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Myrna Gabbe*

Aristotle on the Metaphysics of Emotions

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Abstract: This article explores the nature of Aristotelian emotions and the body-soul metaphysics required to undergird them. The point of departure is an oft-cited argument that appeals to our experience of fear and anger to show the inseparability of the soul. My claim is that this argument is commonly misunderstood: that the intended target is not a separable soul, but an embodied soul. Reinterpreted, we find that Aristotle is driven by an interest to integrate the sentient body with the intellect. And while, on this interpretation, the argument does not support a functionalist reading of Aristotle on the soul, it does suggest that Aristotle shares key intuitions with Embodied Cognition theorists and neuroscientist Antonio Damasio, in particular, who demonstrates the dependence of reason on the body.

Keywords: *pathê* (or affections), *logoi enuloi*, body, functionalism, embodied cognition

This paper analyzes a widely cited argument at the end of *De Anima* I 1, wherein Aristotle draws from our experience with fear and anger to argue that the affections of the soul (*pathê*) are *logoi enuloi* and, therefore, the soul is inseparable from the body. Scholars commonly assume the argument to be directed at Plato's separable, immortal soul, and thereby to show that emotions – understood as psychic states or properties of the soul – are realized in physiological states or processes. Read in this way, the argument purports to show that Aristotle sought to avoid the pitfalls of both the reductive materialists and the substance dualists by endorsing some sort of weak physicalism and by defining the soul's affections in terms of their functional role. Yet it is unlikely that the argument targets the notion of substantial soul, since both Plato and the natural philosophers situate the emotions in an embodied soul.

The aim of this paper is to illuminate Aristotle's account of *pathê*, and the metaphysics that undergird it, by situating the argument within its proper historical context. For though portions of the argument are widely cited, surprisingly little attention has been given to understanding the argument in light of

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Aristotle's predecessors. In brief, the problem of his predecessors is not that they failed to recognize that *pathê* involve the body – they took this for granted; the problem is that they could not properly integrate the body into their account of how *pathê* are triggered and experienced. Ultimately, I shall deny that Aristotle's account of *pathê* prefigures, in any meaningful way, contemporary theories of the mental and functionalism, in particular. Nonetheless, I shall conclude by describing how some of Aristotle's intuitions about the body anticipate recent developments in the area of embodied cognition.

The Argument from the Emotions

The argument of interest addresses the following *aporia*:

[A] [W]hether all <the affections of the soul> are shared by that which has a soul (κοινὰ καὶ τοῦ ἔχοντος), or whether some affections are also proper to the soul itself (τῆς ψυχῆς ἴδιον αὐτῆς). (403a3–5).

Aristotle maintains that “to apprehend this is necessary, but not easy” (403a5). He, then, remarks:

[B] In most cases, such as being angry, being confident, desiring, or sense-perceiving in general, it appears that the soul neither acts nor is affected without the body; but thinking (τὸ νοεῖν) above all else seems proper to the soul. But if thinking is also some sort of *phantasia* or not without *phantasia*, then it would not be possible without the body. (403a5–10)

It is not evident why Aristotle thinks it difficult to determine whether the affections of the soul are shared. On the face of it, it looks like thinking is the hard case since it “above all else seems proper to the soul.” Conversely, when we are in the grips of an emotion, or when we desire or sense-perceive, it appears, says Aristotle, that our soul is acting and being affected with the body. Yet curiously, the argument provided later in passage [D] exploits cases of fear and anger to show that the affections are shared. It is, nonetheless, clear that at stake is the soul's separability from body. In the following lines, Aristotle formulates a means to test the separability of the soul:

[C] If, then, among the operations or affections of the soul, some are proper to the soul, it will be possible for it to be separated. But if, on the other hand, not one is proper to the soul, it will not be separable but just as what is straight, which has many properties *qua* straight, e.g. touching a bronze sphere at a point. The straight separated, however, cannot touch in this way; for it is inseparable, if indeed it is always with a body. And it seems too that all the affections of the soul are with the body (μετὰ σώματος): passion, gentleness, fear, pity, courage, also joy, and both loving and hating. Together with these, the body suffers something. (403a10–19)

The argument that the affections are shared follows:

[D] What indicates this are times when strong and palpable affections (ισχυρῶν καὶ ἐναργῶν παθημάτων) occur but we are not provoked or fearful, yet at other times we are moved by slight and imperceptible affections – when the body is excited, being in the condition of one who is angry. Again, and even clearer, is when nothing fearful happens but we have the affection of someone who is frightened. If this is so, it is clear that affections are *logoi enuloi*. Consequently, their definitions ought to correspond to that of anger: a movement of a body of a particular kind (or part or faculty of a body) by this or that cause and for this or that end. (403a19–27)

This conclusion – that affections are *logoi enuloi* – is reiterated after a discussion on the way in which form and matter enters into the study of living beings. The chapter ends:

[E] We were saying that the affections of the soul are inseparable from the natural matter of animals to which they belong, as fear and anger, not as line and surface. (403b17–19)

Challenging Common Interpretations

What precisely Aristotle aims to show with the argument from the emotions is not immediately evident. In [A], Aristotle states that his interest is to show whether all affections (*pathê*) are shared by the soul and body because, as he tells us in [C], if even *some* are proper to the soul – if the soul can act or be affected without the body in any way – then in some sense soul could be separated. This is the test of the soul’s inseparability. But when Aristotle concludes in [E] that “affections of the soul are inseparable from the natural matter of animals to which they belong, as fear and anger, not as line and surface” (403b17–18), does he mean only the sorts of *pathê* listed in [D] – passion, gentleness, fear, pity, courage, joy, and both loving and hating? Or does he mean the affections listed in [B], which includes perceiving and thinking as well?

Because Aristotle’s intention is unclear, scholars have offered a variety of interpretations. Hicks and Polansky take the conclusion to apply to all *pathê*. Hicks explains that “A. chose the emotions to illustrate the wider sense of operations or attributes simply because the dependence on the body, though nowhere perfectly clear, is more obvious in their case.”¹ Polansky insists that because emotions involve cognition and sense-perception, they “most helpfully confirm the working together of soul and body.”² Ross, on the other hand,

1 R. D. Hicks, *Aristotle De Anima* (Cambridge: Cambridge University Press, 1907), 198.

2 R. Polansky, *Aristotle’s De Anima* (Cambridge: Cambridge University Press, 2007), 54.

believes the argument to show that *most* affections could not, as he writes, “happen to a disembodied soul.”³ He thinks Aristotle wants to leave open the possibility that nous is separable from the body, but Ross has nothing to say about the absence of sense-perception in [D].⁴ Yet this exclusion can bolster Burnyeat’s claim that sense-perception does not involve any bodily change, and that is why, in their response to Burnyeat, Nussbaum and Putnam are keen to explain the ambiguity of this argument. In their view, Aristotle focuses on emotions because the case of sense-perception is clear. “Plato,” they write, “persistently puts perception on the side of body with no hesitation. But desire receives a variety of different treatments, being body in the *Phaedo*, soul in the *Republic*, and immortal soul in the *Phaedrus* and *Laws*.”⁵ Yet despite the differences between these interpretations, the common assumptions are that the argument (a) concerns the nature of psychic states, and (b) rejects the kind of substantial dualism found in Plato’s work in favor of a weak form of physicalism.⁶

Assuming the target to be disembodied soul, the examples of fear and anger provide circumstantial evidence in support of Aristotle’s theory that the affections of the soul, psychic states, are grounded in bodily states (οὐθὲν ἄνευ τοῦ σώματος, 403a6, 9; μετὰ σώματος 403a16–17). We do not feel anger, i.e., the desire for revenge, unless the body is in a certain condition. Nonetheless, the desire for revenge can neither be identical nor reducible to the boiling of the blood because one can have the bodily condition of someone who is angry without enduring the corresponding desire (403a21–22). So interpreted, the argument lends credence, not only to a weak physicalist reading of Aristotle, but also to a functionalist reading, whereby psychic states are to be identified by their causal role relative to some input and overt behavior. This is because Aristotle’s conclusion that a *pathos* should be defined as “a movement of a body of a particular kind...by this or that cause for this or that end” (403a26–27) looks like an effort to incorporate the physicality of psychic states in their

3 W. D. Ross, *Aristotle De Anima* (Oxford: Oxford University Press, 1961), 67.

4 *Ibid.*, p. 168.

