

Rational Powers and Knowledge of Counterparts in Aristotle

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1. Introduction

Some contemporary philosophers in the Aristotelian tradition contend that agents differ from non-agents in that the former possess and exercise two-way causal powers.¹ According to this distinction, non-agents possess powers that have only one type of manifestation. The powers of agents, by contrast, are manifested in two distinct and opposed ways.² In developing this account, two-way powers theorists explicitly draw on Aristotle's distinction between rational and non-rational powers in *Metaphysics* Θ .2 and 5 (see, e.g., Alvarez, 2009, p. 72, n. 16, 2013, p. 109; Steward, 2020, pp. 352–4; Frost, 2020, pp. 1148–1151). Proponents of this approach disagree about the nature of the two 'ways' in which agents manifest their agency (see especially Frost, 2020, and Steward, 2020). There is accordingly disagreement about how we should understand the Aristotelian ideas that anticipate the relevant notion of a two-way power (§§2–3). Nevertheless, all parties seem to agree on this much: a two-way causal power is a *single* power that directly relates to two distinct and opposed ways in which matters might proceed

¹ For this view see Taylor (1966); Hart (1968); Strawson (1986); Geach (2000); Alvarez (2009, 2013); Frost (2013, 2020); Steward (2012, 2020). Lowe (2008, 2013) argues that the will is a two-way power.

² Here I am using 'opposed ways' generically to cover manifestations opposed as contraries (e.g., healing and harming) and those opposed as contradictories (e.g., healing and not healing). See §2 below for further discussion of this distinction.

(see Alvarez, 2013, p. 102; Steward, 2012, p. 155; Lowe, 2013, p. 177; Frost, 2020, p. 1148).

In what follows I argue that Aristotle recognizes no such power. A single rational power, according to Aristotle, is ‘of contraries’ (τῶν ἐναντίων, *Metaph.* Θ.2, 1046b4–5). Medical knowledge, for instance, is ‘of health and disease’ (b6–7). This might mean, and has been taken to mean, that the exercises of a rational power are two opposed changes (*e.g.*, healing and harming) (§4). But although it is true for Aristotle that the *possessor* of a rational power can bring about contrary kinds of change, the manifestations of this rational power are not two contrary changes. Instead, the manifestation of a rational power is a matter of knowing or contemplating the account (λόγος) of one or the other of two ‘opposed’ items (ἀντικείμενα), or ‘counterparts’ as I shall call them (§5). Thus, when Aristotle claims that rational powers are ‘of contraries’ he means only that a single knowledge enables one to contemplate these two distinct and opposed objects of knowledge. Nor is the fact that a single knowledge relates to these two distinct objects due to any special fact about human agents. The natures of the counterparts themselves are what explain the ‘two-way’ character of knowledge. The knowledge of one counterpart (C1) enables one to know the other (C2) because what it is to be C1 is part of what it is to be C2 (§6).

Thus, although Aristotle thinks that the possessor of a rational powers can bring about two opposed kinds of change, he denies that the rational power in question is the (sole) cause of these opposed changes. Instead, multiple powers are involved in a rational agent using their knowledge so as to bring about one or the other of two opposed changes (§7). Rational powers, like all causal powers, are origins of change (*Metaph.* Θ.1, 1046a9–11). But what Aristotle means in calling a rational power an origin of change is just that the account of C1 is one starting point that, in cooperation with others, is responsible for the production of C1 or C2.

2. Two Kinds of Two-Way Power

Two-way powers theorists advance two distinct views about the nature of the opposed results that agents are capable of achieving. In tracing these ideas back to Aristotle, these theorists accordingly emphasize different aspects of Aristotle’s thought. According to one prominent view, agency is a two-way power to act or refrain from

acting.³ For instance, Maria Alvarez, writes ‘if acting is a two way power’ then ‘whenever it is in our power to act it is also in our power not to act’ (Alvarez, 2013, p. 110). Helen Steward similarly identifies two-way powers as those that ‘leave open two ways in which the agent might proceed: to act or not to act’ (Steward, 2020, p. 354).⁴ On this view, the two ‘ways’ in which a power manifests are opposed as *contradictories*;⁵ such a power is

(Power for Contradictories) a power to φ or not to φ (where φ is an action).

A second proposal by Kim Frost attempts to remedy what he regards as the shortcomings of the first proposal. According to Frost, the two exercises of Powers for Contradictories are too different to assign to a single power. For there should be a unified description of the distinct manifestations of such a power, if it is a *single* power; if there is not, then we are likely dealing with a plurality powers. However, as is reflected in the first view’s tendency to specify the two ‘ways’ disjunctively, there does not appear to be a unified description of the manifestation types (Frost, 2020, p. 1142 & p. 1149). In this respect, Aristotelian rational powers are more promising candidates for being two-way powers. For Frost, an Aristotelian rational power is

(Power for Contraries) a power to φ and to ψ (where φ and ψ are contrary actions).

Both exercises of a Power for Contraries are cases of bringing about a change: medicine, for example, is a power to bring about health and disease in a patient (Frost, 2013, pp. 613–14, 2020,

³ See also Taylor (1966); Hart (1968); Strawson (1986); Geach (2000); Alvarez (2009, 2013); Steward (2012, 2020). See Lowe (2008, 2013) for a similar view about the will.

⁴ Cf. Lowe (2008, p. 8).

⁵ Frost (2013, 2020, p. 1146) has disputed that the manifestations of these powers are not ‘opposed,’ and Steward (2013, pp. 690–91) has conceded the point. Both authors appear in this context to use ‘opposite’ to denote contraries. For φ -ing and not- φ -ing are opposed as contradictory opposites. They do not, however qualify as contraries, which, for Aristotle, are maximally different members of a common genus (*De int.* 14, 23b21–22; *Metaph.* Iota 4, 1055a4–5).

p. 1148). However, these two changes are unified in a way that justifies assigning them to a single power. Frost, summarizing Aristotle's remarks at *Θ.2*, 1046b7–15 writes 'the healer knows how to produce health, but such knowledge consists in grasp of a *logos* or rational account, and so is by implication knowledge of the privation of health, and so can also be employed to that contrary end' (Frost, 2020, p. 1148). The view that rational powers are Powers for Contraries is also widespread in the scholarship on *Metaphysics Θ*. According to Charlotte Witt, rational powers 'are capable of two contrary effects' (Witt, 2003, p. 65). Stephen Makin similarly writes that 'a rational capacity to bring about φ [is also] the capacity to bring about the privation of φ ' (Makin, 2006, p. 47). And Jonathan Beere glosses a rational power as 'a single power to bring about either of two [*sc.* contrary] results' (Beere, 2009, p. 78). Because the locutions 'capable of' and 'power to' are typically used to identify the exercises of a power (what the power in question brings about), these scholars seem to attribute to Aristotle the view that the exercises of a single rational power are both cases of producing or bringing about one or another contrary change. I will consider this second proposal in §§4–7. In the following section, however, I first evaluate the contention that Aristotle countenances Powers for Contradictories.

3. Powers for Contradictories

Alvarez finds Aristotle's commitment to a Power for Contradictories in a remark that Ross's translation renders: 'where it is in our power to act it is also in our power not to act' (*NE* III.5, 1113b7–8; Alvarez, 2013, p. 108).⁶ The expression translated 'in our power' ($\acute{\epsilon}\varphi$ ἡμῖν) is not, however, connected to Aristotle's word for 'power' ($\delta\acute{\upsilon}\nu\alpha\mu\iota\varsigma$) and in what follows I will instead translate it 'up to us.' But even apart from this linguistic consideration, context does not support understanding this statement as a claim about a single power with two opposed manifestations. This claim supports Aristotle's conclusion that vice is up to us ($\acute{\epsilon}\varphi$ ἡμῖν, 1113b6). Before arguing that vice is up to us, Aristotle first shows that virtue is (III.5, 1113b3–6). This first argument begins with the previously-established conclusion that

⁶ Alvarez also directs readers to a parallel passage in the *Eudemian Ethics* (*EE* II.6, 4–9).

