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Action and Active Powers

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Abstract
This paper explores the distinction between active and passive powers. Interest in the distinction has recently been revived in some quarters of the philosophy of action as some have sought to elucidate the distinction between action and passion (the changes that happen to a substance) in terms of the former (Hyman, 2015; Mayr, 2011; Lowe 2013). If there is a distinction between active and passive powers, parallel to the distinction between action and passion, what is it? In this paper, I distinguish two ways of drawing it. According to the first one, active and passive powers are distinguished by the ways in which their manifestations come about. According to the second, they are distinguished by their directedness, i.e. what they are powers to do. Both accounts are examined and the latter is defended against the former. I argue that active powers are powers to alter, modify, corrupt or change something.

Keywords Causal powers · Manifestations · Action · Passion

Many authors think that an action is the exercise of a power by a substance.[1] But not any manifestation of a power is the action of a substance, e.g. the manifestation of fragility. What characterises actions as exercises of powers is the fact that they are the manifestations of a specific species of powers, namely active powers (Coope, 2007, p. 113). But just as the idea of action is correlative to the idea of passion, the notion

[1] The list is non-exhaustive: Harré (2013, p.135; 2001); Kenny (1975, pp. 46–47); Hyman (2015, p.34); Mayr (2011, p.198); Harré and Madden (1975, p. 88); see also Hornsby (2015); Runyan (2014, Chap. 4); Michon (2009); Coope (2007); Brent (2017); O'Connor (2000 Chap. 4); Alvarez (2013); Steward (2012); Alvarez and Hyman (1998); Ellis (2013); Kuykendall (2021); Swinburne (2013, Chap. 5).

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of active power is correlative to the notion of passive power,[2] and the question arises of how to found this distinction.[3] In this paper, my question will be less whether there is a distinction than how to distinguish the powers to act on things from the powers to suffer.[4] I shall argue that active and passive powers are distinguished by the nature of their manifestations and not by the way in which they come to manifest.

Insofar as several action theorists are now inclined to revert to the old power-based conception of action and agency, to which the active-passive powers distinction is central, it is crucial that we get clear about what it means for a power to be active or passive.

Here is how I shall proceed. I start by clarifying the notion of action at work in the paper (§ 1). Then I offer a rough sketch of what I take powers to be (§ 2), which is then put to work to distinguish two ways of drawing the active/passive distinction between powers. The first relies on how power-exercises come about. The second relies on what powers are powers to do or for (§ 3). I examine both E. J. Lowe's (§ 3.1) and Erasmus Mayr's versions of the former account (§ 3.2). I reject both in favour of a theory that draws the distinction with respect to what powers are powers for and argue that active powers are powers to alter, modify, corrupt or change something (§ 3.3).

1 Action and Passion

The relevant sense of 'action' for the present inquiry is the sense in which an action is 'an acting upon something', where what is being acted upon is called 'a patient' (see Coope, 2004, p. 203). Accordingly, the actions referred to in sentences such as 'John pushes the cart' or 'Aloy lifts the dumbbell' are neither the bodily activities nor the mental activities of John and Aloy, but what, in a broad sense, John and Aloy are respectively doing to the cart and the dumbbell. This does not exclude talking of bodily action such as moving one's limbs in that sense, in terms of the causing of a change (perhaps in the location of some of their body parts), but bodily actions are not the sort of actions denoted in the above sentences – even though these actions involve moving one's limbs. It does, however, exclude most mental activities. While some mental activities clearly count as actions in the sense of an agent acting upon himself, such as causing oneself to become angry by remembering something upset-

[2] Some reject the label 'passive power' to denote the potentialities of objects to undergo change. Reid thinks that it is 'a contradiction in terms' because passive powers would be powerless powers, see Reid (2010, EAP I.3.1); see also Lowe (2008, p. 149). He rather contends that active power should be contrasted with speculative powers, as action is contrasted with speculation. Harré argues that we should only use the label 'power' for active power in order to preserve its agentive flavour (2013, p. 130). Nothing hinges on our choice of words here, one could replace 'passive power' by 'liability' as long as it conveys the idea of passivity. For a similar point, see Hacker (2007, p. 96).

[3] Reid argues that the meaning of the words 'action' and 'passion' imply power (2010, EAP I, 19, see also EAP I.,13). Hyman points to a similar connection as he argues that the term 'active' refers to the exercise of an active power, a power to cause change, while 'passive' refers to the exercise of a passive power, a power to suffer change (2015, p. 9). See also Michon (2009, p. 146). For an illuminating discussion of the distinction in Aquinas, see Löwe (2021).

[4] For a discussion of the former question, see Wahlberg (2019).

ting, other actions, such as performing a mental calculation or making a decision, do not consist in acting upon something, although they might lead one to do so.

The crucial point is that 'action' in the sense used in this paper is not to be conflated with another much narrower sense in which actions are exercises of a very specific species of powers. Such accounts have recently proliferated: agency as two-way power (Steward, 2020; Frost, 2013; Runyan, 2014); agency as the power to intentionally change what one changes (Ford, 2018), or agency as the so-called agent-causal power of human beings to cause their choices and intentions. My goal is not to decide between these theories but to explore the notion of active powers related to the broader notion of action just outlined.[5]

Differently put, the distinction between action and passion is closely associated with the distinction between active and passive powers. But the relevant notion of action is that of 'acting upon something' – and its corresponding notion of passion is that of 'being acted upon by something'. If actions are the exercises of a distinctive type of power, they will be the exercises of the powers corresponding to this notion, and not the exercise of the very specific power of agency which is possessed only by humans or animate beings. What I want to know is whether actions are the exercises of a distinctive type of power and whether this distinctive type of power – active power – can be demarcated as a species of power distinct from passive powers.

