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Essays in Honour of David Malet Armstrong

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Recombination for Combinatorialists

Armstrong’s combinatorial theory of possibility – or, for short, combinatorialism – owes its name to the fact that claims of possibility and necessity are analyzed in terms of recombinations of pieces of the actual world. The core of the theory is the principle of recombination, a Humean principle endorsed also by David Lewis in order to specify which possibilities can be accounted for within modal realism. While the principle has been extensively discussed in connection to Lewis’s metaphysics (e.g. Borghini and Lando 2015; Darby and Watson 2010; Cameron 2008; Efrid and Stoneham 2006), far less attention has been devoted to the role of the principle in Armstrong’s metaphysics. Following some introductory remarks that provide a context for the discussion (§1), in this paper I first offer a formulation of the principle in keeping with Armstrong’s theory (§2-3); hence, I use such formulation to rebut two chief objections to Armstrong’s combinatorialism, resting respectively on the mereological structure of entities to be recombined (§4) and on the possibility of scenarios involving alien properties (§5).

1 Introduction

To appreciate the contribution of combinatorialism and to discuss its details, it is important to frame the theory within the broader context of the debate on the nature of possibility and necessity. Combinatorialism aims to provide an answer to the Problem of Possibility (PP):

PP: What does it take for a certain situation to be possible?

For instance, what does it take for it to be possible that Fosfo the cat will have some fish and potatoes tomorrow? The general nature of the question that sustains the PP suggests that we break it down into three distinct sub-problems, concerning respectively the semantics, the epistemology, and the metaphysics of possibility and necessity; hence The Semantic Problem of Possibility (SPP), The Epistemic Problem of Possibility (EPP) and The Metaphysical Problem of Possibility (MPP):

SPP: What does it mean to say that a certain situation is possible?
EPP: How do we come to know that which is possible?
MPP: What sort of entity is a possible entity (of any given kind – a possible individual, property, state of affairs, or ...)?

Combinatorialism contributes most directly to the MPP. To the extent that the principle of recombination and the entities that such principle involves are intelligible, combinatorialism suggests a solution also to the EPP. As for the SPP, combinatorialism relies by and large on possible-worlds semantics. In possible-worlds semantics, the truth conditions of propositions – and, in particular, of propositions involving modal terms – are evaluated with respect to a class of possible worlds. A proposition involving a possibility claim is true at a world when true at a possible world, while a proposition involving a necessity claim is true at a world when true at all possible worlds. For instance, the proposition Foffo the cat could eat fish and potatoes is true at our world if there is a possible world where Foffo does eat fish and potatoes; and the proposition Foffo the cat is necessarily true at our world when Foffo is a cat at every possible world. By means of this simple semantic proposal, which can be further articulated in various ways (cfr. Menzel 2015 and Girle 2003), over the past fifty years philosophers have addressed old philosophical questions concerning modality in a new guise (for a historical reconstruction of possible-worlds semantics, see Ballarin 2010 and Copeland 2002). Yet, the proposal raised puzzling questions regarding the metaphysical and the epistemological aspects of possibility: what is a possible world? And how do we know which worlds exist?

The difficulty with the EPP resides in the fact that the majority of possible entities are mere possibilia – they have never been, and will never be, actual, hence we cannot experience them directly. For instance, Foffo could have had, but never did have, a scar on the face. We can know what Foffo looks like by being acquainted with Foffo, or by relying on someone’s report who was acquainted with Foffo; but how do we know that Foffo could have had a scar on the face? No one can ever see that scar. Perhaps such possibility is a projection of our minds; or perhaps it rests on an inference based on certain empirical data (Foffo could have had a scar based on the fact that other cats in similar situations did develop scars); or perhaps it is a deduction (Foffo could have had a scar because nothing contradicts our thinking that he does have a scar).

Like other modal theories (e.g. modal realism or abstract ersatzism), combinatorialism addresses the problems posed by the EPP by turning to the MPP for help. The key tenet is that constituents of the actual world provide sufficient ground to accommodate all the truths that a theory of modality must accommodate; they do because each possible world is a combination of the entities of the worlds that differs for some respect from the way these entities are actually arranged. Thus, to the extent that we can have knowledge of (i) the constituents of the actual world and of (ii) the ways in which those constituents can be recombined, we can have knowledge of possible and necessary scenarios.

