while the first denotes the absence of that activity coupled with a capacity for it. The case of sleep and waking is particularly illuminating when it comes to soul, because only ensouled things can do either, and for the most part they do one or the other at all times.⁴² This is why rocks and corpses do not sleep. Since soul is necessary for both but only sufficient for sleeping, it is analogous to sleeping and having knowledge, rather than waking and contemplating. Soul, like sleeping, is a capacity.

After Aristotle decides that soul is an actuality as knowledge is, he goes on to label this kind of actuality, and he also gives his reasoning in so labeling it.

⁴⁰ 412a23-26.

⁴¹ “To begin with, this at any rate is obvious, that waking and sleep belong to the same part of the animal; for they are opposites, and sleep is apparently a privation of waking...” *Somn. Vig.* 1, 453b24-27, Hett translation.

⁴² Plants are the exception. Waking and sleeping have to do with perceptive soul, which plants do not have, and so they neither wake nor sleep.

But for the same individual knowledge is prior in coming-to-be (προτέρα... τῆ γενέσει). Because of this, soul is the first actuality (ἐντελέχεια ἡ πρώτη) of a natural body having life potentially.⁴³

Knowledge is prior to contemplating in coming-to-be, so due to this kind of priority in its analogue, soul is labeled a first actuality.⁴⁴ The main issue in understanding this label, then, is knowing what Aristotle means by calling something prior in coming-to-be. Upon examination, this sort of priority makes first actuality a capacity, and so Aristotle is including the information that soul is a capacity right in its definition.

Aristotle's works contain several sections in which he discusses senses of priority, but in most of the main sections where he does this—*Categories* 12, *Metaphysics* Δ.11 and Z.1—he does not mention priority in coming-to-be.⁴⁵ He does refer to coming-to-be in his discussion of priority in *Metaphysics* Θ.8, although he does not give it much attention. He mentions it twice, relating it to priority in time and priority in substance. By looking at these two places and adding in supplementary information from elsewhere, one can infer what Aristotle means by saying that knowledge is prior in coming-to-be and so is soul.

In the first passage Aristotle ties priority in coming-to-be to priority in time: “But at all events it is also clear from this too that actuality is prior in this way to potentiality

⁴³ 412a26-28.

⁴⁴ As I noted above, Charlton argues that ‘first’ merely refers back to the first kind of actuality mentioned, not to some special kind (174). I will argue instead that Aristotle uses the ‘first’ in ‘first actuality’ to make an important statement, one fitting well with everything else he says.

⁴⁵ The phrase κατὰ γένεσιν is used at Δ.11, 1019a12, but not as a kind of priority.

also, namely in respect of coming-to-be (κατὰ γένεσιν) and time (χρόνον).⁴⁶ It is important to recognize, however, that when Aristotle discusses priority in time here, he does not merely have in mind an event that precedes another chronologically.⁴⁷ In some other discussions of priority in time, this is what he means. In *Categories* he says that a thing is prior in time when it is “called older or more ancient than another,”⁴⁸ and in *Metaphysics* Δ.11 the key is an event’s distance from the present: “of past events we call ‘prior’ that which is farther from the present..., but of future events we call ‘prior’ that which is nearer to the present.”⁴⁹ In Θ.8, however, he has something more specific in mind. He is looking at temporal priority within the process of coming to be. This process starts with a mature thing and ends with the appearance of a new mature thing: something mature generates something immature, which in turn itself matures.

In time [actuality] is prior in this way; what is actual, which is the same in form, but not in number, is prior. I mean this, that prior in time to this man who is already in actuality and the wheat and the one seeing (τοῦ ὁρῶντος), are the matter and the seed and the one capable of seeing (τὸ ὁρατικόν), which are potentially man and wheat and one seeing (ὁρῶν), though not yet actually; but prior in time to these there are others which are actually, from which these came to be...⁵⁰

⁴⁶ 1050a2-3, Makin translation, modified. Stephen Makin, ed. and trans., *Metaphysics: Book Θ* (Oxford: Clarendon Press, 2006).

⁴⁷ The following discussion of priority in time in *Metaphysics* Θ.8 is based on the commentary of Jonathan Beere, *Doing and Being: An Interpretation of Aristotle’s Metaphysics Theta* (Oxford: Oxford University Press, 2009), 289.

⁴⁸ *Cat.* 12, 14a27-8, Ackrill translation. J. L. Ackrill, ed. and trans., *Categories and De Interpretatione*, (Oxford: Clarendon Press, 1963).

⁴⁹ 1018b15-18, Apostle translation.

⁵⁰ 1049b17-24, Makin translation, modified.

The man who generates a child is prior in time not just because he happened to be there first, but because he is the first step in the generation of a new human. If Aristotle were only concerned with temporal order, neither adult nor child could be said to be prior absolutely speaking, because there is an infinite chain of children becoming adults begetting children becoming adults.... For any given link, there is always another link of the opposite nature standing before it chronologically. It is somewhat misleading, therefore, to say that priority in coming-to-be simply is temporal priority, despite Aristotle's association of priority in coming-to-be with priority in time.

Aristotle shows a better way to think about priority in coming-to-be in the second passage from Θ .8, when he turns to priority in substance and contrasts this with priority in coming-to-be:

But indeed actuality is prior in substance ($\text{o}\acute{\upsilon}\sigma\acute{\iota}\alpha$) too, first because things posterior in coming-to-be ($\text{\tau}\acute{\alpha}$ $\text{\tau}\eta$ $\text{\gamma}\epsilon\nu\acute{\epsilon}\sigma\epsilon\iota$ $\acute{\upsilon}\sigma\tau\epsilon\rho\alpha$) are prior in form ($\text{\tau}\acute{\omega}$ $\text{\epsilon}\acute{\iota}\delta\epsilon\iota$) and in substance ($\text{\tau}\eta$ $\text{o}\acute{\upsilon}\sigma\acute{\iota}\alpha$) (for example, adult to boy and man to seed; for the one already has the form, the other does not), and because everything that comes to be proceeds to an origin and an end (for that for the sake of which is an origin, and the coming to be is for the sake of the end), and the actuality is an end, and the potentiality is acquired for the sake of this.⁵¹

Priority in coming to be is the opposite of priority in form, in substance, or as he puts it in a similar passage from *Parts of Animals*, in nature.⁵² Labels aside, something has priority in coming-to-be if it is further from the end or that for the sake of which. An adult has

⁵¹ 1050a4-10, Makin translation, modified.

⁵² 2.1, 646a25-26.

achieved its end biologically speaking, so it is prior to a child in substance, form, or nature. The child, being further from that end, is prior in coming-to-be. This way of conceiving priority in coming-to-be emphasizes the logical order rather than a temporal one. It might even allow for a non-temporal conception, and this would fit particularly well with soul, since soul does not necessarily develop prior in time to its activity.⁵³ On the other hand, all these discussions of priority in coming-to-be mention time or use examples of temporal processes, so perhaps it is too much to say that it could be non-temporal. At the least, it would be misleading to call it priority in time, as this is not its most important feature.

Not only does this passage from Θ.8 illuminate what Aristotle means by priority in coming-to-be, but as he continues, his examples indicate that the discussion is highly relevant to the account in *De Anima*:

For it is not that animals see (ὁρῶσι) in order that they may have the capacity to see (ᾔψιν) but they have the capacity to see (ᾔψιν) so that they may see (ὁρῶσι), and likewise too they possess the building craft in order that they may build and the capacity to contemplate (τὴν θεωρητικὴν) in order that they may contemplate (θεωρῶσι); but it is not that they contemplate (θεωροῦσι) in order that they may have the capacity to contemplate (θεωρητικὴν), except those who are practicing...⁵⁴

As he does in *De Anima*, he discusses knowledge and contemplating, although in Θ.8 he calls knowledge the capacity to contemplate. This capacity, or knowledge, is for the sake

⁵³ I will discuss this in the next chapter.

⁵⁴ 1050a10-13, Makin translation, modified.

of contemplating, and so therefore it is prior in coming-to-be. When he says in *De Anima*, then, that “for the same individual knowledge is prior in coming-to-be,”⁵⁵ this is what he means. In the same vein, Aristotle compares soul to the capacity to see,⁵⁶ and in $\Theta.8$ he says that the capacity to see is for the sake of seeing, so it is prior in coming-to-be.

Given this discussion from $\Theta.8$, when Aristotle says that soul is a first actuality, this means that it is an actuality that is prior in coming-to-be. Further, in $\Theta.8$ he calls the end an actuality and that which is prior in coming-to-be a potentiality. Thus, a first actuality is an actuality that is a potentiality for another actuality.⁵⁷ In other words, when Aristotle says that soul is a first actuality, he is saying it is a capacity. Specifying the further actuality for which it is a potentiality, soul is the capacity for life.

This conclusion raises the tension I mentioned in the introduction to this chapter. Aristotle says clearly in *De Anima* 2.1 that soul is an actuality. It seems inconsistent, then, to say that soul is a capacity or potentiality. The key to dissolving this tension is to be found in the passages already discussed in this chapter and the previous one, for they illustrate how capacities and actualities can coexist: a first actuality is defined in terms of both actuality and potentiality, so it may equally be called either. However, it is actuality relative to one thing and potentiality relative to another, so when calling a first actuality an actuality or a potentiality, the relevant potentiality or actuality should be mentioned.

⁵⁵ 2.1, 412a26-27.

⁵⁶ *DA* 2.1, 412b18-19.

⁵⁷ Johnston argues that soul is not a capacity because Aristotle defines it as a first actuality, not a second potentiality (the potentiality for the activity, as opposed to the potentiality of the matter). Even though the same thing may be both a first actuality and a second potentiality, one cannot substitute ‘second potentiality’ for ‘first actuality’, since they have different definitions. “In so far as X is a first actuality, it is not defined in terms of a further actuality, but in so far as X is a second potentiality, it is defined in terms of a further actuality” (190). In my account this is not a problem, since the phrase ‘first actuality’ is in fact defined in terms of a further actuality.

Aristotle's discussion of knowledge illustrates this well. In *De Anima* 2.1 and 2.2 he calls it an actuality, while in 2.5 and *Metaphysics* Θ.8 it is a potentiality. The difference lies in the context of these assertions. In Θ.8 Aristotle discusses knowledge, or the capacity to contemplate, as it relates to contemplating. Contemplating is the end of knowledge, and it is this relationship that dictates that knowledge be called a potentiality: "the actuality is an end, and the potentiality is acquired for the sake of this."⁵⁸ Similarly, in *De Anima* 2.5, the person with knowledge is said to be a knower potentially, because the person contemplating is in view.⁵⁹ But this is not the only way to talk about knowledge. Aristotle does not spell out what he is thinking in 2.1 when he says that knowledge is an actuality, but he does in 2.2. There knowledge is contrasted with that which can receive knowledge or what is capable of knowledge. In this case, knowledge is an actuality: "of these both knowledge and health are shape and a certain form and ratio and a kind of actuality of what is receptive, in the one case of the capable of knowledge, in the other of the capable of health."⁶⁰ Before this first actuality is said to be actual or potential, one must specify to what it is being compared.

The same is true for soul. In 2.1 Aristotle is quite clear that soul is an actuality, the question is only what kind. This is because he has in mind its relation to body. But this is only part of what soul is. It is a first actuality, so it is also equally a potentiality, and it is acceptable to call it such in the right circumstances. Calling soul a capacity, then, is just to highlight that it is defined by both. It is potential relative to the activity of life. It

⁵⁸ 1050a9-10, Makin translation.

⁵⁹ 417a22-30.

⁶⁰ 414a8-10.

is actual relative to the body.⁶¹ This second relationship is the one most emphasized, especially in 2.1, and this is the reason why Aristotle emphasizes that soul is an actuality—because it is the form of a body. This is also the aspect of soul to which I turn next.

Soul as Capacity and Form

Aristotle repeatedly speaks of form as an actuality. He does so both in *De Anima*, as already discussed, as well as in the discussions of form and actuality in *Metaphysics*.⁶² The regularity with which Aristotle asserts this makes one pause when faced with the idea that soul could be both a form and a capacity, an actuality and a potentiality. As I just discussed, however, actuality and potentiality must be discussed within a given framework, as relative to specified potentialities and actualities. This applies to the discussion of form as well. Despite Aristotle's repeated statements that form is an actuality, one can still think of form as a potentiality at times. In fact, I want to argue that given the roles form plays, it makes sense that form can be a capacity.

