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Dispositional Explanations in Dualism

Abstract *In order to defend mental explanations dualists may appeal to dispositions (powers). By accepting a powers theory of causation, a dualist can more plausibly defend mental explanations that are given independently of physical explanations. Accepting a power-based theory still comes with a price. Absences and double preventers are not causes in a powers theory, and solutions based on them can only defend their explanatory relevance in mental explanations. There is still a chance that such mental explanations can be causal explanations, though they do not refer to real causes.*

Keywords: *dispositions, powers, causal explanation, dualism, absences, double prevention, mental explanation*

Introduction

Why do we explain our actions with mental causes? Are these causal explanations or not? What we need are true and relevant causal explanations, explanations of causal relations. Causation plays the central role in explanation and prediction. I will argue that a dualist should endorse some kind of a powers (dispositional) theory of causation to defend her theory of mental causation. With such a theory of causation dualist would have a better chance of solving the problem of mental explanation. Defending a power-based theory still comes with a price. Absences and double preventers are not causes in a powers theory and solutions that cite such non-events (non-powers) can only defend their *explanatory* relevance in the case of mental causation.

After some short preliminaries on the problem of mental explanation in dualism and the need for a right theory of causation to defend a dualistic position (Section 1) i will consider why dispositions (powers) and a dispositional theory of causation are a good pick for the dualist (Section 2). I will borrow from a powers theory advanced by Mumford and Anjum (2011) which will be outlined in Section 3. After that i will provide some preliminary solutions to the problem of mental causation that a dualist could extract from such a theory of causation (3.2). Lowe's theory of interactive dualism will be outlined in Section 4. On the ground of

Mumford and Anjum's powers theory i will establish the plausibility of the solution by Sophia Gibb, an account in which mental causes are double preventers and discuss its plausibility in Section 5. This will bring me to the problem of the causal status of absences and preventers and how explanations citing such "causes" should be regarded in Section 6.

1. The Problem

Kim's explanatory exclusion principle[1] (EE) and its respective argument are often cited as the main problems for dualistic mental causation. Gibb (2009) has scrutinized Kim's argument and concluded that although Kim's principle is a metaphysically implausible one, the problem of mental explanation still stands for dualism.[2] So, how could a dualist, trying to give a distinct and independent mental explanation beside a physical explanation, defend her position? Some dualists are accepting a theory of causation based in a power (disposition) ontology. There are several solutions possible once the powers theory of causation is endorsed. I will analyze them and see which ones are more plausible.

Dispositional theory of causation can help the dualist answer the argument form overdetermination and the argument from EE. By changing the theory of causation and by accepting causal dispositionalism he can answer the *Closure* demand, accommodate overdetermination and deny epiphenomenalism (Bennett 2008: 24). Causal dispositionalism doesn't show that *Closure* is wrong, but can weaken it. To preserve *Closure* a theory like transference is needed (Gibb 2010). This theory of causation is physically biased, and the dispositional theory is not, so it is well-suited for dualism. Gibb (2013) suggests an account of mental causation as double prevention. In causal dispositionalism absences are not causes and double prevention can be used to reconcile all 4 claims[3] that constitute the problem of mental causation.

1 "*Explanatory Exclusion*: There can be no more than a single complete and independent explanation of any one event e." (Kim 1993: 238; Gibb 2009: 206)

2 Gibb argues that a weaker principle still stands: "EE*: If two explanations cite distinct and independent events as complete causes of an event, then one of the explanations must be false". Respective argument is: 1. *Explanatory Interaction*: Some physical events have mental explanations. 2. *Explanatory Closure*: Every physical event has a complete physical explanation 3. EE*: If two explanations cite distinct and independent events as complete causes of an event, then one of the explanations must be false. 4. Therefore, any event that a mental explanation cites as a complete cause of a physical event is identical with, or dependent upon, that which some physical explanation cites. (Gibb 2009: 220).

3 Gibb (2013) takes them to be: *Relevance*, *Closure*, *Exclusion* and *Distinctness*.

Can we solve causal exclusion by changing the theory of causation? Is this allowed to the dualist? "Dualists should be allowed to endorse an account of causation that allows them to solve the exclusion problem" (Kroedel 2013: 13). The exclusion problem could be solved more easely if a dualist accepts DTC, then a dependence or production account of causation. The exclusion is "most pressing" when we talk of production account of causation. This means the transfer of energy from cause to effect (transfer of causal "juice", "oomph", "biff"). Transference theory of causation (Salmon 1984, Dowe 2000) is behind exclusion (Gibb 2009). Some think that the problem of exclusion can be solved if we see causation as counterfactual dependence. Just by denying production, exclusion problem doesn't just go away (Bennett 2008: 293). Both dependence and production accounts of causation are flawed accounts and should be replaced with a dispositional account of causation. I will argue that a dualist has a better chance of defending her theory of mental causation if a dispositional theory of causation is accepted.

To ask for a mechanism of causation in interactive dualism is wrong. What is the causal mechanism behind the mental causation? Many theories of causation are not mechanistic, like counterfactual, nomological, and powers theories. Theories that are mechanistic, like transference theory, are reductive in the sense that they analyze causation via noncausal processes, like transferring energy. Even if we analyze causation via noncausal processes they still don't have to be *physical* processes. Ehring's theory of trope persistence is an example. Dispositional theory is not reductive and is not physically biased. Such problems come from the influence of physics and that is why many theories of causation aspire to physical reduction (Mumford, Anjum 2011: 217). Such is the theory of physical causation which consists in transference of preserved quantities (Dowe 2000).

Now i will say something about dispositions in general and then outline a particular dispositional theory of causation of interest to the debate about mental explanations.