Such a proposal, however, gains credibility only to the extent that we have a principled manner to tell which combinations of constituents of the actual world are really possible. This is the key role, which is assigned to the principle of recombination. In order to introduce the combinatorialist version of the principle of recombination, however, we must first discuss the entities that the principle recombines – the constituents of states of affairs. In the next section we shall discuss constituents, to then formulate the principle in the following section.

2 Constituents of states of affairs

A state of affairs is a complex whole made out of various constituents. Consider, for example, the following sentence:

(1) Foffo eats fish and potatoes.

According to the combinatorialist, (1) expresses the existence of a state of affairs, made out of Foffo, fish and potatoes. These three are the constituents of the state of affairs; they are arranged in a specific order and, for this reason, we can claim that such state of affairs is structured. Now, states of affairs need not to be structured wholes; consider for instance the state of affairs expressed by the sentence:

(2) It rains.

Such state of affairs arguably has one constituent only, namely rain (or raining). Nonetheless, aside for a few instances such as the one illustrated by (2), all states of affairs will have some structure, that is, they will have at least two constituents, related in a specific order and covering some specific roles.

The elements combined by the principle of recombination are the constituents of the states of affairs. It is hence important to see more in details the notion of constituent. For Armstrong, constituents divide into two fundamental categories: individuals (sometimes called also 'particulars' or 'objects') and universals. Foffo is an individual. Being a cat is a universal. Multiple criteria have been proposed to differentiate between individuals and universals, yet we need not concern us here with discussing them. It is important, though, to stress that Armstrong's combinatorialism relies on the distinction between individuals and universals: we are to reject such distinction, we would thereby affect how constituents can recombine.
universal is such that it is not a conjunction, a disjunction, or a structure made out of other universals. For example, in (5) we may suppose that the atomic constituents are: the predicates 'to be docile' and 'to be Australian'; and each of the cats. On the other hand, in the state of affairs expressed by (3) there is also a non-atomic constituent, namely 'between Foffo and Fufi'. This constituent is not atomic insofar as it is obtained based on other constituents (Foffo, Fufi, some relation expressed by 'between').

Now, the identification of the atomic constituents of reality is not nearly a banal process. Can a cell be considered an atomic constituent, or is it composed of other constituents? Are colors, sounds or tastes constituents of reality or mere figments of our imaginations? Are gaps and omissions constituents of reality? However, the combinatorialist can partially defuse this issue by pointing out that those are general philosophical problems that do not only surface for the combinatorialist. Following Armstrong, the combinatorialist typically believes that it is not (only) up to philosophers to give an answer to these types of questions. Combinatorialism brings a conceptual clarity to the PP; but, the fact that it cannot have the last word about what things are possible is not strange; to find out, we must also consult other disciplines.

In the simplest model proposed by Armstrong, which shares some important elements also with the metaphysical picture provided by Wittgenstein in the *Tractatus*, all the constituents are atomic (cfr. Armstrong (1997), Skyrms (1981) and Wittgenstein (1921).) Now, imagine having a stock of particulars and universals such that: (i) each particular in the stock instantiates some universal and, furthermore, (ii) each universal in the stock is instantiated by some particulars. Imagine that the world fulfilling such condition is the actual world, so that any recombination of constituents of the actual world delivers a world made out of atomic constituents and that the totality of recombinations associated to the actual world recombines the totality of individuals and universals we have in stock. If this is the case, then the actual world is what Amrstrong calls a *Wittgenstein world*.

As long as combinatorialism assumes that the actual world is a Wittgenstein world, the combinatorial machinery for combinatorialism is relatively straightforward. Unfortunately, such assumption is implausible. For all we know, some important constituents of the actual world (e.g., physical, chemical, or biological kinds) may not be atomic, but rather exhibit a variety of characteristic structures. As we shall see in §6, the possibility of non-Wittgenstein world represents a difficulty for combinatorialism. Before tackling this issue, however it behoove us to provide a combinatorialist formulation of the principle of recombination.

