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Alien Individuals, Alien Universals, and Armstrong's Combinatorial Theory of Possibility¹

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David Armstrong's combinatorialism, in his own words, is the following project: "My central metaphysical hypothesis is that all there is is the world of space and time. It is this world which is to supply the actual elements for the totality of combinations. So what is proposed is a Naturalistic form of a combinatorial theory."² Armstrong calls his central hypothesis "Naturalism." He intends his well-known theory of universals to satisfy this thesis. He now attempts to give a naturalistic theory of modality.

A crucial function of any plausible theory of modality is that it account for all, or at least enough, of the possibilities that one might have thought pretheoretically to be possible. Among such possibilities are the following: it seems possible that there are universals that are neither identical with, nor have as constituents, actual universals. For example, the world might have contained additional, or entirely different, fundamental properties. And it seems that there might be individuals that are not put together from, nor identical with, actual individuals: for example, the world might have contained yet another grain of sand, yet another continent, and so on. These possibilities involve otherworldly individuals or universals; such are commonly called, following David Lewis, "alien individuals" and "alien universals," respectively.³

Such possibilities seem to require resources that go well beyond the resources of Armstrong's combinatorialism, for they cannot be accounted for merely in terms of recombinations of actual world entities.⁴ In his *A Combinatorial Theory of Possibility* (1989), Armstrong attempts to augment his theory and account for the metaphysical possibility of alien individuals. But he simply admits that his combinatorialism cannot account for the metaphysical possibility of alien universals.⁵ Because many find possibilities involving alien universals compelling, the failure to account for alien universals (or at least to explain away intuitions about their metaphysical possibility) is considered by many to be a crucial drawback to his theory. As Armstrong notes, the strongest way to summon the intuition in favor of alien universals is to consider the possibility of a world that is contracted relative to our world; for instance, consider a world without quark properties. Armstrong grants the metaphysical possibility of contracted worlds, and indeed, this seems plausible to many.⁶ But if contracted worlds seem possible, then why not also grant that it is possible that there be richer worlds than our own? That is, why isn't it also possible that our world be contracted relative to certain other worlds? But if it is possible that our world is contracted relative to other worlds, then it is possible that alien universals exist (*CTP*, 56).⁷

Fortunately, in his recent *A World of States of Affairs* (1998), Armstrong attempts to satisfy his critics and accommodate possibilities involving alien universals.⁸ Here he suggests a treatment

that is along the lines of the treatment of alien individuals provided in *A World of States of Affairs*.⁹ It seems fair to say that, should Armstrong's new treatment of alien universals prove effective, his combinatorial theory would be significantly improved. In light of this, the present essay shall determine if this new approach to alien universals is effective. In order to do so, I shall need to examine Armstrong's account of alien individuals. I will argue that Armstrong provides, with a certain modification that I shall suggest, a plausible treatment of alien individuals; however, his analogous treatment of alien universals fails.

More specifically, the account of alien universals is problematic because of its requirement on truthmakers for modal statements about alien universals.¹⁰ The truthmakers for all statements about universals, alien or nonalien, are now said to be barely numerically distinct universals. This bare-bones view of universals is, of course, a radical departure from Armstrong's well-known theory of universals. I shall argue that, although Armstrong's claim that individuals are barely numerically distinct is plausible, this analogous treatment of universals is flawed. Namely, it rests on an implausible view of universals that fails to serve the plausible function that Armstrong introduced his sparse theory of universals to satisfy. Armstrong introduced universals to explain the fact that things in nature appear the same (or similar) and to explain why objects have the causal powers they do. Many agree that some theory of sparse properties, nominalist or otherwise, is needed to serve these crucial functions. But if universals are merely numerically distinct, it is unclear how they ground such phenomena. Further, this new view of universals conflicts with Armstrong's account of laws.

Here is how the paper shall proceed: before discussing his treatment of aliens, it will be helpful to quickly review Armstrong's combinatorial theory of modality. (Readers familiar with Armstrong's theory may want to skip to section three). Having done this, I shall then unpack Armstrong's attempt to account for the metaphysical possibility of alien individuals in *A World of States of Affairs* and suggest an important revision to his account (section three). Finally, I will turn to Armstrong's analogous treatment of alien universals, arguing that it is gravely flawed (section four).

2.

I shall begin with an overview of Armstrong's basic ontology, as Armstrong holds that these are the kinds of entities to be combined by his combinatorial theory. Armstrong takes the following entities to be fundamental.

