

Power Collapse

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Abstract

What distinguishes things that are endowed with agency from those that lack it? Some scholars in the Aristotelian tradition suggest a distinction in terms of two kinds of powers: agents have both one-way and two-way powers; non-agents, by contrast, have only one-way powers. I call this view *Aristotelianism*. In this paper, I examine different ways to think of one-way and two-way powers. First, I argue that the conditional analysis faces a problem that resists well-known repair strategies for conditional analyses of dispositions. Second, I argue that a prominent alternative to the conditional account, as well as variations of it, yield a certain form of *Megarianism* when combined with Aristotelianism: for non-agents, power collapses into actuality—that is, non-agents have the power to do something iff they’re doing it. This might not be a knock-down argument against Aristotelianism, but it does seem cause for concern.

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1 Introduction

What distinguishes things that are endowed with agency from those that lack it? Some scholars in the Aristotelian tradition suggest a distinction in terms of two kinds of powers: agents have both one-way and two-way powers; non-agents, by contrast, have only one-way powers. Let’s call this view *Aristotelianism*.¹

In this paper, I examine different ways to think of one-way and two-way powers. First, I argue that the conditional analysis faces a problem that resists well-known repair strategies for conditional analyses for dispositions. Second, I argue that a prominent alternative as well as various modifications of it yield a surprising result when combined with Aristotelianism: Non-agents have the power to do something iff they’re doing it. In other words, they have the power to do something iff they successfully manifest that power. In still other words, for non-agents, power collapses into actuality. This is a restricted form of what, following Aristotle (*Metaphysics* IX.3), we will call *Megarianism*.

While Megarianism is not untenable, it is not the most appealing view from either a metaphysical or a linguistic perspective, even when restricted to non-agents.² Powers seem to be inherently modal creatures. So, it should be possible even for a non-agent to possess a power without actually

¹Aristotelianism is endorsed by Taylor (1966), Hart (1968), Strawson (1986), Geach (2000), Alvarez (2009; 2013), Steward (2012; 2020), and Frost (2013; 2020). Some of these Aristotelians work with a very broad notion of an agent. For them, the question is not how to account for the difference between agents and non-agents, but how to account for the difference between rational and non-rational agents, or free and unfree agents. Two-way powers have also been used to characterize the will. See, e.g., Lowe (2008; 2013).

²Aristotelians seem to agree. Aristotle himself explicitly argues against “modal collapse”, the collapse of possibility to actuality’ (Fine, 2009, p. 994) and Steward (2020, p. 347) notes that a non-agent’s ϕ -ing does not entail that it has the power to ϕ .

manifesting it. Likewise, it would be odd if non-agents were to gain and lose their power to do something merely depending on whether or not they are doing it right now. Furthermore, powers can be ascribed to and denied of things by modal particles such as ‘can’ and ‘cannot’ (e.g. ‘Water can dissolve sugar’ and ‘Water cannot dissolve iron’), and we’d expect such a power-related flavor of ‘can’ to share at least certain basic features with other flavors of ‘can’, like circumstantial ‘can’, epistemic ‘can’, or deontic ‘can’. One of these features is that a sentence of the form ‘ x can ϕ ’ can be true for any x , whether agent or a non-agent, even if x is not ϕ -ing, and, analogously, that a sentence of the form ‘ x cannot ϕ ’ can be false even if x is not ϕ -ing.³ So, if Aristotelianism, together with plausible additional assumptions, implies some form of Megarianism, this warrants a closer look at Aristotelianism and the additional assumptions.

The paper is structured as follows. In section 2, I present a simple account of one-way and two-way powers in terms of conditionals and argue that depending on how we interpret the conditionals, it either undergenerates or overgenerates one-way powers. In section 3, I discuss an alternative proposal according to which one-way and two-way powers are to be analyzed in terms of both opportunities and abilities. I show that given this proposal Aristotelianism leads to a restricted form of Megarianism (in the following just *Megarianism*): for non-agents, power collapses into actuality. In section 4, I examine two natural modifications of the account—the simple opportunity account and the general ability account—and argue that they, too, lead to the indicated power collapse. In the final section 5, I discuss ways to avoid Megarianism.

I’ll start, however, by laying out some of the background of the discussion to follow. The distinction between one-way and two-way powers goes back to Aristotle, but the labels are medieval. In his *Nicomachean Ethics*, 1113b6, Aristotle claims that what is distinctive about the power to act (a presumed two-way power) is that ‘where it is in our power to act it is also in our power not to act’, and in his *Metaphysics*, 1048a6-13, he notes:

It follows that as for potencies of the latter kind [i.e. one-way powers], when the agent and the patient meet in accordance with the potency in question, the one must act and the other be acted upon; but in the former kind of potency [i.e. two-way powers] this is not necessary, for whereas each single potency of the latter kind is productive of a single effect, those of the former kind are productive of contrary effects, so that if the rational powers were under the same necessity, one potency would produce at the same time contrary effects. But this is impossible.

In this paper, I discuss different ways to think of the two kinds of power that are broadly in line with Aristotle’s remarks.⁴ But we don’t have to start in vacuo. There are a couple of things that we can take for granted. First, it is widely agreed that one-way powers and two-way powers are types of abilities, or capacities, or potencies. Following Steward (2020), we can take the ability to dissolve copper sulphate to be a paradigm example of a one-way power of the water in my drinking bottle right in front of me and, following Alvarez (2013), we can take the ability to move my arm to be a paradigm example of a two-way power of mine. Second, some people in the debate helpfully distinguish one-way and two-way powers in terms of whether something is ‘up to’ someone or something and in terms of whether someone or something can ‘settle things’ (see, most prominently, Steward, 2012; 2020 and Alvarez, 2013). Roughly, the idea seems to be that for any x (whether agent or not), if it’s up to x whether x ϕ s, or if x can settle whether x ϕ s, x has the two-way power to ϕ ; if it’s not up to x whether x ϕ s, or if x cannot settle whether x ϕ s, x at best has the one-way power to ϕ .