To deal with this question, however, we need a rough account of powers to which we now turn. The account given here mainly draws on Mayr's (2011, Chap. 6–7).

2 Powers and Manifestations

Powers, in a very broad sense, are properties of objects whose possession dispose their bearers to do certain kinds of things. Some authors think that powers enable substances to do causal work (Mayr, 2011; Kuykendall, 2021), whereas others think that powers (and not substances) are the things that do the (real) causal work (Mumford & Anjum, 2011; Buckareff, 2011). Although both reject a Humean metaphysics, I take the tendentious point to be whether causation by substances is fundamental or reducible to causation by powers.[6] I shall not defend the (ir)reducibility of substance-causation to power-causation here. For one may endorse the distinction between active and passive powers independently of one's view on the reducibility or fundamentality of substance-causation.[7] For ease of presentation, I shall stick to formulations in

[5] It is worth pointing out that this broader notion allows that some inanimate beings act in the sense that they produce change. This, however, does not mean that inanimate objects can act in the pursuit of a goal or in response to circumstances given perception of an opportunity. See Hacker (2007, p. 139).

[6] I thank an anonymous referee for pressing me on this point.

[7] It has to be noted, however, that certain views of the distinction such as the one I end up defending in this paper (the directedness account) fit more naturally with the view that substances can be causes. But it is compatible with this view that substances are only causes in virtue of their powers being causes. Hence, it is compatible with this account that powers are fundamental causes and substances 'secondary' causes. The directedness account could perhaps be reformulated without any suggestion that substances may be causes. I leave it to those who think that only powers are causes to reformulate the directedness account to fit their views.

terms of substances causing things since the two authors discussed in Sect. 3 think substance-causation is fundamental and irreducible to another kind of causation.

By *objects* I mean enduring bearers of properties like human beings, bronze statues, billiard cues or medusae. Notice that I do not equate from the outset the notion of 'power' with 'causal power'. Doing so will depend on what one means by 'causal'.[8] The point for our purpose is that the notion of power itself does not yet introduce a distinction between active and passive powers.

Following Mayr, we can characterize powers in terms of three features: directedness, manifestation-conditions, and the relation between manifestations and manifestation-conditions.

2.1 Directedness

Powers are often characterized as directed at or 'pointing to' their manifestation. For instance, corrosive powers are directed at corrosion – they are powers to corrode things. We may specify this idea by appealing to the intentionality or directedness intrinsic to dispositionality in general – whether or not this is a mere metaphorical way of talking need not concern us, as it is in any case a useful metaphor.[9] In that sense, the intentional object of a power – what the power is a power to do or for – is some behavioural or mental manifestation(s) (Molnar, 2003, p. 63).

The metaphysical status of power-exercises or manifestations is controversial. The main point of contention lies with whether manifestations have a distinct existence of their own in addition to powers and the effects which usually result from their exercise.[10] For the purpose of the discussion, I shall assume that exercises or manifestations are distinct from the changes they result in, partly because it is often assumed in recent power-based accounts of actions that actions (active powers-exercises) are not identical with the change they result in, or in other words, that actions are chang*ings*, not changes, mov*ings*, not movements (Hyman, 2015; Steward, 2012). There are further arguments to support that view,[11] but discussing them would lead us astray. Moreover, both the discussion and the view I end up defending below could be reframed to accommodate the view that the manifestations of active and passive powers are changes and, in fact, one and the same change but under a different aspect.[12]

[8] Frost defines causal powers as powers whose exercise consists in a specific temporally extended causal process (2020). If we adopt this definition, some (purportedly) active powers won't count as causal powers e.g. the power to appoint someone to a position, or the power to sack one's employee. Their exercises might consist in a datable event, but it is unclear that the event itself is a temporally extended process.

[9] For a discussion of physical intentionality, see Glowala (2019); see also Corry (2019, Chap. 3).

[10] Others have proposed similar distinctions. For instance, Corry distinguishes between the 'influences' of powers and their effects (2019, pp. 33–34). See also Swinburne (2013, Chap. 5).

[11] The main reason to accept manifestations as *sui generis* entities derives from considerations concerning the fact that changes are typically caused by various powers-bearers or their powers and that they can manifest various powers. For a discussion, see Molnar (2003, p. 194); Mumford and Anjum (2011, p. 22); Corry (2019); Marmodoro (2014, p. 33); Coope (2004, p. 217).

[12] For a defence of the view that manifestations just are effects, see McKitrick (2010 and, 2018). See also Glowala (2019, p. 263).

2.2 Manifestation-conditions

All powers have manifestation-conditions. Perhaps the most basic such conditions are contact and possession.