(1) the objects of deliberation (βούλησις) and choice (προαίρεσις; *i.e.*, the desire that results from deliberation⁷) are actions that promote ends that we wish to realize (*NE* III.5, b3–5; *cf.* *NE* III.3, 1113a9–14).

Aristotle adds that

(2) virtuous actions promote an end that we wish to realize (*III.5*, 1113b5–6).

Apart from these two explicit premises, Aristotle also implicitly relies on his earlier conclusion that

(3) deliberation and choice exclusively concern things that are up to us (*NE* III.3, 1112a21–34; *cp.* *III.3*, 1113a2–4).

Aristotle's argument for (3) clarifies that the expression 'the things up to us' denotes one of four domains of things caused: in addition to things caused by nature, necessity and chance, Aristotle maintains that human beings are causes of a distinct class of effects, which he calls 'the things up to us' (1112a30–33). Because we do not deliberate about or choose things caused by nature, necessity or chance, Aristotle maintains that deliberation and choice exclusively take this fourth class of effects as their objects (1112a21–34; *cp.* 1113a2–4). From (1) and (3) it follows that

(4) actions that promote ends that we wish to realize are up to us.

And from (2) and (4) Aristotle can infer that

(5) virtuous actions are up to us (1113b6).

That is, virtuous actions belong to the class of things of which we, rather than nature, necessity or chance, are the cause.

Having shown that virtuous actions are up to us, Aristotle adds: 'and in a similar way vice [is] also [up to us]; for

(6) [in those cases] in which acting is up to us, not acting is also [up to us]' (*NE* III.5, 1113b6–8).

⁷ Choice (προαίρεσις) is a desire to pursue a particular means of achieving a given end that arises as a result of *having deliberated* about the means of achieving that end in action (see *EE* II.10, 1226^b17; *cf.* *NE* II.3, 1113^a10–11).

The purpose of (6) – which Alvarez cites as support for Aristotle's commitment to a Power for Contradictories – is to justify including vicious actions among the things up to us. Aristotle additionally relies on the premise that

(7) if φ -ing in circumstances C is virtuous (or vicious), then not φ -ing in C is vicious (or virtuous) (1113b8–11).

From (5)–(7) Aristotle can infer that vicious actions are up to us (1113b7–8). The argument does not require that we understand (6) as a claim that acting and not acting are manifestations of a single power. For when Aristotle claims that action A and its omission are up to us, he means only that we (rather than necessity, nature or chance) are the cause of A and its omission. The idea that we are also the cause of what we fail to do seems to be a version of Aristotle's idea that the absence or omission of the cause of E is the cause of the opposite of E; for instance, the absence of a ship captain who would have steered the ship to safety is the cause of shipwreck (*Metaph.* Δ .2, 1013b11–16; *Phys.* II.3, 195a11–14). Aristotle's commitment to 6 suggests that he would also assign the shipwreck to a captain who is on board and could have steered the ship to safety but does not do so. Based on this principle, Aristotle can similarly assign the virtuous failure to act on an unjust command to Socrates, who could have also acted viciously by obeying it. The idea that (6) we are the cause of not acting when acting is up to us – together with (7) – is all that Aristotle needs to reach his desired conclusion: that we (rather than to necessity, nature or chance) are the causes of virtuous (or vicious) omissions, in addition to vicious (or virtuous) actions. We need not additionally attribute to Aristotle the idea that act and omission are exercises of one and the same power.⁸

⁸ The same basic argument applies to Aristotle's argument in *Physics* VIII.4 that the movement of heavy and light elements is not 'up to' those elements but is instead due to nature (255a1–10). Here Aristotle claims that it is a distinctive feature (*ἴδιον*) of ensouled beings that they are causes of their own movement (a6–7), (here notably including not only humans, as in *NE* III.3, but animals more generally as the causes of the things 'up to oneself'). Aristotle adds that things that cause their own motion are also causes of their own standing still: 'I mean, for example, if [a thing] is a cause of its own walking, it is also [the cause] of [its own] not walking' (a8–9). But here we likewise need not attribute to Aristotle anything more than his contention that if C is the cause of E, then the absence or omission of C is the cause of E's opposite. The passage only commits Aristotle to the idea that a living being's movement and failure to move are both caused by

Steward has recently argued that Aristotle evinces a commitment to Powers for Contradictories in the following passage:⁹

...as regards potentialities of the latter kind [*i.e.*, those non-rational potentialities which are present both in the living and in the lifeless], when the agent and the patient meet in the way appropriate to the potentiality in question, the one must act and the other be acted on {a5–7}, but with the former kind [*i.e.*, those potentialities which are present only in the living], this is not necessary {a7–8}. For the non-rational potentialities are all productive of one effect each, but the rational produce contrary effects, so that they would produce contrary effects at the same time; but this is impossible {a8–10}. That which decides, then, must be something else; I mean by this, desire or choice {a10–11}. For whichever of two things the animal desires decisively, it will do, when it is in the circumstances appropriate to the potentiality in question and meets the passive object {a11–13}. (*Metaph.* Θ.5, 1048a5–13, Ross trans.¹⁰)

Steward suggests that this passage focuses on a different distinction than that between non-rational one-way powers and two-way rational powers.¹¹ According to Steward, here Aristotle

the living being itself, rather than by nature (or necessity or chance). We need not additionally attribute to Aristotle the idea that there is a single causal power that has as its exercises moving and standing still.

⁹ See Steward (2020, pp. 352–4). Alvarez (2013, p. 109 n. 17) takes inspiration from the same passage.

¹⁰ I quote the passage in the Ross translation (1984) that Steward uses. I also include with Steward's insertions in square brackets. References to corresponding lines in the Greek text in curly brackets are my own insertions.

¹¹ Steward claims that 'the conception of two-way power which I have outlined [a power for contradictories] is arguably also there [*sc.* in Aristotle], alongside the distinction between rational and nonrational powers' and then introduces the Θ.5 passage above as occurring 'a little later on in *Metaphysics* Θ' (p. 352), by which she likely means that the Θ.5 passage occurs shortly after the canonical discussion of the distinction between rational and nonrational powers in Θ.2. This suggests that she understands Θ.2 and Θ.5 to be concerned with different distinctions. In discussing Θ.5 1048a5–13 she moreover argues that it is better to understand the passage as discussing the difference between one-way powers and powers for contradictories 'although Aristotle may appear here to be contrasting one-way powers...such as water's power to dissolve common salt, say, with potentialities he calls "rational"' (p. 352). The two distinctions are, however, closely

distinguishes between one-way powers and ‘another interesting set of powers *which he takes to be manifested more widely than merely in the human case*, cases in which what he calls “desire” is operative’ (Steward, 2020, p. 352 – italics Steward’s); these latter powers, moreover, are those that ‘leave open two ways in which the agent might proceed: to act or not to act’ (p. 354). Steward bases this suggestion on three considerations. The first is the idea, which is reflected in Steward’s square-bracket insertions into Ross’ translation, that ‘the latter kind’ (τοιούτως, a5) refers to powers that are present in both living and non-living things and ‘the former kind’ (ἐκείνως, a7) to those present only in living things. The ‘former’ powers – which Steward takes to be those present only in living things – leave open whether one acts or not (a11–13). As further evidence for this proposal, Steward writes that choice – the decisive factor in whether ‘the former’ powers get exercised – is ‘a capacity Aristotle standardly permits to some nonhuman animals’ (Steward, 2020, p. 352). Hence, these powers, unlike rational powers, are not restricted to human beings. Finally, Steward draws attention to the fact that ‘it is “the animal” (and not only the human being) who does whatever it desires decisively’ (Steward, 2020, p. 352).