2. Dispositions

How do we analyze dispositions? They cannot be analyzed just by stating statistical regularities about behavior (regularity between relevant conditions and manifestations); there must be some intrinsic property that grounds it, so that a disposition can be explanatory for some

behavior. One reason for this is the famous Molier's problem (*virtus dormitiva*). It is said that opium makes people sleepy because it has a dormitive virtue (it is somniferous). If a disposition is just a statistical fact it cannot explain the behavior of an individual (Craver, Romero 2011). For a disposition to be explanatory there must be some kind of property or a trait that grounds regularities.

The other problem is that we cannot use conditional analysis for disposition statements (Lowe 2011, Craver, Romero 2011). We can't just say that salt is soluble in water, there are ways to prevent this. If water is already saturated with salt, more will not be dissolved. Neither simple conditional analysis like Carnap's, nor a refined one will do (as Bird 1998 argues). Conditional analysis is subject to plausible counterexamples. Two major counterexamples to conditional analysis are finks (dispositions that are made to go away by the same stimulus that makes it manifest) (Martin 1994) and masks (the same conditions that help the disposition manifest itself, prevent that manifestation via a distinct causal route, but leave the grounding property).[4]

Craver and Romero use this example of a fink: inserting the key in the ignition disconnects the starter, short-circuiting the key's disposition to start the car (Craver, Romero 2011: 8). When someone is dealing with their own shyness they could mask it. This shows us the mechanism of dispositions that is useful in psychology and psychiatry, where the term itself is already quite common. It also shows why its good to use dispositions in theories with which we try to solve the problem of mental causation. If someone is shy this prevents him from interacting with other people freely, but he could have developed mechanisms to compensate it. The dispositions is still there but it can be masked, turned into something opposite. Maybe we can separate dispositions from behavior of individuals because the manifest behavior is missing in some situations. Craver and Romero warn us that we shouldn't do this and that it is best to understand dispositions both in terms of regularities and traits.

According to Lowe, dispositions are causal powers and liabilities. Every disposition (power) has a type of manifestation. But it needn't have stimuli, like Bird maintains. Lowe gives an example of radium's spontaneous power to decay. There is no stimulus for this manifestation.

4 Mumford also denies the conditional analysis and defends realism. When using dispositional predicates we attribute real properties (realism, contra Ryle and Dummet). Particulars can have dispositions that never manifest. Dispositions are real property-instantiations (Munford 1998: 63).

Radioactive decay of radium atoms is insensitive to external conditions; there is no triggering stimulus. Manifestation is something intrinsic to the power, something stimulus is not (Lowe 2011: 23). For a disposition *to dissolve in water* (water-solubility simply is this disposition), manifestation is *dissolving in water*. Carnap, being a neo-Humean empiricist, was not willing to accept such a non-observational *causal* predicate.

Lowe argues that no conditional analysis of dispositions will ever be successful because no disposition has a "stimulus" and a "manifestation" such that stimulus can be considered a triggering cause (Lowe 2011: 25). What is commonly called a stimulus is already built into the nature of the manifestation, but not into the nature of dispositions, like manifestation is. Stimulus is not a cause of a manifestation. If something has a disposition of water-solubility it means than its manifestation is being *dissolved by water,* so it will be dissolved when placed in water. This condition is already built into the manifestation. Something being in the water is not the cause of the manifestation. This is because manifestation itself is a *causing* (causal state of affairs) and because causes and effects should be distinct and separable. Being in water and being dissolved in water are not logically independent in this Humean sense. Stimuli are explanatory redundant and we cannot think of them as causes of manifestations. What about the cases when dissolution doesn't happen? Lowe says that there is no single answer and empirical investigation is needed in every particular case. Dispositions are fundamental and irreducible (Lowe 2011: 27).

3. Dispositional theory of causality (DTC)

Dualism is more plausibly coupled with non-mechanistic theories of causality. Dispositional (powers) theory of causality (Mumford 1998; Molnar 2003; Mumford, Anjum 2011) seems like a good candidate for a theory that should be applied to mental causation. In DTC "causation is not being analyzed in terms of powers but only explicated by them" (Mumford, Anjum 2009: 285). It is a *causal primitivism*. We use powers to explicate causation. Causal dispositionalism doesn't analyze powers with something else, powers already have a causal sense; they are causes and there is no non-circular analysis.

It is problematic to say that the disposition causes its manifestation, because they should be distinct and separable, something they are not. Both Lowe (2009, 2011) and Molnar (2003) agree that powers get their

identity from manifestations (manifestation-types), they are necessarily connected. Manifestation is *isomorphic* with the power (Molnar 2003, 195). But there is a difference between *manifestations* and *effects* (Molnar 2003). What is their relation? Effects are not isomorphic with the exercise of powers. "Each manifestation is the product of the exercise of one power" (Molnar 2003: 195). But the manifestation doesn't determine the effect by itself. Effect, which is an occurrence that has a cause, is usually a *combination* of many contributory manifestations. So these two are not the same.[5] In Molnar this is a consequence of accepting the concepts of *polygeny* and *pleiotropy*. In genetics a polygenic trait is the one determined by many genes at different loci. In a powers theory polygenic[6] effect is the combination of many contributing manifestations. Pleiotropy states that one gene contributes to the production of many traits. It could be said that powers and their manifestations are pleiotropic. Manifestations are not polygenic, but effects are (Mumford, Anjum 2011: 211).[7] So, effects are coarse macroscopic (or microscopic) events.

When building their powers theory of causation, Mumford and Anjum took Molnar's polygeny in consideration and accepted it. To them, polygeny shows that we should "model causes like vectors" (2011: 12). They prefer this model to the neuron diagrams. It is better because it does justice to the complexity of causation. Powers can work together, or against each other (to prevent each other). Powers are illustrated as constituent vectors within a n-dimensional qualitative space. In such a model, when powers are sufficiently accumulated and a certain threshold is reached, certain effect occur (see *Figure 3* in Mumford, Anjum 2011).