5 M. Nussbaum and H. Putnam, “Changing Aristotle’s Mind”, in *Essays on Aristotle’s De Anima*, ed. M. Nussbaum and A. Rorty (Oxford: Clarendon Press, 1992), 27–56 at 43.

6 Note that Nussbaum and Putnam take the target to be Plato’s treatment of soul in the *Phaedrus* and *Laws* because desire there belongs to the disembodied soul. Polansky suggests the treatment of soul in the *Phaedo* for the reason that it is there given operational independence and substantial being. And though Ross and Hicks do not mention Plato explicitly, they think the argument goes after the idea of disembodied soul by showing that “mental events,” or “mental operations,” cannot occur in a soul existing apart from body. Polansky, *Aristotle’s De anima*, 50; Ross, *Aristotle De Anima*, 167; Hicks, *Aristotle De Anima*, 198.

definition, without defining them by their bodily instantiations. And as further grounds for this reading, scholars claim that the pressures that gave rise to Aristotle's theory of the soul – pressures apparent in this argument – are relevantly similar to those that gave way to functionalism: the pressure to avoid the problems inherent in dualism (Plato's or Descartes') on the one hand, and reductive materialism (the natural philosophers' or contemporary type-type identity theorists') on the other. Take Nussbaum and Putnam, for instance, who contend that Aristotle seeks to provide “a happy alternative to materialist reductionism on the one hand, Cartesian dualism on the other – an alternative that has certain similarities with contemporary functionalism”.⁷ Similarly Shields, who in reference to the argument from the emotions, writes: “Aristotle and contemporary functionalists share deep theoretical commitments” in that he sought “to provide a workable alternative to both Platonism and an austere form of the identity theory”.⁸ Even Modrak, who offers only qualified support of the functionalist interpretation, writes: “Aristotle's philosophy of mind becomes of particular interest since he too was trying to avoid the problems inherent in dualism and the problems inherent in reductive materialism.”⁹

But there are at least three reasons to question the weak physicalist and functionalist reading of our argument. First, the ambiguity of its conclusion has its source in the assumption that Aristotle targets the idea of disembodied soul by offering fear and anger as controverting examples. Read in this way, interpreters are called upon to explain why Aristotle chose the examples of fear and anger to illustrate the bodily dimension of psychic states, when he gives no reason for supposing that the emotions are not with the body and even notes that thinking is the hard case. Second, these interpretations cannot explain why Aristotle thinks it hard to show that the affections are shared (403a5). Let us assume that Plato did not realize that anger manifested in the body as well as the soul. The argument challenges his readers to reflect on their experiences to see whether they can be angry without enduring certain bodily sensations. There is nothing hard about this, if anger has a bodily dimension of which we are aware. But, third, it seems that everybody, including Plato, recognized that anger is not, as Aristotle puts it, “without the body” (403a6, 9).

According to the *Timaeus* – the *only* Platonic dialogue mentioned by name in Book I of the *De Anima*, and a dialogue that Aristotle spends considerable time critiquing – anger is in the purview of the mortal soul. The mortal soul is

7 Nussbaum and Putnam, “Changing Aristotle's Mind,” 27.

8 C. Shields, “The First Functionalist,” in *Historical Foundations of Cognitive Science*, ed. J. C. Smith (Dordrecht: Kluwer Academic Publishers, 1990), 19–33 at 19.

9 D. Modrak, *Aristotle: The Power of Perception* (Chicago: University of Chicago Press, 1987), 16.

different in kind from the immortal soul, the intellect, being that it is responsible for emotions, desires, and sense-perceptions. While both are immaterial, the intellect alone is operationally independent: it can think without the body.¹⁰ The mortal soul, by contrast, is intimately bound to the body in that it uses the body to perform its functions.

The mortal soul has two parts: that which houses spirit (θυμός) has its seat in the heart; that containing the insatiable appetites is bound up with the stomach. Anger is among the chief emotions experienced by the spirited part of the soul. It enables this more “manly” part of the soul (70a3), (“manly” because it can listen to reason), to restrain the appetites, and rally the sentient body¹¹ (ὄσον αἰσθητικὸν ἐν τῷ σώματι, 70b6) in response to injury or injustice. Should reason judge that some wrongful act is taking place, the might of the spirit (τὸ τοῦ θυμοῦ μένος, 70b3) would seethe with anger (ζέσειεν, 70b3), causing the blood in the heart to heat and the heart to pound against the lungs. The veins transmit this bodily manifestation of spirit’s rage to the whole sentient body, pulsating, as they now are, with warm blood. And so it is that the sentient body and the appetitive soul are made to “listen” to the intellect’s directives and heed its injunctions, even though unable to apprehend rational thought.

The account of anger in the *Timaeus* suggests that the argument from the emotions is more complex than meets the eye. The conclusion that the soul is inseparable from body is not evinced by the body’s activity since even Plato recognized that anger has a bodily dimension. Nevertheless, I shall now argue that Plato’s mortal soul cannot pass Aristotle’s inseparability test because certain operations and affections are proper to it (403a10–11). And neither, as we shall soon see, can the accounts of soul offered by the natural philosophers, which, by and large, were also not treated as substantial beings capable of independent existence.

Aristotle’s Critique of his Predecessors

The Body and Our Experience of *pathê*

The treatments of soul offered by Plato and the natural philosophers (in particular, those who take motion as characteristic of soul) fail Aristotle’s

¹⁰ Presumably the mortal soul is also immaterial. Plato does not say of what it is constituted.

¹¹ Despite the description of body as sensitive, body *qua* body does not perceive. The account of perception beginning at lines 64a2 makes it clear that the soul perceives by means of motions or alterations passed through the body to the center of consciousness (τὸ φρόνημον, 64b5). This center perceives, feels pleasures and pains, and experiences the emotions.

inseparability test just insofar as they conceive soul to originate motion in body by means of motion that comes from within. The natural philosophers who emphasize soul as the originator of motion tend to identify it with some material substance in ceaseless motion on the grounds that “what is not moved itself cannot move another” (403b30).¹² This substance is presumed to be the finest in grain (λεπτομερέστατον, 405a22, 9b21) and the most incorporeal (to; ἄσωματώτατον, 405a27, 9b21) because only what is exceedingly small can move continuously and penetrate the body in order to move it. Plato, in contrast with these materialists, makes soul actually incorporeal; yet, as Aristotle disparagingly reports, he nonetheless ascribes physical attributes to it: “In the same manner <as Democritus>, the *Timaeus* also uses physical concepts to explain that the soul moves body” (406b26).¹³ In this context, Aristotle references the revolutions of the immortal soul said to provide humans with the power of cognition and the capacity to quell the violent motions inherent in the body.¹⁴ But there is no reason to doubt that the mortal soul also moves by moving.