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3 Recombination for combinatorialists

Once we are equipped with a stock of individuals and universals, we can provide a full-fledged metaphysical analysis of worlds. The actual world is a vast array of individuals that instantiate a large number of universals. Combinatorialism is the view that the individuals and the universals of the actual world can be rearranged. Let us offer an example. Suppose that, in the actual world, it is the case that:

(6) Foffo eats milk and cookies and Fuji eats fish and potatoes.

Now consider the following sentence, which countenances the same constituents as (6), but recombined in a different manner:

(7) Foffo eats fish and potatoes and Fuji eats milk and cookies.

The core idea of combinatorialism is to regard the scenario depicted in (7) as representing a genuinely possible scenario insofar as it countenances a legitimate recombination of constituents of the actual state of affairs described in (6). Hence, for the combinatorialist, from the fact that (7) is possible we can infer that the following sentence is true:

(8) It is possible that: Foffo eats fish and potatoes and Fuji eats milk and cookies.

The truth conditions for (8) are thus explained by the combinatorialist in terms of the truth conditions for (6). More generally, the core idea of combinatorialism is to regard any representation of a state of affairs, which consists of a legitimate recombination of constituents of the actual world, as a representation of a genuine possibility.

Next on the agenda is the idea of recombination vouchsafed by the combinatorialist, which sets the boundaries of legitimate recombinations. The idea is succinctly captured as follows:

R: A state of affairs S is a recombination of certain states of affairs S* if and only if:

(i) all constituents of S belong to at least one of the states of affairs in S* or are obtained by interpolation or extrapolation from constituents of at least one of the states of affairs in S*;

(ii) S is distinct from all the states in S*.

According to R, a state of affairs recombines other states of affairs if and only if it possesses a different order of constituents or if it relates constituents that are not related in the original state. The appeal to interpolation and extrapolation allows some departure from actual states of affairs. A universal is obtained from interpolation of another when some of its aspects are changed; for instance, imagine that the gravitational constant would have some slightly different value than in fact it has. A universal is obtained by extrapolation from another by removing some of its aspects; for instance, imagine having an electron, with no charge. Part (ii) of the definition, instead, is used to guarantee that S is not actual, but it is a mere possibility, so that we do not call a recombination some states of affairs that in fact we already have in the initial domain of states to be recombined. Thus, suppose the following two sentences represent two actual states of affairs:

(9) Laura is attracted to Pietro,

(10) Giovanni admires Gina.

Based on R, the following sentence represents a state of affairs that is a genuine possibility:

(11) Laura is attracted to Giovanni.

R licenses also more far fetched possibilities; for instance, suppose that gattraction represents a form of attraction which maintains all the features of attraction in the actual world and, on top of those, it is such that the person who feels the attraction is also pulled by a gravitational force to the person to whom she is attracted. Gattraction is an interpolation of the attraction of the actual world and, as such, it is licensed by R. Hence, the following sentence represents a state of affairs which is:

(12) Laura is gattracted to Giovanni.

However, things aren't quite that simple. In fact, not all recombinations are acceptable. For example:

(13) Giovanni is attracted to admires,
which is a recombination of (9) and (10), is not acceptable. In order to explain which combinations are legitimate, it is necessary to reintroduce the logical analysis based on roles introduced earlier on: (13) would not count as legitimate insofar as ‘admires’ fulfills the role of a term, while it should fulfill the role of a predicate. Combinatorialism, therefore, is based essentially on a double logical analysis of sentences, which renders a double metaphysical analysis of states of affairs: that of atomic constituents and that of atomic roles.

Having looked into some key details of the idea of recombination as understood by combinatorialists, we can now proceed to formulate a principle of recombination that seems fitting for their position:

**PRC:** Any collection of individuals $x_1, \ldots, x_n$ and universals $U_1, \ldots, U_n$ could coexist, or fail to coexist, with any collection of individuals $y_1, \ldots, y_n$ and universals $V_1, \ldots, V_n$, as long as:

(i) the individuals fit the maximal external relation of a world, and

(ii) the individuals and universals jointly constitute a state of affairs, which is a legitimate recombination of some actual states of affairs.