Aristotle leaves room for form to be a potentiality in *Metaphysics* Θ.6, where he talks about two different kinds of potentiality-actuality relationships, only one of which is the matter-form relationship.

...as what builds is to what can build, and what is awake to what is asleep, and what is seeing to what has closed eyes but has the capacity to see (ὄψιν), [so is] what has been separated off from the matter to the matter, and what has been

⁶¹ Johansen also says that Aristotle speaks of soul as completion relative to the body and capacity relative to activities. He argues in part based on a difference he sees in Aristotle's use of the terms 'ἐνέργεια' and 'ἐντελέχεια' (23).

⁶² For example: H.2, 1043a14-21; Θ.8, 1050b2-3.

finished off to what is unwrought. Of these contrasts let the actuality be defined by the one part, the potential by the other. Actually (ἐνεργεία) is not in all cases said in the same way, but is said by analogy, as this in this or to this, so that in that or to that; for while the one is as moving (κίνησις) to capacity (δύναμιν) the other is as substance (οὐσία) to some sort of matter (ὑλην).⁶³

The second of these relationships is substance to matter, and the kind of substance Aristotle has in mind is clearly form.⁶⁴ Form is actuality compared to matter. The first relationship is not stated in terms of form, but instead moving⁶⁵ is actuality with respect to capacity. Since this relationship is separate from the second and Aristotle does not say how it would relate to form, it is theoretically possible that form could end up on the potentiality side of it. In fact, in the examples preceding the labelling of the two relationships, each of the things having merely the capacity—what can build, what is asleep, what has the capacity to see—already has its form. Of course, this passage only shows that there is a separate potentiality-actuality relationship from the one that is stated to involve form, leaving open the possibility that in this alternative framework form could end up on the potentiality end; it does not on its own show that form is in fact such a potentiality. If a form can be a capacity, however, then this passage speaks to two different relationships involving form.

⁶³ 1048a37-b9, Makin translation, modified.

⁶⁴ Compare the discussion at the beginning of *De Anima* 2.1 (412a6-10), where substance can be either form, matter, or composite. It is substance as form that is called actuality relative to substance as matter.

⁶⁵ At this point in Θ.6, one should not take into account the distinction made in the second part of the chapter between complete and incomplete motions—that is, between what are labeled ‘actualities’ and ‘motions’. At this point, seeing is called an instance of moving, whereas in the second part it is an actuality rather than a motion (1048b33-35).

Form and capacities share a key feature, illustrating that form can be a capacity: form is what defines something, but in at least some cases a thing is defined by a capacity. I say that form *can* be a capacity, because I only want to make a limited claim here. I am not arguing that all forms are capacities or that all capacities are forms. Perhaps one or both of these is true, but it would take more to argue for them than I will provide. Since my concern is with soul, I will just argue that in some cases it makes sense to say that form is a capacity. Specifically, the form of an organism is its vital capacities.

First, form defines a given thing. Matter without form is indeterminate. When it is informed, it becomes a determinate thing; in fact, it becomes a determinate thing of a particular kind. Form makes a thing be what it is. Aristotle makes this clear in *Metaphysics Z.17* when he lays out a preliminary sketch of substance, so that he can move from there to a statement of what substance is.

... the question is “Why is the matter some one thing?”; for example, “Why are these materials a house?” Because to them belongs this, which is the essence of a house (ὁ ἧν οἰκία εἶναι); and because a man is this, or, this body has this. Thus, we are seeking the cause (and this is the form (εἶδος)) through which the matter is a thing; and this cause is the substance (οὐσία) of the thing.⁶⁶

The form, essence, or substance is what makes the house a house, rather than a pile of lumber, or the man a man, rather than an unensouled body. It defines the thing.

⁶⁶ 1041b5-9, Apostle translation.

In the same way, the vital capacities are what define an organism and make it what it is. Aristotle discusses this in *Parts of Animals*, where he argues that it is not enough to talk about the material elements when describing an animal.

... about the non-uniform parts such as face, hand, and foot, one should say in virtue of what each of them is such as it is, and in respect of what sort of capacity (δύναμιν). For it is not enough to say from what things they are constituted, e.g. from fire or earth. It is just as if we were speaking about a bed or any other such thing; we would attempt to define its form rather than its matter, e.g. the bronze or the wood.⁶⁷

In order to say what a hand or foot is, one must discuss what it is capable of doing. This is saying what makes it what it is, rather than just describing the material composing it. It is noteworthy that Aristotle here compares the capacity of a hand to the form of a bed, and certainly this passage is relevant to my contention that a form can be a capacity. However, for now I want to highlight what he goes on to say after this, since he further emphasizes that what defines an animal is its capacity to do something.

Aristotle further clarifies his position by contrasting it with that of Democritus, a classic materialist. Democritus holds that the fundamental unit of reality is the atom—a tiny, indivisible unit that can vary in shape and size. One explains larger objects by

⁶⁷ *PA* 1.1, 640b20-25, Lennox translation, modified by substituting ‘capacity’ for ‘potential’. One can interpret the first sentence in two ways. 1) “One should say in virtue of what each of them is such as it is,” i.e. the form, “and in respect of what sort of potential,” i.e. the matter. In this case, Aristotle wants his reader to say two different things: what the form is and what the matter is. 2) “One should say in virtue of what each of them is such as it is,” i.e. the form, “and in respect of what sort of potential,” i.e. a capacity, which explains what he means by the first half of the sentence. (The *καί* is epexegetic.) In this case, Aristotle wants his reader to say what the form is and he clarifies what this means. Given what Aristotle goes on to say, this second interpretation is preferable, so I translate δύναμιν as ‘capacity’ to make Aristotle’s meaning clear.

appealing to configurations of these atoms. Thus, it is the arrangement of the atoms that distinguishes one animal from another, and configuration or shape is the defining feature of an animal.

Now if it is by virtue of its configuration (σχῆματι) and color that each of the animals and their parts is what it is, Democritus might be speaking correctly; for he appears to assume this. Note that he says it is clear to everyone what sort of thing a human being is in respect of shape (μορφῆν), since it is known by way of its figure (σχῆματι) and its color.⁶⁸

Aristotle does not think that an animal or its parts are defined by their shape, however. In order to make his case, he gives two examples where something is properly shaped such that it should be an animal or a part of one, if shape were what defined an animal. In each case the result fails to be the right sort of thing, implying that something else is the defining factor.

And yet though the configuration (σχῆματος) of a corpse has the same shape (μορφῆν), it is nevertheless *not* a human being. And further, it is impossible for something in any condition whatsoever, such as bronze or wooden, to be a hand, except homonymously (like a doctor in a picture). For such a hand will not be able (δυνήσεται) to do its work, just as stone flutes will not be able to do theirs and the doctor in the picture his. Likewise none of the parts of a corpse is any longer such—I mean, for example, any longer an eye or a hand.⁶⁹

⁶⁸ *PA* 1.1, 640b29-33, Lennox translation.

⁶⁹ *PA* 1.1, 640b33-641a5, Lennox translation.

A wooden hand has the appropriate shape for a hand, but one cannot say that it is a hand in the full sense of the word, because it cannot do what a hand is supposed to do. A wooden hand cannot grab or hold, and to truly be a hand, a thing must be able to do these. These capacities, then, are the defining features of a hand. Its capacities make a hand a hand and explain why a wooden hand is not really a hand. Someone may object that the problem with the wooden hand is that it has the correct shape but not the correct matter; a wooden hand cannot be a hand because it is wooden. This objection does not explain, however, why a corpse is not an animal. A corpse has the right matter and it is configured correctly. This makes Aristotle's explanation preferable: a corpse is not an animal because it lacks the animal's capacities. The capacities define the animal.

Aristotle does not do so here, but it should be emphasized that the organism or its parts are defined by their capacities, not their activities. For example, if a hand were a hand due to the exercise of hand-like activities, then every time a hand was not holding something it would cease to be a hand. Similarly, every time a human was not thinking, it would not be a human. This is not the desired result, for it will not do to have my hands constantly popping in and out of existence. I do not cease to be human when I am asleep. While Aristotle does not discuss here the reasons against defining a thing in terms of its activities, he clearly thinks its capacities define it instead. This is why he says that a wooden hand "will not *be able* to do its work."

Capacities, then, define an animal. But from the *Metaphysics* passage above, it is form that defines a thing. Therefore, in the case of animals, their capacities are their form. Form can be a capacity.

Before moving on, I should remark that while some forms are capacities, it is perhaps not the case that all forms are. This must be said because it addresses a concern raised by Rebekah Johnston. She argues that soul is not a capacity for Aristotle, and the contrary position—the one I am advocating—both lacks the textual evidence to support it and contradicts some of his other metaphysical commitments. One of the commitments she counts as violated is the one holding form to be an actuality, for one must answer the “What is it?” question differently, depending on whether form is an actuality or a capacity.

Consider, for example, the question: what makes/why is X a ball? From the perspective of the discussion in the *Metaphysics* where form is clearly taken to be an actuality, the answer would be ‘because it is spherical’; but if we take the soul/form to be a set of capacities, then the answer would be ‘because it has the capacity to roll’.⁷⁰

In response to this example, I reply that balls may be the sort of thing that are defined by a shape rather than a capacity. This is because to be a ball is to be a certain shape, as opposed to an organism, which must be able to do certain things to be what it is. The answer that the form of a ball is the capacity to roll sounds funny not solely because it points to a capacity, but because it is a poor definition of a ball.⁷¹ Form is what defines a thing, so if a thing is not defined by a capacity, its form is not a capacity. This would be

⁷⁰ Johnston, 192.

⁷¹ Of course, if one wants to complicate things further, one could argue that a ball *is* defined by the ability to roll. Why else does one make a soccer ball a *ball*? Trying to address this complication leads to a proliferation of additional questions. How does an artificial form differ from a natural form? Can a thing have capacities that do not define it? If so, how does one distinguish between defining and non-defining capacities? While all worthwhile questions, they fall outside the scope of my project. I just want to argue that in the case of soul, it is both certain capacities and the form of the organism.

true for some of Aristotle's other favorite examples as well, such as statues, wax seals, and syllables,⁷² all of which are defined by their shape or structure.

It is also worth considering in light of this objection why, if form can be a capacity, Aristotle repeatedly insists that it is an actuality. The answer appears to be that when Aristotle calls form an actuality, he is usually focusing on the relationship between form and matter. The statement in *De Anima* 2.1 is a good example of this. Aristotle says that there are three kinds of substance, two of which are matter and form, then he adds that matter is potentiality and form actuality.⁷³ This same pattern is repeated in *Metaphysics*, as when he talks about the form and matter, potentiality and actuality of a house.⁷⁴ It makes sense that Aristotle would emphasize the relationship between form and matter, since this speaks to problems he sees in the views of his predecessors. In *Metaphysics* he emphasizes that most of his predecessors were materialists,⁷⁵ so highlighting the difference between form and matter—and the relative importance of form—separates his views from theirs. In *De Anima*, he is particularly concerned to combat the idea that soul could be separated from the body. Thus, after declaring soul to be an actuality, he remarks that “because of this, it is not necessary to inquire whether soul and body are one, just as it is not necessary with the wax and the shape, nor generally with the matter of each thing and that of which it is the matter.”⁷⁶

⁷² *Metaph. Z.7*, 1033a16-22 (statue); *DA* 2.1, 412b6-9 (wax); *Metaph. Z.17*, 1041b11-33 (syllable).

⁷³ 412a6-10.

⁷⁴ H.2, 1043a14-21.

⁷⁵ In *Metaphysics* A.5, Aristotle summarizes the predecessors up to Plato by saying that “the first philosophers posit a corporeal (σωματικήν) principle,” and while some of these have multiple principles, they “place these principles under one kind, the material (ύλης) principle” (987a2-9, Apostle translation). Others also posit a source of motion in addition to the material principle.

⁷⁶ *DA* 2.1, 412b6-8.

