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ORIGINAL RESEARCH

Emergent agent causation

Juan Morales[1]

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Abstract
In this paper I argue that many scholars involved in the contemporary free will debates have underappreciated the philosophical appeal of agent causation because the resources of contemporary emergentism have not been adequately introduced into the discussion. Whereas I agree that agent causation's main problem has to do with its intelligibility, particularly with respect to the issue of how substances can be causally relevant, I argue that the notion of substance causation can be clearly articulated from an emergentist framework. According to my proposal, a free agent is *a causally powerful substance that emerges in an anomic way from her constitutive mental events*, downwardly constraining, selecting and, in this way, having control on them. As we shall see, this particular concept of agent causation not only makes sense of the deep insight behind agent libertarianism, but it also provides us with the resources to solve some of the main objections that have been raised against it. It is true that here I cannot develop a complete defense of the evidential credentials of emergentism. Still, even if the considerations that follow do not serve to convince detractors of agent causal libertarian accounts of free will, they do suggest that libertarian agent causation is more promising than is typically acknowledged.

Keywords Agent causation · Libertarianism · Free will · Emergence · Event causation · Substance causation

✉ Juan Morales
jmoraleso1@unicartagena.edu.co

[1] Philosophy Program, Calle de la Universidad #36-100, Cartagena de Indias, University of Cartagena, Cartagena, Colombia

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1 Introduction

Incompatibilists have argued that the freedom required for moral responsibility is incompatible with the causal determination of action by factors beyond the agent's control. As a consequence, they affirm that indeterminism is a necessary condition for the control that the agent requires for being an ultimate source of her actions – for being up to her whether she does one thing or another on some occasions (Ginet, 1990; Kane, 1996; Franklin, 2018). Some authors, however, have answered that although the kind of free will at issue is incompatible with determinism, it also seems to be incompatible with indeterminism. They contend that a mere indeterministic causal production of an action by the agent's reasons can constitute a pure random effect that, as a matter of good or bad luck, is produced without the required agential control (van Inwagen, 1983; Mele, 1999; Levy, 2011; Pereboom, 2014).

To solve this problem, the agent-causal libertarian claims that this scenario lacks the agent's direct causal control on her action. So, she proposes that we introduce the *agent as a cause*, not merely as a collection of events, but rather as a *fundamental substance* (Chisholm, 1964; Clarke, 2003; O'Connor, 2009, 2011; Steward, 2012; Pereboom, 2014, ch. 4). The idea of the agent as a cause that resolves the indeterminacy promises to vindicate the possibility of free will and the requisite control in an indeterministic world.

Although we can agree that introducing this possibility can be the main appeal in favor of agent causation, it is possible to appeal (as some authors do) to agent causation for further reasons. For instance, one can affirm that our folk understanding of ourselves as agents not only presupposes a libertarian perspective of free will and moral responsibility (Jackson, 1998; Vargas, 2013, ch. 1; Pereboom, 2014), but that the idea of agent causation also does justice to the notion of ourselves as particulars, which happen to be more than collections of mental states and reasons (Velleman, 1992; Hornsby, 2004; Steward, 2012). We can also say that the agent-causal theory is appealing because it captures the way we experience our own activity: it does not seem to us that we are caused to act by the reasons of our actions, but that we produce our actions in the light of those reasons, so we could have, in an unconditional sense, acted differently (Taylor, 1966; O'Connor, 1995). In addition, one might find support for the idea in the well-accepted ontological principle according to which all (concrete) existences must have the power to cause and intervene (see, for instance, Alexander, 1920; Kim, 1992; Armstrong, 1997; Fodor, 2003; Shoemaker, 2007). In view of it, one might argue that the agent and her mental events should be understood as distinct and, therefore, that a real agent in our physical world, if there is a such a thing, must have some distinct causal power different from her mental events and reasons'.

In spite of its intuitive and philosophical appeal, agent causation has been considered by some philosophers to be empirically implausible and even internally incoherent. P.F. Strawson, for instance, denounces its libertarian assumptions as "obscure and panicky metaphysics" (1962, p. 25). In a similar line and on the assumption that only events can be causally relevant, John Searle complains about the very idea of agent causation; according to him, to speak about the agent as a cause "makes no sense" because "is worse than mistaken philosophy", it is just "bad English" (2001,

p. 82). As will become evident, I agree with these philosophers that agent causation's first and biggest problem has to do with its intelligibility; unlike them, however, I think the difficulty can be overcome.

The main problem of agent causation is the issue of how substances, as opposed to the events in which they participate, can be of causal relevance. Many philosophical and scientific traditions believe that wherever some object is cited as a cause, there is some feature or property of the object or some event involving the object that is doing the causal work. So it would seem that there cannot be literal sense for the idea of the object having a causal relevance different from or beyond that of its constitutive events.

The paper aims to vindicate the notion of a free agent as a substance with causal powers that go beyond those of her constitutive events. The text is divided into two parts. In the first – sections § 2–5 –, I articulate and clarify the notion of a free agent as an anomically emergent substance; a substance who synchronously emerges from her mental events, and diachronically exercises her causal power by constraining the nomological possibilities of her subsequent mental events in a way that is not previously fixed by any law of nature. This requires saying what an emergent substance is, how an emergent substance can have causal powers, and why it can be considered free. The second part of the paper – sections § 6–8 – is devoted to show how the concept of agent causation, as developed here, can be deployed to solve some of the main objections raised to agent-causal libertarian accounts of free will. These objections concern the causal and explanatory interaction between the agent and her reasons, the problem of luck under the assumption of indeterminism, and the empirical adequacy of the theory with respect to contemporary scientific knowledge. I finally draw some salient conclusions.

2 What is an emergent substance?

I contend that free agents are anomically emergent substances. The first thing that we have to do is to understand what an emergent substance is.

Emergentism refers to the idea that some entities of our world (properties, events, substances, and so on) are fundamental, in the sense of being non-reducible to, not completely grounded in, and still dependent on other things (see, for instance, Morgan, 1923; Broad, 1925; Barnes, 2012; Gillett, 2016; Morales, 2018; O'Connor, 2021; J. Wilson, 2021). One motivation for the view is the appealing thought that some substances or systems have properties that are *not merely a function* of the properties of their parts, so they cannot be reconstructed nor explained only as a mathematical product of the latter. It's because such systems are not a mere function of their parts that they are fundamental; and it's because they are constituted by their parts that are dependent on these.[1]

[1] Although it is common to find a characterization of fundamentality in terms of ontological independence or ungroundedness, to appreciate the crucial differences between these concepts with important implications for emergence, see especially Barnes, 2012 and Morales, 2018, ch. 3.