Because the notion that soul moves of itself entails that soul has operational independence, the theory shared by Plato and the natural philosophers – that soul moves body by moving – subjects them all to the criticisms arising from the treatment of soul as substantial being, whether they take it to be so or not. That is why, in the context of discussing the natural philosophers, Aristotle writes that attributing natural motion to the soul “carries with it the possibility that the soul might (ἐνδέχεται ἄν) even quit its body and re-enter it and with this would be involved the possibility (τούτω δ’ ἔπιτα ἄν) of a resurrection of animals from the dead” (trans. Smith, 406b3–5).¹⁵ Both the context and the potential optative

¹² Democritus, we are told, postulates soul to be composed of spherical atoms that are never at rest (404a12). He analogizes these atoms to dust motes because they are always in motion, even when all else is calm (404a19–20). That, incidentally, is why some Pythagoreans identify soul with the dust motes themselves; others identify soul with that which moves the motes (404a16–20). Heraclitus, to give Aristotle’s final example, makes soul warm exhalation because of its “ceaseless flux” (405a25).

¹³ By emphasizing, on the one hand, the likeness of the materialist’s soul to an incorporeal substance, and, on the other hand, the physical-like attributes of Plato’s soul, Aristotle downplays the differences between their theories so as to challenge them with a single stroke. A further example of this tendency to highlight continuity between Plato and the natural philosophers can be found after his explanation of why Democritus postulates the soul to be composed of spherical atoms. Aristotle writes: “those who describe the soul as that which moves itself,” i.e. Plato and his followers, “tend in the same direction” (404a20–1): they all take motion to belong to the soul by virtue of its nature.

¹⁴ *DA* 406b28–407a2; *Timaeus* 41d–44d.

¹⁵ *The Complete Works of Aristotle*, 2 Vols., ed. J. Barnes (Princeton, NJ: Princeton University Press, 1984).

signals that Aristotle targets, not only Plato and the Pythagoreans, but also the natural philosophers, who by and large did not believe in the transmigration of souls.¹⁶

Though the precise concern of the argument from the emotions is not the soul's motility but the soul as subject of *pathê* – “whether some affections are proper to the soul itself” (403a4–5) – Aristotle's predecessors make the affections proper to the soul just insofar as they take them to be psychic motions. We know from Aristotle's survey of his predecessors that the natural philosophers treat thinking and sense-perceiving as movements and alterations (410a25), and that Plato describes thinking in terms of circular motion (407a3–6). In the *Laws*, Plato explicitly says that the soul's motion has the names “wishing, examining, being engaged in, deliberating, opining correctly and falsely, feeling joy and pain, feeling confidence and fear, hating and loving” (897a1–3). Thus we find a little later in Book I Aristotle challenging the idea that the soul moves on the grounds that it makes the soul the subject of *pathê*. The argument is well known but misunderstood. Careful attention to the argument shows that the soul can be the seat of the emotions and, thereby, separable, even though bodily activity always accompanies that of the soul. It runs as follows:

We say that the soul feels pain or enjoyment, and confidence or fear, and also that it is angry or perceives or thinks; and all of these seem to be motions. Hence one might infer that the soul is in motion; but this does not necessarily follow. For let us by all means grant that feeling pain, feeling enjoyment, and thinking are motions, and that to be in these conditions is to be moved, and that the soul initiates the motion – so that to be angry or afraid, for instance, is for the heart to undergo this motion, while thinking is presumably a motion of this part or something else, and this comes about in some cases by the local motion of things, in other cases by alteration... Still, to say that the soul is angry is like saying that the soul weaves or builds houses. For presumably it is better to say, not that the soul feels pity or learns or thinks, but that the human being does so by the soul. (trans. Irwin and Fine, 408b1–11)¹⁷

Aristotle opens the argument by stating the position of his predecessors as it is embodied in ordinary speech: “We say that the soul feels pain or enjoyment, and confidence or fear, and also that it is angry or perceives or thinks; and all of these seem to be motions” (408b1–4). Aristotle then proceeds to articulate two

¹⁶ That most of the natural philosophers regarded the soul as destructible can be inferred from the strenuous opposition that Cebes and Simmias provides on their behalf in the *Phaedo*. The Atomists, assuming that the soul like all composites was destructible, took the soul to disperse from the body upon death. Empedocles, however, was a transmigrationist.

¹⁷ *Aristotle Selections*, trans. T. Irwin and G. Fine (Indianapolis, IN: Hackett Publishing, 1995).

assumptions he shares with his predecessors that underlie their theory that the soul is moved: (a) to be in an emotional state is to be moved (408b6–7); and (b) the soul is the source of the bodily changes associated with the emotions, changes such as the movements and alterations that take place in and around the heart (408b8–10). But, he goes on to argue, it would be wrong to conclude from these assumptions that the soul moves and is the seat of the affections. Why? Because “to say that the soul is angry is like saying that the soul weaves and builds houses” (408b11–13). No reasonable person would insist that the soul weaves and builds houses; clearly it is the individual who performs these tasks with her soul. Thus, Aristotle concludes, “it is better to say, not that the soul feels pity or learns or thinks, but that the human being does so by the soul” (408b13–15).

Scholars tend to miss that the argument runs on the assumption shared by Aristotle and his predecessors that *pathê* involve bodily motion.¹⁸ Indeed, the analogy between weaving and house building, on the one hand, and thinking and pitying, on the other, gets its force from the assumption that *pathê* have a bodily aspect. On his predecessor’s view, the body has to move when the soul moves: the two are interwoven (406b26–28). That is why the natural philosophers thought that the soul’s motions could be inferred from the body’s motions (406a30–b1). The problem, then, of treating the soul as subject of *pathê* is not that it fails to recognize that the body moves when an individual experiences fear and anger. The problem is that it treats the body’s movement as inessential and superfluous – at least when it comes to the experience of an emotion. This is the criticism behind the comparison between the soul feeling pity and the soul building houses: his predecessors accept the essential role of the body in the one case and not the other, despite their recognition that both activities involve the body. What, after all, can the body contribute to our experience of *pathê*, if it is the soul that initiates movements in the body (408b7–8) by virtue of the emotion that *the soul feels*? As both the place of bodily feelings and source of bodily motion, this account of the soul leaves the body with no role to play.