The principle of recombination plays an important role also in modal realism. It is debated how exactly the principle should be formulated in that context; without entering into details that do not pertain to us here, we can recap the principle as follows:

**PRM:** For any collection of individuals $x_1, \ldots, x_n$ that stand in a maximal external relation, there is a collection of individuals $y_1, \ldots, y_n$ such that:

(i) each of the $y_1, \ldots, y_n$ is numerically distinct from each of the $x_1, \ldots, x_n$;

(ii) $y_1$ is an intrinsic duplicate of $x_1, \ldots, y_n$ is an intrinsic duplicate of $x_n$;

(iii) the $y_1, \ldots, y_n$ compose a world.

There are three traits of PRC that are most notable and that set it apart from PRM. First of all, PRC recombines not only individuals, but also universals; in fact, PRM follows a nominalist metaphysics, where only individuals exist, while PRC rests on a so-called realist metaphysics, where universals – besides individuals – are real too. In general, PRC aims at recombining all constituents of states of affairs. The second difference between PRC and PRM is PRC’s requirement that the recombination delivers a state of affairs. The third is that the state of affairs must be a legitimate recombination of some actual state of affairs, while PRM accords no special role to the actual world (after all, for Lewis, “actual” is an indexical term and carries no special metaphysical status).

Furthermore, PRC is exempt from some of the difficulties proper of PRM. This is because PRM is formulated in terms of counterparts; yet, since the combinatorialist admits that there is identity among individuals belonging to distinct worlds (after all, the individuals of other worlds exist as surrogates of individuals of the actual world), she will recombine exactly the individuals of the actual world.

Now, Armstrong contends that combinatorialism is capable to provide a reductive analysis of modality, on a par with modal realism. The reason is that combinatorialism explains the meaning of modal sentences in terms of the existence of non-modal, actual entities. Constituents of the actual world provide sufficient ground to accommodate all the truths that a theory of modality must accommodate. However, contra Armstrong’s contention, we can point out that the appeal to legitimate recombinations makes PRC a circular definition of the concept of possibility: possible states of affairs are those that are possible within the limits of the assigned metaphysical roles. Surely, this is a theoretical limitation of combinatorialism in comparison to modal realism; yet, if we consider that modal realism is the only theory that claims to be able to define the concept of possibility in a non-circular manner, the concern raised by the limitation are minor. So, the combinatorialist offers us an explanation of the concept of possibility, but not a definition. And this may be considered sufficient: in order to offer an adequate solution to the PP, EPP and MPP, it is not necessary to eliminate the concept of possibility; it need only be explained.

PRC provides us with some insight into the combinatorialist solutions of the MPP and the EPP. As for the EPP, combinatorialism seems to play upon two distinct types of knowledge. On one hand, we have the principle of recombination, which states that all legitimate recombinations are possible. It is a metaphysical principle, whose knowledge is gained (to a certain extent) independently of experience. On the other hand, we have the empirical knowledge of the atomic constituents of reality: it is based on this knowledge that we can grasp the meaning of any modal sentence.

As for the MPP, we can sum up the combinatorialist solution as follows:

**C:** A state of affairs is possible if and only if it is obtained by means of a legitimate recombination of constituents of at least one actual state of affairs.

Because worlds are ways in which elements of the actual world could be recombined, we can claim that for combinatorialism worlds are surrogate of the actual world and, thus, that combinatorialism is an ersetztst theory.
4 Rebutting the trickle-down objection

We shall now address a serious worry for combinatorialist. Armstrong (2004) argues that combinatorialism may sit best with atomic worlds. And yet, it is far from an established (scientific or philosophical) fact that our world is atomic. So, the combinatorialist cannot assume that our world is a Wittgenstein world and she must provide a criterion for recombing structured constituents. So, suppose that, among actual states of affairs, we find some structured constituents. Should their parts be recombinable as well? For instance, consider a molecule of water and suppose to recombin the molecule: should its atoms of hydrogen and oxygen be recombinable as well, or do they not trickle down in the recombin? Call this the trickle-down objection, which was first discussed by Sider (2005). Sider suggests one way to address the objection, which nonetheless risks of restricting the combinatorial power of PRC and, hence, to restrict the domain of possible scenarios countenanced by combinatorialism. I shall first present Sider's solution, and then suggest an improvement.