On my account, *a substance is a persistent structure or organization of global states and events* at some region of space-time.[2] Substances, according to this view, are of two kinds: some of them are reducible to (nothing but) their parts, others are not. Which substances are emergent is essentially *an empirical question*. In brief, it depends on whether their causal relevance and dynamics are or are not a function of *their proper temporal parts (their events), as exhibited when those parts work in isolation or composing different substances* (see Broad, 1925, p. 61; Kim, 1999, pp. 13–4, 2009a, pp. 95–6). And it does not matter whether we are concerned with linear or non-linear mathematical functions (see Silberstein & McGeever, 1999, and J. Wilson, 2013): while a reducible substance is a (linear or non-linear mathematical) function of its events, an emergent substance isn't.

Let me explain this idea. A pure material object, such as a table, is a substance reducible to its states and events, in so far as its causal power and dynamics are nothing more than the result[3] of its global properties: its global mass, volume, density, and so on. If we fix the value of these global properties, the dynamics and powers of the table will be fixed as well. In turn, as we know, these global properties are reducible to the properties of the parts of the table, its molecules, just because they are a pure function of these lower level properties. The global mass of the table is mathematically determined by the mass of the table's molecules. In general, dealing with pure material objects reduction of both substances to their global properties and global properties to their parts' properties tends to be the rule.[4]

Seen this way, the question of whether a substance is emergent or not has, in fact, two parts, one corresponding to the question about the emergent or reducible character of the substance (the system) from its global properties (states and events), and the other concerning the emergent or reducible character of its global properties from its parts' properties. This means that, in every case, we have four possible scenarios: (a) a substance could be doubly reductive, being a reductive system (a function of its global events) and having only reductive global events (functions of the properties of its components); (b) it could be a reductive substance and still have emergent global properties and events (not reducible to the properties of its components); or vice-versa, (c) it could be *an emergent substance* (not a pure function, and so not reducible to its persistent and changing properties and events) and still be constituted only by reductive global properties and events (functions of the properties of its components); and, finally, (d) it could be doubly emergent, being *an emergent system* and having (at least some) emergent global properties and events.[5]

[2] There are several conceptions of events and their connections and differences with states, processes, and the like (see, for instance, Kim, 1976; Davidson, 1980; J. Bennett, 1988; Shoemaker, 2007; Casati & Varsi, 2020). For the present purposes these differences will not be relevant here. In general terms, will we take events, states, processes, and the like as property instantiations.

[3] As it is called, a mere resultant (Mill, 1843, p. 428), aggregative (Broad, 1925, p. 77), or compositional (McLaughlin, 1992, p. 59) outcome.

[4] Although there are exceptions; see section § 8.

[5] All these scenarios are empirical possibilities that cannot be excluded only by definitional or merely ontological assumptions. As Kim reminds us, "There are no free lunches in philosophy any more than in real life" (1998, p. 30).

In arguing that free agents are anomically emergent substances, I claim that they can be emergent either in the (c) or the (d) senses, having in mind that senses (a) and (b) are still open to different varieties of reductionist and compatibilist accounts.

3 Substance causation as downward causation

The very notion of substance causation is the idea that substances cause things to happen. According to what I mentioned before, one of the reasons why some philosophers have not found the notion of agent causation intelligible is because they have problems seeing how substances, as opposed to events, can participate as causal *relata*. My argument is that they have been skeptical about this idea because they have not examined the notion of *a substance as a higher level persistent structure of global events* that can have a *downward causal and dynamical relevance* on its own subsequent constitutive events.

Appealing to the general idea of causes as difference makers (Sartorio, 2005; Beebee, Hitchcock & Price, 2017), the notion of *downward causation* can be characterized in terms of a higher level entity (property, event, substance) making a difference at a lower level, that is, causing (or increasing the objective probability of – see Hitchcock, 2016) the instantiation or appearance of a lower level entity. Now, we can understand downward causation as constituted by two necessary and sufficient conditions (see Morales, 2018, pp. 158–160): (i) a necessary *causal under-determinacy* given at the lower levels at the moment of the emergence of the higher level entity; and (ii) the emergence of the *higher level entity* (with higher level causal powers) which diachronically narrows, constrains (Kelso, 1995; Schröder, 1998; Juarrero, 2009), and selects (Campbell, 1974; Popper, 1978; Van Gulick, 1993; Steward, 2012) the subsequent lower level courses of events, making a difference on them.[6]

Jaegwon Kim has shown the relevance of the concept of downward causation in discussions about mental causation, physicalism, and the unity of the sciences. Through what has been called the supervenience argument, he has argued that (the occurrence or instantiation of) a higher level entity can cause another higher entity only if the first can cause the lower level basis of the second.[7] It follows that whenever we find emergent, non-reducible, higher level causation we also find the occurrence of *downward causation* (Kim, 2009a, p. 40; see also McLaughlin, 1992, p. 51).

[6] It is important to note the subtle distinction between the notions of under-determinacy (or under-determination) and indeterminacy. Although indeterminacy is commonly and simply articulated as implying a (less that 1) *fixed objective probability* in the interaction of different entities, the issue is that in order to genuinely emerge a higher causal power, *the objective probability of the lower level causal chains* (of 1 or less than 1, that is, deterministic or non-deterministic) *cannot be completely fixed at the same lower level* (and therefore, that probability must be lower-level under-determined: limited but not fixed), leaving the possibility for a higher causal addition. Otherwise, even if causation were indeterministic, there would be a causal closure at the lower level that would make it impossible for higher causal powers to emerge (see Morales 2018, ch. 5).

[7] On the assumption that we are physicalists or at least believe that the higher level entities and causes can only be instantiated in (and so dependent on) lower level (ultimately micro-physical) mechanisms, as emergentism does.

It is important to note that whether fundamental macro, higher level, or emergent causation, along together with its consequent downward causation obtain in our world is an empirical question, one to which I will return below. If this kind of phenomenon constitutes a fact, there must be multiple levels of organization with their own causal influences that end up *complementing* one another. The higher level laws and causal influences would not contradict, change, or violate, but complement the lower ones (Anderson, 1972, p. 222; Campbell, 1974, p. 180; Van Gulick, 1993, p. 252; Gell-Mann, 1994, p. 112; Dretske, 2004, p. 167); the reason is that the latter would under-determine, that is, leave open different possibilities for the lower level chains of events that would be further constrained by the higher causal factors.

I have articulated the notion of a substance as the (reductive or emergent) persistent structure and organization of its own global events. As such, the concept of an emergent substance is that of a substance or system with irreducible causal powers and dynamics that synchronically emerges from its constitutive events, and diachronically makes a direct difference through the *downward* causal influence it exerts *over its own subsequent states and events* (through *a kind of internal causation or self-determination*).[8] In this sense, as a kind of downward causation, the causal influence of the emergent substance over its events is the *causal constraint and selection that it imposes over the causally under-determined* possibilities of its subsequent global events. The substance fixes, with this, the development of its own determinations, giving rise to its self-determination. In the case of agent causation, as I shall now argue, it is the kind of intentional self-determination that we call free will.