Steward’s understanding of ‘the former’ and ‘the latter’ is based on the lines that immediately precede the quoted passage, where Aristotle writes, ‘it is necessary that the former are in living beings and the latter are in both [*sc.* living and non-living beings]’ (1048a4–5). However, if we read back one clause further, it becomes clear that ‘the former’ and ‘the latter’ here refer to rational and non-rational powers respectively: ‘some things [the antecedent of ‘the former’] are capable of producing change on the basis of an account and their powers are rational, others [the antecedent of ‘the latter’] are non-rational and their powers are non-rational’ (1048a2–4). Secondly, Aristotle explicitly restricts choice (προαίρεσις) to adult human beings (*EE* II.10 1226b16–22; *NE* III.2, 1111b8–10). And although desire (ὀρέξις) is a generic notion that includes both rational and non-rational forms of motivation (*EE* II.7, 1223b26–27), Aristotle is clear in the lines that immediately follow the above passage that ‘desire or choice’ is a condition for the exercise of rational powers: ‘therefore, it is necessary that whenever anything that is *capable on the basis of an account* [*i.e.*, any possessor of a rational

related: Steward understands Aristotle’s rational powers as one possible form of the broader class of powers that ‘leave open two ways in which the agent might proceed’ (p. 354).

power, cp. a2–3] desires that for which it has the power and it is in the appropriate condition, it does this’ (a13–15). Finally, although Ross’ translation includes a reference to ‘the animal’ in the translation of a11–13, Aristotle omits the subject of the verbs ‘desire’ and ‘do,’ writing literally ‘whichever of two [*sc.* contrary changes] [it] desires decisively, [it] will do this’ (a11–12). However, the conclusion that immediately follows this remark (a13–15, quoted in the sentence before last) clarifies that the subject of these verbs is a person that is ‘capable on the basis of an account,’ that is, the possessor of a rational power (cp. 1048a2–3).

Θ.5, therefore, does not introduce a distinction between non-rational powers and the powers of living beings that ‘leave open two ways in which the agent might proceed: to act or not to act’ (Steward, 2020, p. 354). Here Aristotle instead argues that the possessor of a rational power can only bring about one or the other of two contrary changes that they are capable of producing *if they desire or choose to do so*. One might think that, even on this reading, desire and choice are Powers for Contradictories. For these appear to be the cause of *whether or not* one brings about one or the other contrary change. We cannot, however, infer from this passage that Aristotle is committed to the idea that desire or choice is a single power to φ or not to φ . For, according to this argument, whether one’s desire to φ results in φ -ing depends not only on one’s desire to φ , but also on one’s antecedent possession of a rational power that enables one to φ (or ψ). Desire and choice, according to Θ.5, are thus not *single* powers to φ (or ψ) or not; they are instead partial causes of φ -ing (or ψ -ing), which require the cooperation of a rational power also acting as a partial cause in order for φ -ing (or ψ -ing) to occur.

There are further passages that one might take to evince Aristotle’s commitment to Powers for Contradictories.¹² But none of these passages convincingly shows that the power to act or not to act is distinctive kind of causal power. For Aristotle presents his official study of causal powers, or ‘origins of change in something else’ (Θ.1, 1046a10–11), in *Metaphysics* Θ.1–5. And according to these chapters, causal powers come in just two kinds: non-rational powers that

¹² For instance, *Physics* VIII.4, 255a1–10 (on which see n. 8 above). Another passage that might be read along these lines is *Metaphysics* Θ.8, where Aristotle claims that the same power is *for contradictories* (1050b6–14). But because Aristotle advances this as a claim about *all powers* (including non-rational and passive powers) it is better to take it as the claim that all powers can be either in a state of being exercised or in a state of not being exercised.

bring about one change only, and rational powers, which are ‘of contraries’ (Θ.2, 1046b4–7). The absence of Powers for Contradictories from these chapters makes it unlikely that Aristotle recognizes them as a distinctive kind of causal power. Rational powers, on the other hand, are both ‘origins of change in something else’ and ‘of contraries.’ They appear to be more likely Aristotelian candidates for a two-way power: a single power whose exercises are two contrary changes. In the remaining sections of the paper, however, I argue that rational powers are not Powers for Contraries.

4. Rational vs. Non-Rational Powers (Θ.2, 1046b4–15)

In *Metaphysics* Θ.2, Aristotle distinguishes between rational and non-rational powers as follows (1046b4–15):

[T1]: All rational [powers are such that] the same [powers are] of contraries, but non-rational powers [are such that] a single [power is] of a single [object]; for instance, that which is hot is of heating alone, but medical expertise is of health and disease [b4–7]. And the explanation for this is that knowledge is an account (λόγος), and the same account discloses the object and its privation, except not in the same way [b7–9], and it is in a way of both but in another way rather of the positively existing thing (τοῦ ὑπάρχοντος), so that it is necessary that kinds of knowledge of this sort are also of contraries, and of the one [contrary] in its own right (καθ’ αὐτὰς) and of the other not in its own right [b9–12]. For the account is of the one [contrary] in its own right and of the other in a certain way accidentally (τρόπον τινὰ κατὰ συμβεβηκόσ) [b12–13]. For [the account of the primary object] discloses the contrary by denial *i.e.* by privative negation (ἀποφορᾶ) [b13–14]. For the contrary is the primary privation, and this is the privative negation of the [primary object] [b14–15].¹³

According to this passage, rational powers differ from non-rational ones in that the former are ‘of contraries’ whereas the latter are ‘of one thing only’ (b4–7). Aristotle supports this distinction by noting that knowledge is an account (λόγος) and that the same account discloses both an object (F^+) and its privation (F^-) (b7–9). From this fact about knowledge in general it follows that ‘kinds of

¹³ Unless otherwise noted, all translations are my own.

knowledge of this sort', *i.e.*, rational powers, are also 'of contraries' (b10–11). Throughout this passage, Aristotle repeatedly adds the qualification that knowledge in general (b9–10) and rational powers in particular (a11–12) do not relate to a thing and its privation in the same way (b9–10; 11–12). In b12–15 Aristotle explains this qualification in greater detail: the account of F^+ accidentally (κατὰ συμβεβήκοσ) discloses F^- , by which he appears to mean that this account discloses F^- *indirectly*, or by way of negation.¹⁴

Scholars typically take the claim that rational powers are 'of contraries' to describe the relation between a power and two contrary changes.¹⁵ According to this interpretation, Aristotle maintains that a rational power has as its manifestations two distinct and contrary changes: making something else F^+ and making it F^- . Three considerations support this reading. First, rational powers are 'origins of change in something else' (Θ.1, 1046a10–11; Θ.2, 1048a36–b4). Secondly, Aristotle's example of a non-rational power – 'the hot thing is of heating' – clearly has a change as its exercise. This makes it natural to read Aristotle's example 'medicine is of health and disease' analogously. Third, when Aristotle rehearses his distinction between one- and two-way powers in Θ.5 he claims that all non-rational powers are such that 'a single power is productive (ποιητική) of a single thing, whereas [rational powers] are of opposites' (1048a8–9). The second clause might simply elide the word 'productive',¹⁶ in which case this would amount to a direct assertion that rational powers are Powers for Contraries.

Despite the attractions of this reading, I will argue that the pertinent remark instead concerns the relation between knowledge and its objects. The way that Aristotle explains the distinction between one way and two-way powers provides initial support for this suggestion. Rational powers are 'of contraries' because knowledge is an account, and the account of F^+ (*e.g.*, health) also discloses (δηλοῖ, b8; b14), indirectly, F^- (*e.g.*, disease) (b7–9). From this fact about knowledge in general, it follows that 'kinds of knowledge of this sort', *i.e.* rational powers, are also of contraries (b10–11). These remarks suggest that when Aristotle claims that a single rational power is 'of contraries' he means only that knowledge of F^+ discloses both F^+ and

¹⁴ For this meaning of 'accidentally' in Aristotle see *An. post.* 1.4 73b10–16; *Met.* Δ.18, 1022a32–5; Δ.30, 1025a21–5. See also Makin (2006, p. 55), to whom I owe those references.