Aristotle may emphasize that form and soul are actualities, but as I have been arguing, this is only half the picture. A more complete view of soul will recognize that it is a capacity, or in Aristotle's language, a first actuality; it is an actuality that is defined in terms of its potential. Calling soul a capacity—or, more properly, the vital capacities—preserves the relationship to the body just referred to. The vital capacities define the organism, unifying its matter. They are also inseparable from that matter; a capacity cannot exist apart from that which it enables.⁷⁷ On the other hand, recognizing that soul is the vital capacities not only acknowledges its downward relation to the body, but it also keeps in mind the upward relation to the vital activities. Aristotle's discussion of soul begins from the position that soul is responsible for these activities, so this is an equally important piece to include in its definition. This is why Aristotle brings in the language of first actuality when defining soul—a phrase he only uses in this context. He did not leave the definition at the point where soul was said to be a form or an actuality, but by further specifying that it is a first actuality he also includes its relation to the activity of life. Soul is “the first actuality of a natural body having life potentially.”⁷⁸

Nor does Aristotle leave this definition be, but he changes it once more. This time, however, he alters the second half of the definition, the part involving the body. It is thus the body to which I turn in the next chapter. Looking at the body and its biology will, moreover, further solidify exactly what Aristotle means by calling soul a capacity.

⁷⁷ I am setting aside the question of $\nu\omicron\upsilon\zeta$. If it is separable from the body then it falls outside the scope of not only my comments but of Aristotle's analogy with the wax as well.

⁷⁸ 412a27-28.

Chapter 4: Fleshing Out the Capacities of Soul

Up to this point I have been examining Aristotle's general definition of soul, the definition that applies to all the various kinds of soul without going into the specifics of any. It states that soul is a capacity. Now I will turn to a particular kind of soul in order to fill in the picture by explaining how the general definition gets worked out in the specific account. Turning to the particular will also provide an opportunity to look at how soul relates to the body. In this chapter, then, I will finish my examination of Aristotle's account of soul by putting it into flesh and blood.

There are several particular kinds of soul to choose from, but I will focus here on the most fundamental kind—the nutritive. This kind is fundamental because among mortal beings only it can exist alone and all living organisms must have it.¹ It exists alone in plants, which only have nutritive soul and lack perceptive, thinking, or any other kind.² At the same time, souls are arranged hierarchically, with the lower always present alongside the higher.³ Nutritive soul is on the bottom rung, so all organisms with higher sorts of soul have it as well. Animals have perceptive soul in addition to nutritive, while humans have thinking soul in addition to both of these. Besides being fundamental, examining nutritive soul also carries the benefit of avoiding some of the problems associated with other kinds. Perceptive soul and thinking soul both fall, at least partially, under the modern category of 'mental'. Thus, looking at them inevitably raises questions involving the relation between the mind and the body. Focusing on nutritive soul, then, allows one to grasp what Aristotle has to say about soul while setting aside this

¹ *DA* 2.2, 413a31-32; 2.4, 415a23-25.

² *DA* 2.3, 414a32-33.

³ *DA* 2.3, 414b28-32.

notoriously difficult relationship. Once Aristotle's soul-body relationship has been illustrated through examining nutritive soul, one will be in a better position to then move on to what Aristotle has to say about the relationship between body and mind. While I will leave this latter exploration for a future project, a focus on nutritive soul will provide ample opportunity to look at how this particular account fits with the definition of soul as a capacity.

Nutritive soul is not obviously a capacity, however. Aristotle says several things that can make it sound like soul is something bodily or localized. A major focus of this chapter will be, therefore, to explain how some of these problematic-sounding statements in fact fit with the view that nutritive soul is a capacity. For example, in *De Anima* 2.4—the only chapter in *De Anima* to focus on nutritive soul—Aristotle assigns it various roles. Nutritive soul “uses food” and is “that which nourishes.” It limits the size of the body.⁴ In all of these cases, it appears to be acting in some way and having an effect on the body, and it sounds strange to say a capacity does either of these. It is more natural to think of that which acts as being something bodily: a girl runs; a heart pumps blood; a ball knocks over the glass on the table. It is perhaps even more natural to think that something needs a body in order to have an effect on another body, the way a small pot limits the size of the plant growing within. If nutritive soul is a capacity, then it requires explanation in order to understand why it is that Aristotle assigns it the roles he does. Similarly, in his biological works he locates it in the heart. For example, “the primary nutritive soul must reside in the region of the body, and in the part of that region, in

⁴ 415a26 (uses food); 416b21 (that which nourishes); 416a9-18 (limits size).

which this principle [of heat] directly resides.”⁵ This statement also makes nutritive soul sound as though it is something bodily, and it needs to be explained if this kind of soul is a capacity instead. I will argue that in the case of all these statements, from *De Anima* and from the biology, explanations are available that enable them to fit with the general definition of soul as a capacity.

I will next turn to the body and look at the relationship between it and the capacity of soul. Nutritive soul, the capacity to nourish, must relate in some way to the organs that process food and maintain the body. Before looking at the relationship involving this specific kind of soul, however, I will return once more to the general definition of soul in *De Anima* 2.1, to the final version of it defining soul as “the first actuality of a natural, instrumental (ὀργανικοῦ) body.”⁶ There is disagreement in the literature as to what Aristotle means by “instrumental body” and which body is in view, but his meaning can be ascertained by looking at several other statements that he makes about instruments. This definition illuminates the general relationship between soul and body, and this relationship may be filled out by inserting information about nutritive soul and the nutritive system.

My aim in this chapter, then, is to flesh out the general definition of soul, both by filling in the details of a particular kind of soul and by putting it into a body. I will begin by looking at the nutritive system. Next I will reconcile the statements about nutritive soul which make it sound like it is not a capacity. Finally, I will look at what it means for the body to be the instrument of soul and how this relates nutritive soul and the nutritive

⁵ *Juv.* 14 (*Resp.* 8), 474a28-31, Hett translation.

⁶ *DA* 2.1, 412b5-6.

system. The whole discussion is in order to complete what I have been arguing throughout the dissertation: soul is the capacity for the activity of life.

Biology of the Nutritive System

Aristotle's account of the nutritive system can be summarized simply. The main work of the nutritive system is to take in food and turn it into blood through heating—a process he calls 'concoction' (πέψις).⁷ This blood is then distributed to the parts of the body, growing and maintaining them. The heart plays a central role in this system, because it both supplies the heat required for concoction and is the place from which the blood is sent out to the body.⁸

I should note that this is really only a description of half of the nutritive system, but it is the only half at which I will look here. When Aristotle talks about nutritive soul he includes both nourishing and generating—maintaining an organism and creating a new one.⁹ While Aristotle does discuss generation—there is a whole work titled *Generation of Animals*—he does set a precedent for focusing on nourishing when discussing nutritive soul. In *De Anima* 2.4, the chapter on nutritive soul, Aristotle speaks briefly about the reason why organisms generate offspring, but then he spends much more time and goes into detail about nourishing.

While the summary above outlines Aristotle's view of the nutritive system, there are many details that could be filled in. For the most part the outline is sufficient with regard to the examination of nutritive soul that I will undertake, but I will discuss three relevant pieces: 1) Aristotle gives contradictory evidence about the exact role of the heart.

⁷ *PA* 2.3, 650a2-14; *Juv.* 14 (*Resp.* 8), 474a25-b5.

⁸ *PA* 3.4, 665b9-666a11; 3.5, 667b19-29; *Juv.* 14 (*Resp.* 8), 474a25-b9.

⁹ *DA* 2.4, 415a22-26.

2) The heart keeps producing blood, but the body has a size limit. 3) The heart requires constant feeding in order to maintain its heat.

First, it is important to examine the role of the heart, since, as I will discuss below, Aristotle says that nutritive soul is in the heart. He is clear that it performs the functions mentioned above and is the key component of the nutritive system. In particular, it appears to be key because it is the source of heat for the whole body; when it goes cold, the organism is dead.¹⁰ This heat plays a key role in the process of nourishing, since it is through concocting that the food is turned into blood. Several organs play a role in this concocting,¹¹ but since the heart is supplying them with their heat, it is ultimately responsible for the transformation of food. The heart can be said to be central to the nutritive system, then, because it acts like a battery powering the organs that nourish the body. The question is whether this is the only sense in which the heart is the key piece of the nutritive system.

Aristotle gives conflicting evidence as to whether it is central not only because it powers all the steps in the process of transforming food but also because it performs the primary step itself. At times he says that blood comes to be in the heart, making it the organ that produces blood as well as distributing it to the body and thus giving it the primary role in nourishing.¹²

¹⁰ *PA* 3.7, 670a22-26; *Juv.* 4, 469b6-20.

¹¹ *PA* 2.3, 650a13-14 (upper and lower gut—i.e. stomach and intestines); 3.7, 670a19-21 (liver and spleen).

¹² As he states in his outline of nourishment, Peck takes Aristotle's position to be that blood comes to be in the heart (Peck, *Generation*, lxvi). This position is also affirmed by Boylan (Michael Boylan, "The Digestive and 'Circulatory' Systems in Aristotle's Biology," *Journal of the History of Biology* 15.1 (1982): 108-111.) and mentioned by Lennox (199).

The blood is conducted from the heart and into the blood vessels, but not to the heart from elsewhere; for this is an origin and spring of blood (ἀρχὴ ἢ πηγὴ τοῦ αἵματος), or its first receptacle (ὑποδοχὴ πρώτη). These things are more manifest with the help of the dissections and the generations; for the heart, which comes to be first of all the parts, is immediately blooded.¹³

This passage comes from *Parts of Animals*, but he says a similar thing in *On Youth, Old Age, Life, and Death*.

But in the heart pulsation is due to the expansion by heat of the liquid food-product which continually enters it. It occurs as the fluid rises to the furthest point of the heart wall. This is a continuous process; for there is a continuous influx of this fluid, of which the blood is constituted; for it is in the heart that blood is first manufactured (πρῶτον γὰρ ἐν τῇ καρδίᾳ δημιουργεῖται).¹⁴

Despite the clarity of these statements, however, Aristotle says elsewhere that the blood comes to be outside of the heart, in the blood vessels that connect the gut and the heart.¹⁵

In all cases food in its final form is, for sanguineous animals, the natural substance blood. . . . The blood has its place in the veins, and the starting-point of these is the heart. . . . When food from without enters the places designed to receive it, the evaporation from it passes into the veins, and changing there becomes blood and makes its way to their starting-point (ἐκεῖ δὲ μεταβάλλουσα ἐξαιματοῦται καὶ πορεύεται ἐπὶ τὴν ἀρχὴν).¹⁶

¹³ *PA* 3.4, 666a6-11, Lennox translation.

¹⁴ *Juv.* 26 (*Resp.* 20), 480a2-7, Hett translation.

¹⁵ These blood vessels lie in the mesentery, a membrane attached to the intestines. See *PA* 4.4, 678a6-15.

¹⁶ *Somn. Vig.* 3, 456a34-b5, Hett translation.

If the blood does not come to be in the heart, then the heart does not take the final step in the transformation of food. It is still the most important organ in the nutritive system due to its heat, but it is not primary because of a particular role that it plays.¹⁷ The role of the heart will matter below when I examine why Aristotle says that nutritive soul is in the heart.

Second, I will also discuss the role that nutritive soul plays in limiting the size of an organism, so it is worth mentioning the role that blood plays with regard to growth. Blood moves out from the heart through the blood vessels to be distributed, since it is the matter for the body.¹⁸ Aristotle gives a few descriptions of how parts of the body are initially formed from the blood. For example, “as the nourishment oozes through the blood-vessels and the passages in the several parts (just as water does when it stands in unbaked earthenware), flesh, or its counterpart, is formed: it is the cold which ‘sets’ the flesh, and that is why fire dissolves it.”¹⁹ It is also easy to picture how blood would grow the body as the animal moves towards maturity; a continual supply of incoming matter continually increases the size of the body. However, at some point the blood stops growing the body and simply maintains it. Aristotle does not explain this in much detail, but he does say that the amount of blood produced is small and that this makes sense because “we must bear in mind that it requires very little to supply the growth of animals and plants from day to day, since the continual addition of a very small amount to the

¹⁷ Of course, it is also still the origin of the blood vessels, but even this statement is weakened by the fact that some blood is flowing into the heart. It would be merely the structural origin and not a functional one.

¹⁸ *PA* 3.5, 668a1-4, 23-24.

¹⁹ *GA* 2.6, 743a8-11, Peck translation. As the passage goes on, he also describes the generation of nails and horns (743a11-17) and sinews and bones (743a17-20).

same thing would make its size excessive (ὑπερέβαλλε τὸ μέγεθος).”²⁰ This passage suggests that if more blood were produced, then the body would grow too large.²¹ I will return to this idea when discussing the soul’s role in limiting the size of the body.