4 Agent causes as free causes

According to libertarian accounts, at least on certain occasions people can be genuinely free agents. This means that sometimes they can be sources of their actions, as opposed to mere witnesses or bystanders of them. As it is frequently put, with respect to at least some of their actions it is up to them whether they do them or not (Ginet, 2007; Steward, 2012; Clarke, 2020).

Some philosophers have tried to capture this idea by referring to free agents as "uncaused causes," the type of substances or things that cannot be an effect of something else (Clarke, 2003; Ginet, 2007; Clarke, Capes & Swenson, 2021); while others emphasize the uncaused nature of the free action (O'Connor, 1995, 2011; O'Connor & Ross, 2004; Botham, 2008)[9]. But this way putting things as such doesn't help

[8] A kind of causation that have been denominated inmmanet as opposed to transeunt causation (Chisholm, 1964).

[9] Although my perspective coincides in general aspects with that of Timothy O'Connor, who has articulated the most well-developed application of emergentism to agent-causation and free will so far, I think it may be interesting and clarifying to note how our proposals substantially differ. In this regard, for instance, O'Connor's theory – but not mine –: (1) tends to be dualist rather than physicalist, differing from the main purposes and the more standard articulations of emergentism since its appearance (as we examined in section § 2 and § 3). (2) His perspective is hesitant as to whether or not emergent entities (nomologically) supervene on their physical bases (see this section § 4 below). (3) As far as I can see, O'Connor doesn't develop an explicit articulation of the meaning of the *emergence* of a *substance* (and not just of its causal powers) from its constitutive events (our sections § 1 and § 2). (4) Although

to clarify the subtle idea at the heart of libertarianism. Instead, I will argue that the important point is to realize that there can be causal relations that are nomologically grounded and others that are not (see Tooley, 1990, 1997; Pereboom, 2014),[10] and to reconstruct the notion of an agent whose actions are up to her in the terms of substances that are *anomically emergent*.

To see why we need to introduce the idea of anomic emergence, consider the model of a layered reality as discussed above. As we ascend to higher levels of causal constraints, one could argue, the world becomes more causally determined, with *an emergent but completely causally and nomologically determined world at the limit*.[11] In a world of this sort there would be no room for libertarian agency.[12] Even if there were emergent substances in it (i.e. persistent non-reducible organizations of different and changing events), their causal powers and dynamics could end up being *non-reductively but nomologically determined by the conjunction of lower level and emergent laws.*[13] And a determined world, whether it is reducible or emergent, cannot be a libertarian world.

And not only emergence but indeterminism by themselves are insufficient for libertarian agency – a central point that is connected with the luck objection that will be analyzed in section § 7. Just as an *emergent* agent could be completely predetermined by the conjunction of intra-ordinal and emergent laws, she *could be indeterministic* and still *her probabilistic dynamics could be completely fixed and governed by pre-established natural* (probabilistic intra-ordinal and emergent) *laws*. If this were the case, the agent as a substance (as a persistent non-reducible organization of her reasons and mental states) would be *an emergent probabilistic result* of the preceding causal factors in conjunction with the laws of nature, and she wouldn't have a direct causal control on, nor be a genuine (libertarian) source *of her actions*, just because

accepting that reasons structure the causal capacity of the agent, making her "objectively likely to act" (O'Connor & Ross, 2004, p. 251), O'Connor systematically argues about a non-causal account of the role of reasons in the explanation of actions; (5) assertion that is connected with the idea that what agent causalists usually take as the agent's first basic and primary free action (the agent's causing an event) is an uncaused occurrence because, in order to be free, there can be neither a sufficient causal condition for it nor for its objective probability (I partially agree with this; see sections § 4, § 6, and § 7, particularly footnotes 19 and 22). Now, (6) even affirming that the agent's control *must be not merely probabilistic* but "at will", O'Connor claims that agent causation does not need to be anomic (see this section § 4 below). As a consequence of this, and as I will argue from now on as one of his agent-causal theory's worst result, finally, (7) O'Connor accepts that the causal power of the agent should coincide with the probabilistic microphysical (or even special sciences') laws in order to be coherent with them (see sections § 6, § 7 and § 8). I have indicated in each case the sections in which I articulate my perspective in disagreement with O'Connor's. I thank an anonymous reviewer for suggesting this clarification.

[10] Inmanuel Kant (1781/1987) contends that this is at least a prima facie conceptual possibility. See also Hoefer, 2016.

[11] Some of the so-called classic British Emergentists defended the idea that our world was emergent but completely determined. See, for instance, Mill, 1843, p. 247; Ryan, 1970, p. 104; McLaughlin, 1992, p. 73; and F. Wilson, 1998, p. 205.

[12] That is, the kind of agency that implies the strongest sort of control in action required for the core sense of moral responsibility at issue in the free will debate that is called *basic desert* (Strawson, 1994; Fischer, 2007; Pereboom, 2014).

[13] C.D. Broad called them trans-ordinal laws, that is, *a posteriori* principles that synchronically link the lower level interactions with the emergent level(s), those laws that complement the corresponding intra-ordinal operating within each level (1925, pp. 78–9).

the (indeterministic) objective probabilities of her actions would be nomologically fixed by preceding causal factors even before her birth, that is, *by factors whose efficacy she does not control*. As in the compatibilist scenario, she would not be able to contribute anything to her actions beyond what is already set before she acts, becoming a pure development of the probabilities stipulated beforehand.

In fact, this situation would have the same practical results as those of the incompatibilist reductionist agent causalists (Kane, 1996, 2007; Balaguer, 2009), according to which the indeterministic causation of the agent is reduced to the indeterministic causation of her constitutive reasons and mental states, namely: *her actions would be nothing more than a (nondeterministic) causal outcome of their causal antecedents in accordance with the laws of nature*. While in one case, the actions of the non-emergent agent (who is reduced to her constitutive events – her reasons and mental states) remain completely governed by the event-like indeterministic laws that apply to the lower physical and intermediate psychological levels, the actions of the *emergent agent* also remain completely governed, but now by the event-like *indeterministic* laws *together with emergent or trans-ordinal laws* that apply to the *indeterministic* dynamics and causal powers *of the agent as a substance*. As many authors argue against the reductionist position wherein no action could be truly free, the same must be said against the nondeterministic emergentist but completely nomologically governed agent, that is to say, in the words of O'Connor and Ross, "the ultimacy of the agent's control is compromised, [because her actions become as nothing more than] a product (albeit an indeterministic one) of other factors whose efficacy [s]he does not control." (2004, p. 250).