³Portner (2009, p. 197), e.g., writes that volitional modals, as he calls the ‘can’ of ability and opportunity, ‘are modals in the most clear semantic sense—they allow us to make statements which depend on non-actual situations.’

⁴See also Aristotle’s *Eudemian Ethics*, 1223a4-7, as well as Aquinas, *Summa Theologiae* 1a 22e, 49, 4, who notes ‘some capacities can be realized in more than one way (*ad multa*)’ other ‘can be realized in only one way (*ad unum*)’.

This brings me to three desiderata for adequate accounts of one-way and two-way powers that I would like to suggest. I don't think they are entirely uncontroversial but they seem plausible enough to make the quest for a plausible account of one-way and two-way powers in line with them worthwhile.

The first and most obvious one is that the account should make correct predictions about paradigm examples of the two types of powers as well as for those cases that we intuitively classify with these paradigms. For instance, an adequate account should predict that the water in the drinking bottle in front of me has the one-way power to dissolve copper sulphate and that I have the two-way power to move my arm. This implies that the account should predict that some powers are one-way powers and that some other powers are two-way powers. In other words, if an account implies that every power is a one-way power, it should be rejected, and, likewise, if it implies that every power is a two-way power, it should be rejected as well.

The second desideratum is that the account of one-way and two-way powers should be explanatory. The above characterizations in terms of whether something is up to a given x or whether something can be settled by a given x are intuitively appealing, but, as we will see in the following, proponents of Aristotelianism usually also aim for an analysis in more philosophically familiar notions, and I will follow their lead.

The third and in the context of this paper last desideratum is that the account of one-way and two-way powers should be independent: there are plenty of suggestions of how to tell apart agents from non-agents in the literature (referring to, for instance, free, intentional, or controlled doings, or determined versus indetermined doings), but proponents of Aristotelianism usually present their view as an alternative to these accounts (see, e.g., Alvarez, 2013, p. 101), and here too I will follow their lead.

I'll make two further assumptions. For one thing, I'll assume that the distinction between one-way and two-way powers is clear-cut and that the two kinds of powers do not form the ends of some kind of spectrum of powers. For another, I'll assume that the distinction between one-way and two-way powers is exhaustive of abilities, capacities and potencies. There surely are other flavors of 'can' that have nothing to do with one-way and two-way powers (think of circumstantial, epistemic, and deontic flavors of 'can'), but for *volitional* 'can' (see footnote 3 above) it seems plausible to assume that if x can ϕ , x has either the one-way power to ϕ or the two-way power to ϕ . I'll come back to this second assumption in section 5.⁵

2 Conditional account

One natural way to draw the distinction between one-way and two-way powers is in terms of conditionals. For any x (whether agent or non-agent):

- (One-Way-a)** (i) x has the one-way power to ϕ iff if x has the opportunity to ϕ , then $x \phi$ s
(ii) x has the one-way power to $\neg\phi$ iff if x has the opportunity to $\neg\phi$, then $x \neg\phi$ s
- (Two-Way-a)** x has the two-way power to ϕ ($\neg\phi$) iff \neg (if x has the opportunity to ϕ , then $x \phi$ s)
 $\wedge \neg$ (if x has the opportunity to $\neg\phi$, then $x \neg\phi$ s)

Such a *conditional account*, as I call it, seems suggested by Alvarez (2013), who writes that 'one-way powers are characterized by the fact that when the conditions for their manifestation obtain,

⁵I won't start from any assumption about how to individuate or how to count one-way and two-way powers. I consider my project to be orthogonal to the question of whether proponents of Aristotelianism can uphold the claim that powers are individuated by what they are powers to do and whether they can meet what Frost (2020, p. 1142) calls *Canonicalism*, the claim that 'all exercises of all powers are cases of doing what the power is properly specified as a power to do'.

the power will be necessarily manifested’ (p. 109) while two-way powers ‘are characterized by the fact that when the conditions for the exercise of the power obtain, the power need not be manifested’ (p. 102). She seems to take the conditions for the manifestation/exercise of the power to be the opportunity to manifest/exercise the power, since she goes on to deny that a two-way power is a conjunction of two one-way powers because this would predict that ‘if an agent had the ability and opportunity to ϕ and also the ability and opportunity not to ϕ at t , [...] then the agent would both ϕ and not ϕ at t —[which] is impossible’ (p. 109). Steward (2020, p. 354) similarly suggests that ‘the key is to think of the ‘two’ ways [...] as ways things might proceed, given a situation in which an agent with a relevant two-way power is confronted with the opportunity to exercise it.’⁶

Note that on this account (just like on all those accounts to follow), the one-way power to ϕ and the one-way power to $\neg\phi$ are distinct: while the former is characterized by the conditional that if x has the opportunity to ϕ , then $x \phi$ s, the latter is characterized by the conditional that if x has the opportunity to $\neg\phi$, then $x \neg\phi$ s. The two-way power to ϕ and the two-way power to $\neg\phi$, however, are the same (or at least indistinguishable). If neither of the indicated conditionals holds, x has both the two-way power to ϕ and the two-way power to $\neg\phi$.⁷

Initially, the conditional account seems plausible. If the water in my drinking bottle is given the opportunity to dissolve copper sulphate, it will dissolve it, while I might not move my arm in situations in which I have the opportunity to move it, and move it in circumstances in which I have the opportunity to not move it. On closer inspection however, the following dilemma presents itself. The conditionals of (One-Way-a) and (Two-Way-a) can be interpreted in different ways. But whether we interpret them in a strong or a weak way we misclassify some powers: if we go with a strong interpretation, we undergenerate one-way powers; if we assume a weak interpretation, we overgenerate one-way powers. Let me elaborate.