¹⁵ For this reading, see Witt (2003, p. 63); Makin (2006, p. 47); Beere (2009, p. 78); Frost (2013, pp. 613–14; 2020, p. 1148).

¹⁶ See Ross (1984, p. 1655) and Makin (2006, p. 6).

F⁻. Thus, by contrast with non-rational powers, where the power relates directly to a single change, the manifestations of a rational power are both cases of knowing or contemplating one or the other of two distinct and opposed objects.¹⁷ According to this reading, a rational power is not an *immediate* origin of change in something else. The production of contrary changes is a more complicated process involving a plurality of powers. Aristotle explains this process in the passage that immediately follows T1 (Θ.2, 1046b15–24). But before discussing that passage (in §7), I first defend attributing this reading to Aristotle (§5) and explain why he endorses this view (§6).

5. ‘Knowledge of Counterparts is the Same’

In Θ.2, Aristotle explains his claim that rational powers are ‘of contraries’ by appealing to the fact that knowledge (ἐπιστήμη) is an account that discloses both a thing and its privation (1046b7–10). This is one instance of an idea to which Aristotle frequently appeals under the slogan ‘Knowledge of Counterparts (ἀντικείμενα) is the Same’ (henceforth: KCS).¹⁸ Importantly for present purposes, KCS is a view about the relationship between knowledge and the counterparts that it enables one to contemplate. Because contemplative thought, for Aristotle, does not initiate actions (*DA* III.10, 432b26–9; *PA* 1.1, 641b4–8; *NE* VI.2, 1139a35–6; see §7 below), KCS is not a thesis about the relation between knowledge and action; it is instead the view that the knowledge by which one contemplates one member of a pair of counterparts also enables one to contemplate the other.

¹⁷ Ross’s (1924, II. 242) comment on Aristotle’s claim at 1046b4 that ‘all rational powers are of contraries’ contains a succinct statement of the proposal that I defend in the remainder of this paper: ‘Aristotle is not asserting contingency in the sphere of rational powers – asserting that precisely the same cause can produce opposite results. Opposite results may supervene on a single λόγος, but it has not been their sole cause; διάνοια αὐτὴ οὐθὲν κινεῖ [‘thought itself moves nothing’] (*E.N.* 1139a35) desire or choice turns the scale (1048a10). The λόγος has been accompanied in the one case by the desire, say, to cure, in the other by the desire to kill, and this accounts for the difference in the result.’

¹⁸ *Top.* I.14, 105b5–6; II.3, 110b20; 8.1, 155b30–32; VIII.14, 163b36–164a2; *An. pr.* I.1, 24a21; I.36, 48b4–5; I.44, 50a19–22; *Phys.* VIII.1, 251a30; *DA* III.3, 427b5–6; *Metaph.* Γ.4, 1004^a9–20; M.4, 1078^b25–7; *NE* V.1, 1129^a11–16.

I begin with *Metaphysics* Γ.2, where Aristotle invokes KCS in his discussion of first philosophy, the purely theoretical science of being *qua* being. Having first argued that essential attributes of being such as sameness, similarity and equality are among the objects of first philosophy (1003b32–1004a2), Aristotle adduces KCS in order to show that this science also studies the *counterparts* of those attributes:

[T2]: Since [*sc.* it is the task] of a single [*sc.* science] to contemplate (θεωρῆσαι) counterparts (τάντικείμενα), and plurality is the counterpart of the one [a9–10] – [*sc.* it is the task] of a single [*sc.* science] to contemplate the denial (ἀπόφασις) and privation (στέρησις) because the one [thing] of which [it] is the denial or privation is contemplated in both cases [a10–12]. For we either say [*sc.* in the case of a denial] unqualifiedly that that object does not belong, or [*sc.* in the case of a privation, we say qualifiedly that the object does not hold] of a certain genus [a12–13]; in the latter case, then, {some differentia is added to the one apart from what is there in the denial}¹⁹ [a13–14]. For the denial is the thing's absence, but in the case of the privation a certain nature comes in too as the subject of which the privation is stated [a14–16] – [...] it follows that it is also [*sc.* the task] of the [*sc.* science] mentioned to be well acquainted with (γνωρίζειν) the counterparts of the things mentioned earlier [*i.e.*, sameness, similarity, equality], that which is different and dissimilar and unequal [...] [a17–20]. (*Metaph.* Γ.2, 1004a9–20)

As in Θ.2, Aristotle here proclaims that because knowledge in general is related to two distinct and opposed objects (a9–10) – a claim that he defends in a long digression (a10–16) – the same is true of the specific kind of knowledge in which he is interested (a17–18; cp. Θ.2, 1046b7–12). Here, however, Aristotle's target is a purely theoretical form of knowledge: it is a hallmark of the science of first philosophy that it has nothing to do with production (*Metaph.* A.2, 982b11–28). This form of knowledge relates to its objects by *contemplating* (θεωρῆσαι, a10) or by *being well acquainted with* (γνωρίζειν, a20) them.²⁰ KCS – the thesis to which Aristotle appeals at the beginning of this passage (a9–10) – thus appears to describe acts of

¹⁹ Both Ross (1924) and Jaeger (1957) suggest that the Greek text corresponding to the words in curly brackets is corrupt.

²⁰ On γνωρίζειν as good acquaintance – see Moss (2022).

contemplation: what knowledge does is contemplate, or make one well acquainted with, counterparts (ἀντικείμενα).

Aristotle uses the term ‘counterparts’ to describe a generic class of items that includes contraries, contradictories and relatives (*Cat.* 10, 11b17–19; *Metaph.* Δ.10, 1018a20–22).²¹ The long digression in the middle of T2 (a10–16) explains the distinct ways in which a single knowledge relates to two kinds of counterparts, namely, contradictories and contraries. Aristotle appears to have the latter in mind when he speaks about a thing and its privation (στέρησις), (a10–12; a15–16). For Aristotle takes one member of a pair of contraries to be the privation of its counterpart *within a determinate genus* (*Metaph.* Γ.6, 1011b18–20; I.4, 1055b3–9). For instance, disease is the privation of health *in a living body*. And Aristotle likely adverts to such an underlying subject when he distinguishes privation from denial by claiming that the former additionally involves a genus (a13; cp. Γ.6, 1011b18–20), differentia (a14; cp. I.5, 1056a35–b2) or nature (a16; I.4, 1055b3–6) of which the privation is asserted. One contrary, then, is a *qualified negation* of its counterpart: it is the denial of the other *within a specific genus*. By contrast, when Aristotle speaks about a thing and its denial (ἀπόφασις) he refers to contradictories: a thing and its *unqualified negation*. According to this explanatory digression, then, KCS applies to both kinds of counterpart: a single knowledge contemplates not only a thing and its *qualified negation*, or contrary; knowledge of one member of a contradictory pair also makes one well acquainted with its denial, or *unqualified negation*.