Following Mill, they differentiate between particular causes (component powers) and a *total cause* (resultant power). There is a possibility of causal overdetermination between the component powers and the resultant power, if they both produce the effect, something Wilson (2009) thinks happens. Causal dispositionalism can accommodate the

5 In DTC there is no talk of events, more of a process consisting of many powers. Mumford and Anjum (2011) accept Lombard's theory of events (Lombard 1986). Some do not believe in the reality of component powers (Cartwright 1983, 59). McKitrick (2010) identifies manifestations with resultant effects. For a discussion see Wilson (2009).

6 The occurrence of polygeny goes against reduction of causes to one simple kind, and so against making reductive and deterministic genetic explanations (Mumford, Anjum 2011, 229). This is of benefit for dualism also.

7 Molnar distinguishes polygeny and pleiotropy from issues concerning single-track vs multi-track powers.

possibility of overdetermination and in this theory it is not problematic. Overdetermination is a threat to counterfactual dependence theories of causation but not to a dispositional theory. The *prima facie* possibility of overdetermination cannot be ruled out (see *Figure 6.2* in 2011). Appeal of the powers theory of causation for the dualist is in the fact that it can accomodate cases of overdetermination. For overdetermination to occur between component and resultant powers they would have to be distinct. If a dispositionalist has to choose between component and resultant powers "it would make more sense to be an anti-realist about the resultants" (2011: 43), but theses authors think that neither realism about the components nor the resultant has to be sacrificed.[8]

Dispositions are causally efficacious and dispositional ascriptions figure in causal explanations, dispositional terms are explanatory concepts (Mumford 1998: 118). Causal explanations describe a phenomenon by saying what causes it has (Lewis 1986). In case of dispositional theory those are powers. Every power that tends to bring about some effect is a cause. If we have many powers that polygenically bring about the effect, then they all figure in legitimate causal explanations. Sometimes we speak of *the* causal explanation. One way to do this is to just count the total cause (Mill's cause). The other way is to pick one from several partial causes (one of the contributing powers) as the most important in bringing about the effect. In the second case the power we pick doesn't have a special metaphysical status, just a special *epistemic* status. Which one we pick is relative. This doesn't rule out other powers (causes) that together bring the effect (Mumford, Anjum 2011: 132). By saying there is only one cause (and one explanation) we could even preserve Kim's exclusion principle. Sometimes we can have just one relevant explanation, although there are more causes to the effect.

A common objection is that dispositions are vacuous causal explanations (*virtus dormitiva*[9]). Mumford argues that it is ungrounded. Some dispositional explanations may be trivial, like when we say that opium

8 Wilson (2009) has an experiential argument that resultant powers are better known. If we adopt an anti-realist position on components by saying that the resultant power is the only real cause, we could use this to defend dualism. Only the physical resultant could be known, but there are real (component) mental powers that are just invisible. This is akin to Lowe's proposition.

9 Similarly, Bedau (1987) has argued that although "Cartesian interaction is conceivable it is still not explainable". He compares it to the *virtus dormitiva* explanation of the opium's dormitive power which is a "parody of an explanation" (Bedau 1987: 496). In the case of opium, at least, some kind of explanation is available, no matter how trivial. Appeal to a mind-body union can be made to illuminate the Cartesian in-

made someone fall asleep, but others are not, like when we explain why someone fell asleep unexpectedly. In a different context *virtus dormitiva* explanation can be informative. In explanations we have to pick out causal roles, and dispositional ascriptions do that. Explanation is also important for dispositions in another sense. In the dispositional theory of causation distinction between the stimulus, the disposition and the manifestation is purely *epistemic*, metaphysically they are all powers that figure in the causal process; they are on an ontological par (2011: 134). They are all powers but it is their explanatory place that makes them distinct. All this will be important for the discussion on absences and double preventers.

Causal dispositionalism leans towards an anti-deductivist account of explanation and this is the advantage of the theory. There is no necessitation of the effect, only disposition towards it. Even if there is an explanatory gap, if deductivism is denied, dispositionalism can fill in this gap; possibly there was some power that was not accounted for in the original model (Mumford, Anjum 2011: 140).[10]

Some think that causation by *absence* can be considered a counterexample to dispositional theory. In causal dispositionalism absence is not a proper cause, not a metaphysical one, but a reference to the absence can still give us an explanatory role. How a nothing can have a causal power? But in the vector model even the absence of some power has an influence on the resultant power, so it is explanatory useful. Though absences are not real causes, because they are something negative, nonexistent, they can still be explanatory relevant.[11] Lack of oxygen can kill a person. Absences are a problem for the realist. Problem of absences can be resolved in causal dispositionalism so that other powers are doing all the causal work, but absences still figure in explanation.[12] This theory can show us why we can make sensible causation by absence claims, although absences are not metaphysically real causes.

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teraction, but it is no better then the *virtus dormitiva* explanation. That is why Bedau thinks that Cartesians have a superficial understanding of mind-body interaction.

10 This is also useful for dualism.

11 There are three possible responses: 1. Reify absences (*reification*) 2. Allow that absences can have powers (*empowerment*) 3. Deny that claims of causation by absences are true (*denial*) (2011: 144). Schaffer's account can be seen as an example of reification, Lewis's is as an example of empowerment, but Mumford and Anjum as realists, take side with the denial.

12 Jane Suilin Lavelle, George Botterill and Suzanne Lock (2013) argue that by adapting Peter Lipton's contrastive account of explanation absences can be seen as explanatory. This way, they think, "the many absences problem" can be solved.