Consider first the following strong interpretation of the conditional in question, suggested at various points by proponents of Aristotelianism:⁸

- (1) In all possible situations, if x has the opportunity to ϕ ($\neg\phi$), then $x \phi$ s ($\neg\phi$ s)

This conditional seems too demanding for one-way powers—not only if we let the universal quantifier scope over all logically or metaphysically possible situations but also if we restrict the scope to all nomologically possible situations. My favorite flower vase has the one-way power to break, but it is not necessarily the case that if it has the opportunity to break, it breaks. Just a couple of days ago, it was presented with the opportunity to break—it fell off my dining table—but luckily stayed intact. Consider also situations in which my vase’s one-way power to break is masked (see, e.g., Johnston, 1992, Bird, 1998) or finked (see, e.g., Martin, 1994)—assume it is protected by various layers of bubble wrap or watched out for by some kind of protective hand like Lewis’s sorcerer who strengthens the molecular structure of the vase whenever it is in the danger of breaking (see Lewis, 1997). Either way, it might be that even when the vase has the opportunity to break, it stays intact.

Analogous problems arise for the following simple indicative and subjunctive conditionals:

- (2) If x has the opportunity to ϕ ($\neg\phi$), x will ϕ ($\neg\phi$)

⁶I’ll discuss alternative ways to read Alvarez and Steward in section 3.

⁷If you think that the purely negative analysis of two-way powers as per (Two-Way-a) is too weak, you can modify (Two-Way-a) so that it only gives a necessary condition of two-way powers. The problem to be presented below will arise all the same.

⁸See, e.g., the quotes by Alvarez given above, where necessity is plausibly taken to have wide scope over the conditional, as well as the quote from Aristotle’s *Metaphysics* given in the introduction, where he talks about what ‘must’ be the case.

(3) If x had the opportunity to ϕ ($\neg\phi$), x would ϕ ($\neg\phi$)

Most scholars these days agree that (2) and (3) have some kind of variably strict semantics (see most prominently Lewis, 1973, Stalnaker, 1975; 1981, Kratzer, 1981; 1986). Now assume we are in a world in which one of the scenarios described above is realized: my vase falls and by pure chance stays intact or it falls and stays intact because there is a mask or fink protecting it from breaking. Then the closest world(s) in which the vase falls are such that it stays intact. So on the suggested kind of semantics, the conditionals would be false even though it seems that the vase has the one-way power to break.⁹

One might object that it is not clear that my vase is really given the opportunity to break in the cases I've described. If my dining table is not very tall or if the carpet underneath it is very soft, my vase didn't have the opportunity to break when it fell. Similarly, one might hold that my vase doesn't have the opportunity to break when there is a mask or a fink protecting it from breaking.

I am skeptical that the very notion of an opportunity rules out that my vase is given the opportunity to break in the situations described, but let's look at two modifications of the conditionals that seem to do justice to the idea in the background.

The first follows the 'getting specific' strategy discussed in the debate on dispositions (see, e.g., Manley and Wasserman, 2008). We precisify the antecedent of the indicated conditionals by listing conditions for ϕ -ing. In the case at hand this would be something like falling down from a height of more than 80 cm to a ground at least as hard as a wooden floor, without being kept safe by bubble wrap or a caring sorcerer. However, as has also been stressed in the debate on dispositions, it seems very hard to give an exhaustive list of specific conditions such that when they obtain, breaking follows (see, e.g., Manley and Wasserman, 2008). Even when falling from a height of more than 80 cm to a ground at least as hard as a wooden floor without being protected by bubble wrap or the sorcerer, my vase might still stay intact: it might fall on the stable rim or another mask or fink might save it from breaking. In some cases, it is even straight out impossible to give an exhaustive list. Radioactive material, for instance, has the one-way power to emit radiation, but there is no condition, simple or complex, which is sufficient for the emission of radiation.¹⁰

The second modification follows what might be called the 'getting general' strategy. We enrich the antecedent of the indicated conditionals by adding that there is no obstacle to ϕ -ing. But then there are two options: there being no obstacle to x 's ϕ -ing either guarantees x 's ϕ -ing or it doesn't guarantee x 's ϕ -ing. The first option trivializes the conditional. Everything would have every one-way power because it is trivially the case that, necessarily, if x has the opportunity to ϕ and it is guaranteed that x ϕ s, then x ϕ s. The second option revives the problem from above. As mentioned earlier, just a couple of days ago my vase fell (from a considerably high table to a considerably hard floor) and didn't break even though there was no obstacle to its breaking worth the name.¹¹

Consider then the following weaker interpretations of the conditionals, inspired by suggestions for analyses of dispositions:¹²

⁹An constantly strict semantics inherits the problems described above for (1). A material conditional semantics implausibly predicts that all things that never have the opportunity to ϕ have the one-way power to ϕ .

¹⁰The intuition that radioactive material has the one-way power to emit radiation is shared by Lowe (2013) and Frost (2020) and is made plausible by the fact that 'Radioactive material can emit radiation' has a volitional reading (just like 'Water cannot emit radiation' has) in conjunction with the indicated assumption that one-way and two-way powers exhaust volitional 'can'. Similar objections to the one presented in the main text have been raised against suggestions to distinguish one-way from two-way powers in terms of whether ϕ -ing is determined, or in terms of whether a complete description of the world at t entails x 's ϕ -ing at $t+1$ (sometimes expressed in terms of whether, holding all prior conditions fixed, both ϕ -ing and not ϕ -ing is possible). For discussion, see, e.g., Lowe (2013), Frost (2020), and Steward (2020).

¹¹One might suggest to enrich the antecedent by adding that there is no mask or fink protecting x from ϕ -ing, but this would require non-circular analyses of the technical terms 'mask' and 'fink', which seem hard to come by.

¹²See, e.g., Mumford (1998), on the one hand, and Manley and Wasserman (2008), on the other.