Although it is relatively clear why the account of one contrary discloses its qualified negation, the proposal that KCS applies to contradictories presents difficulties. Consider for instance the contraries health and disease and suppose that health is the due measure (συμμετρία) of hot and wet elements in a living being (Ps. Alex. *In Ar. Metaph.* 569, 27–28). Unqualified negation would yield the wholly uninformative account that disease *is not* a due measure of hot and wet elements in a living being. This is likely the implication that Aristotle seeks to avoid when he writes in Θ.2 that the account of one contrary ‘discloses its contrary by denial *i.e. by privative negation* (ἀποφορᾷ)’ (13–14). This use of the term, which usually means tax

²¹ The class also includes possession/privation pairs (*Cat.* 10, 12a26ff), but I will not consider these counterparts in what follows. I translate ἀντικείμενα ‘counterparts’, instead of ‘opposites.’ Although the latter is a suitable Latinate equivalent to the Greek, it is awkward to describe relatives (the greater/the lesser) as ‘opposites.’

or rent, is otherwise unattested. But Aristotle's concern with contraries in this passage suggests that ἀποφορά denotes the specific kind of term-negation that he takes to be a linguistic marker for privations (*Metaph.* Δ.22, 1022b32–3). This kind of negation delivers a more promising account, according to which disease is a *lack of due measure* (ἄσυμμετρία) of hot and wet elements in a living being (Ps. Alex. *In Ar. Metaph.* 569, 28–29).

Because unqualified negation does not, in general, illuminate a thing's negative counterpart, I suggest that Aristotle restricts the class of items whose counterparts are illuminated through *unqualified* negation to items in the science of being *qua* being. In T2 Aristotle deploys KCS in connection with three essential attributes of being: sameness, similarity and equality (1004a17–20). For Aristotle, these attributes and their contraries are features of specific categories of being: sameness and difference hold of things whose substance is, or is not, one (*Metaph.* Δ.15, 1021a11), being similar and dissimilar apply to a different category of beings, namely qualities (*Cat.* 8, 11a15–19) and quantities alone admit of being equal and unequal (*Cat.* 6, 6a26–35). Because first philosophy studies each of these categories of being (in so far as they are beings), it studies each of these attributes and their contraries. However, because first philosophy concerns itself with *all* beings, it will also consider the contradictory opposites of these attributes. For the fact that the unqualified negations of sameness, similarity and equality hold of all items in categories *other than* the one mentioned in its definition also falls within the purview of first philosophy. Aristotelian metaphysicians know, for instance, that things are *equal* iff their quantity is *one* (*Metaph.* Δ.15, 1021a12). The qualified negation of this definition – negation within the genus in question – discloses inequality: things are *unequal* iff they are *not-one* in quantity. But the unqualified negation of this definition, according to which things are *not equal* iff they are *not one-in-quantity* discloses an important fact about all beings in non-qualitative categories: 'equal' and 'unequal' do not apply to them.

I thus propose that the long digression in T2 (a10–16) treats two versions of KCS, which apply to two distinct kinds of counterparts. Special sciences like medicine concern a specific genus of being (*Metaph.* E.1, 1025b4–13) and hence study *contraries* such as health and its privation. But first philosophy studies all beings just insofar as they are beings, and hence studies not only attributes and their contraries, which apply to specific categories of being, but also concerns itself with the unqualified negations of those attributes, which apply to all beings outside of the genus in question. But most

important for present purposes is the fact that both versions of KCS in T2 concern acts of contemplation: if one possesses the account of one contrary or contradictory, then one can also contemplate, or be well acquainted with, the corresponding privation or unqualified negation, respectively.

Aristotle's applications of KCS to relatives likewise confirm that it is a thesis about acts of contemplation. One clear commitment to this idea occurs in *Parts of Animals* 1.1, where Aristotle addresses general systematic questions about natural philosophy, the science that studies things with 'natures', or internal origins of change and stability (*Phys.* II.1, 192b8–15). Here Aristotle notes that the natural philosopher must study soul, since soul is an internal origin of change and stability for living beings. There is, however, a puzzle about the extent to which the natural philosopher must discuss soul:

[T3]: In view of what was said just now, one might wonder whether [it is the task] of natural science to discuss all soul, or some [part] (a32–4). For if [it discusses] all, no philosophy remains besides natural science (a34–6). For reason (νοῦς) is of the objects of reason. So that natural science would be knowledge about everything (a36–37). For [it is the task] of the same [*sc.* kind of scientific knowledge (ἐπιστήμη)] to contemplate (θεωρεῖσθαι) reason and its objects, if in fact they are relatives and the same study is in every case of relatives (ἡ αὐτὴ θεωρία τῶν πρὸς ἄλληλα πάντων), just as is in fact the case concerning perception and perceptible objects (b1–4). (*PA* 1.1, 641a32–b4)

The result that natural science concerns *everything* is supposed to be absurd because Aristotle wants to deny that the objects of natural science exhaust reality (*Metaph.* Γ.3, 1005a29–b5). In order to derive this absurd result, Aristotle assumes

(8) reason and the objects of reason are relatives (641b2)

and

(9) the same science is 'of relatives' (b2–3).

If we then assume for reductio that

(10) natural philosophy concerns itself with all soul (*i.e.*, with reason in addition to nutrition and perception) (a34–5)

then the absurdity in question follows, so long as we supply the suppressed premise that

(11) reason thinks *everything* (i.e., there is no restriction on the possible objects of thought (*DA* III.4, 429a18)).

What is important for present purposes is that Aristotle does not solve this alleged problem by denying (8) or (9). Instead, in what follows, he denies (10): unlike the nutritive and perceptive parts of the soul, the rational part of the soul *is not* an origin of motion (κινήσεως ἀρχή, 461b4–10; I will return to this idea in §7 below).²² Hence, reason does not fall within the purview of the study of nature. And the idea that there is a single science that studies each pair of relatives remains standing.

The idea that a single kind of scientific knowledge contemplates both a psychological activity and its correlative objects is in fact a central organizing principle of Aristotle's investigation of the soul in *De Anima*. The following programmatic passage sets out Aristotle's proposed method for studying each kind of soul (*DA* II.4, 415a14–22; cf. *DA* I.1, 402b10–16):

[T4]: It is necessary for the one who intends to conduct an investigation about these things [*sc.* kinds of soul] to grasp what each of them is (a14–15) [...] And if it is necessary to state what each of them is, for example, what the rational capacity or the perceptual capacity or the nutritive capacity is, we must further state first what thinking and what perceiving is (a16–18). For activities and actions are prior in account (πρότερον...κατὰ τὸν λόγον) to powers (a18–20). But if this is so and their counterparts (ἀντικείμενα) must, furthermore, have been contemplated (τεθεωρηκέναι) prior to them, it would be necessary, for the same reason, first to define (διορίσαι) these, for example nourishment, perceptible object and object of thought (a20–22).

This passage sets the program for Aristotle's treatment of the various powers of the soul. In order to know (e.g.) what the nutritive power is – in order to grasp its account – one must first understand the activity of nutrition. For nutrition is 'prior in account' to the nutritive capacity (*DA* II.4, 416b3–19). Thus, in order to know what the nutritive capacity is, we must first understand nutrition. However, we must additionally contemplate the 'counterpart' of nutrition – the objects of nutrition – before we can grasp the account of nutrition itself (a20–21). This, Aristotle claims, follows

²² For further discussion of this problem and its solution see Charlton (1987, pp. 410–11); Lennox (2001, pp. 142–4); and Kullmann (2007, pp. 309–310).

for the same reason (a21–2), namely, that the objects of nutrition are ‘prior in account’ to the activity of nutrition. In the following chapters, Aristotle follows this agenda in defining the major kinds of soul: first for the nutritive soul (*DA* II.4), then for the various perceptual powers that comprise the perceptual soul (II.7–11), and finally for the rational soul (*DE* III.4).²³

As we saw in T2, in T3–4 KCS is clearly a commitment about knowledge and the objects with which it makes one well acquainted: knowledge of the object of a given perceptual activity enables one to grasp the account of the perceptual activity in question. When Aristotle invokes a version of KCS in *Θ*.2 in order to support his claim that a single rational power is ‘of contraries,’ we should similarly understand the latter as a claim about acts of contemplation: the account that makes one well acquainted with one contrary also enables one to contemplate its counterpart.