Third and finally, heat is required for the processing of food, as I sketched above, but the reverse is also true: a constant supply of food is required to maintain the heat. “Both plants and animals die if they do not receive nourishment, for they consume themselves; for just as a great flame burns up and destroys the small flame by exhausting what feeds it, so the natural warmth, the prime cause of concoction, exhausts the matter in which it resides.”²² Since the source of heat is the heart, it must keep receiving processed food from the first part of the nutritive system, and this part processes the food by means of the heat it receives from the heart. This fact will have interesting consequences for soul, since the heat in the heart must be burning continually in order to preserve itself.

Nutritive Soul As a Capacity: Location of Soul

With the nutritive system now sketched out, I will turn to nutritive soul and ask whether it fits with Aristotle’s general definition of soul as a capacity. I will look at a few different aspects of nutritive soul that can appear to contradict the general definition, and I will begin by looking at what Aristotle says about the location of soul. Aristotle is clear in the biology that the heart is the central piece of the nutritive system, and at times he

²⁰ *GA* 1.18, 725a18-21, Peck translation. For another statement that little blood is produced, see *GA* 4.1, 765b31-35.

²¹ On the other hand, since he comments here that little is needed to supply the day-to-day growth of the animal, he could instead be saying that the little blood produced is still sufficient to grow the animal to its required size; why he would speak of excessive growth in this case is unclear, and so the interpretation above is preferable.

²² *Long.* 5, 466b28-33, Hett translation, modified. See also *Juv.* 5, 469b21-26.

also speaks as though it is where nutritive soul resides. The questions, then, are whether this is consistent with his general definition of soul and, if so, what it means for a capacity to reside somewhere.

Aristotle gives two different reasons for locating nutritive soul in the heart. The first locates it in the center of the body due to its relationship to the capacity to perceive. The defining feature of an animal is the capacity to perceive or sense. A thing must perceive in order to be an animal, but it must also live. Therefore, it must be the same part of the animal that is responsible for its perceiving and living.²³ The common sense organ—the organ in which individual senses can interact—is where the capacity to perceive is located, so nutritive soul is located in the same place.

Since then the individual sense organs have one common sense organ in which the senses when actualized must meet, and this must lie in between the part called “before” and that called “behind” (“before” means in the direction of our sensation, and “behind” the opposite), and the bodies of all living creatures being divided into “upper” and “lower” (for all have upper and lower parts; hence so have plants), clearly the nutritive principle (τὴν θρεπτικὴν ἀρχὴν) lies between these.²⁴

²³ *Juv.* 1, 467b16-25. The argument appears to be that if one organ were responsible for life and another for perceiving—for making the thing an animal—then the situation could occur where a thing was missing the first organ but not the second. It would then be an animal, but it would not be alive. This is a contradiction, since being alive is essential to an animal. This argument raises interesting questions about the relationships between the parts of the soul and implications these relationships have for the structure of the body.

²⁴ *Juv.* 1, 467b28-468a1, Hett translation, modified. Aristotle divides halves of the body based on function. Front and back are determined by which side has the sense organs (*IA* 4, 705b8-13), while up and down are determined by entry and exit of nourishment (*DA* 2.4, 416a3-5).

The second explanation locates nutritive soul in the heart due to the requirements of the nutritive process itself.

We have said before that life and the possession of soul depend upon some degree of heat; for concoction (πέψις), by which animals assimilate their food, cannot take place apart from the soul and heat; for all food is rendered concoctible by fire. Therefore the primary nutritive soul (τὴν πρώτην θρεπτικὴν ψυχὴν) must reside (ὑπάρχειν) in the region of the body, and in the part of that region, in which this principle directly resides. This is the region midway between that which receives the food and that by which the waste is discharged. It has no name in the bloodless animals, but in animals with blood this part is the heart.²⁵

The question, then, is what it means for nutritive soul to be located in the heart.

First, this cannot mean that the heart is the container surrounding soul. That is, soul cannot be in the heart in the primary sense of ‘in’ discussed in Aristotle’s *Physics*—in a place.²⁶ As Theodore Tracy explains, to be in a place requires that a thing be corporeal; since soul is not a body and has no matter, it cannot be located in the way that water is in a cup or a rock is on the surface of the earth.²⁷ The heart contains blood, not soul. Another explanation must be sought for what Aristotle means.

Tracy explains passages like those above by appealing to another sense of ‘in’ found in *Physics*.²⁸ One thing can be in another as form is in the matter.²⁹ This is not to

²⁵ *Juv.* 14 (*Resp.* 8), 474a25-b3, Hett translation, modified.

²⁶ 4.3, 210a24.

²⁷ Theodore Tracy, “Heart and Soul in Aristotle,” in *Essays in Ancient Greek Philosophy*, vol. 2, ed. J. P. Anton (Albany, NY: State University of New York Press, 1983), 334.

²⁸ Tracy, 334-336.

²⁹ 4.3, 210a20-21.

say, however, that soul is merely the form of the heart. Tracy appeals to a distinction Aristotle makes in *Metaphysics* between prior and posterior causes. Both the heart and the whole body are the matter of which soul is the form, but the heart is the proximate matter, while the whole body is the matter in a secondary sense.

It is possible, then, that when Aristotle speaks of the soul “in the heart” he has in mind the heart as primary and proximate material organ of the soul, the controlling organ originally informed and activated by the soul, upon which all other organs depend for their formation and activation by the soul. They too live, i.e., are informed and activated by the soul, but in a way that is *secondary* and more remote. To speak of the soul as existing “in the heart,” then, is not to deny its presence in other organs but only to indicate the primary and proximate subject it informs and activates. A heart would be no heart if not part of a living whole.³⁰

This explanation requires explanation, however, if it is to fit with the account of soul as a capacity. In what way does the heart have the capacity to nourish, and in what way does the body have it in a secondary sense? In order to explain what Aristotle is thinking, I will keep Tracy’s insight that soul is in the heart as a form, but rather than using the notion of proximate matter, I am going to look at other language that Aristotle uses to say that nutritive soul is in the heart.³¹

It is important to note that when he says that soul is in the heart, it appears to be shorthand for saying that the heart has the *source* of the nutritive soul. For example, after explaining that there are three main parts of the body, with the central one being the

³⁰ Tracy 335-336.

³¹ It is unclear whether the position I adopt is the same as Tracy’s above, just using different language, or whether they are incompatible. In any case, my formulation is intended to highlight how soul is a capacity.

chest, he notes that “the source of the nutritive part of the soul (ἡ γὰρ τῆς θρεπτικῆς ἀρχὴ ψυχῆς) is in the middle of the three parts, as is evident from sensation, and is in itself reasonable.”³² Thus, he is equally comfortable saying that the nutritive soul is in the center of the organism and that its source is. In addition, elsewhere he combines ‘being in’ terminology with ‘the source being in’, as when discussing the relationship between nutritive and perceptive soul, saying that “if life is in this part (ἐν τούτῳ τῷ μωρίῳ) [i.e. the heart] in all, it is clear that it is also necessary for the perceptive source (τὴν αἰσθητικὴν ἀρχὴν) [to be here]; for we say that a creature is alive in so far as it is an animal, and an animal in so far as it is perceptive.”³³ This suggests that when it comes to discussions of soul, it is equivalent to say that it is in the heart and that its source is in the heart.

Aristotle uses the term ‘source’ (ἀρχή) in many different ways, so what does it mean when he says that the source of nutritive soul is in the heart? He discusses various senses of ἀρχή in the entry on the term in *Metaphysics* Δ.1, meanings such as “that part of a thing from which one would first move,” “the first from which motion or change by nature begins,” “that from which a thing is first knowable,” “cause.” He summarizes by saying that “it is common to all sources, then, to be the first from which a thing either exists or is generated or is known.”³⁴ I propose that the meaning of ἀρχή relevant to nutritive soul is best understood by looking at what he says about the source of blood vessels and bones.

³² *Juv.* 2, 468a20-23, Hett translation, modified. See also 4, 469a23-28.

³³ *Juv.* 3, 469a17-20, Hett translation, modified.

³⁴ 1012b34-1013a23, Apostle translation, modified.

For each of them, having originated (ἡργυμένη) from one thing, is continuous; and a bone on its own is nothing; rather, it is a part either as part of something continuous or through contact and binding, in order that nature may use it both as one and continuous and, for bending, as two and divided. Likewise too a blood vessel on its own is nothing; rather, all blood vessels are part of one thing. And indeed, if any bone were separate, it would not perform the function for the sake of which the nature of bones exists (for if it were not continuous but disconnected, it would not be a cause either of bending or of straightening).³⁵

The blood vessels and bones are each a system that needs the whole in order to function. Individual blood vessels and individual bones do nothing on their own. For example, the bones in the forearm do nothing if not connected to the upper arm; when they are connected then they can bend with reference to each other at the elbow, and the forearm can perform its function. Similarly, a blood vessel needs to connect to the other vessels carrying blood, so it can carry the blood as well. Moreover, as the beginning of this passage alludes, each of these systems has a source or beginning-point that renders it functional.

The source of the blood vessels is the heart, because it enables them to perform their function. It is not just the place from which the blood starts flowing, but without its heat the blood vessels could not carry blood. This is because “if some blood vessel were separate and not continuous with its origin (τὴν ἀρχήν), the blood within it would not be preserved, for the heat from that origin prevents the blood from becoming congealed,

³⁵ PA 2.9, 654a33-654b6, Lennox translation.

which is apparent when the separated blood also putrefies.”³⁶ A blood vessel needs more than merely to be connected to the network of other blood vessels. It must also be continuous with the heart, the key piece of the vascular system. Even if all the other blood vessels were connected to each other, they would not be a functional vascular system, for they would lack the source of heat that keeps the blood flowing, not to mention the source of the blood itself. The heart makes the system as a whole function. The heart is the source of the vascular system because it is the key piece of it, but this sense of ‘source’ is potentially obscured by another sense. It might look as though the heart is the source because it is where something originates and spreads through the system; it produces blood and heat and sends them out. Aristotle even compares the blood vessels to aqueducts, since they are “constructed from one origin and spring (ἀπὸ μιᾶς ἀρχῆς καὶ πηγῆς) into many and still more channels, always for distribution to all locations.”³⁷ The former sense of ‘source’ is more apparent when turning to the example of the skeletal system. Switching examples is also helpful because the heart can be thought of as something external to the blood vessels, since it is not itself a blood vessel, but the origin of the bones is itself a bone.

The source of the skeletal system is the backbone, and it is the source not because it is a place from which something physical emanates but because it is the key component of the system. The backbone is the central component of the skeletal system because the other bones connect to it and it provides the structure that enables them to perform their functions: “While the heart is the origin of the blood vessels, the origin of the bones in all

³⁶ *PA* 2.9, 654b7-11, Lennox translation.

³⁷ *PA* 3.5, 668a12-14, Lennox translation.

animals that have them is called the backbone, from which the nature of the other bones is continuous. For the backbone of these animals is what maintains their length and straightness.”³⁸ The backbone provides the structure of the torso—its length and straightness. If it did not do this, then the animal would just be a blob. This structure provides something for the other bones to branch off from, forming appendages. If the bones did not have a central bone to which they all connect, then they would not be able to play two of their key roles: supporting the fleshy parts and allowing the animal to move at joints.³⁹ A set of disconnected limbs inside an otherwise gelatinous mass of flesh would not support that flesh, nor would those limbs be able to move the animal, because they would have no reference point to bend against. The network of bones depends upon the backbone for its function. The backbone is not essentially different from the others, however, for it also supports the flesh of the torso, providing its length and straightness. It also does not emanate anything out to the rest of the bones; its importance comes from the way that the others exist with reference to it. It is the origin of the bones solely with reference to its key role within the system.

Returning to soul, if nutritive soul is a capacity, then its origin will be the sub-capacity that plays the key role in the whole. For an animal to be capable of nourishing itself, it needs to be able to do several things. It must bring in food from the outside. It must separate the useless part of the food from the useful. It must process this useful nourishment and turn it into a substance that is its parts potentially. Finally, it must distribute this substance to the whole body so it can be nourished. One capacity—

³⁸ *PA* 2.9, 654b11-14, Lennox translation.