- (4) In ideal or normal situations, if x has the opportunity to ϕ ($\neg\phi$), then x ϕ s ($\neg\phi$ s)
- (5) In a suitable proportion situations, if x has the opportunity to ϕ ($\neg\phi$), then x ϕ s ($\neg\phi$ s)

These conditionals seem too undemanding for one-way powers. I, for one, have the power to eat cookies, but this is a two-way rather than a one-way power of mine. I can assure you, however, that in ideal or normal situations as well as in almost every situation, I eat cookies when given the opportunity. Not because I am a serious addict—for instance, I could do otherwise. It's just that I like cookies a lot and in all but very peculiar situations, I do not see a reason to abstain from eating them.¹³

Note that the cookie case is a problem only if conditionals of the form (4) or (5) are presented as an analysis of one-way powers. As an analysis of dispositions more generally they might be perfectly fine. After all, I arguably do have the disposition to eat cookies. It's just that if we distinguish between one-way and two-way powers, my disposition to eat cookies seems to be a two-way power rather than a one-way power.¹⁴

To summarize, whether we go for a strong or a weak interpretation of the conditionals in question, we misclassify some powers. Clearly, the specific conditionals presented are not the only precisifications one could think of. They illustrate, though, how difficult it is to tell apart one-way from two-way powers by way of conditionals: the conditional has to be weaker than a necessitation to correctly classify my vase's potentiality to break as a one-way power but also stronger than a regularity to correctly classify my ability to eat cookies as a two-way power. So far, no rendering has been offered that fits this middle ground.

3 Conjunctive account

A further way to analyze one-way and two-way powers is in terms of both abilities and opportunities.¹⁵ For any x :

- (One-Way-b)** (i) x has the one-way power to ϕ iff x has the ability to $\phi \wedge x$ has the opportunity to $\phi \wedge \neg(x$ has the ability to $\neg\phi \wedge x$ has the opportunity to $\neg\phi)$
- (ii) x has the one-way power to $\neg\phi$ iff x has the ability to $\neg\phi \wedge x$ has the opportunity to $\neg\phi \wedge \neg(x$ has the ability to $\phi \wedge x$ has the opportunity to $\phi)$
- (Two-Way-b)** x has the two-way power to ϕ ($\neg\phi$) iff x has the ability to $\phi \wedge x$ has the opportunity to $\phi \wedge x$ has the ability to $\neg\phi \wedge x$ has the opportunity to $\neg\phi$

This *conjunctive account*, as I call it, avoids the challenge discussed in section 2. But it faces a new problem: Assuming Aristotelianism—the claim that while agents have both one-way and two-way powers, non-agents have only one-way powers—we can derive Megarianism: non-agents have the power to do something iff they are doing it.¹⁶

¹³For discussion of addiction and other disorders as well as Frankfurt- and Fischer-style cases, see Alvarez (2013, 122ff.).

¹⁴For challenges of (4) and (5) as accounts of dispositions, see, e.g., Vetter (2014).

¹⁵See, most prominently, Alvarez, 2013, pp. 108, 109 (her discussion on pp. 114 and 116 suggests that she takes the indicated condition of a two-way power to be both a necessary and a sufficient condition). If you think, pace Alvarez and Steward as well as Mandelkern, Schultheis, and Boylan (2017), Kieran Setiya, Irene Heim, Maria Bittner, and Martin Hackl (credited by Mandelkern et al), that abilities can only be ascribed to agents, not to non-agents, you can replace the ability talk in (One-Way-b) and (Two-Way-b) with 'can' talk. The arguments to be presented below go through all the same. If you think that there is no volitional sense of 'can' such that non-agents can do things (again pace those listed above and also Vetter (2014)), then all of the accounts to follow will strike you as non-starters. This would be grist to my mill because it would narrow down the options significantly.

¹⁶Note that according to the conjunctive account, any given one-way power and any given two-way power is lost once the opportunity to do the thing in question is lost. If you, like Frost (2020, p. 1147) find this counterintuitive, you might want to jump to section 4.2, where I discuss a modification of the conjunctive account that avoids this problem.

Here is how. It is commonly assumed that there are two kinds of abilities: general abilities and specific abilities (see, similarly, Mele, 2003, Berofsky, 2005, Whittle, 2010). For instance, right now, sitting in my office, I have the general ability to eat 100 cookies in less than an hour, but I'll only have the specific ability to do so once I have 100 cookies at my disposal. General abilities (abilities_g) and specific abilities (abilities_s) seem to be interdefinable in the following way (I'll come back to the interdefinability in section 5). For any x :

(6) x has the ability_s to ϕ iff x has the ability_g to $\phi \wedge x$ has the opportunity to ϕ

(7) x has the ability_s to $\neg\phi$ iff x has the ability_g to $\neg\phi \wedge x$ has the opportunity to $\neg\phi$

Given (6) and (7), the conjunctive account reduces to the following. For any x :¹⁷

(One-Way-c) (i) x has the one-way power to ϕ iff x has the ability_s to $\phi \wedge \neg x$ has the ability_s to $\neg\phi$

(ii) x has the one-way power to $\neg\phi$ iff x has the ability_s to $\neg\phi \wedge \neg x$ has the ability_s to ϕ

(Two-Way-c) x has the two-way power to ϕ ($\neg\phi$) iff x has the ability_s to $\phi \wedge x$ has the ability_s to $\neg\phi$

Let n be a non-agent. Given (One-Way-c), the following holds:

(8) $\Box (n \text{ has the one-way power to } \phi \rightarrow \neg n \text{ has the ability}_s \text{ to } \neg\phi)$

(9) $\Box (n \text{ has the one-way power to } \neg\phi \rightarrow \neg n \text{ has the ability}_s \text{ to } \phi)$

Next, assume Aristotelianism and let agency as well as non-agency be necessary properties: if something is an agent, it is an agent in all accessible possible worlds and, likewise, if something is a non-agent, it is a non-agent in all accessible possible worlds (another claim to which I return in section 5). Then given (Two-Way-c), we get the following:

(10) $\neg\Diamond (n \text{ has the ability}_s \text{ to } \phi \wedge n \text{ has the ability}_s \text{ to } \neg\phi)$

Austin (1961) famously held that what is known as (a version of) the T-axiom of modal logic (i.e. $p \models \Diamond p$) also holds for ability ascriptions. Now assume, following Austin, (11) and (12) (yet another pair of claims to which I come back in section 5).