Although it may not be causation, the conditional is valid. According to causal dispositionalism conditional analysis is wrong. This is because there are cases of overdetermination and preemption. Overdetermination on the other hand, presents no problem for causal dispositionalism and can be accommodated. In DTC there can be causation without counterfactual dependence and counterfactual dependence without causation (like in the case of double prevention). Causal dispositionalism can also accommodate such strange cases like double prevention and this will be important later discussion.

There is no necessity of bringing the effect. We can add and subtract powers. Some powers produce new ones, some prevent others from manifesting. Several powers are needed to light a match or to move your body, but there are powers that tend to prevent this effects from happening (like wind or humidity). Size of the resultant vector determines the outcome.

Within the framework of DTC there is more chance to understand the minute details and complexity of mental causality. Mental powers (volitions) are part of the causal process that can be helped by or prevented by other (possibly physical) powers. The body can resist our willed actions. When one power is manifested, others can still counter it; it can be thwarted. So, the modality of agent causality is dispositional (Mumford and Anjum 2011: 210).

It is hard to perceive causality. If we stop understanding causality like a relation between events, and more like a process we can better perceive causality (2011: 200). Authors argue that Hume's temporal priority condition (cause before effect) should be abandoned. We can experience causality in our own bodies. We can feel the manifesting of certain causal powers in us, like willing, for example. Causality is real and it's more then constant conjunction. Willing is not enough for an action to happen. This mental power by itself doesn't have to produce the effect, the bodily movement. Mumford an Anjum argue against Hume's disconnected account of causation.

This model of disconnectedness is wrong because it leaves us with an unsolvable problem of how to connect cause and effect. In DTC "causation is involving a single, unified and continuous, unfolding process in which dispositional partnerships came together and, usually over an interval of time, became the effect" (2011: 205). Mumford and Anjum apply this integrated account of causation to intentional causation. DTC

emerges as a good theory for mental causation (2011: 206). Temporal priority is not plausible. Willing happens in the same time as the movement. In Hume's account volition would be connected to the movement just by constant conjunction and this is "psychologically implausible". Causation is a unified process. Volition and movement are intimately connected. For Mumford and Anjum proprioception is another proof of reunification of agency, that the volitions and movements are not separated. And proprioception enables the perception of causality in our bodies. DTC can explain why and how we can bail out of our actions, like stop moving the hand or change its trajectory and Hume's account of causation can't to this. There is more psychological plausibility in DTC. It is in tune with reality of our actions and so better suited for mental causation.

Dispositional modality is less then necessity, but more then contingency, because causes can be prevented. Mumford and Anjum argue that in agency this characteristic of causality can be experienced. In agency we have two elements that are needed for modal power of dispositional: directedness and possibility of prevention (2011: 210). They are perceived unified, not separately. And so we have an experience of causal power. Dispositional modality is known directly from experience (2011: 212). So this type of modality explains modality in normativity and intentionality.

3.2 Powers theory and mental causation

That the willing doesn't always lead to the desired effect (like moving your hand) shows us that it is dependent on other powers. To reach the effect, the coarse grained event, combination of powers is needed. Molnar and Mumford defend such composition of powers. Is is plausible to say that the manifestation of the will, as a mental power, brings about a physical effect in combination with manifestations of some physical powers. At least those two properties should be distinct (so dualism). Vector model works in a qualitative space and references properties not substances. Theory is also neutral regarding the nature of the powers, whether they are mental or physical. This is why it can be applied for dualistic purposes, but this alone does not mean that dualism is true. Dualism will have to pursue independent arguments for itself elsewhere. By being neutral it is better suited for dualism then the transference theory which is physically biased. In Mumford there is no qualitative side of properties, just a causal one (dispositional), so there is no distinction

between mental and physical and dualism will have to add it to the dispositional theory. Independently of this matter, I think that the qualitative side of properties should be taken into consideration. Denying it leaves us with more problems than solutions. We are talking about causality, relations, but qualia also influence the causal side of properties and hence causation. At least some properties are non-powers.[13]

Mental and physical powers combine to produce an effect, bodily movement. Object has a power *simpliciter* to cut wood because it has a property that it is knife-shaped, but the manifestation of this power depends on other powers (properties) of this object, like, is it made of steel and so on. With Mumford all powers are powers *simpliciter*. Will as a rational power doesn't always bring the effect even when it's manifested (arm doesn't go up), because the resulting effect is a combination of several contributing or preventing powers. Manifestation of the will itself could be spontaneous and rational, but by itself, it is not enough to bring the effect, and so needs to combine with other powers. Molnar doesn't consider manifestation to be an event, and Lowe and Mumford see it more like a process, with many manifest partners.

Powers can be combined in many different ways. Composition is not the only option. Eating 10 times more chocolate which has a disposition to produce pleasure, does not mean 10 times more pleasure; quite the contrary. Simple additive or subtractive composition is not always the case. What this means is that there is a possibility of emergence in DTC and this is promising for some dualists who argue for it.

Returning to what i said in Section 1. Karen Bennett has claimed that production is behind the exclusion, but denying it will not take away the problem, because it is not necessary for exclusion. She also thinks that if we take causation to be pure counterfactual dependence we also can't solve exclusion, because the problem of overdetermination still stands. According to the counterfactual theory overdetermination can sometimes occure, like double assassination, but it is different from the cases in mental causation (Bennett 2008: 294), so it has to be said that cases of overdetermination are cases of joint causation. Those who defend it are forced into "collectivist" view of overdetermination (see Schaffer 2003).