³⁹ *PA* 2.9, 654b27-35. Aristotle also lists protecting the internal organs, as the ribcage does, but this function does not as obviously require a backbone.

nourishing—requires several sub-capacities. This network of capacities has parts that are critical, however, just as the network of bones has a key bone. In particular, I discussed above the roles assigned to the heart, and these can be considered the key capacities. The heart must have the capacity to generate heat, otherwise the whole nutritive system does not work. Similarly, the key point in nourishing is turning food into a substance that is the body potentially; the other steps are preparing for this one or distributing its results. Therefore, the origin of the capacity to nourish could be said to be the sub-capacities to generate heat and to transform useful nourishment into blood.

As I discussed in the previous chapter, in an organism the form is a capacity. This is also true for the parts of an organism. The form of the heart is the capacity to produce the heat that turns food into blood. As Tracy argues above, soul is in the heart as a form. To say that nutritive soul is in the heart, then, is to say that its origin or key sub-capacity is the form or capacity of the heart, and no contradiction arises in saying this.

Nutritive Soul As a Capacity: Nourishing and Limiting

While I have explained why Aristotle says that nutritive soul is in the heart, this is not the only potentially problematic statement he makes with regard to the general definition of soul. I turn next to a passage in *De Anima*. Here he is explaining how his position differs from a materialistic one, one that looks primarily at the elements as the cause of nourishing. By contrast, he says that the explanation of nourishing is soul. Once again, the question is how the picture he paints of nutritive soul here is compatible with the general definition of soul as a capacity.

The nature of fire seems to some to be without qualification the cause of nourishing and growing (ἀπλῶς αἰτία τῆς τροφῆς καὶ τῆς αὐξήσεως), for it alone of the bodies appears to nourish itself and grow, and because of this someone may suppose this to be what does these in plants and animals. But it is in some way a contributory cause (συναίτιον), not simply the cause (ἀπλῶς... αἴτιον); rather, the cause is soul. For the growth of fire is limitless (ἄπειρον) so long as there is something burnable, but with all things put together by nature there is a limit and proportion (πέρας καὶ λόγος) of both size and growth; these belong to soul but not to fire, and to account rather than matter (λόγου μᾶλλον ἢ ὕλης).⁴⁰

In this passage Aristotle makes three assertions of particular interest when trying to integrate this discussion with the general definition of soul. 1) Nutritive soul is the cause of growing and nourishing. 2) It is responsible for the size of an organism. 3) Fire is a contributory cause of growing and nourishing. I will discuss each of these in turn, and each fits with nutritive soul being a capacity.

First, nutritive soul is the cause of growing and nourishing. This language should be familiar from the previous chapters of this dissertation. Soul is the explanation of activities such as growing (αὐξησις) and nourishing (τροφή), and this just means that it is the capacity for these activities. Nutritive soul, then, is the capacity to nourish and to grow. It is worth emphasizing that this is Aristotle's meaning, since some of the other ways he says this same thing in the same chapter sound different. For example, he also says that "there are three things: that which is nourished (τὸ τρεφόμενον), that by which it

⁴⁰ *DA* 2.4, 416a9-18.

is nourished (ὃ τρέφεται), and that which nourishes (τὸ τρέφον). That which nourishes is the primary soul (ἡ πρώτη ψυχή); that which is nourished is the body that has this; and that by which it is nourished is the food.”⁴¹ Again, when he says that the primary soul—nutritive soul—is that which nourishes, he just means that it is soul that is responsible for the activity of nourishing. The body is nourished by food, and the reason it can be nourished is because it has the capacity to nourish. Similarly, Aristotle says that “The work of [nutritive soul] is to reproduce and to use food (τροφή χρῆσθαι).”⁴² To say that something uses food might sound like that something must be a bodily thing—that it must wield the food as a carpenter wields a hammer. However, this should also be understood to mean that the capacity to nourish makes use of the food, as will become clearer when I discuss instruments below. The active-sounding language Aristotle uses to discuss nutritive soul—language that might make it sound like a bodily thing—is instead compatible with the general definition of soul.

Second, Aristotle says that an organism has “limit and proportion of both size and growth,” and this is due to soul. While this limit and proportion likely includes the specific proportions of the parts of an organism, given the context Aristotle is focusing on more general size limitations: some organisms are big and some are small.⁴³ This limit provided by soul is in contrast to what the element fire could provide, for a fire will continue growing indefinitely as long as it finds more fuel to burn. The fire is only limited by external factors, not anything internal to itself. By contrast, soul somehow

⁴¹ *DA* 2.4, 416b20-23.

⁴² *DA* 2.4, 415a25-26.

⁴³ Polansky discusses both aspects, although he emphasizes the first (212). Freudenthal discusses the first (see below).

limits the size of the animal as an intrinsic component of the animal. Mice are small. Elephants are big. But how does soul do this? If I want to limit the size of a plant, I can put it in a small pot, clip its roots or water it sparingly. These are all material or mechanical processes, however, and they are also external to the plant itself. If soul is a capacity it cannot limit the size of an organism in any of these ways.

It would be nice to be able to turn to the biology for a clear discussion of how it is that the size of an organism is limited. Unfortunately, Aristotle does not devote much discussion to this topic. The most direct passage of what he does discuss regarding size even states that he will need to continue the discussion later, a continuation not to be found in his extant works. This passage comes from a discussion in *Generation of Animals* concerning the growth of the bones, where he states that the length of the bones limits the size of the animal.

On this account, the bones continue growing only up to a certain point, for as all animals have a limit to their size (πέρας τοῦ μεγέθους), this involves a limit to the growth of the bones. If the bones continued growing for ever, then every animal which contains any bone or the counterpart of bone would go on growing as long as it lived, because the bones set the limit (ὄρος) for an animal's size. We shall have to explain later on why the bones do not continue growing for ever.⁴⁴

Aristotle addresses the question here, but since he does not answer it, this passage teases more than enlightens.

⁴⁴ *GA* 2.6, 745a5-10, Peck translation.

Gad Freudenthal explains the *De Anima* passage above, when Aristotle calls soul the limiter of size rather than fire, but his explanation needs more detail for the present purposes. He takes the passage to be equivalent to one in *Generation of Animals*. There Aristotle discusses the heat provided by the father in generation, heat that produces the flesh and bone of the offspring.

This heat resides in the seminal residue, and the movement and the activity which it possesses are in amount and character correctly proportioned (σύμμετρος) to suit each several part. If they are at all deficient or excessive, to that extent they cause the forming product to be inferior or deformed. The same is true of things that are “set” by heat elsewhere than in the uterus; *e.g.*, things which we boil to make them pleasant for food, or for any other practical purpose. The only difference is that in this case the correct proportion of heat (τὴν τῆς θερμότητος σύμμετρον) to suit the movement is supplied by us, whereas in the other, it is supplied by the nature of the generating parent.⁴⁵

Freudenthal ties this passage to the discussion of size in *De Anima* by saying that the two accounts are equivalent. One describes the size of an organism in terms of vital heat and one in terms of soul and fire, but this is merely a difference of vocabulary.

The use of one theoretical vocabulary rather than the other depends on the context. Being devoted to a discussion of soul, the *De anima* is not the appropriate context in which to draw on the biological notion of vital heat, which fuses

⁴⁵ 2.6, 743a26-34, Peck translation.

together the formal and the efficient causes. Consequently, the two functions—that of warming and that of informing—are considered as separate.⁴⁶

Vital heat is a heat that can inform matter, according to Freudenthal.⁴⁷ In *De Anima*, Aristotle describes the same phenomenon as he discusses in *Generation of Animals*, but he assigns the heating to fire and the informing to soul. Freudenthal's explanation is interesting, because it highlights a parallel between the two passages, although the *Generation* passage focuses on the proportionality of the parts, rather than the overall size of the animal. More importantly, the explanation is not yet complete. It still leaves it unclarified what it means for soul to inform—and therefore to limit the size of the body. In particular, it does not help to explain what it means for a capacity to do this.

Along a different line, A. L. Peck draws attention to a discussion of the size of animals by J. B. S. Haldane.⁴⁸ Haldane discusses the ways in which animals must change as their size changes. For example, a sixty-foot-tall man with the same proportions as a regular six-foot-tall man would be one thousand times as heavy, but the cross-section of his bones would only be one hundred times as big. He would break his bones and collapse under his own weight. For an animal to get larger it must change its proportions in some way, such as becoming thick and stocky or tall and thin.⁴⁹ This sort of discussion is helpful when thinking about Aristotle's views on size, since it shows how the size of an animal may be related to various capacities. In the example, the animal can only be as

⁴⁶ Gad Freudenthal, *Aristotle's Theory of Material Substance: Heat and Pneuma, Form and Soul* (Oxford: Clarendon Press, 1995), 33.

⁴⁷ See the section "Vital Heat as an Informing Power," 22-29.

⁴⁸ Peck's comment is not on the *De Anima* passage, but one from *History of Animals* stating that bloodless animals are smaller than blooded (*HA* 1.5, 490a21-22). Peck, *History: Books I-III*, 28 note c.

⁴⁹ J. B. S. Haldane, "On Being the Right Size," in *Possible Worlds and Other Essays* (London: Chatto and Windus, 1927), 18-19.

large as the bones have the capacity to support. However, this example does not sound particularly Aristotelian (nor is it meant to be), so this idea must be extrapolated to cover the capacity of nutritive soul.

The best way to expand this idea to cover Aristotle is to link the size of an animal to the capacity to process nourishment. As I discussed earlier, Aristotle says that the amount of blood an animal produces is quite small, but if it produced a lot, its size would be excessive.⁵⁰ Aristotle never goes into detail about this, but based upon what he does say, it is reasonable to think that an animal eventually reaches a size at which only enough blood is produced to maintain the animal, and there is none left over to grow it bigger. This would be an instance of Aristotle's general principle that there is a finite amount of nourishment to divide amongst the various activities of the organism, so this limits those activities. For example, he displays this principle when he says that "in the large animals ... most of the nourishment is used up to maintain the large bulk of their body, so that but little residue is produced,"⁵¹ and "semen is absent during childhood... because the body is growing, and the concocted matter is all used up so soon that there is none left over."⁵² The amount of blood produced will depend upon the amount of food consumed—an external factor—and the capacity of the animal to process that food. This capacity is an intrinsic factor, and it is the one sought, for the capacity to process nourishment and incorporate it into the body is nutritive soul. Just as the bones have a maximum size at which they can support the body, and unlike fire, which can grow indefinitely, the capacity to grow and nourish the body has limits upon it. This is the

⁵⁰ *GA* 1.18, 725a18-21.

⁵¹ *GA* 1.18, 725a30-33, Peck translation.

⁵² *GA* 1.18, 725b19-23, Peck translation.

sense in which nutritive soul limits the size of an organism. Once again, what Aristotle says about nutritive soul is compatible with it being a capacity.⁵³

Third, returning to the quote from *De Anima* above, Aristotle says that fire is a contributory cause of growing and nourishing. I will argue that this statement fits with the general definition of soul as a capacity, and I will also use it to transition to a discussion of soul's use of the body.

Soul and the Instrumental Body

The relationship between soul and body is one of user and instrument. This is true in the case of soul and fire as well. In considering why fire is a contributory cause of growing and nourishing, it is helpful to look at a passage from *Parts of Animals* where Aristotle compares fire to a carpenter's tools.

For while some crudely posit fire or some such potential (πῦρ ἢ τοιαύτην τινὰ δύναμιν) to be the animal's soul, it is perhaps better to say that soul is constituted (συνεστάναι) in some such body. That is because among bodies the hot (τὸ θερμόν) is the one most able to assist (ὑπηρετικώτατον) with the functions of the soul; for nourishing and producing change (τὸ τρέφειν... καὶ κινεῖν) are functions of soul, and these things come about most of all through this potential. Saying fire is the soul, then, is like saying the saw or auger is the carpenter or carpentry (τὴν

⁵³ Paul Studtmann speculates that the limits to an organism come from vital heat. This heat causes blood to emanate outward from the heart, but there is a maximum distance the blood could travel without cooling. Paul Studtmann, "Living Capacities and Vital Heat in Aristotle," *Ancient Philosophy* 24 (2004): 368-9. This explanation is also compatible with nutritive soul being a capacity, since the distance the blood travels would depend upon how hot the capacity of the heart can heat it. I prefer my explanation because Aristotle already ties together the quantity of blood produced and the size of the animal.