That the natural philosophers cannot make sense of the body’s contributions to our experiences of *pathê* should not surprise. Because the natural philosophers view the cosmos and its inhabitants to be such as they are by accident of elemental or atomic properties, there can be no reason for why the heart pounds when one is angry or why it goes cold when one is afraid. So long

¹⁸ Polansky, for instance, thinks that Aristotle introduces the body’s contribution here as an alternative to the idea that soul is moved. See *Aristotle’s De anima*, 112–17. Hamlyn also thinks that, for Aristotle, the presence of bodily activity indicates that soul is not subject to the *pathê*. Hamlyn, *Aristotle De Anima* (Oxford: Clarendon press 1968 [1993]), 81.

as they are committed to the view that the soul initiates the bodily motions of *pathê* – which they are because the body cannot move of itself – they have to admit that the heart and other viscera move and alter as a consequence of the way the soul moves and behaves. Plato critiques this outlook in the *Phaedo* and offers in the *Timaeus* an explanation of human physiology in terms of the goal and purpose of human life.¹⁹ Thus, we there find an explanation for why anger involves the pounding of the heart and the heating of the blood: namely, these bodily operations are the means by which the spirit communicates the intellect's displeasure to the appetitive soul and the rest of the sentient body. But Plato has not revised significantly the dynamics between the body and soul; for on his view, the seething of the spirit (ζέσσειεν, 70b3), which is felt as anger, is the cause of the alterations and movements of the heart and blood. To be fair, Plato may have imagined that the full experience of anger is felt only when the heat and movement from the heart is transferred back to the rest of mortal soul. But in that case, we must wonder with Aristotle why the spirit uses the body to communicate with the rest of the mortal soul: why it does not communicate to this lower part of soul directly through its own motions. It does seem as if Plato's account of anger falls short of accomplishing what he intends for it to do.

The reason it is problematic to ascribe to the body such an inconsequential role in the experience of *pathê* is because, on such a view, it cannot be explain why the soul is bound to the body at all. Thus, when shoring up his critique of the self-moving soul, Aristotle complains: “they all <Plato and the natural philosophers> join the soul to a body, or place it in a body, without adding any specification of the reason of their union, or of the bodily conditions required for it” (407b15–17, trans. Smith). But fail as they might to make body essential to our experience of the emotions, when it comes to triggering emotions, Aristotle shows that the body, on his opponents' treatment, plays too great a role in determining the nature and intensity of one's emotional response to stimuli. I turn to this argument – the argument from the emotions – now.

The Body and the Trigger of *pathê*

Let us recall that Aristotle challenges his predecessors by presenting three scenarios: (a) when the presence of powerful and palpable affections (ισχυρῶν

¹⁹ See Carlos Steel's wonderful article, “The Moral Purpose of the Human Body” for the argument that Plato concerns himself in the *Timaeus* not with scientific explanations, but ethical-political explanations of the human constitution: explanations geared to help us understand how we can achieve the best life. C. Steel, “The Moral Purpose of the Human Body: A Reading of *Timaeus* 69–72,” *Phronesis* 46 (2001): 105–28.

καὶ ἐναργῶν παθημάτων, 403a19–20) do not cause fear or excitement; (b) when one is moved by slight or faint affections, as when the body is already excited (ὀργῆ τὸ σῶμα, 403a22) because it is in the condition of one in anger; and (c) when nothing fearful occurs but one feels fear nonetheless. In all three cases, we are accustomed to expect the presence of fear or anger given the presence of some sensible stimulation, or conversely the absence of fear or anger given the absence of some sensible stimulation. But the opposite comes to pass. This is due in part to the somewhat unusual, though recognizable, characters of the individuals described. For character, Aristotle explains in the *Nicomachean Ethics*, is the state of the appetitive soul that disposes an individual to feel *pathê* well or badly (1105b25–28). The first example describes the response of the stalwart, someone who reacts with coolness to what is startling to most; the second and third describe the irascible and timorous, who are excited by the slightest provocation or even when there is no provocation at all. Thus broadly speaking, Aristotle's charge is that his predecessors cannot explain the influence that character has over one's emotions, given their theory of body and soul.

The link between character and emotion is sense-perception and imagination (φαντασία). First, emotions are triggered both by sense-perceptions (*aisthêseis*) or appearances (*phenomena*), and also by imaginative ruminations (*phantasiai*) of past events and future expectations.²⁰ “Anger,” for instance, “is a desire with pain for revenge owing to a perceived slight” (διὰ φαινομένην ὀλιγωρίαν, 1378a31); “fear is some pain or disturbance from an imagination of a future bad” (ἐκ φαντασίας μέλλοντος κακοῦ, 1382a20–21); “shame is an imagination of disgrace” (περὶ ἄδοξίας φαντασία, 1384a22); “envy is some pain at the perceived acquisition (ἐπὶ εὐπραγία φαινομένη) of goods...in regards equals” (1387b23–24). Second, character shapes what one sense-perceives and how things appear; otherwise, says Aristotle, one would not be responsible for the ends at which ones aim (1114a31–b3). Thus, in *On Sleep*, Aristotle writes:

We are easily deceived with respect to sense-perceptions (περὶ τὰς αἰσθήσεις) when we are emotional, and different people by different emotions; for instance, the coward <is deceived> when fearful, and the amorous when in love, so that it seems that the former sees (ὁρᾶν) enemies from little resemblance, and the latter his beloved. (460b3–7)

The timorous and irascible of examples (b) and (c) are much like the coward and amorous described above.²¹ Each, as a consequence of her character, *sees* what

²⁰ Cf. *Rhetoric* I 11, 1370a27 ff. wherein Aristotle explains that the pleasures and pains of emotions are attached either to what we sense-perceive or to what we remember of the past or expect in the future.

²¹ Cf. *NE* 1115b15–17.

is in fact not there. This serves to either intensify an existing emotion or give rise to a new emotion, depending on the circumstance in which the lover “sees” her beloved or the coward her enemies.

Character and habit (the means by which character is formed) do not, however, explain one’s emotional response to any given situation alone: reason, thought, and judgment are also involved. Reason directs character development in the form of a child’s guardian and tutor, since the tutor’s objective is to develop the child’s affections and aversions so that they harmonize with reason (κατὰ τὸν λόγον, 1119b14–15). Furthermore, as Fortenbaugh and Konstan have well-established,²² reason, thought, and judgment are integral to the evaluation of a scenario. Consider the ambiguous language Aristotle uses to describe the trigger of anger and fear. Though Aristotle defines anger in the *Rhetoric* as a desire for retaliation caused by a perceived slight (διὰ φαινομένην ὀλιγωρίαν, 1378a30–31) at the hands of an inferior (1379b8–13), in the *Topics* he describes anger as a pain “accompanied with the judgment of being slighted” (μεθ’ ὑπολήψεως τοῦ ὀλιγωρεῖσθαι, 151a15–16), and in the *Nicomachean Ethics* he writes that “reason or imagination reveals hubris or a slight” (ὁ μὲν γὰρ λόγος ἢ ἡ φαντασία ὅτι ὕβρις ἢ ὀλιγωρία ἐδήλωσεν, 1149a32–33). Again, though fear is described in the *Rhetoric* as “a pain or disturbance from the imagination (ἐκ φαντασίας) of some painful or destructive future bad” (1382a21–22), he later reports that it involves believing (οἶοντα) one to be vulnerable to destruction (1382b31), and believing that the destruction is likely (1382b33). Thus, insofar as one’s emotions are a function of one’s character and beliefs, Aristotle’s charge is that his predecessors cannot explain how these dispositions of the soul – the dispositions we have for knowledge and for emotional response – influence what and how one sense-perceives.