Seeing this as a problem, they start looking for a better counterfactual theory, but this is not a good solution. No theory of causation that allows

13 See, for example, Lowe (2010) for a discussion on non-powers.

both cases (cases when two causes overdetermine and when they don't) can all by itself distinguish between them. Appeal to a pure dependence theory of causation cannot show that exclusion is false. Dispositional theory is free of these problems. Bennett argues that compatibilism requires physicalism, and so dualist is in a problem. Causal dispositionalism can accomodate cases of overdetermination (causation without counterfactual dependence). Counterfactual analysis is not enough and we read conditionals that are true dispositionally (2011: 154).

Dispositional theory has an advantage over counterfactual dependence theory because it can accomodate overdetermination and an advantage over transference theory because it can accommodate cases of double prevention. There are three possibilities before a dualist in DTC: (1) if we see mental causation as double prevention, then non of the 4 claims are dropped, because absences are not causes, so it avoids denying *Closure*, (2) mental causation is a case of overdetermination which is acceptable, but we deny non-overdetermination principle and *Exclusion*[14], (3) two independent causes (powers) work together to produce an effect, there is no overdetermination, but *Closure* is violated. Kim's exclusion principle is questioned in DTC. There can be more then one cause of effect, because they all dispose to it. But this event is coarse grained, not fine grained like Kim's events. If we want, we could preserve exclusion principle by saying that there is only one real cause, that is the resultant vector. Then only *Closure* is denied, which is not so surprising for a dualist to claim and the principle itself is very problematic.

Mental power could be a real cause (or one of the causes) of some physical effect (behavior), although the causal explanation doesn't reference it, not seeing it as a cause. According to DTC disposition, manifestation and stimulus are on an ontological pair, they are all equally real, but we still make a distinction between them, and this distinction is epistemic. Scientific investigation will take a mental power to be a background condition, not a cause, or miss it completely (invisible like in Lowe). So it will not figure in explanations. Physiology can't "see" mental powers. But this doesn't mean that the mental power wasn't one of the causes, maybe a preventing one. What science is seeing is possibly the resultant cause. Gibb argues that mental powers can be explanatory relevant even if they are not real causes. Reverse is imaginable: mental is one of the causes, but it is not explanatory visible.

14 "*Exclusion*: no effect has more than one sufficient cause unless it is overdetermined." (Bennett 2008: 281)

Regarding the status of dispositions, Lipton made a tripartite distinction: "For dispositions [there is] [...] a tripartite distinction: displaying, present-but-not-displaying, or absent" (Lipton 1999: 163).

1) *Absence* – The object in case may not have the disposition or the disposition was lost due to a fink.
2) *Displaying* – If it is displaying, object has the disposition and the relevant trigger is present, then it will manifest,
3) *Present-but-not-displaying*

Schrenk (2010: 156) thinks there are two possible scenarios here. Take the case of sugar's solubility. Its disposition is present, but is not showing, because the stimulus is not there to trigger it. Other case considers Bird's antidotes. Take an electron that is in an electric and a gravitational field that pull it in opposite directions (one because of its Coulomb capacity, other because of its mass). It has dispositions to accelerate in both directions, and the opposite forces are equal, so the electron remains stationary. Although the relevant stimuli are present, and the dispositions are there, there is no manifesting because of antidote. Schrenk's conclusion is that the antidote cases show us we cannot distinguish between (i) being present plus being not triggered and (ii) being present plus triggered, yet, not manifesting. So, merely saying that the disposition is "present" is not enough and Schrenk proposes adding a fourth stage where we have *pushing* and *trying* of the disposition aiming to manifest and the dispositionalist should have no problems accepting it.

How we should understand the *pushing*? Schrenk argues that although a Humean solution, or a counterfactual one is not accepted, metaphysical necessity is also the wrong kind. Mumford solves it with dispositional possibility. Schrenk thinks this is the best solution because of the antidote cases (Schrenk 2010: 163). The fourth stage could helps us explain workings of mental dispositions. Mental powers could be special in that they can "try" or aim to manifest or not to manifest even when the triggering stimulus is present.[15] Maybe, will is such a power that it has a control over its own manifestation. Will could be its own antidote[16].

15 This is probably the difference we see in Lowe between causal powers and will as a spontaneous power and what he means when he says that the will is a two-way power.

16 This is in case we take volitions as dispositions. When physical powers are present as triggers that still doesn't mean that the manifestation will be brought about

We could use the polygeny model if we deny *Closure*. In that case mental power together with a physical one contributes to the final effect. When will is manifested it produces the effect with the physical power. Physical powers can sometimes bring about the effect on their own, but in this case we have no sense of responsibility for the bodily movement, no feeling of volition. If we want to keep *Closure*, we could say that the mental disposition has a manifestation that is the physical causal chain of powers. The disposition itself would not be the *cause* of the causal chain (Mumford would think it is, but in Lowe it wouldn't be).

Now i will outline two positive dualistic accounts of mental causation that work within a powers ontology.

4. Lowe's interactive dualism

In Lowe's (1996, 2000, 2008, 2013) theory of interactive dualism mental doesn't start any new physical causal chains, a mental *event* causes a physical *fact*. Mental event M causes it "to be the case that certain physical events, P1, P2, ... Pn, have a certain physical effect, P" (Lowe 2008: 54). Mental event M is not a direct cause of P1 or any other physical event, but of the hole causal chain. What is brought about is a state of affairs. So there is a distinction between event causation and fact causation.