τεκτονικήν) because the function (τὸ ἔργον) is accomplished when they are near each other.⁵⁴

Like soul, carpentry is also a capacity, the acquired capacity the carpenter has for building chairs and tables. It is clear that carpentry is something different from the saws and augers that serve as its tools. They do nothing on their own. Even when they are used, if they are used by a non-carpenter, they will still not produce a finished chair. However, this passage also highlights the necessity of the tools for carpentry. A carpenter cannot start from logs of wood and build a chair with her bare hands. She needs the tools. These tools could be called a contributory cause because they are necessary for the operation of carpentry, but they play a subsidiary role to it. For example, we may ask, “Why is there a chair here rather than a log?” It is the carpenter’s skill that ultimately explains the chair, specifically the fact that it is a particular thing with a particular form. However, the tools also explain the chair in a way, because the carpenter used them in order to activate the capacity and produce the chair.⁵⁵ Similarly, fire is not soul but a contributory cause of nourishing and growing. As discussed above, fire alone does not nourish, because it grows indefinitely. However, just as the tools are required by the carpenter, the hot is the most helpful body with regards to soul. Why this is so is clear from the biology of the nutritive system: digestion depends on heat. If there is no heat, then no nourishing happens; food stays food and does not turn into blood. The capacity to nourish—nutritive soul—requires fire or heat in order to perform its activity.

⁵⁴ 2.7, 652b7-15, Lennox translation.

⁵⁵ Aristotle says that the movement of the instruments is “is the activity, the actualization, of the art.” *GA* 2.4, 740b25-28, Peck translation.

There is an important disanalogy between soul and carpentry, however, one that Aristotle does not address: heat is not just required for the activity of soul, but for its very existence. On the one hand, the carpenter's tools do not have to be present to the carpenter in order for her to have the skill of carpentry; they are only needed to actualize that skill. On the other hand, the capacity to nourish depends upon an organism having heat. Nutritive soul is not something existing separately that then makes use of heat or fire, but its existence depends on heat. As Aristotle puts it, "life (τὸ ζῆν) and the possession of soul (ἡ τῆς ψυχῆς ἔξις) depend upon some degree of heat; for concoction, by which animals assimilate their food, cannot take place apart from the soul and heat; for all food is rendered concoctible by fire."⁵⁶ Both the activity (life) and the capacity (soul) depend on heat. When there is no more heat, the organism has no more capacity for nourishing itself, no more soul, and it is dead: "Violent death or destruction is the extinction or waning of the heat (for destruction may occur from either of these causes), but natural death is the decay of the same due to lapse of time, and to its having reached its appointed end. In plants this is called withering, in animals death."⁵⁷ This difference potentially strains the analogy because when the tools are separate, it is clearer what is the main cause and what is merely contributory, but when heat is necessary for the very existence of soul, it sounds funny to say it is only a contributory cause. The answer to this problem is to recognize that it is not necessary for the user and its instruments to be separate. The necessary feature, the one that makes one the tool and the other the user,

⁵⁶ *Juv.* 14 (*Resp.* 8), 474a25-28, Hett translation, modified.

⁵⁷ *Juv.* 24 (*Resp.* 18), 479a32-b4, Hett translation.

involves the relationship of their ends. This becomes clear in Aristotle's final definition of soul, and so I will now return to *De Anima* 2.1 and its definitions.

Right after Aristotle defines soul as the first actuality of a natural body having life potentially, he transforms the definition once more. This time he comments further on the sort of body that is ensouled.

Because of this, soul is the first actuality of a natural body having life potentially.

But such a body is instrumental (ὄργανικόν). (The parts of plants are also instruments (ὄργανα), but utterly simple, as the leaf is a covering of the husk, and the husk of the fruit; the roots are analogous to the mouth, for both draw in food.)

If, then, it is necessary to say something common to every soul, it would be “the first actuality of a natural, instrumental (ὄργανικοῦ) body.”⁵⁸

In this final definition Aristotle says that the body is ὄργανικόν, a term variously translated as ‘instrumental’, ‘organized’, and ‘having organs’. To understand this definition, then, one has to understand what it means that the body is ὄργανικόν and why it is that Aristotle substitutes this term.

Older translations and commentaries tend to interpret ὄργανικόν as ‘having organs’.⁵⁹ More recently, however, several scholars have suggested that this is the wrong way to understand the term. They say it should instead be translated ‘instrumental’, because this is what it always means in Aristotle; it labels something *as* an instrument or

⁵⁸ *DA* 2.1, 412a28-b6.

⁵⁹ Philoponus, trans. Charlton, 17 (217,13-14); Averroes, 112; Aquinas, 126; Hicks, 313 (note to a28); Ackrill “Definitions,” 126. Hett, Hamlyn, Apostle, and Lawson-Tancred all translate this passage using some variation on ‘having organs’. Smith translates it with ‘organized’, while Irwin and Fine use ‘organic’. Bolton gives ‘serves as an instrument’ as a translation option, but he favors ‘with organs’ (275n6).

organ, not as something that *has* these.⁶⁰ While the more recent commentators make a good case for translating the term ‘instrumental’, two things should be kept in mind.

First, there might not be as much difference between the two positions as it appears. This is suggested by the way Aristotle moves immediately from talking about the instrumental body to discussing the organs or instruments of plants.⁶¹ This is not to say that ὀργανικόν means that the body has organs, but there is nevertheless a connection between the instrumental body and the organs composing it. He suggests this connection in *Parts of Animals*.⁶²

For just as, since the axe must split (σχίζειν), it is a necessity that it be hard, and if hard, then made of bronze or iron, so too since the body is an instrument (ὄργανον) (*for each of the parts is for the sake of something* (ἕνεκά τινος γὰρ ἕκαστον τῶν μορίων), *and likewise also the whole* (ὁμοίως δὲ καὶ τὸ ὅλον)), it is therefore a necessity that it be of such a character and constituted from such things, if this is to be.⁶³

Or again, from the same work:

Since every instrument is for the sake of something (Ἐπεὶ δὲ τὸ μὲν ὄργανον πᾶν ἕνεκά του), and each of the parts of the body is for the sake of something, and what they are for the sake of is a certain action (πρᾶξις τις), it is apparent that the

⁶⁰ Everson, 64 incl. n27; A. P. Bos. *The Soul and Its Instrumental Body: A Reinterpretation of Aristotle's Philosophy of Living Nature* (Leiden: Brill, 2003), 3, 11, 85-89; Menn, 108-110. Johansen also uses the translation ‘instrumental’ (e.g., 17), but he does not argue for it.

⁶¹ Bos suggests that the passage about plants is a marginal addition, in order to maintain his position on the meaning of ὀργανικόν (97-98, 112).

⁶² Menn also cites both of the following passages, in order to emphasize that the whole body is an instrument (109, incl. n38).

⁶³ 1.1, 642a9-13, Lennox translation, emphasis added.

entire body too (φανερὸν ὅτι καὶ τὸ σύνολον σῶμα) has been constituted for the sake of a certain complex action (πράξεώς τινος ἔνεκα πολυμεροῦς).⁶⁴

In both cases, Aristotle suggests a connection between the fact that the parts of the body are instruments for the sake of something and the fact that the whole body is. Each of the organs performs an activity, so the collection of them—the whole body—performs a complex activity.⁶⁵ In light of this, one should still understand that ‘instrumental’ is the correct translation of ὀργανικόν, and that Aristotle is saying that the whole body is an instrument. However, this statement is very closely related to the idea that the body is composed of instruments or organs.

Second, some of the proponents of the interpretation ‘instrumental’ go too far with their conclusions, declaring the body in question not to be the whole body of the organism. Stephen Everson, for example, takes the understanding that ὀργανικόν labels something as an instrument or organ to support his claim that “the bodies which are the primary bearers of psychic capacities... are organs;” that is, the bodies in question in the definition of soul are individual organs within the organism’s body as a whole.⁶⁶ Both A. P. Bos and Stephen Menn rightly reject Everson’s view of the body while still supporting the reading of ὀργανικόν as ‘instrumental’.⁶⁷ In particular, Menn appeals to the two passages from *Parts of Animals* I just discussed, since these speak of the whole body as an instrument. While Bos rejects Everson’s mistaken view of the body in the definition of soul, he develops one of his own. “Taking all the information into account, we must

⁶⁴ 1.5, 645b14-17, Lennox translation, modified.

⁶⁵ Polansky argues against Everson and Menn along the same lines (160, incl. n21).

⁶⁶ Everson, 63-65.

⁶⁷ Bos, 89; Menn, 108-110.

conclude that the words *sôma physikon organikon* in Aristotle refer to a special body within the visible body of a living creature, and specifically to the *pneumatikon sôma* or *pneuma* (or its analogues in lower kinds of animals and plants).⁶⁸ Bos makes a lengthy argument for this conclusion, but a key piece of that argument is the interpretation of ὀργανικόν as ‘instrumental’.⁶⁹ Menn’s response to Everson would apply equally in this case, however; Aristotle refers to the whole body as an instrument, so there is no need to think that he has a different, special body in view in the definition of soul. Aristotle’s discussion of this definition in *De Anima* 2.1 and 2.2 makes sense if the whole body is in view—including the part about the body being instrumental—so it is best to stick with the traditional interpretation.

It still remains to explain what Aristotle means by saying that the body is the instrument of the soul. In particular, just as there is no capacity to nourish if there is no heat, there are no capacities of soul at all if there is no body.⁷⁰ Unlike the art of carpentry, which exists in the carpenter and separate from the tools used to actualize it, soul can only exist within its instrument. Separability is not the key attribute of an instrument, however. Instead, an instrument is marked by its being for the sake of some activity, and this activity is in the service of some user.

The first attribute, that an instrument is for the sake of some activity, can be seen from the two quotes from *Parts of Animals* above, and they even give some information as to what the activity is in the case of the body. In the first passage, when Aristotle

⁶⁸ Bos, 93.

⁶⁹ In the introduction to his book, Bos describes the realization that ὀργανικόν means ‘instrumental’ as one of the things that led him away from the traditional position regarding soul (3).

⁷⁰ Except, perhaps, the capacity to think.

explains that the body is an instrument, he does so by saying that “each of the parts is for the sake of something, and likewise also the whole.” The fact that the body and its parts are for the sake of something indicates that they are instruments. As to what this something is, the only clue in this passage comes from the parallel with the axe. The axe appears to be for the sake of splitting wood, so an animal’s body is presumably for the sake of some action as well. The second passage supports these conclusions. Aristotle starts it by stating directly that “every instrument is for the sake of something.” He then clarifies that each of the parts of the body is for the sake of some action, and so “it is apparent that the entire body too has been constituted for the sake of a certain complex action.” After a discussion of different relationships between actions, he even gives some examples of what actions he has in mind. “By ‘affections’ and ‘actions’ (πράξεις) I mean generation (γένεσιν), growth (αὔξησιν), coition (ὄχειαν), waking (ἐγρήγορσιν), sleep (ὑπνον), locomotion (πορείαν), and any other such things that belong to animals.”⁷¹ These are examples of the complex actions engaged in by the whole body, since they are things that the whole animal does, and they are different from the specific actions of particular organs that are given later in the book. (Blood vessels are for the sake of holding the blood, the stomach is for receiving the food, and so on.⁷²)

It is important to ask whether these actions are activities or capacities, since this will help determine the relationship between body and soul. On the one hand, it would make sense if Aristotle has capacities in mind, for this makes a straightforward connection: the body is for the sake of the vital capacities; that is, it is for the sake of

⁷¹ *PA* 1.5, 645b33-35, Lennox translation.

⁷² *PA* 3.5, 667b13-18 (blood vessels); 3.14, 674a9-19 (stomach).

soul. On the other hand, when Aristotle lists the actions, several of the terms he uses have the –σις ending—γένεσις, αὔξεισις, and ἐγρήγορσις—the suffix that refers either to an activity or to a general function. While the ending on its own is ambiguous, it is unlikely that he has the general function in mind here, especially with the inclusion of ἐγρήγορσις, waking. It is best, then, to view the body as being for the sake of the vital activities. This position is further confirmed because if it is correct, then it also explains why the body is the instrument of soul; the body is for the sake of soul in another sense of ‘for the sake of’.