My proposal, then, is to reconstruct the core idea behind libertarian agency in terms of an *anomic* or *non-nomologically governed* substance: a causally relevant structure that anomically emerges from the *under-determination*[14] *of her mental events as reasons, desires, and emotions*, and who exercises her causal powers by *downwardly* constraining and determining her subsequent mental states as decisions (which, in turn, cause her bodily actions) in a way that is *not previously fixed by any (intra-ordinal or emergent) law of nature*.[15] This is what grants her the kind of control, in virtue of which she can be considered free: the objective probability of her actions are nomologically (physically, neurobiologically, and psychologically – even socially) under-determined, but not necessitated by anything other than her. In this respect, *her actions are ultimately up to her*.

To further clarify this concept, let me briefly list and differentiate the possibilities that the emergentist theory accepts as empirical options. First, we can have a reductionist and compatibilist conception of the agent wherein (i) the agent is reduced to (is nothing more than) her mental states, (ii) such mental states (as reasons) deterministically cause her actions, so (iii) her actions cannot be free libertarian actions (see, for instance, Nelkin, 2011, ch. 4; Markosian, 2012; Pereboom, 2015; Clarke, 2019).

[14] Not simply indetermination, as I have explained above: the objective probability of the lower level chains must be lower level limited but not fixed.

[15] So I agree with Derk Pereboom when he argues that "it is precisely the non-law-governed causal relation that would have to be invoked by the agent causal libertarian" (2014, p. 42). Pereboom, however, doesn't articulate the perspective under an emergentist conception.

Secondly, we can have a non-reductive, emergentist but compatibilist conception of the agent wherein (i) the agent isn't reduced to (is a persistent non-reducible organization of her) her mental states, (ii) such mental states and such emergent agent both are deterministic results of previous events acting in accordance with the lower-level and emergent laws and, in turn, nomologically and deterministically produce her actions, so (iii) her actions cannot be free libertarian actions.[16]

The third option is a reductionist but incompatibilist conception of the agent (see Kane, 1996, 2007; Balaguer, 2009) wherein (i) the agent is reduced to her mental states, (ii) such mental states (as reasons) are both causal outcomes of previous events and non-deterministic causes of her actions in accordance with the laws of nature, so (iii) the indeterministic objective probabilities of her actions would be nomologically fixed by preceding causal factors whose efficacy she does not control and, therefore, (iv) her actions cannot be free libertarian actions.[17]

In the fourth place, we can have a non-reductive, emergentist and incompatibilist conception of the agent wherein (i) the agent isn't reduced to her mental states, (ii) such mental states (as reasons), the emergent agent, her emergent causal powers, and the particular ways she exercises those causal powers are *both* causal outcomes of previous events acting in accordance with the lower level and emergent laws of nature, and non-deterministic but completely nomologically governed causes of her actions; so (iii) the indeterministic objective probabilities of her actions would be *fixed by causal factors whose efficacy she does not control* (by preceding events in accordance with the lower level and emergent laws) and, in consequence, (iv) her actions couldn't be free libertarian actions. And this is the reason why even the emergentist agent-causal proposals articulated so far have failed to clearly show how a free action is really up to the agent, and why they again have fallen prey to objections such as the luck and the disappearing agent.

In our fifth and final possibility, the emergentist response is that the emergent agent must be anomic, meaning that *the particular ways in which she exercises her emergent causal powers* are under-determined, limited, but not fixed by any intra-ordinal or emergent law of nature, so it is only up to her how she selects her psychological possibilities, how she acts, how she decides. From this perspective, (i) the agent isn't reduced to her mental states, (ii) she emerges from the causal and nomological under-determination of her mental states according to a general trans-ordinal law with the following form: whenever the same lower level components be related in the same way, an *anomic agent* should synchronically emerge with the causal power to diachronically select her lower level options *in a way that is not determined by any law*

[16] In order to understand the emergentist proposal it is important to recognize and highlight that these first two options articulate *a coherent* (compatibilist – so not libertarian – reductive or non-reductive) *notion of the agent and her causing her actions* that, for instance, is compatible with the agent-causalist Richard Taylor when he says that "What is entailed by [his] concept of agency, according to which [wo]men are the initiators of their own acts, is that for anything to count as an act there must be an essential reference to an agent as the cause of that act, whether [s]he is, in the usual sense, caused to perform it or not." (Taylor, 1966, pp. 114–15). The question is whether all our actions are produced in such a manner, so they couldn't be free in the way that we would be morally responsible for them in the basic desert sense.

[17] To further analyze this conclusion see section § 7 about the luck objection, and also the disappearing agent objection in, for instance, Pereboom, 2014, and Clarke, 2019.

of nature.[18] To put it in other terms, the objective probability for the appearance of the anomic agent is fixed by the different laws of nature, but the objective probability of the anomic agent for selecting (downwardly causing) her subsequent mental states as decisions is not fixed by anything other than herself.[19] So, unlike the four empirical options already seen, (iii) (the objective probability of) her actions will not be fixed by causal factors whose efficacy she does not control (as preceding events and the laws of nature); and therefore, (iv) some of her actions can be performed "at will," that is, as free libertarian actions.

I have said that the objective probability for the appearance of the anomic agent is fixed by the different laws of nature, but that the objective probability of the anomic agent for causing her decisions is nomologically under-determined and not fixed by anything other than herself. In a very simplified way, let us suppose that the relevant circumstances C at t_1 nomologically and (for simplicity) deterministically cause the agent Alice to have a moral reason R_M, an egoistic reason R_E, and a sentimental reason R_S at t_2, and that if there were nothing more than event-causal powers at issue, these reasons would have the objective non-deterministic probability of 0.5 to cause her moral decision D_M, 0.3 for causing her egoistic decision D_E, and 0.2 for her sentimental decision D_S at t_3. If this were the case, the Pr(Alice's decisions at t_3 | Alice at t_2)=the Pr(Alice's decisions at t_3 | circumstances C at t_1) because the existence (supervenience, event-like complete grounding) of Alice at t_2 wouldn't introduce any change in the causal probabilities that C has fixed – and we can even suppose that C have been settled before her birth.

Let us now say that the relevant circumstances C at t_1 nomologically deterministically cause Alice to have R_M, R_E, and R_S at t_2, from which Alice synchronically emerges. Here we find two different options corresponding to our fourth and fifth empirical possibilities: the emergence of Alice and her causal powers can be nomologically fixed (by trans-ordinal or emergent laws) or they can be *anomically* emergent. Let us take the former option and let us suppose that the trans-ordinal laws fix the emergence of Alice with the causal power to downwardly select her decisions and

[18] A law that should apply in nomologically similar worlds that will include anomic emergent agents.