(11) $\Box (n \phi_s \rightarrow n \text{ has the ability}_s \text{ to } \phi)$

(12) $\Box (n \neg\phi_s \rightarrow n \text{ has the ability}_s \text{ to } \neg\phi)$

On the one hand, we can now infer that if it's not the case that $n \phi_s$, then it's not the case that n has the one-way power to ϕ . On the plausible assumption that it's not the case that $n \phi_s$ iff n does not ϕ ($\neg n \phi_s \models n \neg\phi_s$, call this *neg moving*), (12) is equivalent to (13):

(13) $\Box (\neg n \phi_s \rightarrow n \text{ has the ability}_s \text{ to } \neg\phi)$

Furthermore, (8) and (13) jointly entail (14):

¹⁷This holds not only if we interpret 'ability' in (One-Way-b) and (Two-Way-b) as 'ability_g' but also if we interpret it as 'ability_s', because since according to (6) and (7), having a specific ability implies having an opportunity, we can simply omit the opportunities from (One-Way-b) and (Two-Way-b).

(14) $\square (\neg n \phi s \rightarrow \neg n \text{ has the one-way power to } \phi)$

On the other hand, we can infer that if $n \phi s$, then n has the one-way power to ϕ . (10) and (11) jointly entail (15):

(15) $\square (n \phi s \rightarrow (n \text{ has the ability}_s \text{ to } \phi \wedge \neg n \text{ has the ability}_s \text{ to } \neg\phi))$

Furthermore, given (One-Way-c), (15) is equivalent to (16):

(16) $\square (n \phi s \rightarrow n \text{ has the one-way power to } \phi)$

The boxed conditionals in (14) and (16) jointly entail the boxed biconditional in (17):

(17) $\square (n \phi s \leftrightarrow n \text{ has the one-way power to } \phi)$

Given Aristotelianism and the claim that, besides one-way and two-way powers, there are no further powers (one more claim to which I return in section 5), (17) entails (C):

(C) $\square (n \phi s \leftrightarrow n \text{ has the power to } \phi)$

In other words, non-agents are ϕ -ing iff they have the power to ϕ .

4 Modified accounts

Is there a way to avoid Megarianism? In the following, I examine two natural modifications of the conjunctive account. I argue that they face the same problem.

4.1 Simple opportunity account

One option would be to get rid of abilities and to analyze one- and two-way powers in terms of opportunities only. For it seems that if x has only one of a pair of opportunities, then x must do what x is doing while if x has both of a pair of opportunities, x is free to choose. More concretely, the idea would be the following. For any x :

(One-Way-d) (i) x has the one-way power to ϕ iff x has the opportunity to $\phi \wedge \neg x$ has the opportunity to $\neg\phi$

(ii) x has the one-way power to $\neg\phi$ iff x has the opportunity to $\neg\phi \wedge \neg x$ has the opportunity to ϕ

(Two-Way-d) x has the two-way power to ϕ ($\neg\phi$) iff x has the opportunity to $\phi \wedge x$ has the opportunity to $\neg\phi$

This *simple opportunity account* yields the same consequence as the conjunctive account however. If (11)/(12) from above are plausible, then (11') and (12'), where n is once more a non-agent, are plausible too (see section 5 for discussion).

(11') $\square (n \phi s \rightarrow n \text{ has the opportunity to } \phi)$

(12') $\square (n \neg\phi s \rightarrow n \text{ has the opportunity to } \neg\phi)$

We can thus run the following argument. Given (One-Way-d), we have:

(8') $\square (n \text{ has the one-way power to } \phi \rightarrow \neg n \text{ has the opportunity to } \neg\phi)$

(9') $\square (n \text{ has the one-way power to } \neg\phi \rightarrow \neg n \text{ has the opportunity to } \phi)$

Furthermore, given Aristotelianism combined with (non-)agency necessitarianism and (Two-Way-d), we have:

(10') $\neg\Diamond (n \text{ has the opportunity to } \phi \wedge n \text{ has the opportunity to } \neg\phi)$

The rest follows the familiar pattern.

(13') $\square (\neg n \text{ } \phi\text{s} \rightarrow n \text{ has the opportunity to } \neg\phi)$ [(12') & neg-moving]

(14') $\square (\neg n \text{ } \phi\text{s} \rightarrow \neg n \text{ has the one-way power to } \phi)$ [(8') & (13')]

(15') $\square (n \text{ } \phi\text{s} \rightarrow (n \text{ has the opportunity to } \phi \wedge \neg n \text{ has the opportunity to } \neg\phi))$ [(10') & (11')]

(16') $\square (n \text{ } \phi\text{s} \rightarrow n \text{ has the one-way power to } \phi)$ [(15') & (One-Way-d)]

(17') $\square (n \text{ } \phi\text{s} \leftrightarrow n \text{ has the one-way power to } \phi)$ [(14') & (16')]

Given Aristotelianism and the claim that there are no further powers besides one-way and two-way powers, (17') implies (C):

(C) $\square (n \text{ } \phi\text{s} \leftrightarrow n \text{ has the power to } \phi)$

So, if we analyze one-way and two-way powers simply in terms of opportunities, Aristotelianism again collapses into Megarianism.