For a majority of powers, a necessary condition of their manifestation is that their bearer comes into contact with some other power-bearer(s) (Aristotle, 1984, *Physics III*.1, 202a1; Martin, 2008, p. 48; Hyman, 2015, p. 124). Such powers are usually powers to interact. Contact here is to be interpreted generously. It is not confined to physical contact between bodies. In some cases, e.g. magnetism, one thing comes into contact with another when it falls within the range of the power of the other. But this condition is trivially satisfied in some cases, e.g. gravitational power.

However, some powers, like radioactive disintegration, are not powers to interact and contact is not a necessary condition of their manifestation. Instead, the only condition of their manifestation might be rather trivial, i.e. their being possessed (Corry, 2019, p. 49).

Beyond contact and possession, the manifestation-conditions of powers can be more or less specific. For instance, the power of a water-soluble object to dissolve in water only at a very specific temperature and when in contact with water can be manifested under a relatively small range of circumstances, whereas gravitational power can be manifested under practically any type of circumstances where nothing is blocking the manifestation (Mayr, 2011, p. 162).

When the manifestation-conditions are trivial or highly unspecific, we can talk of unconditional power (Mayr, 2011, p. 163). Some powers, like the explosive power of an unstable explosive or radioactive disintegration, may be such unconditional powers. They are characterized by the absence of a conditional linking their manifestations to their manifestation-conditions, i.e. it is not the case that, if the explosive power of the unstable explosive is possessed, then it manifests (similarly for radioactive disintegration).

However, this claim might be challenged on the ground that there are such conditionals linking *the absence* of intervening factors (and the possession of the power) to the manifestation – i.e. if nothing blocks or prevents the manifestation of the power and the latter is possessed by an object, then it manifests). But as Mayr correctly points out the 'if' in such clauses does not describe manifestation-conditions of the power, but background conditions which are required in addition to the manifestation-conditions of the power (e.g. being possessed), and which are usually presupposed as well when a power has more specific manifestation-conditions, e.g. water dissolves a lump of sugar, if nothing prevents the manifestation of its power to dissolve (Mayr, 2011, p. 163). Hence, the absence of countervailing factors is not to be assimilated with the manifestation-conditions of a power.

Perhaps we should view trivial conditions such as possession of the power as background conditions as well, and if so we should revise the claim that all powers have manifestation-conditions. Nothing hinges on that question in what follows and I remain neutral on what to say here. The crucial point is that manifestation-conditions might be more or less specific and that the genericness of the manifestation-conditions of some powers is such that they can be thought of as unconditional powers.

2.3 The Connection between Conditions and Manifestations

We saw that powers are directed at their manifestations, and that their manifestations depend on more or less specific conditions obtaining. But not all powers are manifested when their manifestation-conditions obtain, even discounting for intervening factors. Some powers will manifest when their manifestation-conditions obtain, in which case these conditions are necessary and sufficient for their manifestations, whereas some powers can but need not manifest, in which case the conditions of manifestation are necessary but not sufficient. An example of the former is the water solubility of a sample of NaCl that manifests whenever the sample meets the right manifestation-partner (water) and such that it can be ascribed only if its bearer, when placed in water, dissolves (discounting for intervening factors); whereas an example of the latter is irritability which can be ascribed despite its bearer not always manifesting it whenever the occasions obtain (Mayr, 2011, p. 162). It suffices for the ascription of such powers that their bearer manifests them sufficiently often.

However, to which extent a substance manifests a power 'sufficiently often' to warrant the ascription of a corresponding power to that substance is a question with no fixed answer. For instance, Mayr provides the example of a medicine that can produce a side effect only if certain specific conditions obtain, but that does so under these conditions only in 10% of the cases.

The point is that the connection between the manifestation of a power and the conditions of its manifestation can be more or less loose, regardless of the specificity of these conditions. In the medicine example, the conditions of manifestation are very specific, but the connection between the manifestation and these conditions is very loose. By contrast, the conditions of manifestation of the ability to speak a language are unspecific, but the connection can, in some instances, be rather tight (as opposed to loose). Someone who knows Spanish cannot help but understand Spanish if she reads it or hears it.

3 Active and Passive Powers: What Are They?

In the light of this rough picture of some crucial features of powers, we can use them to locate theories of active powers. Three views can be distinguished:

The simple account draws the active/passive distinction by appealing to the connection between manifestation-conditions and manifestations (Lowe 2013, pp. 153–59; Harré, 2001, p. 97). Active powers are powers whose manifestations are not caused by the obtention of some manifestation-conditions; passive powers are powers whose manifestations are always caused by the obtention of some manifestation-conditions.

The gradual account draws the active/passive distinction in relation to both (i) the connection between manifestation-conditions and manifestations and (ii) the manifestation-conditions themselves (Mayr, 2011, p. 205). A power is active to the extent that it can manifest under a sufficiently wide range of cir-

cumstances and that the connection between its manifestations and its manifestation-conditions is sufficiently loose.
The directedness account draws the active/passive distinction by appealing to the directedness of powers. Active powers are directed at altering, modifying, or changing things; passive powers are directed at suffering alteration, modification or change.