To reconstruct how the argument is meant to run against the natural philosophers, we can reflect on Democritus’ account of sense-perception. Sense-perception for Democritus is identical, or reducible, to movements or alterations of the soul, the cause of which are effluences: tiny particles emitted

²² Notwithstanding M. Frede and Sorbaji’s compelling argument to the contrary (treated in §VI of this essay), there is broad consensus that Aristotelian emotions involve the operations of the intellect. In his ground-breaking monograph, *Aristotle on Emotion*, Fortenbaugh demonstrates that the efficient cause of emotions for Aristotle are beliefs or judgments, and points out that this cause is included in the definition of the emotion. (See passage [E] above.) This, he maintains, allows Aristotle to approach the study of emotions as a demonstrative science and to argue for the benefits it serves the individual as a social and civic being. D. Konstan’s, in his recent monograph *The Emotions of the Ancient Greeks*, goes to great lengths to detail the complexity of the judgments and beliefs that trigger an emotion in order to demonstrate that emotions are not universally felt, but bound up with the cultural values of the day.

by perceptible objects. These particles impact the body, which thereupon transmit its movements or alterations to the soul. Perception results by necessity from the force of the effluences and the material constitutions of both the body and soul. This means that if strong *pathêmata* usually sets into place movements that engender fear, then it is not clear how they can fail to do so on all occasions. Indeed, even if on Democritus' theory one's character and dispositional beliefs could influence what one sense-perceives (if, say, character were a feature of the soul-atoms position), the soul's great motility would not permit a cool response to a strong stimuli.²³ For the stalwart's body will trigger movements of necessity that march through the soul and are felt as fear. Yet it does not seem that character and dispositional beliefs can influence what one sense-perceives on Democritus' view to the extent that one sees what is not there. At least, so thinks Aristotle.

Aristotle criticizes the natural philosophers in at least two other places for their failure to explain perceptual error and false beliefs,²⁴ tying their failure to two assumptions: (a) sense-perception and knowledge have for their objects the same thing, what is (1009b12–13; 1010a1–3; 427a20–21); and (b) sense-perception and knowledge are both material alterations, whereby like is moved by like (1009b13; 427a26–28). It may look like the main crux of the problem is the latter assumption, since mistaken sense-perceptions would require unlike to move unlike, which would not result in sense-perception at all. Yet even Aristotle concedes that the sensations of the special senses are always true. What he denies is that appearances are the same as sensations (1010b1–1011a2); an appearance can be false even when the sensation that gives rise to it is true. The natural philosophers deny a distinction between sense-perceptions and appearances because they “suppose knowledge to be sense-perception, and this to be an alteration” (1009b13). For supposing knowledge to be sensation (which they must, given that both are taken as physical alterations caused by the same things), commits them to the view that what one sense-perceives is always true. Thus there is no room in their theory for appearances – sense-perceptions so-called owing either to some doubt registered by the perceiver regarding what she sense-perceives, or doubt registered by the person reporting the sense-perception of someone else. By contrast, Aristotle has a theory of incidental perception – the perceiving that the thing before one is *x* – which involves more than just the impact of the sensibles on the sense organs. For this reason, incidental perception can be false (428b19–22).

²³ Cf. Berryman, Sylvia, “Democritus,” in *The Stanford Encyclopedia of Philosophy* (Fall 2010 Edition), ed. Edward N. Zalta <http://plato.stanford.edu/archives/fall2010/entries/democritus/>.

²⁴ *DA* III 3, 427a17–b5; *Meta.* IV 5,

The argument from the emotions works similarly against Plato, given the assumptions he shares with the natural philosophers. But arguably Aristotle's case against Plato is even more compelling, thanks to the details Plato provides and his commitment to separate the intellect from the mortal soul. In the *Timaeus*, emotions that are not initiated by the rational soul are treated as psychic disturbances that result of necessity from unreasoning sense-perception (αἰσθήσει δὲ ἀλόγῳ, 69d4). As bodily creatures, we need sense-perception to navigate our environment and, among other things, take in nutrients and expel waste (42a3–6). Sense-perception is thus for some good end. But emotions themselves (at least those generated from sense-perceptions) are of little value because they are necessitated by the interaction of body and soul.

Plato adopts a version of the theory of effluences, whereby sense-perception is engendered through a chain of movements, beginning with the interaction of a sensible object and a sense-organ. This impact produces movements and alterations in the body, which are then transmitted through the body to the center of consciousness (τὸ φρόνιμον, 64b5) where they are sense-perceived. Pain is experienced when the disturbance comes upon us rapidly and with great force; pleasure is enjoyed when the body comes back to its natural state with some intensity (63c8–d2). The emotions are the desires and feelings that arise from the pleasure and pain supervening on the unreasoning sense-perception; they are automatic and visceral passions driving the individual to seek or avoid the pleasures and pains associated with a particular perceptual experience (69d4–5). So though we are encouraged to master our emotions (42b2–d2), just as the stalwart of Aristotle's argument, it is not clear how we can when the *pathēmata*, as example (a) stipulates, are powerful and palpable (ἰσχυρῶν καὶ ἐναργῶν παθημάτων).²⁵ And the very fact the mortal soul is placed as far as possible from the rational soul tells against this possibility. By the same token, this account also leaves no room for erroneous beliefs and vice to affect what we sense-perceive, since emotions have to take hold within mortal soul before they can even begin to affect the intellect.

²⁵ We might note that this way of reading the argument helps us understand παθημάτων in line 403a20. Scholars usually gloss παθημάτων as “occurrences” – happenings or events, either within the individual or without that, in this case, typically provokes fear. But as Polansky in his commentary notes, this is a peculiar usage for παθημάτων, since it usually refers to affections – what an individual endures often as a result of external motions or events. Reading “occurrences” for παθημάτων is preferred by most because the argument, as it is typically read, provides no reason for limiting the occurrences to those that the body endures. On the proposed reading, by contrast, Aristotle must stipulate that the body is *palpably and violently* moved, since it is the body's motion that precipitates the chain reaction that ends with motion in the soul. Cf. Polansky, *Aristotle's De anima* and note 40.

Ultimately, the argument from the emotions vitiates Aristotle's predecessors' treatment of body and soul by showing, once again, that it jeopardizes the unity of the individual. The examples remind us that our sense-perceptions and emotions are always congruous with our character and dispositional set of beliefs, and reveal that a separable soul cannot accommodate this fact of our subjective experiences. The problem, as Aristotle sees it, lies with imagining that emotions result from the sequential activation of the body's and soul's capacities, precipitated, moreover, by a body that is susceptible to whatever force comes its way, and a soul equally vulnerable to the body thanks to its sensitivity to motion and alteration. This theory of body and soul, and the causal dynamics it entails, leaves no room for dispositional beliefs and character to shape an individual's affective response – especially when knowledge is sense-perception, as the natural philosophers believe, or when the intellect is assigned to a soul separate from the senses, as Plato maintains in the *Timaeus*. Aristotle, I shall argue, avoids these problems by replacing the serial causal schema of his predecessors with one that allows for the synchronic engagement of an individual's various capacities. For sense-perception, desire, and thought are all, on his view, rich and unified experiences, resulting from the coupled exercise of numerous capacities. And to accommodate his new causal schema, Aristotle sought first to reconceive the nature of body and soul.