Neural causal chains that start in the limbs branch out like a treetop. There is no one direct causal way from the will to hand that is raised. Certain bundles of neural causal chains converge to certain behaviors, to bodily movements. Convergence is a formal property of some causal chains (Gibb 2010: 373). Mental event causes this formal property, will causes the convergence, the causal fact, but not as one of the events in the chain itself. Mental events make the causal tree of neural events converge on a bodily movement non-coincidentally. Without the mental such a convergence would be a thing of chance. It is also *invisible* to the scientist researching the physical events leading to the movement. Explanation of the movement in purely physical terms would be incomplete, although it would not appear as such, because there are no gaps

(moving of the hand). I see two options here: that the will antidotes itself, so to speak, that it pushes away from manifestation or that there is another mental power pushing in the opposite direction of the will, to some other desire. In the second case, if there is no strong enough mental power to antidote the will, movement happens; if there is such a desire movement is prevented or something else happens.

in physical causation.[17] To make it not indeterminate, we need a mental explanation. Also, mental doesn't control the electrochemical signals like tubes direct the movement of some fluid. There is no redistribution of energy or moment, and this is because a dualist doesn't endorse a transference theory of causation.[18]

Lowe's solution is to deny the homogeneity of causal relata (event and fact distinction). But they are not distinct enough for this to work, reduction of one to the other could be made (Gibb 2002: 80-84). Both feature property-instantiations on a substance at a time, so properties (and powers) are what matters, what does the causal work. There is really no substantive distinction here. Both facts and events are tied to the ontological category of properties. Maybe we could try to save Lowe's proposition by making a distinction between dispositions and their manifestation, but they are also very closely bind, or they are both powers (Mumford). There is also the difference between effect and manifestation that could be used. And, we don't have to invoke the heterogeneity of causal relata to solve the problem of mental causation.

Will is not a causal power or a liability, its effects don't always occur. One possibility for an event to be uncaused is that it is spontaneous; a substance manifests its power without some other substance making it manifest it. Will is such a spontaneous power, not a causal one, according to Lowe. But manifesting our will is not an accident, indeterminate, will is a *rational* power. Spontaneity is not enough. Will is different from a spontaneous power because it is a two-way power and it is rational. With Lowe this also means that will is an *active* (a power either to will or not to will a particular course of action). Active powers is one whose manifestation needs no trigger, it has no stimulus type. It is also a non-causal power, it is an exercise is not caused by another substance acting upon its bearer and it's bearer doesn't have to bring a change in another substance.[19] This theory is different from an agent-causal one in which agents cause their volitions.

17 See Lowe (2008), ch. 3.
18 See Gibb (2010) for discussion.
19 Causal relata in Lowe's account are *individual substances*. Individual substances are concrete bearers of properties (and so, powers). They are ontologically independent and never causally inert. In his view all causation is, fundamentally, substance causation. Only substances possess powers, any talk of events or properties possessing powers is derivative. The *will*, therefore, should not be alienated from the agent whose will it is. Agent doesn't need some power over his will, it is already *his* power. The agent simply *exercises his will* (Lowe 2013: 157-167)

5. Gibb's account of mental causation

One of the most interesting solutions to the exclusion problem in recent literature comes from the mental causation model of Sophia Gibb (2013). She invites us to think of mental events as *double preventers*. This comes form accepting a powers theory of causation. She uses the neuron model instead of the vector model. Mental events are not direct causes of physical events, but still figure in explanations; they are explanatory relevant. This model makes the combination of *Relevance*, *Closure*, *Exclusion* and *Distinctness* consistent. She uses a powers theory because it distinguishes between a role of *causing* an event and role of *permitting* an event. Mental event permits a bodily movement (physical event) to be caused by preventing another mental event that would have prevented a neurological event from causing the movement. So, the real cause of the bodily movement was the neurological event, but the mental event permitted it.

Gibb argues that her account is empirically supported and is consistent with findings of Libet's experiments concerning the free will. The account explains how mental events permit the final motor outcome (Gibb 2013: 210). She also claims that it is supported by William James's insights into the phenomenology of free will. Gibb's account of psychophysical causation is very similar to Lowe's account. In both accounts mental events are invisible to scientific research. Empirical investigation sees only the chain of physical events. Mental events would have no role in explaining the raising of the hand, because there are no gaps in the causal chain.

She takes James's example of a desire to brush the dust of the sleeve (James 1981: 1131). There is an *absence* of a conflicting desire. She says that such a case fits with her account. Considering there is no conflicting desire, the relevant mental event has nothing to prevent to permit the physical causal chain. What initiates the chain then? If i have a desire to brush my sleeve and this power does nothing, how the action happens, what starts the chain? Gibb says that Fred's desire to move his hand (mental event m1) permits the moving (physical event b1). If Fred doesn't want to move the hand, m1 does nothing and m2 is not prevented from preventing n2(neural event)-b1 causal chain. So, m2 makes a positive influence on the chain. But in this case we have no double prevention. It is the absence of m1 that matters. Isn't the *Closure* violated in this case? Even with one mental event the situation would be the same.

Maybe permitting could be considered as a kind of causing, although not a primitive one like pushing or pulling, and such notions of causation should be abandoned anyway.[20]

But there seem to be simpler ways to stop or permit or cause an action then this, more simple explanations of mental causation and some possible solutions were discussed in Section 3, none of which included powers that are suspicious causes, like double preventers. From a phenomenological point of view, to me, it feels like a very indirect and circumstantial way for mental causation and human action to work. On the other hand it is a good solution as it makes all the dreaded claims consistent and the dualist doesn't have to sacrifice anything. Double prevention could be just one of the many scenarios in the workings of the mental causation. Also, there seems to be only an illusion of free will in this account, because there is only permitting and permitting is very passive. Double prevention cannot stop or prevent a causal chain, or put one in motion without breaching the *Closure*.

There is a difference between double preventers and absences. Double preventers make an absence that is making a difference. Preventing is failing to exercise the power, claim Mumford and Anjum (2009). But there is always something that acts upon a power to prevent it from exercising, so there seems to be some real, positive influence even in preventing. Gibb's account then could have only a limited application. When permitting a chain of neurological events, double prevention doesn't deny *Closure*, but if some of the mental events have to stop the chain (veto it) then they are real causes and *Closure* is violated. So its plausibility also depends on how we understand preventing.