According to our first two views, active powers are to be distinguished from passive powers by how they come to manifest. On these views, paradigmatic active powers are powers that manifest without being triggered, released or unleashed, either because they are continuously exercised (unless something prevents their manifestation) or because they can be exercised spontaneously. Powers continuously exercised typically have very generic manifestation-conditions, and they can be manifested on practically any occasion e.g. gravitational power and magnetism. Spontaneous powers are powers whose manifestation is typically not necessitated by prior conditions or circumstances. The spontaneous power *par excellence* is sometimes taken to be the will (Lowe 2013). By contrast, the third view distinguishes active and passive powers by appealing to what they are powers to do.

In what follows, I start by briefly examining the simple account. I shall mainly focus on the gradual account and the directedness account and argue in favour of the latter.

3.1 The Simple Account

The fundamental intuition behind the simple account is that 'active' is associated with self-movement, the initiation of happenings, spontaneity or the idea of intervention, while 'passive' is associated with the continuation of change. Accounts of the distinction along these lines have been offered by Reid in the *Essays on the Active Powers of Man*, Locke in Chap. xxi of the second book of the *Essay* and more recently by E.J. Lowe (2013, p. 159; 2008, p. 149).[13] On Lowe's version of the simple account, the active/passive distinction boils down to the distinction between active powers whose exercises never need to be triggered or caused by something acting on their bearers, and passive powers whose manifestations always need to be caused by something acting on their bearers (Lowe 2013, p. 159; 2008, p. 149; Harré, 2001, p. 97). To be more specific, on Lowe's view:

Uncaused Active Power (UAP): For a power P, its bearer O and its manifestation(s) M, P is an active power of O if, and only if, M never need to be caused (triggered) by something acting on O.
Caused Passive Power (CPP): For a power P, its bearer O and its manifestation(s) M, P is a passive power of O if, and only if, M always need to be caused (triggered) by something acting on O.

[13] Rom Harré defends a similar account, see (2001, p. 97).

The problem with the simple account is that it mixes up, on the one hand, the evitable or non-necessitated exercise of a power and the exercise of an active power, and on the other hand, the inevitable or necessitated exercise of a power and the exercise of a passive power. For it seems that an object can act and thus exercise an active power even when the circumstances make it inevitable that it does so. After all, there clearly is a distinction between the circumstances producing a change in spite of an object and such that it is not involved in producing it, and the circumstances making it so that the object must act and produce the change (Mayr, 2011, p. 202). For instance, consider the movement of a small ferrous object, that is its occupation of a series of positions in space. There is a difference between, say, making it inevitable for a magnet to produce that movement, e.g. by placing the ferrous object close enough and removing all obstacles, and simply moving the object to exactly the same positions in such a way that the magnet exerts no influence on the motion of the object.

I do not wish to argue that no account of action whatsoever can be offered which locate the active character of active powers with self-movement.[14] We can, if we wish, restrict the concept of action – and thus speak of 'true agency' or 'true action' – to self-movement. But natural (inanimate) objects sometimes produce change and act on things and we will eventually have to recognize a category of productive or active powers for their (minimal) agency, which we would want to contrast with the things they do which do not consist in producing something, but rather in suffering or undergoing a change. For example, wine can intoxicate and anti-inflammatory agents, such as ibuprofen, can heal (produce a change), but they can also be burnt (undergo a change); and viruses, which are infectious agent, may infect cells (produce a change), but they can also be neutralized by antibodies (undergo a change).

Part of the reason to draw a distinction between active and passive powers derives from the fact that we want to account for the fact that some objects have the liability to be affected in certain ways and not others – a stone cannot be chemically burnt by acid for instance – while we want to account for the fact that some objects have the power to affect other objects in certain ways – alcohol can affect most animals but not a stone.[15] But Lowe's criteria fail to mark this difference as it characterises most powers as powers to be affected by something. On his account, the power of corrosives like sulfuric acid to chemically burn living tissues – whose manifestations are surely not uncaused – would be a passive power. This suggests that whatever difference these criteria are aimed at drawing, this is not the one between powers to act on things, and power to be acted upon.

In the light of this, some have defended a different account of the active/passive distinction among powers where active powers are associated with causal powers. We now turn to these theories. I shall argue, against Mayr's account, that the distinctive features of active and passive powers lie with their directedness.

[14] For an account along these lines, see Steward (2012 and, 2020).

[15] For a similar idea, see Hacker (2007, p. 96).

3.2 The Gradual Account

The gradual account, put forth by Mayr, is perhaps the most developed theory of the active/passive distinction among powers on the market. In fact, Mayr's theory contains both an account of the active/passive distinction between substances and an account of the distinction between powers. But I shall focus only on the latter here. The crucial element of Mayr's account is that it connects activity (and passivity) with explanatory contributions. The more a substance and its powers contribute to the explanation of a change or an effect, the more active they are. The active/passive distinction is then explained in terms of explanatory relevance, active powers being the crucial factors in the explanation of the occurrence or production of an effect. This is supposed to reflect the idea that substantial explanatory contributors are the (active) sources of the change.

The account is called gradual because it assumes that powers can be more or less active or passive depending on the extent to which they satisfy some criteria of activity and passivity (2011, pp. 204–6). Differently put, the distinction is one of degree and powers can be placed on a continuous spectrum. The relevant criteria of activity and passivity are formulated in terms of (i) manifestation-conditions and (ii) the connection between the former and manifestations. To be more specific:

> **Gradual Active Power (GAP):** A power P is an active power *to the extent* that (i) P can manifest under a *sufficiently* wide range of circumstances, and (ii) the connection between P's manifestations and its manifestation-conditions is *sufficiently* loose.
> **Gradual Passive Power (GPP):** A power P is a passive power *to the extent* that (i) P can manifest only under a narrow range of circumstances, and (ii) the connection between P's manifestations and its manifestations-conditions is *sufficiently* tight.