In *De Anima* 2.4, Aristotle lists three ways that soul is a cause or explanation. In the second of these, he discusses it as a cause for the sake of which.

It is clear that soul is also a cause for the sake of which, for just as intellect acts for the sake of something, nature also acts in the same way, and that for which it acts is its end. Soul is such an end by nature in animals, for all natural bodies are instruments of soul (τῆς ψυχῆς ὄργανα)—just as those of animals are, so also are those of plants—since they are for the sake of soul. But there are two ways for something to be that for the sake of which (διττῶς δὲ τὸ οὗ ἕνεκα): the purpose for which and the beneficiary for which (τό τε οὗ καὶ τὸ ᾧ).⁷³

Here Aristotle again calls the body the instrument of soul.⁷⁴ What is especially helpful is his addition of the two senses of “for the sake of which.” While the Greek is quite condensed, it is usually taken to refer to: a) the purpose for which something is or is done

⁷³ 415b15-21.

⁷⁴ I agree with Ross that we ought to understand “all natural bodies” to be all natural bodies of organisms, not all natural bodies in an unqualified sense. He suggests that the texts in certain manuscripts allows for this reading (*De Anima*, 229). Polansky argues that the scope of “all natural bodies” is wider (209-210).

and b) the person or thing which benefits from it.⁷⁵ That is, X can be for the sake of Y if either X exists in order to attain or bring about Y, or if Y is that on behalf of which X exists or operates. These two senses are particularly relevant in the case of an instrument. The hammer is both for pounding nails and for the carpenter. Its purpose is the activity of nailing, and it does this in order to bring about the carpenter's goals. It is because of this second meaning—because the hammer serves the goals of the carpenter—that it is said to be an instrument *of the carpenter*. The same is true with body and soul. As Aristotle says in the passage above, the body is for the sake of soul because it is its instrument. The body serves the purposes of soul, and so soul is the beneficiary for which the body exists.⁷⁶

Elsewhere Aristotle gives more information that illuminates the link between the purposes of the user and the action of the instrument, and this helps to clarify how the body serves soul.⁷⁷

Now the products which are formed by human art are formed by means of instruments (διὰ τῶν ὀργάνων), or rather it would be truer to say they are formed by means of the movement of the instruments (διὰ τῆς κινήσεως αὐτῶν), and this movement is the activity, the actualization, of the art (ἡ ἐνέργεια τῆς τέχνης)...⁷⁸

The carpenter's art or skill is, as I discussed earlier, the capacity she has for building. It is insofar as she has this capacity that she is using the tools, since she is not using them

⁷⁵ This is reflected in the translations of Hamlyn, Hett, Lawson-Tancred, and Irwin and Fine, as well as in the commentary of Ross (*De Anima*, 228, note to lines 415b1-3) and Polansky (210). Sachs differs, translating it “that to which they belong and that for which their actions are.”

⁷⁶ Thus, I agree with Ross that “in ll.20-21 he says that soul is the οὐ ἔνεκα in the sense of being that in whose interest the bodies of animals and plants exist” (*De Anima*, 228).

⁷⁷ The example is intended to explain soul's use of hot and cold, but it fits the present discussion as well.

⁷⁸ *GA* 2.4, 740b25-28, Peck translation.

insofar as she is a human being or a musician. Thus, strictly speaking, one can say that it is the art of carpentry that is using the tools and benefitting from them; Aristotle even speaks this way at times: “it is necessary for the art to use its instruments (δεῖ... τὴν μὲν τέχνην χρῆσθαι τοῖς ὀργάνοις).”⁷⁹ Specifically, the capacity for building is using the tools because it is actualized through their movement. The hammer, in performing the action that it is for, is actualizing the carpenter’s capacity and being used on its behalf. Similarly, since the body is the instrument of soul, the activity of the vital capacities comprising soul is the activity of the body. The soul uses the body as an instrument by having it act out the capacities of soul. It does not matter that body and soul are inseparable; the body is still an instrument because it bears this relationship to soul.

This account of instruments also explains why Aristotle can shift his definition of soul from “the first actuality of a natural body having life potentially” to “the first actuality of a natural, instrumental body.” As I have been arguing throughout this dissertation, the relationship between soul and life is central to Aristotle’s discussion of soul. It is striking, then, that ‘life’ drops out of Aristotle’s final definition. The body changes from “having life potentially” to being “instrumental.” However, life only leaves the formulation, not the account. The instrumental body is the one that serves soul, and it serves soul by performing the activity of soul when active itself. Just as the carpenter’s tool is one that has the potential for performing the activity of carpentry, soul’s instrument is one that has the potential for performing the activity of soul. The activity of soul is life. So, the instrument of soul is a thing that has life potentially.

⁷⁹ *DA* 1.3, 407b25-26.

Aristotle *can* shift from one definition to the other, but why *does* he? The main reason appears to be that calling the body the instrument of soul emphasizes the need for the body to be a particular kind of body. Not just any tool will serve the needs of a carpenter; belts and scarves make lousy hammers. Similarly, not every body will serve the purposes of soul. An animal soul cannot be in a plant body, because this would mean that something had the capacity to perceive but no perceptive organs. Aristotle complained that his predecessors ignored the requirements upon the body when he discussed them in book one of *De Anima*.

They attach soul to a body and place it inside, not at all specifying in addition the cause or the condition of the body (διὰ τίν' αἰτίαν καὶ πῶς ἔχοντος τοῦ σώματος). And yet, it would seem that this is necessary.... They only attempt to say what sort of thing soul is, but they do not specify further as to the receiving body, just as if it were possible, as in the Pythagorean stories, for a random soul to enter into a random body. For it seems that each body has its own form and shape (ἴδιον ἔχειν εἶδος καὶ μορφήν), but they speak about the same as if someone were to say that the art of carpentry (τὴν τεκτονικὴν) enters into flutes. For it is necessary for the art to use its instruments (χρησθαι τοῖς ὀργάνοις), and the soul its body (τὴν δὲ ψυχὴν τῷ σώματι).⁸⁰

When Aristotle shifts his definition of soul to say that the body is instrumental, he has this discussion in mind, and he is emphasizing that the body needs to be of a very particular kind—one that can be used by soul.

⁸⁰ 1.3, 407b15-26.

Nutritive Soul

This general account of the instrumental body may be applied to nutritive soul. Individual parts of the body perform particular actions. The mouth allows food to enter and chops it up. The stomach receives the food and starts concocting it. The heart supplies the heat for concocting and perhaps makes the blood. The blood vessels distribute the blood to all the parts of the body so they can be maintained. Below the level of the individual organs, heat or fire works on the food, transforming it. All of these—heat, heart, and so on—work together as a complete body to perform the activity of nourishing. This activity is also the activity of nutritive soul, of the capacity to nourish. The whole body, then, serves as the instrument of nutritive soul, as do its parts in an indirect way. The capacity to nourish uses the body, and their activity is nutritive life.

This picture of nutritive soul illustrates a concrete instance of soul and its relationship to the body, and I will finish this chapter by looking at two further ways that a consideration of nutritive soul helps with thinking about soul in general. First, since all mortal, ensouled things have nutritive soul, there may be no such thing as something that has soul and not life. Nutritive soul requires the body to have heat in the heart. If it has no heat, then it does not have the capacity to nourish itself. It is dead and has no soul, for “when the region of the heart gets cold, the whole body is destroyed, because the principle of heat in all the other parts depends on the heat therein, and the soul is so to speak fired in this organ.... Thus life must coincide with the conservation of this heat, and what we know as death must be the destruction of this heat.”⁸¹ The heat in the heart

⁸¹ *Juv.* 4, 469b13-20, Hett translation.

is needed for the presence of soul, but as I explained above in the discussion of the nutritive system, this heat must continually be fed in order for it to persist. That is, the heart must constantly receive food and be actively processing it. But this activity is life. Therefore, in order for an organism to have soul, it must also have life. It must have the activity to have the capacity, the same way that a fire on a log must continually burn in order to remain capable of burning. This means that for Aristotle there is no in-between state where something is ensouled but neither dead nor living, at least practically speaking.⁸² It is still important to keep soul and life distinct, however, because it is ultimately soul that explains life, the capacity that is the cause of the activity. It just so happens that the activity is also needed to maintain the capacity.

Second, and building upon the previous point, soul and its activity may come to be simultaneously. If there is in fact never anything that is merely ensouled without also having life, then this has to be the case. As soon as something comes to have the capacity to nourish, it must also be exercising that capacity. This fact holds relevance for something I discussed previously. In chapter three I argued that soul is a first actuality because it is prior in coming-to-be with respect to life. I explained that often priority in coming-to-be is the same as temporal priority, but that at times, including in the case of soul, it emphasizes not priority in time but a logical priority that means that the thing in question is further from the end or that for the sake of which. I raised the question whether there might even be a non-temporal meaning of priority in coming-to-be, one

⁸² One could still ask the theoretical question whether, if something could be ensouled but not living, it would be considered dead. From the last passage quoted it seems that Aristotle would likely say that death is ultimately the opposite of soul, not of life. Thus, the organism which is merely ensouled would be living in the sense of not dead, but not living in the sense of active. Consider the analogy with asking whether the sleeper should be called 'seeing' or 'sightless'.

that just speaks to the logical priority. The case of nutritive soul illustrates why it is attractive to think that this may be a possibility. Soul is prior to life in coming-to-be, but it looks as though the two must come to be simultaneously. If that is the case, then the most fundamental kind of soul is a first actuality solely because of its logical priority to life.

An examination of nutritive soul sheds light on Aristotle's general account of soul in a few ways, then. It provides evidence that the particular accounts can be reconciled with the general definition of soul as a capacity. Through its relationship to the nutritive system it gives concrete bodily activities with which to illustrate the instrumental nature of the body. Because of the nature of the heat in the heart, nutritive soul provides a particularly interesting context in which to discuss the relationship between soul and life. Finally, it supplies more evidence regarding what Aristotle means by priority in coming-to-be. Because of this information provided by looking at nutritive soul, this is also a fitting place to conclude my examination into Aristotle's account of soul.

Conclusion

Soul is the capacity for the activity of life, and this is reflected in Aristotle's definitions of it. It is the "*substance as form* of a natural body having life potentially"¹ because form is what defines a thing, and an organism is defined by its capacities. It is the form of a natural body *having life potentially*, because soul is the cause of life; when the body is ensouled it has the capacity to perform life activities. Soul is the *first actuality* of such a body, because a first actuality is an actuality defined with reference to a further actuality; it is a capacity. Finally, it is "the first actuality of a natural, *instrumental body*,"² because soul uses the body to achieve its ends; the actuality of the body is also the actuality of the capacities of soul, and this actuality is life.

It has been my project to articulate Aristotle's account of soul, and in one sense I have reached its end. I have covered his general definitions and argued that they are compatible with at least one of the particular accounts. In another sense, however, this is only the beginning. Aristotle has much more to say about the particular kinds of soul. Additionally, soul lies at the heart of Aristotle's philosophy, connected to many different aspects of his thought, and so to examine it thoroughly is to follow the implications of its nature. Defining soul just opens up a set of additional inquiries.

For example, I have looked at the most bodily of the kinds of soul—the nutritive—but what about those that we might label 'mental'? Does anything about the general definition of soul help to explain what Aristotle says about these? In particular, he suggests that there might be some kind of soul that is separable from the body because

¹ *DA* 2.1, 412a19-21.

² *DA* 2.1, 412b5-6.

it is not the actuality of any body.³ Clearly this kind of soul will have a different relationship to the body than nutritive soul does, since nutritive soul is such an actuality. However, I have also argued that there is an important relation the other direction, not that of which soul is the actuality, but that for which it is the potentiality—life. Could this relationship between soul and life shed light on what Aristotle means by a soul that is separable from the body?

And what about the coming to be of a new soul? In *Generation of Animals* Aristotle explains how an organism comes to be from its parents. This discussion naturally includes references to soul. For example, he says of the male's contribution to generation that "it is clear both that semen possesses soul, and that it is soul, potentially."⁴ This is a cryptic statement, one which needs to be discussed in the context of everything else he says about generation, but perhaps the knowledge that soul is a capacity could help to explain what Aristotle means.