Aristotle's Solution

In the run up to the argument from the emotions in passage [C], Aristotle indicates how the body and soul ought to be reconceived, if it is shown that *pathê* are not proper to the soul but “shared by that which has a soul” (403a3):

[C] If, then, among the operations or affections of the soul, some are proper to the soul, it will be possible for it to be separated. But if, on the other hand, not one is proper to the soul, it will not be separable but just as what is straight, which has many properties *qua* straight, e.g. touching a bronze sphere at a point. The straight separated, however, cannot touch in this way; for it is inseparable, if indeed it is always with a body. And it seems too that all the affections of the soul are with the body (μετὰ σώματος): passion, gentleness, fear, pity, courage, also joy, and both loving and hating. Together with these, the body suffers something. (403a10–19)

The first part of the passage offers a new account of the body using an analogy – the soul is to straightness as the body is to the straight object – because nothing short of an analogy could capture and illustrate the radical idea that Aristotle is trying to sell: namely, that the body is a seat of conscious activity. Like the

straight object, which has properties *qua* straight that are not attributable to the property straight considered in itself (e.g. touching a sphere at a “point”), the body, he suggests, has phenomenal properties by virtue of being ensouled: properties that the soul does not possess of itself. To be clear, Aristotle does not wish to overturn completely the assumption fundamental to the thinking of his predecessors that the body is devoid of consciousness. The body, on his view, is capable of conscious activity just insofar as it is ensouled. What he denies is that physiological processes are felt in and by the soul, as his opponents maintain. The soul does not feel the boiling of the blood, the body does.²⁶

The body, however, is limited by its nature in terms of what it can discern (*κρίνει*), and so cannot be the sole seat of conscious activity. Insofar as the body is affected qualitatively (416b34) – by colors, sounds, tactile qualities and the like – it can only discern sensible qualities or forms (429b15). These may be the sensible forms belonging to objects external to the body, or they may be qualitative changes taking place within the body, as flesh is the medium by which we feel tactile qualities like hot, cold, hard, or soft. What the body cannot discern are intelligible forms. All thinking – whether theoretical, practical, or the ordinary internal narration that accompanies us in much of what we do – involves the apprehension and use of concepts, e.g., intelligible forms. Intelligible forms correspond to the essential nature of the thing cognized: the what-it-is-to-be a magnitude, the what-it-is-to-be flesh (429b10–17). As such, they are devoid of particularity and qualitative content. That is why Aristotle insists that the intellect can have no organ. Were thinking the activity of an organ, the apprehension and use of these forms would be felt through qualities like warmth or coldness (429a25–26). Aristotle’s innovation is not, then, to deny the soul a place of conscious activity, but (a) to limit it to a certain kind of consciousness, and (b) to insist that the soul “neither acts nor is affected without the body” (403a6–7).²⁷ At the very least, this means that thinking is not without

26 Others have argued that Aristotle lacks a conception of the mental more systematically than I do here. See, for instance, R. Sorabji, “Body and Soul in Aristotle,” *Philosophy* 49 (1974): 63–89; and M. Frede, “On Aristotle’s Conception of the Soul,” in *Essays on Aristotle’s De Anima*, ed. M. Nussbaum and A. Rorty (Oxford: Clarendon Press, 1992), 93–107.

27 I am deeply influenced by Kahn’s paper, “Aristotle on Thinking,” and the idea that thinking requires the body, or senses, as a condition of self-awareness. But whereas Kahn wants to limit self-awareness to the perceptual domain, I am not convinced that Aristotle has no concept of an “I” that has noetic awareness of what she thinks. This interpretation is, in part, a feature of Kahn’s reading of *noēsis*: “*Noēsis*,” he writes, “is not an act which I perform but an act which takes place in me” (375). Thus on this view, there cannot be an “I” associated with pure noetic acts. If then thoughts belong to an individual, it is through perception that we have awareness of ourselves having them. I am skeptical of this view, not in the least because perceptual

phantasia (as he implies in [B]). But in the case of the emotions, it looks as if thinking is bound up with the body beyond the senses and *phantasia*; for it looks as if emotions involve thoughts.

After arguing that the body is a seat of conscious activity, Aristotle affirms the intuition of his predecessors that the emotions also have their seat in the soul: “And it seems too that all the affections of the soul are with the body (μετὰ σώματος): passion, gentleness, fear, pity, courage, also joy, and both loving and hating. Together with these <the affections of the soul>, the body suffers something” (403a16–19). Notice the contrast Aristotle draws between the affections of the soul and the affections of the body. If the body’s affections are not purely physiological, as the physicalist or functionalist reading would have it, then Aristotle’s claim is that emotions involve both thoughts and qualia. Furthermore, by giving the affections of the soul the names of the emotions, Aristotle indicates that the intellect’s contribution to *pathê* gives them their characteristic nature, or form. I grant that work has to be done to show the plausibility of this interpretation, but if it is correct, then to say that *pathê* are *logoi enuloi* is to say that emotions are thoughts grounded in bodily feelings.

I will say more about the nature of emotions later in this section and the next. For now, it is important to emphasize how Aristotle’s novel treatment of body and soul is instrumental for reconceptualizing his opponents’ etiological account of the emotions: an account, we recall, which gives the body too big of a role in their triggering and too little of a role in our experience of them. By insisting that the living body is ensouled, not only does Aristotle give the body a role in our experiences of them, he also positions himself to explain how sense-perceptions and emotions reflect the individual’s character and beliefs. What is key is that his treatment of body and soul frees him to conceptualize a cooperative engagement that involves no transference of movements and alterations. Insofar as the ensouled body has the capacity for conscious activity, it can form a genuine unity with the intellect: a unity that comes from being governed by and belonging to a single complex power. In turn, this allows Aristotle to insist that experiences like sense-perceiving and emoting involve the coupled activity of the body and intellect – what is needed if sense-perceptions and emotions are to reflect the unity and dispositions of the individual.

That Aristotle treats sense-perception, or rather incidental perception, as an activity of the senses and intellect is implied in his discussion of the intellect in *De Anima* III 4. When answering the question of which faculty discerns that the

content is limited to particulars and, therefore, the senses do not have the means of themselves to make us aware of our thoughts. C. Kahn, “Aristotle on Thinking,” in *Essays on Aristotle’s De Anima*, ed. M. Nussbaum and A. Rorty (Oxford: Clarendon Press, 1992), 359–79.

thing before one is flesh, Aristotle signals that it is the same faculty that discerns the what-it-is-to-be-flesh, only directed towards particular objects (429b10–18). Indeed, this would explain how it is that the pitiable appears only to those who believe in the goodness of people (1385b34–1386a1), and lovers and enemies appear from but little resemblance (460b3–7). It is because sense-perceiving is an activity of the body and the intellect, where the intellect's contribution reflects one's beliefs and the thoughts in its grips.

But what are we to make of the claim that emotions are *logoi enuloi*? On the face of it, there is reason to doubt that emotions involve both thoughts and bodily feelings, as I am suggesting. For the analogy Aristotle draws from the form and matter of a house to the form and matter of anger (403b4–6) suggests that the form of the emotion, its *logos*, is not an element over above the bodily movements, its *hulê*. As the form of a house – shelter against the elements – is not a component over and above its bricks and mortar, so neither should the form of anger – the desire to retaliate (403a30–31) – be a component over and above the boiling of the blood. This is among the reasons Frede and Sorabji offer for denying that the desire to retaliate is a thought (or in fact any type of psychic state) in addition to the changes that are felt in the body.²⁸ Yet the textual evidence in the *Rhetoric* simply does not bear this interpretation out. We see there that emotions are highly complex activities that cannot be explained on the theory of his predecessors.