Paradigmatic active powers are powers that can manifest under an extremely wide range of occasions – those whose manifestation-conditions are the most generic – and such that their manifestations need not occur under any of these occasions. The power of an unstable explosive and the power of radioactive disintegration are typical active powers. By contrast, a purely passive power would be a power that could be exercised in only one situation in the entire history of the universe because its manifestation-conditions would be too specific (Mayr, 2011, p. 206).[16] Three qualifications are required.

First, Mayr rejects the existence in nature of purely active or purely passive powers – of powers that would satisfy the conditions on the right-hand-sides of GAP and GPP to the maximal extent.

Second, a power is considered as active or passive depending on the extent to which it satisfies the two conditions of GAP and GPP. And the extent to which a

[16] As Mayr specifies (2011, p. 206), it is not the fact that its manifestation-conditions are highly specific that makes it a passive power, but the fact that they would make the power irrelevant in an explanation of the change.

power must satisfy these conditions to count either as an active or as a passive power depends itself on (i) what is a sufficiently large or narrow range of circumstances and (ii) what is a sufficiently loose or tight connection between the manifestations and the occasions. A minimal requirement on whether the range is regarded as sufficiently large for active powers is that it covers all those external circumstances which we regard as 'normal' i.e. the circumstances that constitute the assumed background in the explanation of a change (Mayr, 2011, pp. 206-7). Hence, Mayr claims that 'the range of active powers includes at least those things which an object can be expected to do by itself' (2011, p. 207).

Third, the two conditions GAP and GPP can sometimes come apart, as we saw in Sect. 2.3 with the medicine example. Take gravitational power. Clearly, its range is extremely large, it can manifest under virtually any circumstances. But gravitational power *must* be manifested under these circumstances, and it seems that the connection between the circumstances and its manifestations is rather tight. Is it an active or a passive power then? Mayr would probably respond that condition (i) must take precedence over (ii) – this is what he says about substances. So, gravitational power would count as active.[17]

Mayr's theory faces three problems, which taken together, tip the balance in favour of the directedness account of the active and passive powers distinction, which I will introduce thereafter.

(a) First, the theory gives counter-intuitive verdicts as to whether a given power is active or passive. For instance, inanimate objects as well as animate objects can be endowed with a power to kill, that is, with a lethal power. Poison, for instance, is an agent of death, but people too, sometimes, are agents of death. While there is no major difference between these two lethal powers as far as their directedness is concerned – they are both powers to kill – there are important differences with respect to their manifestation-conditions, and the connection between the latter and their exercises. For once, the lethal power of the poison has rather specific manifestation-conditions – it can manifest only when it is in contact with a living being that possesses the liability to be intoxicated and for whom the poison is lethal. What is more, whenever an occasion for its manifestation obtains, it must manifest. By contrast, the lethal power of a human can have an extremely wide range of manifestation-conditions. It requires contact with some living being, but beyond this, the occasions are much more varied than for the poison. And it seems that whenever the occasion obtains, a human need not exercise its lethal power. It seems to be up to the killer to exercise it.[18]

[17] One reason for the prevalence of (i) over (ii) on Mayr's account derives, I believe, from the claim that activity is not only associated with explanatory contributions, but with the explanatory weight of *intrinsic* properties over extrinsic factors. Hence, even if a power *must* be manifested, the fact that a manifested power with a sufficiently wide range of manifestation-conditions is part of what makes its bearer the kind of thing it is, suffices to make it more active than passive. See also Mayr (2022, p. 13).

[18] Of course, it could be said that whether the poison's power is active or passive depends on the change to be explained in a given situation. But this reply is not very convincing. It would involve giving up on the idea that there are active power-types and passive power-types. So, there would be no such thing as powers to act upon things in general.

Now, following Mayr's criteria, we may either classify the lethal power of the poisonous substance as passive or as less active than the human power to kill. If the former, the class of lethal powers contains both active and passive species of powers to kill. This, in itself, is an odd conclusion, but not one that forces us to reject Mayr's view. If the latter, we may ask if it really makes sense to say that the power of poison is 'less' a power to produce change or act on things than the lethal power of humans is. What could it mean that a power is more or less a power to produce change or act on things? It seems to me that unless a plausible answer can be given here, we should turn to a different theory.

(b) The second problem is that the theory fails to account for the metaphysical dependence between active and passive powers and the fact that they often come in pairs. That is, the existence of certain types of active powers depends on the existence of a related type of passive power and vice versa[19] – although the manifestation of an active or a passive power in a particular situation need not depend on the manifestation of a corresponding power (Mayr, 2011, p. 199). There would be no power to kill in a world in which nothing was mortal, nor would there be a power to ignite in a world in which nothing was inflammable.