When facing the trickle-down objection, for each constituent in the basis of recombination (the pool of constituents that are suitable to be recombinated), the combinatorialist has two sorts of options: either all the structural features of the constituent do trickle down and the result is a recombinant that is as structurally complex as the recombinating constituent; or, the structural features do not trickle down, so that the result is an atomic recombinant. (There is also an intermediate option, which is forgone by Sider, according to which some of the structural features of the constituent do trickle down, and some do not, so that the result is a recombinant that retains only some of the structural complexity of the recombinating constituent. We shall leave this option on a side for the moment and come back to it later.)

Now, Sider argues that both options are problematic, when applied to all individuals and all properties in the basis of recombination. If none of the features trickle down, then PRC delivers only meroelogically simple individuals and unstructured universals, that is, PRC delivers only Wittgenstein worlds. This seems too strict of a limitation of the range of possibilities: suppose we agree that Being a cell is a structural universal; then the PRC would obliterate the (merely) possible existence of cells and, hence, PRC would suggest that cells could not have been otherwise. More generally, if none of the features trickle down, then no structured individual and no structural universal could have been instantiated otherwise.

On the other hand, if all the structural features of constituents trickle down, then PRC delivers some puzzling worlds: consider, for instance, recombinating an individual that is meroelogically simple (and thus instantiating a non-structural universal in the actual world) with a structural universal; if all the features of the structural universal trickle down, then the recombinant delivers a world where a meroelogical simple instantiates a structural universal – a metaphysical monster, or a metaphysical impossibility, if one maintains that structural universals can be instantiated only by individuals whose meroelogical structure matches the structure of the universal.

A first intuitive solution of the dilemma – the one suggested also by Sider – is to reserve different treatments for individuals and for universals. All the features of universals should trickle down, while none of the features of individuals should trickle down. The recombination of a structural universal whose structure involves – say – twenty-seven parts, would hence involve twenty-seven individuals, one for each part of the structure.

The solution brings to light a general limitation of the various principles of recombination so far proposed, including PRC and PRM: they are blind to the meroelogical structure of the individuals in the basis of recombination (on this point, see Borghini and Lando 2015). The solution, however, does little to solve the limitation. First of all, within the solution the meroelogical structure of the recombinated individuals is derivative upon the structures of the universals that the individuals instantiate; however, the structures of the universals arguably followed the meroelogical structure of some individuals; hence, the meroelogical structure of the recombinated individuals seems to emerge magically, out of thin air. Secondly, the solution fails to deliver gunky scenarios, unless one postulates the existence of gunky universals (cfr. Borghini and Lando 2015 on this point). It is controversial whether gunk is a genuine possibility; but, if one agrees that it is, the only way in which the solution could guarantee the existence of gunk is to postulate the existence of some structural universal with an infinitely complex structure – a postulation that would be rejected by most metaphysicians.

A more palatable solution rests on the intermediate option suggested above, according to which some of the structural features of the constituent do trickle down, and some do not. Being selective with respect to the features that trickle down is entirely in keeping with the spirit of PRC: the selective removal of some meroelogical features of individuals or of some structural features of universals is indeed a special case of extrapolation, which is part and parcel of the combinatorial theory of possibility. Hence, I suggest that the best interpretation of PRC is one where the principle licenses as many features to trickle down as possible, so long as no puzzling states of affairs are generated.

It may be objected that the limitation of the extent of features of constituents that trickle down is a limitation of the theoretical power of combinatorialism, in that the theory fails to deliver modal plenitude. Yet, the combinatorialist will insist that the selective obliteration of features ensures that only those features that
would deliver metaphysically impossible scenarios are hindered from being recombined; hence, modal metaphysical plenitude is attained by PRC, although modal logical plenitude is not. A Humean may be dissatisfied with this answer, as for the Humean anything can coexist, or fail to coexist, with anything, hence all constituents — with no restrictions with respect to their features — should be included in the basis of recombination.