4.2 General ability account

Another option would be to get rid of opportunities and analyze one- and two-way powers in terms of abilities only. More concretely, one might suggest to analyze one-way and two-way powers in terms of general abilities. The idea would be the following.¹⁸ For any x :

(One-Way-e) (i) $x \text{ has the one-way power to } \phi \text{ iff } x \text{ has the ability}_g \text{ to } \phi \wedge \neg x \text{ has the ability}_g \text{ to } \neg\phi$

(ii) $x \text{ has the one-way power to } \neg\phi \text{ iff } x \text{ has the ability}_g \text{ to } \neg\phi \wedge \neg x \text{ has the ability}_g \text{ to } \phi$

(Two-Way-e) $x \text{ has the two-way power to } \phi (\neg\phi) \text{ iff } x \text{ has the ability}_g \text{ to } \phi \wedge x \text{ has the ability}_g \text{ to } \neg\phi$

This *general ability account*, too, yields the same consequence as the conjunctive account. If Austin is right and the T-axiom holds for abilities, then we can assume the following, where once again n is a non-agent (see section 5 for discussion):

(11'') $\square (n \text{ } \phi\text{s} \rightarrow n \text{ has the ability}_g \text{ to } \phi)$

(12'') $\square (n \text{ } \neg\phi\text{s} \rightarrow n \text{ has the ability}_g \text{ to } \neg\phi)$

¹⁸The general ability account seems closest to Aristotle's remark in his *Nicomachean Ethics* (that what is distinctive about the power to act (a presumed two-way power) is that 'where it is in our power to act it is also in our power not to act'). In a similar fashion, Steward (2012, p. 155) remarks: '[The] power to act [...] is a *two-way* power: to act or refrain from acting. That makes it so special.'

Accordingly, we can run the following argument. Given (One-Way-e), we have:

(8'') $\square (n \text{ has the one-way power to } \phi \rightarrow \neg n \text{ has the ability}_g \text{ to } \neg\phi)$

(9'') $\square (n \text{ has the one-way power to } \neg\phi \rightarrow \neg n \text{ has the ability}_g \text{ to } \phi)$

Furthermore, given Aristotelianism combined with (non-)agency necessitarianism and (Two-Way-e), we have:

(10'') $\neg\Diamond (n \text{ has the ability}_g \text{ to } \phi \wedge n \text{ has the ability}_g \text{ to } \neg\phi)$

The rest follows again the familiar pattern.

(13'') $\square (\neg n \phi s \rightarrow n \text{ has the ability}_g \text{ to } \neg\phi)$ [(12'') & neg-moving]

(14'') $\square (\neg n \phi s \rightarrow \neg n \text{ has the one-way power to } \phi)$ [(8'') & (13'')]

(15'') $\square (n \phi s \rightarrow n \text{ has the ability}_g \text{ to } \phi \wedge \neg n \text{ has the ability}_g \text{ to } \neg\phi)$ [(10'') & (11'')]

(16'') $\square (n \phi s \rightarrow n \text{ has the one-way power to } \phi)$ [(15'') & (One-Way-e)]

(17'') $\square (n \phi s \leftrightarrow n \text{ has the one-way power to } \phi)$ [(14'') & (16'')]

Given Aristotelianism and the claim that there are no further powers besides one-way and two-way powers, (17'') in turn implies (C):

(C) $\square (n \phi s \leftrightarrow n \text{ has the power to } \phi)$

So, if we analyze one-way and two-way powers in terms of general abilities, Aristotelianism again collapses into Megarianism.

4.3 Simplification

On both the simple opportunity account and the general ability account, just like on the conjunctive account from section 3, one-way and two-way powers are incompatible: if x has a one-way power to ϕ , it doesn't have the two-way power to ϕ , and if x has the two-way power to ϕ , it doesn't have the one-way power to ϕ . In any case, a two-way power is not a conjunction of two one-way powers.¹⁹ This can be avoided if in addition to (Two-Way-c/d/e) but instead of (One-Way-c/d/e) we work with the following:

(One-Way-c') x has the one-way power to ϕ ($\neg\phi$) iff x has the ability_s to ϕ ($\neg\phi$)

(One-Way-d') x has the one-way power to ϕ ($\neg\phi$) iff x has the opportunity to ϕ ($\neg\phi$)

(One-Way-e') x has the one-way power to ϕ ($\neg\phi$) iff x has the ability_g to ϕ ($\neg\phi$)

(Two-Way-c) x has the two-way power to ϕ ($\neg\phi$) iff x has the ability_s to $\phi \wedge x$ has the ability_s to $\neg\phi$

(Two-Way-d) x has the two-way power to ϕ ($\neg\phi$) iff x has the opportunity to $\phi \wedge x$ has the opportunity to $\neg\phi$

¹⁹Some proponents of Aristotelianism consider this crucial to ascertain the deep metaphysical difference between the two kinds of power. See, e.g., Steward (2020) and Frost (2020).

(Two-Way-e) x has the two-way power to ϕ ($\neg\phi$) iff x has the ability_g to ϕ \wedge x has the ability_g to $\neg\phi$

The problem though stays the same. If you are sympathetic to Aristotelianism, it seems plausible to assume that it is not by accident but by conceptual necessity that non-agents do not have any two-way powers. Given this assumption, (One-Way-c'), (One-Way-d'), (One-Way-e'), respectively, imply the following claims, familiar from above:

- (8) \square (n has the one-way power to $\phi \rightarrow \neg n$ has the ability_s to $\neg\phi$)
- (8') \square (n has the one-way power to $\phi \rightarrow \neg n$ has the opportunity to $\neg\phi$)
- (8'') \square (n has the one-way power to $\phi \rightarrow \neg n$ has the ability_g to $\neg\phi$)

Given these claims, we can rerun the above arguments, replacing (One-Way-c), (One-Way-d), (One-Way-e) with (One-Way-c'), (One-Way-d'), (One-Way-e') in the derivations.