What is more, active and passive powers often come in pairs because as Lowe points out, causal relations are typically dyadic (2011, p. 24). Transactions between substances, as when a ball breaks a window, thus causing it to break, are typically described by causative action verbs which have both transitive and intransitive uses. These are the same verbs we use when we describe the manifestations or exercises of (seemingly) related active and passive powers. I do not mean to argue that we can 'read off' our ontology from the surface of language here. The point is rather that the (at least seemingly) interrelations between most active and passive powers pairs stand in need of an explanation, or at least, one should explain why we should do away with it.

In that vein, Mayr attempts to do away with the fact that active and passive powers appear so interrelated. He explicitly argues that the fact that we use transitive causative verbs which contain a causative element to describe the manifestations of a power is not, as a 'grammatical' criterion, a good indication of its being active. Any such view would be, on his account, confronted with the following paradox.

Mayr argues that all active powers, according to such a purely grammatical criterion, involve changes not only in the other objects – the patient upon which the power is exercised – but in the active-power-bearer as well. For instance, when water dissolves a sample of NaCl and its active power of solvent is manifested, not only the sample changes, but the water changes as well. As a consequence, Mayr claims that 'almost all supposedly active powers are not only powers to produce, but also powers to suffer change – and so, it seems practically all active powers are, at the same time, passive powers' (Mayr, 2011, p. 203). The upshot, he continues, is that if we take the apparent paradox seriously, it turns out that the difference between active and passive powers is not a real distinction between two kinds of property, but a mere matter of perspective in describing one and the same power.

[19] For a defence of that claim, see Marmodoro (2014, Chap. 1 and 2017).

Hopefully, we do not have to take this apparent paradox seriously. For, from the fact that whenever water manifests its power to dissolve salt it also undergoes a substantial alteration from water to salted water, it does not follow that the power of solvent is a power to suffer change in addition to being a power to produce change. What water is able to do is to break the ionic bond of NaCl molecules, that is to cause these bonds to break. The manifestation of water's solvent power then is the breaking of the ionic bond of NaCl molecules. But the fact that when water manifests this power, it also undergoes a substantial change does not entail that the power to break the ionic bond of NaCl molecules is also a power to undergo this substantial change, any more than the fact that the exercise of the power to run involves sweating (and thus a change in the runner) implies that the power to run is also a power to sweat.

In the light of this, it seems that we do not need to do away with the fact that the manifestations of active powers and passive powers appear systematically related as suggested by our use of transitive forms of causative verbs and their corresponding intransitive forms to describe them. All things being equal, a theory that is not revisionist on that point is preferable.

(c) The third problem with Mayr's theory is that it does not sufficiently detach itself from the simple account. His theory is partly motivated by the rejection of the simple account on the ground that it conflates spontaneous or non-necessitated exercises of powers with active powers to produce change. But it is unclear whether the theory does not reintroduce a similar conflation in a different place. Let me explain.

Why should we assume in the first place that (i) a wide range of circumstances under which a power can manifest and (ii) a loose connection between manifestation-conditions and manifestations would yield the distinction between powers to act upon and powers to be acted upon? It seems that any answer offered here is likely to bring back the intuition that 'active' is somehow connected with spontaneity or 'up-to-usness'. And it is unclear why we should assume that such a connection holds in the first place. Take condition (ii). If the manifestation of a power is determined (necessitated or must occur) by the occasion or circumstances in which the substance finds itself, then the power is, to that extent, more passive than active. Why? Because, it seems, it makes it less spontaneous.

Mayr accepts that some active powers' manifestations might be necessitated by the circumstances, as he clearly draws a distinction between the circumstances necessitating that an object produces a change, and the circumstances producing the change regardless of that object (2011, p. 202; 2022, pp. 13–15). In such a case, the active character of the power will probably owe to the fact that the power is intrinsic to its bearer and thus that this power is a crucial factor in explaining what happened, that is, it should satisfy criterion (i) to a sufficient extent. It seems then that a kind of 'up-to-usness' is introduced to distinguish active and passive powers.

But now, it also seems to me that Mayr's theory conflates (a) the active or passive character of a given power with (b) the degrees to which the manifestation(s) of that power can be 'up-to-its-bearer'. For, while the exercises of their powers can be more or less up-to-their-bearers, the variable degrees in this 'up-to-upness' do not distinguish between active and passive powers. And that is because the exercises of both active and passive powers can be more or less up-to-their-bearers. To illustrate, consider the following examples.

Some manifestations of active causal powers are less up-to-their-bearer than others. At one extreme, whether some active powers manifest is in no sense up-to-their-bearer, e.g. magnetism, the explosive power of a bomb, a poisonous substance's toxicity, and perhaps the power to move of a flagellum or the power of a plant to grow. For some other (purported) active powers, what happens when the power manifests can depend to a greater extent on its bearer. For instance, human beings have the power to blink at will, and we can initiate a blinking at will but not stop it once it has begun. By contrast, we can both initiate breathing and stop breathing at will, although we do not have full control (in the sense of 'up-to-upness') over our breathing.[20] At the other extreme, the exercise of some of our active powers can be up-to-us in a stronger sense, such as moving our bodies or deliberately forming certain thoughts in our mind.