6. Counterparts and Priority in Account

Aristotle’s thesis that rational powers are ‘of contraries’ does not reflect a fact about human agency: it is not because of any special fact about humans that knowledge relates to these two distinct objects. Instead, knowledge of one counterpart (C1) discloses the other (C2) because the account of C2 contains the account of C1.

According to T4, there is a hierarchy of priority relations between (a) a perceptual power, (b) a perceptual activity and (c) the corresponding object of perception. Aristotle starts with the idea that b is ‘prior in account’ to a (415a18–20). On Aristotle’s view, x is prior in account to y just in case the account of x does not include the account of y but the account of y does include the account of x (*Met.* M.2, 1077a36–b4; cp. Z.1, 1028a34–6; *Θ*.8, 1049b10–17) (see Annas, 1976, pp. 146–7, and Beere, 2009, pp. 286–7). And activity in general is accordingly prior to power because ‘it is necessary for the account of the one to be there before the account of the other, and the good acquaintance (γνώσιν) with the one before the good acquaintance with the other’ (*Metaph.* *Θ*.8, 1049b16–17). The fact that Aristotle here takes priority in account to entail priority in knowledge reveals that the relevant accounts here are those the possession of which

²³ See Everson (1995); Corcilius (2017, pp. LIV–LXV); Shields (2016, pp. 199–201, pp. 224–6, pp. 306–8). The same basic commitment underlies Aristotle’s investigation of the objects of perception in *De Sensu* (*Sens.* 3, 439a6–17).

constitutes knowledge: the accounts stating what the relevant power is (see Beere, 2009, p. 287). According to Aristotle, then, the account of the exercise of a power is part of what the power in question is. This explains why one must know what the activity is before one can know the power.

Aristotle goes on to claim in T4 that ‘for the same reason’ we must grasp the counterparts of nutrition, perceiving and thinking, that is, nourishing, perceptible and intelligible objects (415a21–2). This is an instance of a general commitment about a certain kind of relative. According to Aristotle ‘relative counterparts (ὅσα... ὡς τὰ πρὸς τι ἀντίκειται) are things said to be just what they are of their counterparts (ἅπερ ἐστὶ τῶν ἀντικειμένων) or in some other way in relation to them’ (*Cat.* 10, 11b24–5; cp. 6a36–7).²⁴ Aristotle uses the locution ‘x is just what (ἅπερ) y is’ in order to indicate that y is part of the account of x (*Top.* 4.1, 120b21–6; *Metaph.* Γ.4, 1007^a33).²⁵ In the case of most relatives, this ‘just what it is’ relation is symmetric: R1 is just what it is in relation to R2 and R2 is just what it is in relation to R1 (*e.g.*, the greater/the lesser, *Cat.* 7, 6a36–b2). Perception and thought, however, are exceptions that exhibit definitional asymmetry: the activities of perception and thought are ‘called just what they are’ in relation to their counterpart objects, however, perceptible objects and intelligible objects are not just what they are relative to perception and thought (*Metaph.* Δ.15, 1020b30–2 & 1021a26–9).²⁶ According to this distinction, then, the accounts of perceptible objects are part of the accounts of the various kinds of perception, but not vice versa (see Everson, 1995). It is thus clear why Aristotle endorses KCS in the case of definitionally asymmetric relatives. It is by knowing what the proper perceptible object (*e.g.*, sound) of a given perception (*e.g.*, hearing) is that one is able to grasp what that sense is: ‘for the essence (οὐσία) of each sense is by nature relative to [its proper object]’ (*DA* II.6, 418a23–5).

²⁴ The second disjunct presumably captures the fact that we do not always use the genitive case (‘of their counterparts’ τῶν ἀντικειμένων) to specify the relative in question. For instance, we say that knowledge is of the knowable (τοῦ ἐπιστητοῦ) but that the knowable is known by knowledge (τῇ ἐπιστήμῃ) (*Cat.* 10, 11b27–31).

²⁵ On this use of the expression, see Barnes (1993, p. 176); cf. Bonitz (1870, pp. 533b36–534a18); Duncombe (2020, p. 92).

²⁶ Aristotle presumably thinks that nutrition and its objects are similarly asymmetric in definition, since in T4 he assigns priority to the object over the corresponding activity and power not only in the case of nutrition in addition to perception and thought.

The other two counterparts to which Aristotle applies KCS are also definitionally asymmetric. I suggested above that, within first philosophy, KCS applies not only to contraries like similar and dissimilar, but also to contradictories such as similar and its unqualified negation, not-similar. According to Aristotle, things are similar just in case they are one in quality (*Metaph.* Δ.15, 1021a11–12). If one grasps the account of similarity, one is also automatically in a position to understand what it is for things to be not-similar. For the latter is the unqualified negation of the former: things are *not similar* just in case they *are not* one in quality. In the case of contradictories, then, a thing (*e.g.*, being similar) is clearly prior in account to its unqualified negation (*e.g.*, being not similar): because the ways of failing to be similar are manifold and disunified, one can only provide a uniform account that captures everything that fails to be similar by stating what they all lack.

Aristotle understands contraries in a similar way. As we saw above, one member of a pair of contraries (F^-) is the denial of its counterpart (F^+) within a determinate genus (*Metaph.* Γ.2, 1004a12–3; 15–6; Γ.6, 1011b18–20). For instance, disease is the lack of health *in a living being*. Disease is accordingly posterior in account to health. Health, by contrast, is a unity that admits of a direct determination: according to the consensus among ancient medical writers and philosophers, health is a correct balance or equilibrium of different elements in a body (*Hip. De prisc. Med.* 19.36–42; *De nat. hom.* 4.2–3; *Pl. Resp.* IV. 444d; *Tim.* 82a).²⁷ Given this conception of health, it is reasonable to think that knowledge of health discloses both health and disease. For disease is manifold: there are innumerable ways in which a living being can fall short of the standard of health. The only thing that these deficient bodily conditions all have in common is their failure to be a correct balance of bodily elements.

Aristotle takes the definitional asymmetry exhibited in the case of health and disease to hold for contraries in general. For he takes one member of a contrary pair (F^+) to be a unity and the other (F^-) a lack of that unity. Thus, while we can directly define F^+ , we can only capture F^- in terms of the account of the unity it lacks. There appears to be a Pythagorean background to this idea about contraries. In *Metaphysics* A.5, Aristotle mentions a Pythagorean

²⁷ Different medical authors proposed different kinds and numbers of elements. But they agreed that health consists in a correct balance of them. On the influence of the specific four-humor theory of health set out in *De natura hominis* see Jouanna (2012).

‘table’ of contrary principles arranged in two columns (τὰς κατὰ συστοιχίαν λεγομένους), which includes (986a22–26):

Limit	Unlimited
Even	Odd
Unity	Plurality
Rest	Rest
Good	Bad

Although Aristotle rejects the Pythagorean view that these contraries are principles, he endorses the ordering of contraries into such ‘positive’ and ‘negative’ counterparts along these lines. In *Metaphysics* Γ.2, for instance, he avers that ‘among contraries, the one column (συστοιχία) is a privation, and all [contraries] are explained in terms of being and non-being and in terms of unity and plurality’ (1004b27–9). He similarly contends in his treatment of contraries in *Metaphysics* I.4 that one member of a contrary pair is always a privation, that unity and plurality are the genera of contraries, and that each contrary pair is explained in terms of, or reduced to (εἰς ταῦτα ἀνάγεται), these genera (1055b26–9).²⁸

This background theory about contrariety is the key to understanding Aristotle’s contention in Θ.2 that a rational power relates to the positively existing thing (τοῦ ὑπάρχοντος) in its own right (καθ’ αὐτό) and to its privation only accidentally (κατὰ συμβεβηκός; 1046b9–10; 11–12; 12–13). It is not an arbitrary matter, for Aristotle, which contrary is primary. It is of course reasonable to think, for example, that humans’ primary purpose in developing, say, medicine was to produce health and that the rational power of medicine is therefore primarily concerned with grasping health. But Aristotle’s point is a deeper one.²⁹ Among contraries, one is a unity that we can directly disclose by giving an account of it. The other member of the pair, however, is disunified: we can only offer an account of F^- by appropriately negating F^+ .