5 Discussion

There are in principle two ways to respond to the arguments presented in sections 3 and 4. Either we accept (C) and with it Megarianism, or we reject one of the assumptions. As indicated in the introduction, Megarianism is not untenable, but it is counterintuitive, even when restricted to non-agents, and thus presents a clear theoretical cost. Let's therefore look into options for avoiding Megarianism. Option (i) is to block the inference from (17) (= (17')/(17'')) to (C) by assuming that while non-agents cannot have two-way powers, there are other powers besides one-way powers they can have; option (ii) is to reject the analysis of specific abilities in terms of general abilities and opportunities as suggested by (6) and (7); option (iii) is to contest that agency and non-agency are necessary properties and accordingly deny (10), (10'), or (10''); option (iv) is to reject the Austin inspired assumptions (11)/(12), (11')/(12'), or (11'')/(12''); option (v) is to find an alternative account of one-way and two-way powers that avoids the indicated problems; option (vi) is to reject Aristotelianism.

Option (i) seems ad hoc. Besides, the intermediate conclusion (17) seems counterintuitive enough because as an ability, or capacity, or potency, we'd expect one-way powers not to collapse into actuality. Option (ii) seems problematic as well, not only because (6) and (7) are widely accepted but also because given (11)/(12), (11')/(12'), and (11'')/(12''), we strictly speaking don't have to assume (6) and (7) to derive (C). For if both a non-agent's (specific or general) ability and it's opportunity to ϕ are entailed by the non-agent's ϕ -ing, we could derive (C) directly from (One-Way-b) and (Two-way-b).

Regarding option (iii), I'd like to offer two responses. First, there is good reason to think that (non-)agency necessitarianism is true. Second, strictly speaking, we do not have to assume (non-)agency necessitarianism to run the above arguments.

Why would one think that (non-)agency necessitarianism is false? Well, one might wonder about cases like the following.²⁰ Think of a world in which my genetic counterpart is only an embryo right now (it was conceived much later than I was) or in which my genetic counterpart is in a coma right now (it suffered an accident on its way to work). If we assume that the embryo and the coma patient are non-agents while I am an agent, (non-)agent necessitarianism implies that I am neither identical with the embryo nor with the coma patient. This in turn suggests that I am neither identical with the embryo that my parents conceived in the actual world a while back

²⁰I thank Vanessa Carr and Barbara Vetter for very helpful discussion.

nor identical with the coma patient that will cost my health insurance quite a fortune (let's assume that's my and my health insurance's fate). How plausible is that?

On the one hand, it is not clear that the embryo and the coma patient are non-agents. There might be some ϕ s such that the embryo or the coma patient can ϕ and can not ϕ in the (specific or general) ability or the opportunity sense. So it is not clear that I couldn't be identical to them. On the other hand, if we assume that the embryo and the coma patient *are* non-agents, then it's not only intuitive that they might not be identical to me; this is also predicted to be the case on many accounts of personal identity: on many such accounts, I, a person, can only be identical to persons. And on many further such accounts, we have that if something is a person, it is an agent. So I can only be identical to agents, not to non-agents. One might reject these accounts of personal identity, but this would be a significant theoretical cost. Megarianism could only be avoided by taking on board specific non-standard views about personal identity.

As indicated above, however, we don't have to commit to (non-)agency necessitarianism to run the above arguments. Note that there are two kinds of claims that should be kept apart. On the one hand, there is

$$(18) \quad \forall x (x \text{ is a non-agent} \rightarrow \neg \diamond (x \text{ has the ability}_s \text{ to } \phi \wedge x \text{ has the ability}_s \text{ to } \neg \phi))$$

$$(18') \quad \forall x (x \text{ is a non-agent} \rightarrow \neg \diamond (x \text{ has the opportunity to } \phi \wedge x \text{ has the opportunity to } \neg \phi))$$

$$(18'') \quad \forall x (x \text{ is a non-agent} \rightarrow \neg \diamond (x \text{ has the ability}_g \text{ to } \phi \wedge x \text{ has the ability}_g \text{ to } \neg \phi))$$

On the other hand, there is

$$(19) \quad \forall x \neg \diamond (x \text{ is a non-agent} \wedge (x \text{ has the ability}_s \text{ to } \phi \wedge x \text{ has the ability}_s \text{ to } \neg \phi))$$

$$(19') \quad \forall x \neg \diamond (x \text{ is a non-agent} \wedge (x \text{ has the opportunity to } \phi \wedge x \text{ has the opportunity to } \neg \phi))$$

$$(19'') \quad \forall x \neg \diamond (x \text{ is a non-agent} \wedge (x \text{ has the ability}_g \text{ to } \phi \wedge x \text{ has the ability}_g \text{ to } \neg \phi))$$

By assuming (10) and variants, we committed ourselves to (18) and variants. Given Aristotelianism and the respective accounts of one-way and two-way powers, these claims imply that if something is a non-agent, it is a non-agent in all accessible possible worlds and, likewise, they suggest that if something is an agent, it is an agent in all accessible possible worlds. But we could waive (10) and variants and work with (19) and variants only. Crucially, these latter claims do not imply (non-)agent necessitarianism. They merely have it that there is no possible world inhabited by a non-agent that can ϕ and can not ϕ in the relevant sense, which is what Aristotelianism tells us. The derivation would look like this. Given either (One-Way-c), (One-Way-d), or (One-Way-e), we assume (20) (here and in the following, 'can' is supposed to be read as volitional 'can' that stands for specific ability, opportunity, or general ability):

$$(20) \quad \forall x \square (x \text{ is a non-agent} \rightarrow (x \text{ has the one-way power to } \phi \rightarrow \neg x \text{ can } \neg \phi))$$