Now take passive powers. Most of them are such that their manifestations are also in no sense up-to-their-bearer, e.g. inflammability, corrosivity, ageing (DNA oxidation). But this is not true of every passive power. Hacker illustrates the point with the passions, that is emotions or moods as psychological changes we undergo. As he points out, we can often suppress their manifestations, we can modify our feelings by reasoning, or by deliberate distraction of attention. We can also cultivate our responsiveness to certain situations by enhancing our affective sensitivity (Hacker, 2007, p. 115). The point is that even the manifestations of some (purported) passive powers are in some sense and to some extent up-to-their bearers. Hence, this suggests that the manifestations of passive powers, just as the manifestations of active powers, can be more or less up-to-their-bearers. But then, we need not introduce degrees of activity and passivity. What we need is to distinguish (a) whether a power is a power to act on something or to be acted upon and (b) whether the exercise of such a power is (and to what extent) 'up-to-its bearer'.

To sum up, Mayr's idea that powers can be placed along a spectrum is partly right and partly false. It is partly false because powers do not admit of degrees of 'activity' or 'passivity' any more than an action can be more or less an action (although it can be automatic, intentional, voluntary, deliberate or not). And it is partly right because active and passive powers can be placed on a spectrum where the two poles are not purely active and purely passive powers, but powers whose exercise is fully up-to-their-bearer and those whose exercise is not at all up-to-their-bearer.

Perhaps we may salvage Mayr's theory, not as a theory of the active/passive distinction among powers, but as a theory of the degrees of up-to-upness substances have *over* the exercises of their powers. In any case, I shall leave the question open as my goal in this piece is only to argue in favour a theory of the active/passive distinction among powers.

3.3 The Directedness Account

So far, the accounts of the active-passive distinction among powers we considered all drew the distinction, in one way or another, in terms of how the powers come to manifest. The directedness account differs from these views in that it is the very

[20] These two examples are Hacker's (2007, p. 108).

nature of the manifestations, regardless of the way in which they come about which allows us to draw the distinction between active and passive powers.

Powers are directed towards their manifestation(s) in the sense that the exercise of the power by its bearer consists in some behavioural or mental manifestation(s). What the directedness account of the distinction adds to this is that the type of behavioural or mental manifestation(s) essential to a given power is not only essential to its identity, but also to its active or passive character. This means that the proposed view differs significantly from the previous views we examined with respect to the link between the active/passive powers distinction and the action/passion distinction. For, what explains the active or passive character of a power is the nature of its manifestation, i.e. whether it is an action or a passion, and not vice versa. Actions, as we understood the term here, are 'actings upon'. The idea of the directedness account is that the manifestations of active powers are their bearer changing things or effecting change, whereas the manifestations of passive powers are their bearer undergoing change. This may be captured by the following criteria:

> **Active Power:** For a power P and its bearer O, P is an active power of O if, and only if, the manifestation(s) of P is an altering, a modifying, a corrupting of something or more generally, a causing of change, *by its bearer O.*
> **Passive Power:** For a power P and its bearer O, P is a passive power of O if, and only if, the manifestation(s) of P is a suffering of an alteration, a modification, a corruption of its bearer or more generally, a suffering of change *of its bearer O.*

These criteria may appear almost too simple, or even simplifying. But this is desirable for two reasons. First, they do not, unlike Lowe's simple account, place too many powers to act on things in the category of passive powers. The idea that some objects have the capacity to actively affect other objects in certain ways is neatly captured by the first criterion.

Second, these criteria do not leave unaccounted for our talk and thought about 'natural agency' and 'natural actions', by which philosophers often mean the actions of inanimate substances of the kind referred to when we say, for instance, that some detergent agent acts on some dirt, or that some medicine acts upon our organism (Harré & Madden, 1975; Harré, 2013; Kenny, 1975; Michon, 2009; Hacker, 2007). It is not inappropriate to use causal terminology for both the actions of human substances and those of inanimate substances. For both can be endowed with active powers, that is powers to cause certain kinds of changes.

Now, two features of this account should be emphasized.

First, the notion of active powers cuts across a distinction traditionally made between two kinds of causation: immanent and transeunt causation.[21] Immanent causation is 'internal' to the causing substance: it causes a change in itself, whereas transeunt causation is 'external' in the sense that the causing substance causes a change in a distinct entity. In traditional volitionalist conceptions of action and active power as found in Locke (1975, *Essay*, II, ch. xxi, § 4) and Reid (2010, EAP I.5, I.6; III.1), active powers are associated with immanent causation because they thought that only

[21] I thank an anonymous referee for pressing me to say more about how these distinctions relate.

the will is truly productive and that only volitions are exercises of active powers. On the account presented above, powers to change distinct entities are active in the same sense as powers to change oneself. Active powers are no less associated with transeunt causation than with immanent causation. The difference is that in the case of immanent causation, the agent of the change, the causing substance, is also its patient, the undergoing substance, so that the substance exercises both an active and a passive power. For instance, if I move myself, I may be the agent of my own motion as I exercise the active power of locomotion, and its patient as I am being moved (by myself). By contrast, in the case of transeunt causation, if a poisonous substance is the agent of the death of an animal, the agent and the patient of the change are not the same.

Secondly, we should note that the directedness account implies that the distinction between active and passive powers is a categorical one, as opposed to one of degrees. Mayr objects to this idea on the ground that it would entail that in the manifestation of an active power its possessor must be purely active, that is it would not undergo any change itself (2011, p. 204). This is not so. As a matter of fact, a substance may be viewed as virtually passive even when it exercises an active power.