5 Rebutting the objection from alien possibilities

The second objection to the PRC that requires attention is related to ways in which the actual world might not contain adequate ontological resources for creating a basis of recombination that accommodates our intuitions about modality. In particular, it concerns the possibility that the actual world may have contained either more individuals, or more universals. Let us discuss these options, starting from the one regarding individuals.

To begin, consider the possibility that the actual world could have contained fewer individuals; this scenario is typically referred to as a contraction. The combinatorialist definitely has adequate resources to represent a contraction: all she needs is a world made out of a conjunction of states of affairs that jointly contain less individuals than the ones existing in the actual world. It is a different story, instead, when we consider the case of an expansion, that is, of a world that contains more individuals than in the actual world. Suppose the stock of re combinable individuals from the actual world includes \( n \) individuals, and we are given the sentence:

(14) There could have been \( n+1 \) cats.

Regardless of whether (14) would turn out to be true or false, (14) seems to express a sentence whose content: is straightforward. So, the combinatorialist can hardly appeal to the fact that, despite our modal intuitions, (14) expresses an impossible state of affairs. Yet, how can her theory represent such a state of affairs, if there are not enough individuals in the actual world to deliver it?

A solution may be to add a clause regarding the legitimacy of recombinations obtained through the iteration of elements of the actual world: if in the actual world there are \( n \) individuals, a state of affairs with \( n+1 \) individuals is possible insofar as it is derived from the actual world by the iteration of an individual constituent. Thus, a world in which there are more individuals than there are in the actual world becomes a possibility by iterating some items of the actual world.

Whether iteration can be regarded as a legitimate operation, from a metaphysical point of view, may nonetheless be doubted. One way to understand iteration is by way of fictionalism: iteration is a pretense; for instance, it's the pretense that, instead of there being only one pope, we have two (or three or ...) infinitely many of them. Modal fictionalism, however, carries an ontological commitment that is typically orthogonal with respect to the combinatorialist commitment. Indeed, the earliest formulation of modal fictionalism (namely Rosen 1990; cfr. also Nolan 2007) built upon modal realism; it is dubious that the basis for recombination of PRC could contain both constituents modeled after an Armstrongian ontology and constituents modeled after a Lewisian ontology. More importantly, modal fictionalism typically buys a full theoretical package — e.g. the whole modal realism — and it is dubious how such a package could be made compatible with the combinatorialist perspective. Of course, one could devise a more suitable version of modal fictionalism, with a fiction based on combinatorialism rather than on modal realism; still, fictional entities are ontologically spurious: a state of affairs whose constituents are partially fictional and partially non-fictional has little metaphysical plausibility and the combinatorialist would have to provide much more context for such sort of entity in her ontology.

More promising may be some sort of ersatzist understanding of iteration, according to which iterated items are surrogates of actual items. The surrogates could be linguistic entities, or abstract entities, or images. Thus, if the actual world has \( n \) individuals, there could be a world with \( n+1 \) individuals because in the basis of recombination we find not only concrete individuals but also some words/abstract entities/images that play the role of individuals. Yet, also in this case, the objection remains that the basis of recombination would contain a heterogeneous array of individuals, some concrete and some surrogates of some of the concrete: the metaphysical plausibility of a state of affairs partially concrete and partially ersatz remains to be substantiated.