Soul also plays a prominent role in Aristotle's ethics, for the human good is "an activity of soul in accord with virtue."⁵ In the argument for this conclusion, Aristotle mentions life several times, using the terms ζωή and τὸ ζῆν.⁶ As I argued, the literature on *De Anima* is unclear when it comes to the relationship between soul and life. Could having this relationship clearly in mind help one to understand his ethics as well?

Soul does not appear in a central definition of his metaphysics, but it is a prominent example of a form. As I have argued, soul is a form because it is a capacity.

³ *DA* 2.1, 413a6-7.

⁴ 2.1, 735a8-9, Peck translation.

⁵ *EN* 1.7, 1098a16-17, Bartlett and Collins translation.

⁶ *EN* 1.7, 1097b33-1098a17.

This presents a different sort of example to think about than things which are primarily defined by their shape or structure, such as statues and balls, syllables and wax seals. Could understanding soul, then, also contribute to understanding of Aristotle's metaphysics?

While the account I have presented in this dissertation can be seen as the seed of a much larger project, it was a necessary first step. Aristotle discusses soul in many different contexts, but if one does not understand what it is, then these discussions are liable to be misunderstood. My hope is that I have clarified the nature of soul sufficiently by arguing that it is the capacity for life, and that this seed will sprout further understanding of what Aristotle has to say.

Bibliography

- Ackrill, J. L.. "Aristotle's Definitions of *Psuche*." *Proceedings of the Aristotelian Society*, New Series 73 (1972-1973): 119-133.
- , ed. and trans. *Categories and De Interpretatione*. Oxford: Clarendon Press, 1963.
- Apostle, Hippocrates G., trans. *Aristotle's On the Soul*. Grinnell: The Peripatetic Press, 1981.
- , trans., *Aristotle's Metaphysics*. Des Moines: The Peripatetic Press, 1979. First published 1966 by Indiana University Press.
- Aquinas, Thomas. *A Commentary on Aristotle's De Anima*. Translated by Robert Pasnau. New Haven: Yale University Press, 1999.
- Averroes (Ibn Rushd) of Cordoba. *Long Commentary on the De Anima of Aristotle*. Translated by Richard C. Taylor. Subeditor, Thérèse-Anne Druart. New Haven: Yale University Press, 2009.
- Balme, D. M., trans. *History of Animals: Books VII-X*. Cambridge: Harvard University Press, 1991.
- Barnes, Jonathan. *Aristotle*. In *Greek Philosophers*, 191-302. Past Masters. Oxford: Oxford University Press, 1999.
- , ed. and trans. *Posterior Analytics*. 2nd ed. Oxford: Clarendon Press, 1993.
- Bartlett, Robert C. and Susan D. Collins, eds. and trans. *Aristotle's Nicomachean Ethics*. Chicago: University of Chicago Press, 2011.
- Beere, Jonathan. *Doing and Being: An Interpretation of Aristotle's Metaphysics Theta*. Oxford: Oxford University Press, 2009.
- Bolton, Robert. "Aristotle's Definitions of the Soul: 'De Anima' ii, 1-3." *Phronesis* 23.3 (1978): 258-278.
- Bos, A. P. *The Soul and Its Instrumental Body: A Reinterpretation of Aristotle's Philosophy of Living Nature*. Leiden: Brill, 2003.
- Boylan, Michael. "The Digestive and 'Circulatory' Systems in Aristotle's Biology." *Journal of the History of Biology* 15.1 (1982): 89-118.
- Burnyeat, M. F. "De Anima II 5." *Phronesis* 47.1 (2002): 28-90.

- Bywater, I., ed. *Aristotelis ethica Nicomachea*. Oxford: Clarendon Press, 1894. Reprint, 1962. <http://stephanus.tlg.uci.edu/>.
- Charles, David. *Aristotle on Meaning and Essence*. Oxford: Clarendon Press, 2000.
- Charlton, William. "Aristotle's Definition of Soul." *Phronesis* 25.2 (1980): 170-186.
- Corcilius, Klaus and Pavel Gregoric. "Separability vs. Difference: Parts and Capacities of the Soul in Aristotle." *Oxford Studies in Ancient Philosophy* 39 (Winter 2010): 81-119.
- Descartes, René. *The Philosophical Writings of Descartes*. Vol. 1. Translated by John Cottingham, Robert Stoothoff, and Dugald Murdoch. Cambridge: Cambridge University Press, 1985.
- Drossaart Lulofs, H. J., ed. *Aristotelis de generatione animalium*. Oxford: Clarendon Press, 1965 Reprint, 1972. <http://stephanus.tlg.uci.edu/>.
- Everson, Stephen. *Aristotle on Perception*. Oxford: Clarendon Press, 1997.
- Forster, E. S., trans. *Topica*. In *Posterior Analytics and Topica*. Cambridge: Harvard University Press, 1960.
- Freudenthal, Gad. *Aristotle's Theory of Material Substance: Heat and Pneuma, Form and Soul*. Oxford: Clarendon Press, 1995.
- Furth, Montgomery. *Substance, Form and Psyche: An Aristotelian Metaphysics*. Cambridge: Cambridge University Press, 1988.
- Haldane, J. B. S. "On Being the Right Size." In *Possible Worlds and Other Essays*, 18-26. London: Chatto and Windus, 1927.
- Hamlyn, D. W., ed. and trans. *De Anima: Books II and III (with Passages from Book I)*. New impression with supplementary material by Christopher Shields. Oxford: Clarendon Press, 1993.
- Hett, W. S., trans. *On the Soul, Parva Naturalia, On Breath*. Rev. ed. Cambridge: Harvard University Press, 1957.
- Hicks, R. D., ed. and trans. *De Anima*. Cambridge: Cambridge University Press, 1907. Reprint, New York: Arno Press, 1976.
- Hocutt, Max. "Aristotle's Four Because." *Philosophy* 49 (1974): 385-399.
- Homer. *The Odyssey of Homer*. Translated by Richmond Lattimore. New York: Harper & Row, Publishers, 1967. Reprint, New York: HarperPerennial, 1991.

- Irwin, Terence and Gail Fine, trans. *Aristotle: Selections*. Indianapolis: Hackett Publishing Company, 1995.
- Johansen, Thomas Kjeller. *The Powers of Aristotle's Soul*. Oxford: Oxford University Press, 2012. doi:10.1093/acprof:oso/9780199658435.001.0001.
- Johnston, Rebekah. "Aristotle's *De Anima*: On Why the Soul is Not a Set of Capacities." *British Journal for the History of Philosophy* 19.2 (2011): 185-200.
- Kent Sprague, Rosamond. "A Missing Middle Term: 'De Anima' II,2." *Phronesis* 41.1 (1996): 104-108.
- Keyt, David. "The Meaning of ΒΙΟΣ in Aristotle's *Ethics* and *Politics*." *Ancient Philosophy* 9 (1989): 15-21.
- King, R. A. H. *Aristotle on Life and Death*. London: Duckworth, 2001.
- Lawson-Tancred, Hugh, trans. *De Anima*. London: Penguin Books, 1986.
- Lennox, James G., ed. and trans. *On the Parts of Animals I-IV*. Oxford: Clarendon Press, 2001.
- Louis, P., ed. *Aristote. Histoire des animaux*. 3 vols. Paris: Les Belles Lettres, 1:1964; 2:1968; 3:1969. <http://stephanus.tlg.uci.edu/>.
- , ed. *Aristote. Les parties des animaux*. Paris: Les Belles Lettres, 1956. <http://stephanus.tlg.uci.edu/>.
- Makin, Stephen, ed. and trans. *Metaphysics: Book Θ*. Oxford: Clarendon Press, 2006.
- Matthews, Gareth B. "De Anima 2. 2-4 and the Meaning of *Life*." In Nussbaum and Rorty, *Essays on Aristotle's De Anima*, 185-193.
- Menn, Stephen. "Aristotle's Definition of Soul and the Programme of the *De Anima*." *Oxford studies in Ancient Philosophy* 22 (2002): 83-139.
- Mure, G. R. G. "Cause and Because in Aristotle." *Philosophy* 50 (1975): 356-357.
- Nussbaum, Martha C. and Amélie Oksenberg Rorty, eds. *Essays on Aristotle's De Anima*. Paperback edition. Oxford: Clarendon Press, 1995.
- Peck, A. L., trans. *Generation of Animals*. Cambridge: Harvard University Press, 1942.
- , trans. *History of Animals, Books I-III*. Cambridge: Harvard University Press, 1965.

- , trans. *History of Animals: Books IV-VI*. Cambridge: Harvard University Press, 1970.
- Philoponus. *In Aristotelis De Anima Libros Commentaria*. Edited by Michael Hayduck. *Commentaria in Aristotelem Graeca*, vol. 15. Berlin: G. Reimer, 1897.
- . *On Aristotle's On the Soul 2.1-6*. Translated by William Charlton. Ithaca: Cornell University Press, 2005.
- Plato. *Five Dialogues*. Translated by G. M. A. Grube. 2nd ed. Revised by John M. Cooper. Indianapolis: Hackett Publishing Company, 2002.
- . *Platonis Opera*. ed. E. A. Duke, W. F. Hicken, W. S. M. Nicoll, D. B. Robinson, and J. C. G. Strachan. Oxford: Clarendon Press, 1995.
- Polansky, Ronald. *Aristotle's De Anima*. Cambridge: Cambridge University Press, 2007.
- Ross, W. D., ed. *Aristotelis topica et sophisticis elenchi*. Oxford: Clarendon Press, 1958. Reprint, 1970. <http://stephanus.tlg.uci.edu/>.
- , ed. *Aristotle's Metaphysics: A Revised Text with Introduction and Commentary*. 2 vols. Oxford: Clarendon Press, 1924. Reprint, London: Sandpiper Books Ltd., 1997.
- , ed. *De Anima*. With an introduction and commentary. Oxford: Oxford University Press, 1961. Reprint, London: Sandpiper Books Ltd., 1999.
- , ed. *Parva Naturalia: A Revised Text with Introduction and Commentary*. Oxford: Clarendon Press, 1955. Reprint, London: Sandpiper Books Ltd., 2001.
- Sachs, Joe, trans. *Aristotle's On the Soul and On Memory and Recollection*. Second printing with minor revisions. Santa Fe: Green Lion Press, 2004.
- Shields, Christopher. *Order in Multiplicity: Homonymy in the Philosophy of Aristotle*. Oxford: Oxford University Press, 1999.
- . "The Aristotelian *Psuchê*." In *A Companion to Aristotle*, edited by Georgios Anagnostopoulos, 292-309. Malden, MA: Blackwell Publishing, 2009.
- Simplicius. *In Libros Aristotelis De Anima Commentaria*. Edited by Michael Hayduck. *Commentaria in Aristotelem Graeca*, vol. 11. Berlin: G. Reimer, 1882.
- . *On Aristotle's On the Soul 1.1-2.4*. Translated by J. O. Urmson. Ithaca: Cornell University Press, 1995.

- Smith, J. A., trans. *On the Soul*. In *The Complete Works of Aristotle: The Revised Oxford Translation*, ed. Jonathan Barnes, vol. 1, 641-692. Princeton: Princeton University Press, 1984.
- Smyth, Herbert Weir. *Greek Grammar*. Revised by Gordon M. Messing. Cambridge: Harvard University Press, 1956.
- Sorabji, Richard. "Body and Soul in Aristotle." *Philosophy* 49 (1974): 63-89.
- Studtmann, Paul. "Living Capacities and Vital Heat in Aristotle." *Ancient Philosophy* 24 (2004): 365-379.
- Tracy, Theodore. "Heart and Soul in Aristotle." In *Essays in Ancient Greek Philosophy*, vol. 2, ed. J. P. Anton, 321-39. Albany, NY: State University of New York Press, 1983.
- VandenBos, Gary R., ed. *APA Dictionary of Psychology*. 2nd ed. Washington, DC: American Psychological Association, 2015. ProQuest ebrary.
- Whiting, Jennifer E. "Living Bodies." In Nussbaum and Rorty, *Essays on Aristotle's De Anima*, 75-91.
- . "Locomotive Soul: The Parts of Soul in Aristotle's Scientific Works." *Oxford Studies in Ancient Philosophy* 22 (2002): 141-200.
- Wilkes, K. V. "*Psuchē* versus the Mind." In Nussbaum and Rorty, *Essays on Aristotle's De Anima*, 109-127.

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