To illustrate, a fired pistol bullet has undeniably an active causal power to pierce a person's rib cage, which it manifests when it penetrates its victim's body. Its possession of this power is largely dependent on its speed and spin, itself given by the pistol, which in turn is a mere instrument used by a human substance. In the light of this, the bullet might appear to us as a mere participant in the event and it seems to exhibit little or no agency at all in view of the broader sequence of happenings involving the killer and his victim. In other words, the bullet appears to be rather passive. However, this is perfectly compatible with the fact that the bullet possesses an active power and exercises it by piercing a hole in the victim's body. The difference between the bullet and the shooter is the difference between two kinds of agent, each of whom can be attributed a change which it effected through the exercise of one of its active powers. And each of them is active with respect to the change it effected, even if with respect to the broader sequence the bullet plays the role of a mere participant.

Moreover, as Alvarez and Hyman point out, even with respect to a particular action, we cannot identify a purely active agent or a purely passive patient (1998, p. 244). For instance, a boxer typically has the power to land an uppercut on his opponent, and this is an active power. When he exercises his power in striking his opponent, the boxer is not purely active, since his opponent's body reacts by simultaneously exerting a force of the same magnitude on the boxer's fist. But this is compatible with the claim that the boxer is exercising an active power in striking his opponent by landing an uppercut on him. In fact, one might argue that a success condition of the exercise of such a power is precisely that the body of the opponent reacts in the way it does. Thus, the claim that the distinction between active and passive power is categorical does not entail the implausible conclusion that a substance exercising one of its active powers is purely active.

Now, if the directedness account is to do better as an account of the active-passive powers distinction than Mayr's, it must answer two related worries or objections.

A first worry is whether it is enough to know what a power is directed at in order to know if that power is active or passive. I believe it is. But it is not easy to learn what

a power is genuinely a power for or to do, especially in the case of inanimate beings. We may think of some powers as powers to cause change, only to discover later by scientific advances that we had misjudged the dispositional properties of a given object, and that in fact, it has no power to produce a given change or instead that it produces another, or that something else was responsible for the observed change.

Second, the directedness account owes us an answer to the following question: are the classes of active and passive powers mutually exclusive? Can a power be both active and passive? And can it be neither active nor passive? The latter question is easily answered: nothing in the account requires us to say that there are no powers which are neither active nor passive. If there are, then this is no objection to the account. The former question is more difficult to answer. Many powers seem to be both active and passive given our criteria, probably because such powers are multitrack powers, that is, powers directed at more than one manifestation. Typical examples include electrons' negative charge which is a power both to repel and attract certain particles and to be repelled and attracted by certain particles,[22] or the power of an ice cube to cool the water and to be warmed by the water.

In response, we could say that the distinction between active and passive powers does not apply to every corner of nature and that it does not apply to the entities and powers that are studied by physics. The purported power of the electron may be both active and passive, but outside physics, this kind of powers seems to be the exception and not the norm. What is more, even if the distinction does not apply across the board, it may still apply to *some* powers and interactions of a chemical or biological nature.[23]

This, however, would only deal with the first example here. What we should say is that (i) there is no reason why a reciprocal interaction such as the one between the ice cube and the water may not involve two simultaneous actions,[24] and (ii) we may question the claim that we are really dealing with a single power both to cool and be warmed.[25] Differently put, nothing in the example as such suggests that being warmed by water and cooling water are manifestations of one and the same power – and notice that the power to cool water can usually be exercised independently of the power to be warmed by water, as when your refrigerator cools some water.

I shall conclude, then, that if there is indeed a distinction to be made between powers to act on things and powers to be acted upon by things, the directedness account is our best account of it.

[22] Provided, as Heil suggests (2020, p. 18), that negative charge is a power (which is in no way obvious to me). Note that such a power would be multitrack in two ways: it would be a power both to repel and to attract, but also a power to be repelled and to be attracted. But if negative charge is not a multitrack power, but something that grounds two (or more) powers, e.g. one to attract/repel and another to be attracted or repelled, then we do not have an example of a power which is both active and passive.

[23] For a detailed discussion, see Kuykendall (2024).

[24] For a similar point, see Marmodoro (2014, p. 40). Some would certainly argue that such interactions, just as forces, should be seen as a single entity that one can see from two different 'sides' or 'perspectives' e.g., Ingthorsson (2021). I fail to find this view convincing, although for reason of space, I cannot undertake to say why here.

[25] Lowe offers a dilemma to anyone who would wish to maintain that some powers are genuinely multitrack (2010, pp. 11–12).

4 Conclusion

In this paper, I have sought to elucidate the distinction between active and passive powers, as well as its relation to the action/passion distinction. I have argued that drawing the active/passive distinction by appealing (i) to the connection between manifestation-conditions and manifestations, and (ii) to the range of manifestation-conditions classifies too many powers as passive and conflates the productive character of certain powers with a sense in which their exercises can be up-to-their-bearer. What accounts for the distinction between active and passive powers is not the connection between the exercise of a power and its manifestation-conditions or the range of occasions on which it can manifest, but the very nature of their exercises, respectively, causings of change and undergoings of change. If this is right, we should not seek to elucidate the distinction between action and passion in terms of the active/passive powers distinction. Rather, we should understand the latter in terms of the former.

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