Given Aristotelianism and (Two-Way-c), (Two-Way-d), or (Two-Way-e), we have (21):

$$(21) \quad \forall x \neg \diamond (x \text{ is a non-agent} \wedge (x \text{ can } \phi \wedge x \text{ can } \neg \phi))$$

Following Austin, we can assume (22) and (23):

$$(22) \quad \forall x \square (x \text{ is a non-agent} \rightarrow (x \text{ } \phi \text{ s} \rightarrow x \text{ can } \phi))$$

$$(23) \quad \forall x \square (x \text{ is a non-agent} \rightarrow (x \text{ } \neg \phi \text{ s} \rightarrow x \text{ can } \neg \phi))$$

We can derive Megarianism as follows:

- (24) $\forall x \Box (x \text{ is a non-agent} \rightarrow (\neg x \phi s \rightarrow x \text{ can } \neg\phi))$ [(23) & neg-moving]
- (25) $\forall x \Box (x \text{ is a non-agent} \rightarrow (\neg x \phi s \rightarrow \neg x \text{ has the one-way power to } \phi))$ [(20) & (24)]
- (26) $\forall x \Box (x \text{ is a non-agent} \rightarrow (x \phi s \rightarrow x \text{ can } \phi \wedge \neg x \text{ can } \neg\phi))$ [(21) & (22)]
- (27) $\forall x \Box (x \text{ is a non-agent} \rightarrow (x \phi s \rightarrow x \text{ has the one-way power to } \phi))$ [(26) & (One-Way-c-e)]
- (28) $\forall x \Box (x \text{ is a non-agent} \rightarrow (x \phi s \leftrightarrow x \text{ has the one-way power to } \phi))$ [(25) & (27)]

Given Aristotelianism and the claim that, besides one-way and two-way powers, there are no further powers, (28) entails (C'):

$$(C') \quad \forall x \Box (x \text{ is a non-agent} \rightarrow (x \phi s \leftrightarrow x \text{ has the power to } \phi))$$

In other words, for any x , it is necessary that if that x is a non-agent, it ϕs just in case it has the power to ϕ . In other words, non-agents ϕ iff they have the power to ϕ .

What about option (iv)?²¹ Let's reconsider the relevant claims.

- (11) $\Box (n \phi s \rightarrow n \text{ has the ability}_s \text{ to } \phi)$
- (12) $\Box (n \neg\phi s \rightarrow n \text{ has the ability}_s \text{ to } \neg\phi)$
- (11') $\Box (n \phi s \rightarrow n \text{ has the opportunity to } \phi)$
- (12') $\Box (n \neg\phi s \rightarrow n \text{ has the opportunity to } \neg\phi)$
- (11'') $\Box (n \phi s \rightarrow n \text{ has the ability}_g \text{ to } \phi)$
- (12'') $\Box (n \neg\phi s \rightarrow n \text{ has the ability}_g \text{ to } \neg\phi)$

Assumptions (11')/(12') seem hard to deny, because it seems impossible to ϕ without there being the opportunity to ϕ , whether the thing in question is an agent or a non-agent. Given these assumptions, however, (11)/(12) and (11'')/(12'') seem plausible to the same degree: they stand and fall with whether a non-agent's ϕ -ing entails its general ability to ϕ .

As indicated above, Austin (1961, p. 227) famously held that 'it follows merely from the premise that [somebody did something], that he has the ability to do it, according to ordinary English'. But this view has not only been met with approval. Kenny (1976) equally famously objected that the unskilled dart player might hit the bullseye by a fluke, without having the ability to hit the bullseye. Does this pose a problem for (11)/(12) and (11'')/(12'')?

Boylan (2021) and Loets and Zakkou (forthcoming) have recently argued that what is driving intuitions in cases like Kenny's is the assumption that ability requires control (see similarly Portner, 2009, p. 201). Roughly, the idea is that x 's ϕ -ing implies x 's ability to ϕ only if ϕ -ing is under x 's control. It is controversial whether there really is a control requirement on abilities and, accordingly, whether cases like Kenny's show Austin's claim to be false (see again Loets and Zakkou, forthcoming, for discussion), but it seems fair to assume that if there is a control requirement, it is only a requirement for agents' abilities and not for non-agents' abilities: agents are the

²¹ Steward (2020, p. 347) states that a non-agent's ϕ -ing does not entail that it has the *power* to ϕ . One way to interpret this is as the claim that the non-agent's ϕ -ing does not entail that it has the *ability* to ϕ . Alvarez (2013, p. 109) seems to only deny the other direction of the conditional, as she notes that the relevant notion of ability 'doesn't imply that whenever I try to exercise such an ability, given the opportunity, I shall succeed, because [...] I might try but fail despite having the ability and opportunity'. This claim is compatible with (11/12) as well as pertinent variations.

sorts of things that can have control; non-agents are not.²² So, unless we think that non-agents do not have any abilities at all, we have to acknowledge that there is no control requirement on non-agents' abilities.²³ This in turn suggests that cases like Kenny's do not threaten axiom T ($p \models \diamond p$) as applied to non-agents' abilities or (11)/(12) and (11'')/(12'') more specifically.

This leaves us with options (v) and (vi), that is, to come up with an alternative account of one-way and two-way powers or to reject Aristotelianism. Proponents of Aristotelianism might want to remind us that they did offer an alternative account in terms of something being up to someone or something or in terms of whether someone or something can settle things. So, the conciliatory conclusion to draw is that if we want to hold on to Aristotelianism, we shouldn't look for an explication of the two kinds of powers in terms of conditionals, opportunities or abilities, but that we do need to avail ourselves to the indicated conceptual resources.

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²²Put differently: while for agents it makes sense to distinguish between a skilled ϕ -ing, which entails the ability to ϕ , and an unskilled ϕ -ing, which might not entail the ability to ϕ , such a distinction seems inapplicable to non-agents.

²³See footnote 15 for the dialectical standing of the claim that non-agents cannot have any abilities.

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