[19] And, *in this precise sense*, as several agent causalists argue, the agent's primary free action (the agent's anomically and downwardly causing her decision with a specific objective probability) *is uncaused* (see, e.g., O'Connor 2000, 2011; O'Connor and Ross 2004; and Botham 2008); in our articulation, it is not determined by anything other than the agent herself, *a fortiori*, it is not determined by preceding causal factors in accordance with the laws of nature.In footnote 9 I said that I partially agree with O'Connor about this issue, and this is why: although in the aforementioned precise sense I think that the agent's primary free action is uncaused, nonetheless, we just have referred to another sense in which it is caused: the objective (even non-deterministic) probability for the appearance of the anomic agent is fixed (determined) by the different laws of nature; *and the objective probability of the anomic agent for causing her decision* (although not fixed) is under-determined by the same laws; so, by our characterization of a cause in section § 3 (as a difference maker, which increases the objective probability of the instantiation or appearance of other entities), this primary free action has been caused: its objective probability has been increased by the preceding causal factors (in particular, by the agent's reasons) in accordance with the laws of nature. For the cited agent causalists, these causal antecedents are merely causal contributors or influences, but not causal producers or determinants, and I agree; but I add: causal influences that increase the probability of the primary free action. But beyond this, the important point to realize is the reason why such an action cannot be "completely" caused, that is, *because its anomic nature*. I thank an anonymous reviewer for raising the question about this uncaused nature and the analysis of the nomic and anomic relations at issue.

so to cause at t_3 D_M with the objective probability of 0.7, D_E with the probability of 0.2, and D_S with 0.1. But if this were the case, we would have the same result as the reductionist scenario: the Pr(Alice's decisions at t_3 | Alice at t_2)=the Pr(Alice's decisions at t_3 | circumstances C at t_1). Given that the laws of nature are established from the beginning and that they are something that Alice cannot change or manipulate, the emergence of Alice at t_2 wouldn't introduce any change in the causal probabilities that C fixes. According to this scenario, *Alice's actions would be fixed* (to the extent that they are fixed, that is, non-deterministically) *by causal factors whose efficacy she does not control* (by preceding events in accordance with the laws of nature), depriving her of the ability to somehow contribute to the determination of her actions. As a consequence, as we have already pointed out, this articulation is subject to objections such as the luck, the disappearing agent, and (given the possibility for establishing or manipulating C) the manipulation argument (Pereboom, 2014, ch. 4).

But the scenario changes with the introduction of the anomic agent. So let us say that the relevant circumstances C at t_1 nomologically deterministically cause Alice to have R_M, R_E, and R_S at t_2, from which Alice synchronically and anomically emerges. Given that her anomic causal power implies the nomological under-determination of the probabilities of her decisions, these are established neither by C nor by any other event or circumstance in accordance with the laws of nature, so she can (in virtue of this causal power) fix them "at will," by herself, independently of any other condition. According to this scenario, although we can say that the Pr(Alice's decisions at t_3 | circumstances C at t_1) could be projected as if there were nothing more than event-causal powers at issue (because, as O'Connor – 2000, p. 115 – says, "these choices are at times even brought about event-causally, while we simply monitor the result and retain the capacity to agent-causally redirect things as need be"), such probability is objectively under-determined, that is, nomologically limited but not established at t_1.

The specific probability of Alice's decisions at t_3 will be anomically established only at t_2 by the agent herself *insofar as she is the anomically emergent organization (of the causal contribution) of her reasons*. That is to say, given that the agent synchronically emerges as the complex and irreducible organization of her mental states and reasons, she emerges as the irreducible organization of the causal power and contribution of the latter. In this way, her causal power depends on, but is neither directly nor reductively determined by, the causal power of her reasons. So the agent's power synchronically emerges as a power to cause with certain probabilities (neither directly nor reductively determined by the probabilities that her reasons have to cause) her subsequent decisions. As far as this agent causal power is anomic, it is a power to cause her subsequent decisions with certain probabilities which are only up to her.

This means that the probabilities of the agent's power to cause her subsequent decisions *are not necessarily* deterministic (or indeterministic), so such power can emerge with a distribution of different probabilities for her different possibilities. As in our above example, the agent can emerge with the causal power to downwardly select her decisions and so to cause D_M with the objective probability of 0.7, D_E with the probability of 0.2, and D_S with 0.1. But only as far as this agent power with spe-

cific probabilities for causing her subsequent decisions is anomic, it is (non-causally, emergently) determined only by herself.[20]

We can find some epistemic consequences that follow from this picture. Given that the anomic agent emerges from her lower level psychological constituents according to a trans-ordinal law, and that we could have predictions of these constituents, then we could have a posteriori predictions of the appearance of anomic agents. *But, given the anomic nature of the agent's causal power over her subsequent psychological dynamics*, all the available information (about past events, her psychological, biological, and physical conditions, and the ordinal and trans-ordinal laws of nature which can be implicated) *will be insufficient to know how she will causally constrain her psychological possibilities* and, so, *the decisions that she will make*. This will be known only retrospectively. A consequence which follows from a substantive reading of the agent as the ultimate source of her free actions, conferring her moral responsibility in the basic desert sense.[21]

So far I have developed the articulation of the concept of a libertarian agent who freely causes her actions in terms of an anomically emergent agent. In the sections that follow I will explain in further detail and responding some criticisms the working of this kind of causation.

5 Taking stock

Traditionally, critics of agent causation have claimed that its main problem has to do with its intelligibility as a solution to the problem of free will, particularly about the issue of how substances, as opposed to the events in which they participate, can be of causal relevance in the light of an indeterministic picture of the world.

I have articulated the concept of a substance as either the reducible or emergent organization of some global events, and I have explained that which of these two ways it should be understood depends on whether or not it is a function them. Given that emergent causation is conceptually tied to downward causation, as a first result we reached the idea that emergent substance causation is the downward causation that the substance exerts over its subsequent under-determined constitutive events.

But I argued that emergent substance causation (added to compatibilist requirements for freedom) is not sufficient for free agent causation because it can be completely determined by preceding causal factors in accordance with the conjunction of intra-level and inter-level or emergent laws of nature. And the same applies to an indeterministic emergent agent because the *non-deterministic probabilities* of her actions could be nomologically fixed by preceding causal factors (whose efficacy she does not control) even before her birth.

So I proposed that a true concept of a free agent is that of an *anomically emergent substance*, a substance that exercises her causal powers by downwardly constraining her (nomologically under-determined) subsequent mental states (as decisions)

[20] I owe the articulation of the last paragraphs to the comments of an anonymous reviewer.

[21] This epistemological consequence is clearly foreseen by what Chisholm calls a Kantian as opposed to a Hobbesian approach (1964, p. 12). See also Steward, 2012, pp. 168-9.

in *a way that is not determined by any law of nature*, in such a way that such causal constraint is only up to her.