I have argued that we should understand Aristotle’s claim that a rational power is ‘of contraries’ as the claim that the exercises of a rational power are acts of contemplation: the account of F^+ makes one well acquainted with both F^+ and F^- because the latter

²⁸ Aristotle apparently carried out the reduction of all contraries to unity and plurality in a now-lost treatise on contraries (*Metaph.* Γ.2, 1003b36–1004a2). On this project see Guariglia (1978); Berti (1973); Rossitto (2000); Castelli (2018, pp. xxxiv–xliv).

²⁹ In these reflections I am indebted to Makin (2006, pp. 53–6).

is posterior in account to the former. But Aristotle nevertheless maintains that these accounts are origins of change in something else (Θ.2, 1046b2–4). In the final section of this paper, I consider Aristotle's account of the way in which rational powers serve as origins of the changes that their possessors produce.

7. Rational Powers as Origins of Change in Something Else (Θ.2, 1046b15–22)

After having distinguished between rational and non-rational powers (Θ.2, 1046b4–15 = T1), Aristotle explains how possessors of rational powers (henceforth: 'experts') bring about contrary changes as follows:

[T5]: But since contraries do not occur in the same thing [b15–16], and knowledge is a power by having an account [b16–17], and the soul has an origin of motion (κινήσεως...ἀρχήν) [b17], the thing that is good for health produces only health and the thing that is hot [produces only] heat and the thing that is cold [produces only] cold [b18–19], but the one who has knowledge [produces] both [*sc.* the primary object and its privation] [b19–20]. For the account [*sc.* that the person with knowledge has] is of both [*sc.* the object and its privation] but not in the same way [b20], and it is in a soul that has an origin of motion [b20–21], so that from the same origin one will produce both [*sc.* kinds of contrary change] by having connected [them] to the same thing [*sc.* the account] [b21–22]. (Θ.2, 1046b15–24)

Aristotle initially supports the claim that the expert ('the one with knowledge') produces contrary changes (b19–20) by appealing to three premises (b15–17):

(12) Contraries do not occur in the same thing (b15–16).

(13) Knowledge is a power by having an account (which applies to both a thing and its contrary in different ways) (b16–17; b20).

(14) The soul has an origin of motion (ἀρχή κινήσεως; b17; b20–21).

Aristotle does not explain why (12) is pertinent.³⁰ But he plausibly invokes this principle in order to justify this passage's implicit contention that the power/change relationship is different in the rational and non-rational cases. As Aristotle's examples 'the hot thing' and 'the thing good for health' clarify, possessors of non-rational powers make other things F by being, in some sense, F themselves.³¹ The hot thing makes other things hot by being (synonymously) hot and green tea makes humans healthy by being 'healthy' in a different but related sense, that is, by promoting the health of that which is called 'healthy' in the primary sense of the term, namely bodies (cp. *Metaph.* Γ.2, 1003a34–b4). However, because experts are capable of bringing about contrary changes, contraries would occur in the same thing if rational powers made other things F^+ and F^- by themselves being F^+ and F^- . However, according to 12, medical knowledge cannot be simultaneously 'healthy' – *i.e.*, productive of health – and 'diseased' – *i.e.*, productive of disease. 13 likely clarifies why this absurd result does not obtain. Knowledge is a power by *having an account* of F^+ , which discloses both F^+ and F^- . The origin of the change that (partially) explains why experts can make something else F^+ or F^- is thus a single unitary thing: the account of F^+ .

Aristotle's premise that (14) the soul has an origin of motion does not repeat his declaration that (13) the expert possesses a rational power (*pace* Makin, 2006, p. 57). For Aristotle repeatedly cites the expert's account and the soul's origin of motion as though they were separate items (b16–17; b20–21). Moreover, Aristotle labelled rational powers origins of *change* (ἀρχαὶ μεταβλητικαί, Θ.2, 1046b3–4) whereas in 14 he mentions an origin of *motion* (κινήσεως ἀρχήν, b17; b21). The distinction that Aristotle may intend to mark with this terminological difference becomes apparent when we recall that the exercises of rational powers are acts of contemplation: the account of F^+ enables one to contemplate, or makes one well acquainted with, both F^+ and F^- ; that knowledge is not responsible for making a patient F^+ or F^- . For those changes result from the expert *acting* on the patient in which those changes occur. And Aristotle denies that the rational soul – in which rational powers are located (Θ.2, 1046a36–b2) – moves human beings to action:

³⁰ Makin (2006, p. 50) appeals to this premise as part of the support for Aristotle's earlier distinction between rational and non-rational powers but does not find a use for the premise in the present argument about the distinction between possessors of rational and non-rational powers.

³¹ On this model of change see Beere (2009, pp. 73–8).

[T6]: But the rational faculty (λογιστικὸν) or what is called reason (νοῦς) is not what initiates motion (ὁ κινῶν), for the faculty of contemplation (θεωρητικὸς) does not at all reason about (νοεῖ) what ought to be done, nor does it say anything at all about what ought to be pursued or avoided, but motion (κίνησις) always belongs to one who is avoiding or pursuing something. (*DA* III.9, 432b26–9; *cf.* *PA* 1.1, 641b4–8; *NE* VI.2, 1139a35–6)

Although rational powers are clearly, in some sense, origins of change (ἀρχαὶ μεταβλητικαί, *Θ*.2, 1046b3–4), passages such as this make it clear that they cannot be what initiates the motion (ὁ κινῶν) by which an expert brings about those changes. For, as we have seen in §4, the claim that rational powers are ‘of contraries’ is an instance of KCS, which is itself a claim about how forms of knowledge relate to the counterparts that they contemplate. Because rational powers relate to their objects by *disclosing* or *contemplating* them, these forms of knowledge cannot be what is responsible for pursuing some course of action. Indeed, shortly after T6 Aristotle writes ‘we generally see that one who has medical knowledge does not heal, on grounds that something else – not knowledge (ἐπιστήμη) – is in control (κυρίου) of one’s acting on the basis of that knowledge’ (*DA* III.9, 433a4–6). Instead, as Aristotle goes on to conclude in *DA* III.10, ‘what is called desire (ὀρέξις) is the sort of power in the soul that initiates motion (κινεῖ)’ (433a30–1). I accordingly suggest that the soul’s origin of motion in 14 is the desiderative power. This reading gains further support from Aristotle’s declaration in *Θ*.5 that desire (ὀρέξις), or the specific form of desire that is choice (προαίρεσις), is in control (κύριον) of whether an expert brings about the change that they are capable of producing (1048a10–11).³² Two kinds of origin are thus involved in the production of contrary changes: the rational power itself, which makes one well acquainted

³² Klaus Corcilius has similarly argued on the basis of this passage that, for Aristotle, rational powers are not *immediate* origins of motion: ‘Die Vermögen mit Vernunft sind daher nicht *unmittelbar* prozess- oder bewegungsrelevante Vermögen; sie sind nur dadurch bewegungsrelevant, dass ihre Gehalte außerdem noch Gegenstände menschlicher Strebungen sind. Aristoteles ist also der Meinung, dass Denkgelhalte nur dadurch in den kausalen Weltverlauf eingebracht werden können, dass es menschliche Akteure gibt, die zusätzlich zu ihrer Vernunft auch noch über Bewegungsvermögen ohne Vernunft verfügen’ (Corcilius, 2018, p. CXCI; *cf.* Corcilius 2008, p. 182, n. 82; p. 314).