Gibb is right to stress the permitting (and the difference between permitting and causing), but it has to be active not passive (permitting by not doing anything, by absence) because by this we could be permitting an infinite number of things. Can we really take credit for all those "actions"? Sometimes there is responsibility, sometimes not, it is context dependent. Absences and preventers are commonly cited in explanations of moral and legal responsibility. If we don't help someone in danger, we are partly responsible if he is hurt. If someone tempers with the safety on the hunting rifle, and later a child plays with the rifle and accidently shoots himself, is that person also responsible? Or if a doctor

20 Dualists are first to deny understanding psychophysical causation in terms of pushes or pulls.

doesn't give us the vaccine and we contract the disease that could have been prevented have we taken the vaccine, is the doctor's responsible? Asking is someone responsible is different from asking are his actions (really) the cause.

6. Absences and preventers

Schaffer (2000, 2005)[21] and Lewis (2000, sec. 10) argue that cases of causation by omission and prevention are genuine cases of causation. Counterfactual and probabilistic theories of causation are also committed to this (Hitchcock 2003: 20). For others it is a case of pseudo-causation (quasi-causation, Dowe 2000; dependence, Hall 2000). Process theories state that causation must relate positive events, so causation by omission and prevention gets a secondary causal status. They follow earlier Lewis's position (1986).[22] Hitchcock calls this cases *parasitic dependence* and remains agnostic concerning the question are they genuine cases of causation. He also says that what we should demand from a theory of causation "is not so much that it settle this disagreement in one way or the other, but that it identify the respects in which cases of prevention and omission both resemble and differ from paradigmatic cases of causation" (Hitchcock 2007: 498). He urges us to abandon our efforts trying to characterize *the* causal relation, toward analyzing a collection of different causal concepts (Hitchcock 2003: 22). A theory of causation should try to capture this different ways in which events can be bound together.

Dualist defends her position not by saying that there is a flow of energy or transference from cause to effect, so there is no obvious connection between them. And connection is required by causation. Schaffer argues that cause and effect can be connected by disconnection, but a extrinsic, Humean causal relation is needed for this (Schaffer 2000). If a

21 It is problematic to see if Schaffer's contrastive account can overcome the problems of taking absences as genuine causes, though it makes a good account of causal explanations citing absences *as* causes. In Schaffer's *quaternary, contrastive* account cause-effect relation should be seen as: "*c* rather than *C** causes *e* rather than *E**" (Schaffer 2005: 327). In this account the claim "My not watering my plant caused my plant to die" should be interpreted as "My napping *rather* than watering my plant caused my plant's dying *rather* than living." (Deery 2013: 312). Schaffer's account can't handle late peemption cases because it is counterfactual. See Deeery (2013) for a recent discussion on absence-causal claims in causal explanations and his novel solution that handles both absences and preemption.

22 See, for example, Hitchcock (2007) and Paul, Hall & Collins (eds.) (2004) for discussion.

dualist accepts a powers theory of causation something more is needed, so causation by absence or prevention becomes a problem.

Here i am concentrating on the powers theory of causation and causal explanation, as defended by Mumford and Anjum (2009, 2011). In trying to establish if absences and preventers can be cited in explanations they argue that a theory of causation based on an ontology of powers (dispositions) proves its worth over counterfactual dependence theory in the case of double prevention. When causation is passing around of powers, double prevention is not causation. This is like saying that two wrongs make a right, which is not right. If a counterfactual theory is accepted double prevention could be taken as causation because there is counterfactual dependence. This works against some of our intuitions about causation. Double prevention is the instance of counterfactual dependence without causation that was mentioned before (reverse example is the overdetermination).

The problem of these causal claims is that causation becomes an *extrinsic* matter. Other consequences are that there need be no continuous chain from cause to effect, that absences can be causes and causation at a distance is possible.[23] Although Lewis accepts them, Mumford states that we do not want any of them in a theory of genuine causation. Why is double prevention not a case of causation in DTC? Because prevention is non-exercise of powers. "A power is prevented from exercising when another also fails to exercise" (Mumford, Anjum 2009: 287). But how is one power prevented, shouldn't there be some kind of real influence on the power to prevent it from manifesting?

We site those absences as causes that are contextually more important. There is a pragmatic reason. The cause of a billiard balls colliding is not the absence of another collision, it is because of real, positive powers that are there and movements they cause. Although absences can be called upon in an explanation of why the collision happened, there is no real causal power behind them. Other powers are doing all the causal work and they can be invoked in causal explanations of collisions for a stronger reason. Mumford and Anjum see the significance of putative cases of double prevention in that they show the advantage of powers theory over the counterfactual theory and they prefer the powers theory exactly because it rules out the cases of double prevention as genuine

23 The condition of intrinsicality should specially be preserved as it is important for anti-physicalists.

causation. In their dispositional theory, absences (and double preventers) cannot be any kind of causes.

We should not be fooled by common sense intuitions about absences which judge some of them to be causes. In many cases of alleged causation we have no clear judgement. Common sense judges the moral status of an absence to be relevant for the causal status of the absence (Beebee 2004: 293). But the truth conditions for causal claims do not contain a moral element. Common sense judges absences based on considerations of normative features[24], which have no place in metaphysics. The problem with the common sense is that it fails to distinguish between *causation* and *causal explanation* (Beebee 2004: 293). Common sense moves between "E because C" (causal explanation) and "c caused e" (causal relation) locutions.