It should be clear that I am trying to offer neither a priori nor empirical arguments to show that we *in fact* are, or aren't, free agents. Rather, I want to show that the idea of agent causation is intelligible, that an a priori objection can be answered, and that if we have this answer we can be confident that at least it makes sense to ask some remaining questions. To see why this is so important, I am going to show how with this clarity we can solve some central problems that have been raised against the view.

6 The causal integration of the agent and her reasons

In addition to the problem of its intelligibility, other concerns have been raised with respect to the idea of agent causation as grounding libertarian free will. In what follows, I want to discuss these concerns. Whereas I cannot claim to present decisive replies to them, I can show how having a clearer idea of the notion of agent causation puts libertarians in a better position towards answering them. Let us start with the consequences of the agent causal account in the light of a causal theory of action.

Donald Davidson (1980) already told us, and most theorists agree that the reasons for an action are the reasons that cause the action.[22] Given that actions for which agents are morally responsible are normally rational actions, these should be caused by reasons rather than by agents insofar as they are rational; and, on the agent causal proposal, caused by agents rather than by reasons insofar as they are morally responsible free actions. This apparent dilemma poses a challenge to the agent causal account of morally responsible action.

Following our previous example, let us suppose that Alice anomically emerges from her reasons R_M, R_E, and R_s with a power to downwardly constrain their possible decisions D_M, D_E, and D_S. The anomic emergentist picture is an integrated account that gives relevance to the different implicated causal factors, in particular, both to the anomic causal agent and her reasons and motivations. It is precisely because the causal relevance of her motivations R_M, R_E, and R_s that Alice is left with only three

[22] So far I have assumed this "traditional" causalist conception of action, taken intentions, choices, and/or decisions as plausibly the most direct and basic actions of agents. Nonetheless, this can mislead us about *primary free* actions. So I agree with agent-causalists like O'Connor (2000, 2011), O'Connor and Ross (2004), and Botham (2008) that the agent's causing an event (e.g., the agent's causing a decision) is the foremost candidate for the agent's *primary free* action – and not the agent's caused event (the decision) as such. This is so because, following our emergentist articulation, a free action minimally requires that the agent anomically and downwardly causes her subsequent mental state, her decision, in the sense that if that decision were differently produced, it wouldn't be a free action (for further detailed reasons see Botham 2008, pp. 90ff, p. 122, pp. 132ff).This means that when we say that the agent is the genuine source, causally necessitate, and causally control (and so she's morally responsible for) – e.g. – her free decision, as both the common sense and the agent causalist want to say, we imply that such decision is free only in virtue of being the effect-constituent of her *primary* free action: her anomically causing it (meeting what Botham – 2008, p. 93 – calls Whenceness, a principle of origination/sourcehood that is required by acting freely: being the underived/ultimate originator of an essential element/part of her primary free action). I thank an anonymous reviewer for suggesting the clarification of this issue. In what follows I show how the agent has causal control over her decisions even though her reasons are also causally relevant for them.

of her possible decisions: D_M, D_E, and D_S; so when Alice decides, her final decision needs to be explained (although only partially explained) as an outcome of her motivational structure – in this sense, her reasons are causally and explanatorily necessary but insufficient for her decision.

As we have done before, we can suppose that if there were nothing more than event-causal powers at issue, Alice's psychological states would have the objective probability of 0.5 to cause D_M, the probability of 0.3 for D_E, and 0.2 for D_S.[23] We can also say that she could have several other reasons and motivations to choose between D_M, D_E, and D_S, but that the aforementioned R_M, R_E, and R_S are those that on this occasion are doing the causal work, that is, constituting the motivational scenario that will cause one of her decisions.[24]

Now, if Alice is an anomic agent, she will have a similar motivational structure that leaves open her three possible decisions, but from which she emerges as a higher level organization with the anomic causal power to downwardly constrain, manipulate, and establish one of her possible decisions as its ultimate source. Given the motivational probabilistic set up of her mental events and reasons, it is probable but not necessary (depending on Alice's nature, abilities, and circumstances), that her making the decision D_M will be easier than the decision D_E, and she will have to strive much harder to decide D_S. But causing one of these decisions is the element that is only up to her qua agent as a whole, rather than just having the various aspects of her motivational structure.

Now suppose that Alice causes D_M. In this case, what can we say about the real cause of her decision? Is Alice's moral reason R_M for deciding D_M or Alice as an agent that caused it? As I have argued before, on this account there is no contradiction but complementarity between the two kind of causes: it isn't any other *event* than R_M which finally cause D_M,[25] but it only does it in virtue of and because *Alice by herself* constrains and selects over her (reason's) possible outcomes, determining D_M over the other ones.

And what about her other possible decisions? Suppose now that Alice downwardly constrains and selects over her possible outcomes determining D_E. We still have to

[23] If this were the case, as we have said, such probabilist result would be the function of the causal relevance of Alice's mental states and reasons when these are isolated or composing other systems (agents) – see section § 2. This could be also an anomic scenario wherein, quoting again O'Connor, "these choices are at times even brought about event-causally, while we simply monitor the result and retain the capacity to agent-causally redirect things as need be." (2000, p. 115).

[24] So suppose that Alice has additional reasons for causing her decisions D_M, D_E, and D_S. For instance, suppose that she also has R_{M2} for causing D_M, and that she finally causes D_M. In this case, how can we say that R_M and not R_{M2} (or R_M together with R_{M2}) is (are) doing the causal work of producing D_M? The emergentist answer (as other proposals', under the aforementioned principle that each concrete reality must have a unique causal power) is that different reasons can have different causal powers that can coincide in certain respects but must differ in others. Thus, although in certain circumstances R_M, R_{M2} (and even R_M together with R_{M2}) can cause a same result, namely, the decision D_M, their meditated consequences must be different, causally affecting different actions and mental states that follow D_M. We can say that the causal powers that R_M bestows on the agent are different from those that R_{M2} bestows on her, and that such differences must become evident from the partially coincidental causation of D_M. I thank an anonymous reviewer for suggesting the clarification of this issue.

[25] Remember that her egoistic and sentimental reasons R_E and R_S would cause D_E and D_S, respectively, but not D_M.

say that both Alice as the agent and her selfish reason R_E are complementary causes of her decision. This is because, although having a low nomologically projectable probability of 0.3 for causing D_E, the only motivational or psychological factor that is doing the work for causing this decision is her reason R_E, but it is only doing it just because Alice selected it over her other nomologically and psychologically under-determined possibilities.