In the context of describing the pleasures associated with anger, Aristotle makes it clear that anger does not consist of bodily states alone, as Frede and Sorabji supposed. Beyond the feelings taking place in the body, there is a thought and *phantasia* of retaliation, beliefs about oneself and the perpetrator of the slight (which may or may not play out in one's consciousness), and feelings of pleasure. For though anger is characterized by pain (1378a31, 1380b1), Aristotle claims that there is a pleasure to anger that is attested by the poets (1378b5–7). The pleasure of anger has two sources. There is pleasure in “believing (τὸ οἶεσθαι) that one will attain that at which he aims” (1378b2); and “there is a pleasure that follows when the angry are consumed in the thought of retaliation” (διατριβουσιν ἐν τῷ τιμωρεῖσθαι τῇ διανοίᾳ, 1378b8–9). In the former case, the pleasure stems from the belief, however strong, that one is not the worthless clown for which he is taken. And this belief is crucial. Without it, the

²⁸ This is not to say that on Sorabji's and Frede's view anger can be described by the feelings in our viscera alone. What differentiates the feelings of one who is sick from one those of one who is angry is the fact that, in the latter case, bodily states are engendered from a perceived slight and move the individual to pursue revenge. Thus, in the latter case the bodily feelings are for the sake of some end.

thought of relation cannot come to pass: “no one,” Aristotle says, “aims at what seems impossible to him” (1378b3–4). Thus there is pleasure in the thinking of retaliation: for to think it is to believe in one’s self. In the latter case, by contrast, the pleasure is tied to a *phantasia* of revenge that arises upon the thought of revenge (ἡ οὖν τότε γινομένη φαντασία ἡδονὴν ἐμποιεῖ, 1378b9–10). It is a sensual pleasure, as that in dreams, which attends a pleasing rumination.

The fact that anger involves different types of pleasures – one is sensual in nature, the other is grounded in one’s beliefs – implies that the thought and *phantasia* of revenge contribute distinct conscious activities. But because they both provide the same content to the emotion, it looks as if they both provide the emotion’s form. In fact, this was hinted at in *DA* I 1, when Aristotle gives to the affections of the soul the names of the emotions (403a16–19). And, we might note, this reading explains how one’s blood can boil without one feeling anger: one must also think of revenge. Yet if the thought and *phantasia* of retaliation are activities distinct from the boiling blood, then anger’s form must be an element of anger in addition to the boiling of the blood. And this, I shall now argue, can be shown by considering the boiling of the blood: for what we find is that this bodily activity reflects not the desire and expectation of retaliation, but the painful state of mind precipitating the thought and *phantasia* of revenge.

In *On Youth and Old Age* (479b26–32), Aristotle describes the boiling of blood as painful, explaining that the feeling is caused when an increase of heat expands the blood in the heart beyond its normal volume – so that it pounds against the heart’s outer-wall with greater than normal intensity. The boiling of the blood does not then reflect the hope and confidence of revenge: for the hope and confidence that gives rise to the thought of revenge appears to engender nothing but pleasure. In fact, in *Parts of Animals* III 6, Aristotle connects hope and expectation to a different bodily feeling altogether: the jumping of the heart felt when a person anticipates some future good (669a18–21). Indeed, the pain of anger is connected to the slight and the suspicion (which we hope to crush with our thoughts of retaliation) that perhaps we are lacking in ways that would warrant contempt (1379a35–b2). Thus, it would not even be correct to say that the bodily feelings express the thought and *phantasia* of retaliation: the two dimensions of anger are about different things. The thought and *phantasia* is forward looking; the pain and discomfort of the volatilization and expansion of blood is backward facing.

In the next section, I will attempt to explain why Aristotle treats the boiling of the blood as matter to desire for retaliation. What deserves emphasis here is that anger, for Aristotle, involves tightly coupled sub-systems. There is the desire for revenge comprised of a thought of retaliation, a corresponding *phantasia*, and their attending pleasures; there are the processes taking place in the

heart and the veins that accounts for the particular bodily feelings associated with the slight; and then there is the perception of a slight, a perception generated from the mutual engagement of the senses and the intellect. My suggestion, then, is that emotions (like sense-perceptions and even thoughts) are instantiations of a goal-directed system: a system distributed over the senses, the intellect, and the viscera for some particular end. This denial of faculty psychology – the theory that emotions, sense-perceptions, and thoughts are the activity of a single discrete part of the soul – is the idea behind Aristotle’s claim that we do not think with one part, desire with another (411b5–6). Aristotle’s profound insight is that only an intellect that is one with the body, and only a body that is ensouled, can accommodate the complexity of our subjective experiences.

Aristotle and Contemporary Theories of Mind and Cognition

In this last section, I want to take up where we started and revisit the functionalist and physicalist interpretations of the argument from the emotions. There has been a lot of discussion on whether Aristotle has a theory of mental, or psychic, states: the starting point for ascribing either weak physicalism or functionalism to him. Let it suffice to say that the proposed interpretation challenges the notion that *pathê* are psychic states, whose nature Aristotle is interested to explain. What I would like to address in greater detail is the presumption that Aristotle’s theory of the soul was born in response to similar philosophical pressures as functionalism. This is a common misconception that has yet to be set straight. But I will end this section by arguing that even if Aristotle cannot be described as the ancient forerunner of weak physicalism and functionalism, his interest to unify the body and soul and give the body an essential (if subordinate) role in our experience of *pathê* anticipates some of the latest research in cognitive science.

According to advocates of the functionalist interpretation, Aristotle sought to save the phenomena by developing a theory that walked a balance between the extremes of his predecessors. At one extreme, the argument goes, are the natural philosophers, the ancestors of type-type identity theory; at the other extreme is Plato and his various versions of substance dualism. On this interpretive line, Aristotle’s account of *pathê* as *logoi enuloi* demonstrates a commitment to physicalism, (all *pathê* of the soul inhere in the body), while denying the identification of body and soul, (for one can have the bodily condition of anger without being angry). Left without a *pathos*’ subject to

give it its distinctive characteristic, Aristotle offered in its stead the psychic state's functional role.

Our analysis of the argument from the emotions challenges this picture of the forces driving Aristotle's theory of the body and soul. For one, it shows that it is misleading to represent the natural philosophers as the ancient forerunners to type-type identity theory. Though they believed psychic states to be identical, or perhaps reducible, to material states, they did not similarly conceive the soul's states to be identical, or reducible, to the body's states. The soul, in their view, has the power to think, perceive, and move thanks to its own special constitution, which is why, by Aristotle's estimation, they are unable to unify the body and soul. And while Aristotle does challenge the view that *pathê* are identical, or reducible, to physical processes, his target is both Plato and the natural philosophers, as both take *pathê* to be motions of the soul. Indeed, our study reveals that Aristotle emphasizes the connections between Plato and the natural philosophers over their differences.²⁹ Perhaps he had it in mind to both deprecate Plato's innovations and also invalidate Plato and the natural philosophers with a single stroke. But in some cases, it seems as if Aristotle's interest is to show that only a paradigm shift in thinking about the body and the soul can accommodate Plato's theory that the body plays an essential role in our experience of *pathê*. After all, Plato goes to great lengths to describe the reasons for which humans have bodies in the *Timaeus*.