with the definitions of two contraries and the desiderative power, which is the origin of the motions that bring about the relevant changes.³³

In the second half of T5, Aristotle tersely explains how these two origins work together so as to produce change: ‘from the same origin [*sc.* the expert, cp. b19–20] will produce both (ἄμφω...κινήσει) [*sc.* kinds of contrary change] by having connected [them] to the same thing’ (b20–2). The origin *from which* the changes proceed is presumably the expert’s origin of motion, or the desiderative power. Aristotle likely refers to the account when he speaks of ‘the same thing’ to which these changes get connected. And the expert plausibly connects their account to the desired change through deliberative reasoning about means. Indeed, Aristotle frequently uses the verb that I translate ‘connect’ (συνάπτειν) for the process of seeking the middle term(s) that connect(s) two further terms in a deductive chain (*An. pr.* 1.23, 41a1; 12; 19) (see Ross, 1924, p. 243). The fact that Aristotle envisions reasoning about such means as part of the exercise of a rational power makes it attractive to think that choice is the specific form of desire that impels the expert to produce the changes of which their rational power makes them capable.³⁴ For choice is a form of rational desire that results from having deliberated about the means of achieving a desired end (1226^b19–20; *NE* III.3, 1113^a9–12). If this is right, then the proximate origin of the changes that the expert produces is the desire to pursue a specific course of action that they form as the result of having deliberated

³³ For simplicity, I treat both changes as resulting from the expert acting. But one or the other contrary change might also result – in accordance with the above principle that the absence or omission of the cause of E is the cause of the opposite of E (*Metaph.* Δ.2, 1013b11–16; *Phys.* II.3, 195a11–14) – because the expert fails to act. For instance, an expert doctor could be the cause of disease by omitting to administer the medical treatment that would result in the patient’s health. Here the choice to administer the medicine is a source of motion that results in health, and the omission of this source of motion is the cause of health’s opposite, disease. In such cases, I suspect Aristotle would still say that two distinct origins are involved: the account of health guides one’s deliberation about how to produce disease and the soul’s origin of motion is a cause of the absence of health by not initiating the motion that would produce health.

³⁴ According to this suggestion, when Aristotle speaks of ‘desire or choice’ in Θ.5, he means desire, *or more precisely*, the specific form of desire that is choice.

about how the account of F^+ relates to the relevant patient in the circumstances in question.³⁵

Two distinct origins are at work when experts produce change. Choice is an origin of motion (ἀρχὴ κινήσεως, 1046b17) that impels one to produce the desired change, once deliberation has forged a connection between the account and the relevant change through an appropriate actionable means.³⁶ And the account of F^+ , although not an origin of motion, nevertheless qualifies as a power, or origin of change (ἀρχὴ μεταβολῆς, Θ.2, 1046b3–4), in that it constitutes a starting point for the expert's deliberation about how to make any given patient either F^+ or F^- .

8. Conclusion

Two-way powers are sometimes thought to be marks of agency: a single power that has two distinct and opposed manifestations, at least one of which is an action. I have argued, on the one hand, that Aristotle does not recognize causal powers whose manifestations are to act or not to act (§2). Two-way powers theorists have rightly noted that choice is a plausible candidate for such a power. But as we have seen, choice is not a *single* origin of action or omission: for choice plays the subordinate role of determining whether and how a further source of change – a rational power – gets exercised. On the other hand, neither do rational powers have two contrary changes as their exercises (§§3–6). Rational powers are ‘of contraries’ because

³⁵ This need not imply that an episode of deliberation directly precedes each chosen action, for choice can be a habituated standing commitment (cf. *NE* II.4 1105^b4–5).

³⁶ Although Aristotle's official conclusion in *DA* III.10 (according to the manuscript tradition preferred by Förster, 1912, and Ross, 1961, at *DA* III.10, 433a21) is that the desiderative power is the origin of motion, he also sometimes speaks of the *object* of desire as an origin of motion (e.g., *DA* III.10, 433a15–16; 19–20; b11–12). Aristotle presumably identifies the desiderative power as the origin of motion, because he wants to identify what it is, internal to the animal, that initiates motion. However, because – as we saw in T4 – the objects of a given capacity are prior to that capacity, he also speaks of the object of desire as an origin of motion. This priority is probably what Aristotle has in mind when he writes that ‘that which initiates motion is one in form: the power of desire insofar as it is a power of desire. But first of all is the object of desire, since this initiates motion without being moved’ (*DA* III.10, 433b10–13).

they are kinds of knowledge and the knowledge that makes one well acquainted with one member of a pair of counterparts also makes one well acquainted with the other (§4). And the fact that an expert is well acquainted with two counterparts is not grounded in a special feature about experts; a priority in account between the relevant counterparts instead explains the fact that knowledge of counterparts is the same (§5). A rational power is thus an origin of change in the sense that the account F^+ is the starting point for deliberations about how to make something else F^+ or F^- ; but this rational power itself – just as the knower’s choice, on which the occurrence of change also depends – is not a *single* source of two distinct and opposed changes (§6)³⁷

Sigla:

<i>An. pr.</i>	W.D. Ross, <i>Aristotelis analytica priora et posteriora</i> (Oxford: Clarendon Press, 1964)
<i>An. post.</i>	W.D. Ross, <i>Aristotelis analytica priora et posteriora</i> (Oxford: Clarendon Press, 1964)
<i>Cat.</i>	L. Minio-Paluello, <i>Aristotelis categoriae et liber de interpretatione</i> (Oxford: Clarendon Press, 1949).
<i>DA</i>	Aurelius Förster, <i>Aristoteles. De Anima libri tres.</i> (Budapest: Magyar Tudományos Akadémia, 1912).
<i>In Ar. Metaph</i>	M. Hayduck, <i>Alexandri Aphrodisiensis in Aristotelis metaphysica commentaria</i> (Berlin: Reimer, 1891).
<i>Metaph</i>	Werner Jaeger, <i>Aristotelis Metaphysica</i> (Oxford: Clarendon Press, 1957).
<i>De nat. hom</i>	É. Littré, <i>Oeuvres complètes d'Hippocrate</i> , vol. 6 (Paris: Baillière, 1849).
<i>NE</i>	I. Bywater, <i>Aristotelis ethica Nicomachea</i> (Oxford: Clarendon Press, 1894).
<i>PA</i>	P. Louis, <i>Aristote. Les parties des animaux</i> (Paris: Les Belles Lettres, 1956).
<i>Phys</i>	W.D. Ross, <i>Aristotelis physica</i> (Oxford: Clarendon Press, 1950).
<i>De prisc. Med.</i>	É. Littré, <i>Oeuvres complètes d'Hippocrate</i> , vol. 1 (Paris: Baillière, 1839).
<i>Resp.</i>	S.R. Slings, <i>Platonis Respublica</i> (Oxford: Clarendon Press, 2003).
<i>Sens.</i>	W.D. Ross, <i>Aristotle. Parva Naturalia</i> (Oxford: Clarendon Press, 1955).
<i>Tim.</i>	J. Burnet, <i>Platonis Opera Vol. IV</i> (Oxford: Clarendon Press, 1902).
<i>Top.</i>	W.D. Ross, <i>Aristotelis topica et sophistic elenchi</i> (Oxford: Clarendon Press, 1958).

³⁷ I would like to thank participants in the reading group ‘Two-Way Powers: Historical and Contemporary Perspectives’ at the Human Abilities Center in Berlin in 2021–2, where I first presented the ancestors of some of the ideas in this paper, for helpful and stimulating conversations about $\Theta.2$ and 5. For written feedback on the present paper I would like to thank Nathaniel Baron-Schmitt, Klaus Corcilius, Can Laurens Löwe and an anonymous referee for *Philosophy*.

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