This is the meaning of the idea that we perform our actions *in the light of* our reasons and motivations: our acting is causally constrained *but not completely determined by* them. *We* (as anomically emergent structures, systems, substances) are finally who constrain and select among the nomologically under-determined possible outcomes of our motivations and reasons, that is to say, we are finally who select and so determine our actions. Still, we have to notice that the causal relevance of our motivations and reasons is essential: the anomic downward control that the agent imposes on their possible outcomes is only a power of their emergent organization or structure and, therefore, *can only exist while these motivations and reasons take place.*[26]

7 Meeting the luck objection

The luck objection is another central worry that has been raised to libertarian accounts of free will. Recall that contemporary agent causal libertarianism proposes to introduce the agent as a substance cause with the purpose to solve this problem. Several authors have argued that in fact it does not help at all (see, for instance, van Inwagen, 1983; Haji, 2004; Mele, 2005, 2006; and Clarke, 2019). In short, the objection is that a scenario that takes into account all the mental events and reasons of an agent and still portrays her objectively indeterministic in her having different probabilities to cause different decisions, seems to imply neither factual nor nomological elements that can account for the selection of one of these decisions over the others. As a consequence, there are no grounds for the required causal control that the agent should have on them, making her election just a matter of (good or bad) luck, and depriving her of any responsibility on them.

At first, we can differentiate two general senses of luck and randomness at issue.[27] We have a principal sense for the free will debates referring to actions and happenings *which are not under the agent's control*: for an action to be a non-lucky outcome of the agent, the action must happen as a result of the agent's causal influence and control. And we have a secondary sense of luck that picks up the idea of *non-deterministic, probabilistic causation*: in order to overcome it, the agent must secure just one course of actions and, with it, prevent any other possible chance.

We will see that although the anomic agent's actions can be "lucky" in the second, probabilistic sense (given that, as we have explained, the *different* probabilities of her

[26] It is important to highlight that the causal determination of the anomic agent is *not necessarily* conscious nor rational. Plausibly, we have to admit that much of our *free* actions can be made through unconscious elections which are based on non-rational emotions, affections, and biases. See, for instance, Doris, 2017.

[27] Kevin Timpe (2013, ch. 10) has developed a similar distinction.

actions are only up to her), they still are under her causal control thanks to her anomic causal power that can act either probabilistically or deterministically. This in turn will show us that an objectively indeterministic scenario is compatible with the kind of control that is at issue in the free will and moral responsibility debate and, so, by itself cannot be used to articulate as a sustainable objection to the anomic agent proposal. In the end, the problem is not whether the agent causes her decision deterministically or non-deterministically but whether she finally introduces a real contribution beyond that of the causal conditions of the world that she cannot control (as her past events in accordance with the laws of nature).

I have said that the causal power of a free agent is an *anomic* power, meaning that the (either deterministic or non-deterministic) objective probability for constraining her mental events and reasons is not determined by any natural law, neither lower level nor emergent. As I have explained, this is meant to signify that, in our example, Alice by herself (insofar as she anomically emerges as the higher level organization of the causal contribution of her reasons) fix the objective probabilities of her mental states and reasons for causing one of her possible decisions D_M, D_E, or D_S.

Let us suppose that Alice establishes her psychology in such a way that her reasons R_M, R_E, and R_S have the objective probability of 0.5 for causing D_M, the probability of 0.3 for causing D_E, and the probability of 0.2 for causing D_S. Now suppose that through her determination of this probabilistic set up, Alice causes her decision D_M. Would we say that because Alice left causally opened her three possible decisions D_M, D_E, or D_S, then Alice's causing D_M was a matter of luck?

In accordance with the *second sense of luck*, Alice is "lucky" (under the definition), but in accordance with the *first, primary sense, she's not*. She's "lucky" because she causes her decision D_M only in a probabilistic way, but she finally is not really lucky because she has causal control over D_M insofar as by herself she *anomically* determined the probabilities of her three psychologically possible decisions, she could have selected another psychological set up with a different distribution of the probabilities and, with it, she could have either increased (up to its fullest value 1.0) or decreased (and even cancelled out) the probability for the occurrence of D_M. As we have said, no other factors other than herself determine this kind control on her decisions, in particular, no preceding causal factors in conjunction with the laws of nature.

This shows that there is nothing by itself problematic with an indeterministic scenario, wherein the agent can determine her psychological structure having certain probabilities for causing her subsequent mental states and decisions either in a non-deterministic or in a completely deterministic way. The real point is whether she has that power. And that's a factual and empirical issue, the worldly issue whether she is an anomically emergent agent.

We can make explicit that even maintaining exactly the same past events Alice has the power to fix different probabilities to cause any of her decisions. But she can do it because two important reasons: (i) these probabilities are nomologically underdetermined, that is, from the nomological constrictions that her reasons impose on such probabilities she fixes, as her higher level organization, their specific values. And (ii) this fixation is *anomic*: it isn't necessitated by anything other than herself, it is ultimately only up to her. In this sense, the answer to the luck objection isn't based

on the fact that the agent ensures the appropriate connection between her reasons and her decisions (this connection is ensured by the laws of nature, although in an under-determined way, namely, it is actualized (selected) depending on the anomic action of the agent); rather, the solution is based on the anomic nature of the agent. Now, what does determine the agent's exercise of her anomic agent-causal power in one way or another – with certain probabilities rather that others? Nothing but her; that exercise is only up to her (in the sense explained above), granting her the agential control necessary for having moral responsibility in the basic desert sense.

8 The empirical adequacy of agent causation

Some authors have argued that although agent causation could turn out to be coherent, it still has to face unsurmountable empirical problems. Specifically, problems about the very peculiar ways the world and its laws would need to be structured in order to accept it and increase its feasibility (Vargas, 2013, ch. 2; Pereboom, 2014, ch 3; Clarke, Capes & Swenson, 2021).

Pereboom, for instance, argues that fundamental agent causation may be the best alternative for libertarians to pursue, but that there are good reasons to doubt its empirical credentials. He contends that the agent causalist faces one of two unwelcome possibilities. She must accept an *unexplainably wild coincidence* between the outcomes of the agent's causal powers and those expected from what we suppose our best physical theories would propose on the basis of purely microphysical laws. Or she must accept *too dubious contraventions of the microphysical laws* that should be governing the small-scale elements that constitute our world.

My answer is that there cannot be massive coincidences between the anomic agent's causal effects and those expected by our best (micro)physical (even adding all the special) sciences *on the basis of their natural laws*, just because then there will be no significance for the *anomic* character of the agent. But the agent's anomic causal power is not committed to contraventions of the microphysical or special sciences laws either, because such causal power only functions as a constraint that emerges from the under-determinacy of these natural laws and, therefore, can only exist while they take place in such a way. Let us specify with a little more detail.

The problem of wild coincidences starts from a non-deterministic interpretation of quantum mechanics that states that our physical world is governed by laws that are fundamentally probabilistic or statistical; physical laws that, although are insufficient for, can allow the action of the causal power of the anomic agent, as we have seen on our emergentist articulation. But some agent causalists have argued that the causal power of the agent should conform with what the probabilistic microphysical laws dictate in order to be coherent with them (see, for instance, Clarke, 2003, p. 181; and O'Connor, 2003, p. 309).