The interest to bring into account the role the body and environment plays in cognition drives some of the most recent research programs in embodied cognitive science. Leaving aside the "the extended mind" theory – the idea that certain features in the environment facilitate cognitive processing and so belong to the mechanisms of cognition – I want to consider briefly the idea that cognition depends upon the body outside the brain as developed by neuroscientist Antonio Damasio. Damasio is especially relevant to our discussion here because he argues that emotions, and in particular the bodily feelings of emotions, play a crucial role in facilitating decision-making and developing skills requisite for practical reasoning.³⁰ What I want to suggest is that Aristotle also regards emotions as critical for practical reasoning and even takes cognitive processing to be dependent upon bodily states.

The catalysts of Damasio's research were patients with prefrontal lobe damage: damage to a part of the brain that is crucial for generating emotions. People with this sort of damage report feeling emotionally flat; they know what

²⁹ See note 11.

³⁰ A. Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (New York: Penguin Group, 1994).

they are supposed to feel, but are unable to feel it.³¹ Additionally, people with prefrontal lobe damage also tend to make poor personal and social decisions. Consider Damasio's description of Elliot, who lost functioning in his prefrontal lobe due to a tumor:

Elliot...was physically capable and most of his mental capacities were intact. But his ability to reach decisions was impaired, as was his ability to make an effective plan for the hours ahead of him, let alone to plan for the months and years of his future. These changes were in no way comparable to the slips of judgment that visit all of us from time to time. Normal and intelligent individuals of comparable education make mistakes and poor decisions, but not with such systematically dire consequences. The changes in Elliot had a larger magnitude and were a sign of disease.³²

Determining that the poor planning and decision making of his patients were not due to failures in other parts of the brain (These individuals performed well on intelligence, memory, arithmetic, and language tests; and in a laboratory setting, they proved themselves to possess ethical principles, could predict the consequences of an action, and could reason to an efficacious end.), Damasio hypothesized that the ability to choose a good course of action from a multitude of possibilities requires bodily feelings that mark images generated in the course of deciding what to do with positive or negative signals. These signals, generated from previous experiences, cause us to rule out certain courses of action and bring our attention to others, so as to narrow down our choices and allow us to learn from past experiences. Without bodily feelings, what Damasio calls "somatic markers," the individual cannot be guided by the predictions of future rewards or punishments and thereby cannot develop strategies for practical reasoning. This leads Damasio to conclude that "[t]he mind is embodied, in the full senses of the term, not just embrained."³³

Aristotle could not have known how emotions affect practical reasoning but he does seem to think that our ability to develop practical wisdom requires having emotions. If we follow the account of M. Heath on natural slaves, then it appears that, on Aristotle's view, natural slaves are deficient in a very particular way: they cannot deliberate well from an end to an action. The reason, he determines, is that their deliberation is not anchored by "a stable conception of the overall good," and as a consequence they "inevitably pursue a series of uncoordinated particular goals"³⁴. (The uncanny similarities between Damasio's

³¹ *Ibid.*, p. 45.

³² *Ibid.*, p. 37.

³³ *Ibid.*, p. 118.

³⁴ M. Heath, "Aristotle on Natural Slavery," *Phronesis* 53 (2008): 243–70 at 251.

patients and Aristotle's barbarians would be too much to explore in this paper, but it is worth pointing that both groups of people are supposedly unable to act with a view to some future or higher good, and resort to making decisions on the basis of the here and now.) According to Heath, the problem lies with their ability to generate fear and anger, *thumos*. Individuals with too little *thumos* are not driven to exercise and develop practical wisdom; individuals with too much *thumos* simply act before they think.

The most significant difference between Aristotle and Damasio regarding how emotions affect practical reasoning is that Aristotle see emotions as crucial catalysts for deliberation, whereas Damasio takes emotions, and bodily feelings in particular, as part of the machinery of practical deliberation. And yet it would be too quick to conclude that cognition, for Aristotle, is not dependent on bodily processes beyond *phantasia*. For when we consider the structure of an Aristotelian emotion, it looks as if bodily feelings assist in our self-understanding and thereby in the processing of our thoughts.

That the body, for Aristotle, plays a constitutive role in the understanding and processing of our thoughts is implied in his treatment of bodily feelings as the matter to the desire to retaliate. For to insist that the boiling blood is matter to the desire for retaliation is to insist that these two components of anger are a unity, forged by the supporting role that the boiling blood plays to the thought and *phantasia* of retaliation. As matter is to form, so too does the boiling blood ground the desire's existence (403b2–3) and serve the desire's end (403b6). Hence it appears that the boiling blood is constitutive of the cognitive state involved in desiring retaliation.

Just how does the boiling of the blood ground the thought and *phantasia* of retaliation, when the two are instantiations of different sub-systems? Part of the answer is physiological. All desires are impulses to act, but the state of being angry is associated with particularly impulsive and risky action. In themselves, the thought and *phantasia* of retaliation are pleasant: they reflect the confidence and hopefulness of the agent, and thus are attended by a certain feeling of pleasure: a skipping of the heart. This means that, alone, they would be unable to motivate the perilous action that is revenge. Heat, however, is a motive force (732a20) and the heart the source of all motion (666b14–15). Thus, if the end of the desire for retaliation is action, then the body has to be driven to act: the blood in the heart has to "boil". In this way, then, the thought and *phantasia* of retaliation cannot exist without the attending bodily state; for in that case the thought of revenge would not be impulse-driving. It would not be a desire for revenge.

The second part of the story is psychological; for we are aware of the urge to act. Were we not, then curbing the impulse to act would be exceedingly difficult.

This is the role, then, that the pain associated with the boiling of the blood plays. The particular sort of pain we feel when our blood beats hard and fast against the heart's outerwall contributes to our awareness and understanding of the thought and *phantasia* we are having and, in this conscious way, motivates us to act. It tells us that the desire comes from a place of pain, that it has importance, and that it needs resolution.

The idea that the human being needs the body to fully cognize the intellect's thoughts and judgments when it is angry has its source in Plato. Recall that in the *Timaeus*, Plato treats bodily movements and feelings as the means by which the irrational part of an individual grasps the intellect's thoughts and desires. Because the appetitive soul cannot understand rational thought – “even if it were in one way or another to have some awareness of them, it would not have an innate regard for any of them” (trans. Zeyl, 71a3–5) – bodily movements apprehended as painful, pleasurable, good, bad, enticing, or discouraging serve to indicate something of the intellect's thoughts and desires. Indeed, the gods devised the liver for this purpose – or so we are told in the *Timaeus*. Not only can the “power issuing from reason” (71b3–4) disturb the liver so as to produce bodily pains and nausea, it can send down encouraging and fearful images.

Aristotle did not accept the idea that the intellect could act as if separated: that it could think of itself and use its body as a tool for communicating with the rest of the soul. But if Aristotle adopted the idea that anger involves bodily feelings, *phantasia*, and thought it is because he too recognizes that a human being is a composite of a sentient body and intellect and thereby cannot comprehend her internal states unless both parts are engaged. But rather than making the body a tool for the intellect – that would only divide – Aristotle incorporates Plato's insight by making the body a constitutive element of cognition. Thus Aristotle may not have anticipated the metaphysics and biology of emotions, but if this interpretation is correct, then his thinking on the body should resonate with theorists working on embodied cognition today.

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