A more promising strategy to address cases of expansion in a combinatorialist fashion is to treat them as cases of interpolation, where the feature of individuals that is altered is mereological complexity. It is possible to generate a world with more individuals than our world by interpolating the mereological complexity of our world (taken as a large mereological sum of individuals) and making such structure even more complex. Whether this solution is viable, however, depends on how interpolation is understood. In particular, the question is whether it is legitimate to expect that by means of interpolation we can augment the ontological resources of the actual world. Armstrong himself does not say much about this operation, so it is difficult to settle the matter at this time. The strategy on interpolation, at any rate, seems the most promising.
Let us now move to consider the second typology of possibility that the combinatorialist does not seem to be able to explain: the case of alien universals. Not only can we think that there are worlds with more individuals than there are in our own; there could also be worlds with individuals whose qualities and abilities are completely distinct from those of the individuals of our world. Once, these types of possibilities were excluded by invoking the so-called principle of plenitude for the actual world, according to which God created (in the actual world) everything God could have created, not only by number (which is debatable, but less relevant), but also, and more importantly, by variety. The fact remains that this principle does not seem to have a clear empirical confirmation: there are undoubtedly many species of living organisms; but, why should we believe that there couldn't be or couldn't have been even more? From the record we have, indeed, there are many regions of the morphospace of organisms that are left unoccupied. Or why couldn't the periodic table, for example, have included more elements than the ones it already includes? In other words: why believe that we live in the most variegated world that could exist?

The appeal to extrapolation and interpolation in the PRC is precisely to be able to meet some of these alien scenarios. The extent of scenarios that we can meet, though, depends on how the two operations are understood. If during the operations we can only modify a universal by removing some of its features, or by adding features that belong to other universals that are actually instantiated, then any feature that is alien to our world cannot be licensed through the PRC and, therefore, any state of affairs involving alien features is – according to the combinatorialist – impossible.

Perhaps the combinatorialist should endorse a bolder understanding of extrapolation and interpolation, according to which the operations can make use also of universals that are actually uninstantiated. This solution, though, would require an important change in the conception of universals; it would require, that is, that there are some universals that are not actually instantiated.

6 Conclusions

The principle of recombination plays a key role in Armstrong’s metaphysics. Despite its importance, the principle has received little attention so far in the literature on combinatorialism. Drawing also on the parallel work on the principle of recombination in modal realism, in the present work I aimed to clarify a formulation of the principle and to defend such formulation against two important objections: the so-called trickle down objection and the objection moving from the possibility of alien individuals or universals. As we have seen, combinatorialism can accommodate the trickle down objection by appealing to an intermediate option, according to which only selected structural features of a constituent trickle down, so that all and only the features that are not metaphysically puzzling are selected. On the other hand, the solution of the objection moving from the possibility of alien individuals or universals is more costly. Combinatorialism can counteract the possibility of worlds containing alien individuals or universals only by endorsing a bold understanding of extrapolation and interpolation, at the cost of revising – among others – some important tenets of the theory of universals; whether the combinatorialist can and should follow this strategy remains to be assessed.

Bibliography

Michele Paolini Paoletti
Who's Afraid of Non-Existent Manifestations?

1 Introduction

According to many recent metaphysical accounts of powers,1 powers are fundamental, irreducible entities.2 Even if you do not believe that powers are the only sort of fundamental entities — or the only sort of fundamental properties —, as some philosophers such as Alexander Bird (2007) maintain, you could still believe that they are part of the basic ontological inventory of the universe, that God could not produce an exhaustive copy of our universe without reproducing powers and their instantiations.

Moreover, it seems that powers are essentially individuated — among other things — by their (possible) manifestations. Thus, the power to dissolve salt — that is seemingly possessed by water — is also essentially individuated by its (possible) manifestation, i.e., dissolving salt. That power is what it is — the power to dissolve salt — also in virtue of that (possible) manifestation. If it had had another (possible) manifestation, it would not have been that power, but the power to some thing else. If it had had no (possible) manifestation at all, it would not have been a power at all. Of course, some powers are associated with different (possible manifestations in different (possible) circumstances. Yet, this does not imply that they are not essentially individuated also by those (possible) manifestations: perhaps, they are individuated by all those (possible) manifestations and all those (possible) circumstances.

Anyway, I shall argue in this paper that, if you claim that powers are fundamental, irreducible entities and that they are essentially individuated also by their (possible) manifestations, you should also claim that there are non-existent objects.3 In this respect, I shall agree with David M. Armstrong on the thesis that powers metaphysics is committed to the truth of Meinongianism, i.e., the doctrin

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1 I take “powers” here as referring to powers, dispositions, capacities and propensities, because the distinctions between these sorts of entities are not relevant in this paper. See Choi, Fara 2012
3 See, for example, Armstrong 1997, 79.

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