But Pereboom disagrees, arguing that a credible agent causal theory should affirm that the agent's causal power *must be distinct* from the causal powers of her constitutive events and that, in consequence, "we would expect the decisions of the agent cause to diverge in the long run from the frequency of choices that would be

extremely likely on the basis of these events alone." (2014, p. 67) He also contends that if.

> we nevertheless found conformity, we would have good reason to believe that the agent-causal power was not of a different sort from the causal powers of the events after all […] Or else, this conformity would be a wild coincidence, which we would not expect and would have no explanation. (Pereboom, 2014, p. 67)

I think that Pereboom's point is powerful. Furthermore, we can add that such kind of wild coincidences only invites agent causal reductionism or epiphenomenalism on the basis of Kim's well known exclusion argument. As Kim puts it, "the problem of causal exclusion is to answer this question: *Given that every physical event that has a cause has a [sufficient] physical cause, how is a mental [or an agent] cause also possible*?" (1998, p. 38, original italics).

Certainly, the premise of the rationale is the principle of the causal closure of the physical domain: if a physical event has a cause at t, it has a *sufficient* physical cause at t (Kim, 2009a, p. 38). Complete coincidence between agent causation and event causation naturally invites the idea that *every event has a sufficient event as its cause*. From this, the exclusion argument runs and leaves us with only two options: reductionism or epiphenomenalism. If we agree with many authors that epiphenomenalism is wrong, absurd, or even incoherent (see, for instance, Silberstein, 2001, p. 84; Kim, 2005, p. 70; McLaughlin, 2006, p. 40), the general result is the reduction of agent causation.[28] But if we accept epiphenomenalism as a viable articulation of agent causation, we would have to face the disappearing agent objection: the objective probabilities of the agent's actions would be completely fixed *as causal outcomes of her preceding events* in accordance with the laws of nature, so she would have neither the agential control necessary for having moral responsibility in the basic desert sense, nor deserve to be blamed and to be praised in a retributive way.

Complete coincidence between the causal consequences of agent causation and event causation takes us to whether reduce or eliminate the agent's causal power. But *anomic agent causation* cannot, by its very essence, completely coincide with event causation in accordance with the laws of nature, just because it only works constraining, selecting, and making a difference on the *under-determined possibilities* that these laws display and, so, bringing about courses of actions different from those projected by the only action of the latter. So there is coincidence and nomological reduction/elimination, or there's no coincidence and anomic emergence.[29]

Let us now examine the second horn of the dilemma according to which the theory has to accept implausible contraventions of the laws that govern our microphysical world. As Pereboom states,

[28] As we have seen, the variants of reductive agent causation can be compatibilist (Nelkin, 2011, ch. 4; Markosian, 2012; Pereboom, 2015; Clarke, 2019) and incompatibilist (Kane, 1996, 2007; Balaguer, 2009).

[29] Trenton Merricks (2001) has developed a similar argument about irreducible persons.

> On O'Connor's (2009) emergentist account of agent causation, the agent-causal power is a higher-level power that strongly emerges from a wholly microphysical constitution by virtue of the organization of the constituents. That is, the exercise or activation of this higher-level power can result in contraventions of the microphysical laws that can ideally be discovered without taking into account any higher-level properties—henceforth the *ordinary laws*. (2014, p. 68)

Here we may note that the issue about *the agent causal power* doesn't differ from a general question referring to any *emergent causal power*, and that it's because of this reason that Pereboom, following O'Connor's example, illustrates the issue through the connection between an arguably emergent causal power of a protein molecule and its causal dynamics at the microphysical level (Pereboom, 2014, p. 68). This shows us that Pereboom's trouble is about the general notion of ontologically emergent (non-agent) causal powers in the sense that they should contravene the microphysical laws from which they emerge.

We have explained that emergent causal powers only function as higher level constraints that emerge from the under-determinacy of lower level (as microphysical) natural laws and, therefore, can only exist while the latter take place in such a way. As we have highlighted, the emergent (in particular, the agent's anomic) causal powers complement, and neither contradict, change, nor violate the under-determinacy of the lower level causal and nomological factors. What kind of empirical evidence can we have of this?

One of the commonly recurrent examples that seem to show the falsity of microphysical reduction (complete microphysical grounding) and the appearance of further emergent higher level causal constraints, is the phenomenon of quantum states of entanglement (Maudlin, 1998; Silberstein & McGeever, 1999; Papineau, 2008; Ismael & Schaffer, 2020). But this does not seem to be an isolated phenomenon. Within the scope of both the physical science itself and its interaction with chemistry we find numerous examples of (non-quantum) irreducible holistic properties (see Anderson, 1972; Leggett, 1987; Gell-Mann, 1994; Cartwright, 1997; Hendry, 2006; Kistler, 2006; Hoffmann, 2007).

And there is also evidence that the failure of microphysical reduction goes beyond the physical and chemical scopes. For instance, there is a growing consensus based on empirical evidence that biological properties cannot be explained *completely* on the basis of their underlying chemical processes (Campbell, 1974; Rothschild, 2006; Wimsatt, 2007; Davies, 2012; Dupré, 2021). And the empirical results available regarding the interaction between mental and neural properties at least suggest a failure of reductive explanation between theses domains (Van Gulick, 1993; Velmans, 2002; Scott, 2007; Juarrero, 2009).

If this kind of evidence finally ends up being correct, what is a completely empirical issue, emergence and downward causation should be, as William Wimsatt thinks (2007, p. 175), much more common than normally supposed. The emergent causal laws and powers would finally complement, and wouldn't contradict, change, nor contravene the lower level (such as microphysical) laws and powers from which they emerge.

But what about anomically emergent agent causation? We have explained how this kind of special, anomic causation can only emerge on the basis of the underdetermined dynamics of our mental events and reasons in such a way that, after having all the scientific knowledge about the laws that govern us, it would be impossible, as nowadays is the case, to predict the particular ways in which we evolve, transform ourselves, and transform our world. Maybe only then we could say in a determined sense, as we daily believe and hope, that we are (partial but) real constructors of our own destiny.

9 Conclusion

We have seen that the agent causation's main traditional problem about its intelligibility can be solved by understanding non-reducible substances as emergent organizations of global events, downwardly constraining, selecting and, in this way, having control on them. But we explained that for free agent causation we need more than emergent substance causation, so that its true concept is that of an *anomically* emergent substance who has a causal power that is not determined by any law of nature, that it's only up to her. This conceptual framework provided us with the resources to face some of the main objections against the view, but which cannot by themselves show that we are actually anomic agent causes of our acts. What we have argued is something more modest: agent causation is plausible. It is consistent, and indeed continuous with, credible metaphysical and scientific pictures. If that is right, we have good reason to take seriously the possibility that we are, in a strictly literal sense, the ultimate and irreducible causes of our own actions.

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