Can explanations based on absences be *causal*? Given explanatory realism (ER)[25] and causal realism (causation is an objective feature of reality), to have a causal explanation, there must be a grounding causal relation. Since double preventers are not causes (but permitters) explanation based on them cannot be causal. Such relations, as non-causal objective relations, can only ground non-causal explanations. If a dualist takes these explanations, citing preventers and absences, to be non-causal, then even EE wouldn't be denied.

Beebee argues that some absences can figure in causal explanations though they are not causes themselves. She defends the view that "the explanans of a causal explanation need not stand to the explanandum as cause to effect" (Beebee 2004: 301). Absences don't have to be causes in order for facts about them to figure in causal explanations. To show they can still be causal explanations, Beebee appeals to Lewis's theory of

24 Abnormal, immoral, illegal; violations of norms are specially visible

25 "ER: C is an explanans for E *in virtue of* the fact that c bears to e some determinate objective relation R." (Kim 1993: 229). Gibb (2009) has argued that Kim can't infer EE from combination of Causal Exclusion and ER. Kim needs an additional premise of the Principle of Explanatory Individuation (EI). I don't know what is Kim's stance on absences but he says: "a science that invokes mental phenomena in its explanations is presumptively committed to their causal efficacy; if a phenomenon is to have an explanatory role, its presence or absence must make a difference—a causal difference." (Kim 2000: 31; 2005:10). For explanations he states: "A causal explanation of an event that invokes another as its cause can be a correct explanation only if the putative cause really is a cause of the event to be explained" (Kim 2000: 75). Kim maintains that giving up a "robust notion of mental causal explanation" for a "looser and weaker model of explanatory relevance" is possible if Lewis's theory is accepted with some alterations.

explanation (1986). Explanations provide information about *causal histories* of events (Lewis 1986: 216) but they don't always have to involve picking out causes. Sometimes explanations state what events *do not* figure in the causal history, what *kind* of events cause or what *particular* event causes another.[26]

When someone is cast into Lewis's void and is dismembered or a plant dies from not being watered, it is the void and not watering that figure in causal explanations, describing the causal history in some way, but it is other events (other powers) that are the real causes. Since there is no real causes in absences but there are causal explanations, they can all be true, but can't be equally *adequate* explanation (Beebee 2004: 307).[27] The adequacy of explanation depends on the moral question, like in the rifle and vaccine examples. It is still problematic how we pick the right, adequate explanation citing the right non-cause. A dualist defending such an account can claim that the mental explanation is more adequate. There are two causal explanations, a mental and a physical one, but there is only one cause. Interactive dualism can fill in the explanatory gap.

Problem for a dualist in such a case is that she accepted a powers theory of causation which shows double prevention is not going to constitute a genuine case of causation. Double preventers are not causes of an event they prevent from being prevented. Gibb says that powers theory shows us the difference between causing and permitting (of causing). Other power theorists would say that it allows us to see more clearly, where our intuitions are confused, that double preventers are definitely not causes.

The complexity of causation and and pluralism of causes cannot be stressed enough and maybe a powers theory should accept this cases as some kind of causation. Cases of double prevention are different from simple absences, because there are some real powers working here. In Gibb's account there are two mental events which are permitting a causal chain, so permitting could be regarded as a kind of causing, in a

26 In the sentence "JFK died because somebody shot him" (Beebee 2004: 302) explanans doesn't stand to the explanandum as cause to effect and it still counts as a true causal explanation, because it says something about the causal history of the event of JFK's death.

27 In Gibb (2009) it was concluded that the weaker version of EE stands: EE*: "If two explanations cite distinct and independent events as complete causes of an event, then one of the explanations must be false." Already it was said that double prevention doesn't deny causal exclusion, but it would seem that it denies explanatory exclusion, if there are two *causal* explanations in this case. And they both seem to be true, but the mental explanation could be a more adequate explanation. This is in case we think of the mental explanations via double prevention as causal explanations.

limited sense, if this account[28] is to be defended.[29] That there is an absence doesn't mean that there is no (mental) power which it is the absence of. Maybe, it is just a mental power not manifesting itself and powers are equally real even when they are not manifesting. Eventually, there is some positive influence to be had. Even if there is no causing in double prevention, there is permitting, and so a relevant explanation could be extracted from this. In the case of mental causation, absence should be understood differently because it is deliberate, and can be relevant, unlike in non-mental cases. Mental powers could be deliberately un-manifested. Not manifesting, non-exercising a mental power could be a conscious act. Even if the right stimuli for manifestation are present, a mental power could be pushing away from manifesting.

As it can be seen in the vector model, it is the other powers that do the causal work. In case of mental causation as double prevention, mental events figure in (causal) explanations, but it is the physical events doing all the work. Double prevention as an account of mental explanation works very well for the dualist, and not so much as a solution to the problem of mental causation, at least not from a powers theory perspective. It seems that dualists should look for a less problematic account of mental causation then double prevention.

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28 As an account of mental causation

29 Though if mental events are causes, *Closure* is false.

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Dispoziciona objašnjenja u dualizmu

Apstrakt

Da bi odbranili mentalna objašnjenja dualisti mogu se pozvati na dispozicije (moći). Prihvatajući dispozicionu teoriju kauzalnosti dualista može plauzibilnije braniti mentalna objašnjenja koja su nezavisna od fizičkih objašnjenja. Međutim, ako se prihvati ovakva teorija kauzalnosti, nedostaci i dvostruki onemogućivači neće biti pravi uzroci i rešenja koja se pozivaju na ovakve uzroke mogu braniti samo njihovu eksplanatornu relevantnost u mentalnim objašnjenjima. Postoji mogućnost da takva objašnjenja mogu biti kauzalna, iako se ne odnose na prave uzroke.

Ključne reči: dispozicije, moći, kauzalna objašnjenja, dualizam, nedostaci, dvostruko onemogućavanje, mentalna objašnjenja