(1) *Universals*. As is well known, Armstrong believes in universals and has previously given a very detailed theory of them. Very briefly, he holds that there are monadic and polyadic universals (or properties and relations). He claims that they are sparse; there are only those universals that are needed to ground objective resemblances and the causal powers of objects.¹¹ The inventory of these universals is an a posteriori matter left to a completed science. He rejects disjunctive and negative universals but admits conjunctive universals (where F and H are universals, F & H is also a universal) and structural universals (if an individual, *a*, consists of a part, F, that stands in relation R to another part of *a*, G, and F, R and G are all universals, then *a* has the structural universal *an F having R to a G*). And he accepts the following principle of instantiation:

PI Necessarily, every universal has at least one instance

that entails that there are no uninstantiated universals (the exclusion of which is required to uphold Naturalism). He further holds that universals are entirely present in each instantiation. The appearance of identities at the macrophysical level can be explained, ultimately, by particulars' having the same universal(s). But what explains the phenomenon that certain thin particulars have, say, one unit negative charge and others do not? Nothing. For "instantiation" is primitive. The fact of sameness and difference in nature arises because some particulars have the same properties and others do not.

(2) *Thin particulars*. In addition to universals, Armstrong admits thin particulars to his basic ontology. Thin particulars, on Armstrong's view, are always united with universals. Although always united with universals, a thin particular can be thought of, in abstraction, as the bare individual—the individual without its properties. Thin particulars only differ from each other in being numerically distinct.

(3) *States of affairs*. Armstrong calls a thin particular's having a property or a relation holding between two or more thin particulars a "state of affairs." He regards states of affairs as ontologically basic. Given that thin particulars and universals were already taken as basic, why does Armstrong take states of affairs as basic as well? Suppose we know what thin particulars and universals there are at a world. This would not tell us whether a certain property, F, is had by a certain particular, *a*. Nor would it tell us what particulars stand in what relations. This point is stated epistemically, but it is used to illustrate the following metaphysical point: the universals and thin particulars at a world do not determine which universals are instantiated by which particulars.

The gist of the role that this basic ontology plays in Armstrong's combinatorialism is the following: any of the actual-world properties can be recombined with any actual thin particular to form a possible state of affairs. And, similarly, any n-adic relation can be recombined with any number n of thin particulars. More specifically, this combinatorial operation is over simple individuals and simple universals. Simple individuals, *a*, *b*, *c*..., are thin particulars that have no proper parts, where proper parts of thin particulars are thin particulars as well. The simple individuals have indefinitely many properties and enter into indefinitely many relations with other individuals. Simple universals are "simple" in the sense that they have no properties or relations as proper parts.

Possible worlds are constructed from the simple individuals and simple particulars in the following way. Suppose "a is F" is true, but "a is G" is false. But "we can also say that a's being G is a possible (merely possible) atomic state of affairs" (CTP, 46). We say this because, although it fails to correspond to an atomic state of affairs, it has the form of an atomic state of affairs. Possible atomic states of affairs may be either merely possible or possible because actual (but obviously not both). We can express this basic idea as the following combinatorial principle:

CP For any n-tuple of n ($n > 1$ or $n = 1$) distinct simple particulars, $\langle a_1, \dots, a_n \rangle$, and any simple n-adic universal, R, Ra_1, \dots, a_n is a possible atomic state of affairs.¹²

A complex, or molecular, state of affairs is simply any conjunction of possible atomic states of affairs. And finally,

PW w is a possible world only if:

- (i) w is a conjunction of possible atomic states of affairs, and
- (ii) for every particular a , there is some property F such that the state of affairs Fa is a constituent of w .

Armstrong includes this latter clause to exclude worlds that contain a particular(s) that only figures in relations (*CTP*, 47). This is not the same as requiring that every particular figures in some state of affairs or other. He also believes this, but here he is claiming that it is not possible that a world have a particular that only figures in states of affairs with universals that are relations. (Unfortunately, he does not justify this clause, but I will not dispute it).

There are numerous further elaborations and modifications to the theory. Since my purpose is not primarily expository, refer the reader to the text for further detail. My primary concern is with refinements involving alien entities. So let us now turn to this matter, beginning with Armstrong's refinement concerning alien individuals. As we shall see, Armstrong will attempt to extend this refinement to the case of alien universals as well.

3.

Consider the following sentence:

- (1) There could have been yet another mouse in my study.

It is generally accepted that a theory of modality, to be plausible, must give a sense in which statements like (1) are true. Indeed, Armstrong agrees with this assessment: "it seems very hard to deny that it is possible that the world should contain more individuals than it actually contains. There is no mouse in my study. Nevertheless, it is possible that there should be one. But why does this mouse have to be one of this world's mice?"¹³ After all, it seems easy to entertain the possibility that the world consists in more particles of the types that already exist.

But as noted, the combinatorial theory, as it stands, cannot handle such possibilities. Stated within the framework of Armstrong's ontology, the problem is that there are no suitable truthmakers for statements about alien particulars because the combinatorial operation cannot produce thin particulars that are not identical with, or composed of, actual thin particulars. Instead, the existing particulars can merely be reshuffled. So Armstrong will need to extend his theory in order to supply entities that could serve as truthmakers for alien particulars. In *WSA* he proposes that actual thin particulars with a certain sort of haecceity, together with the mereological relation of difference, will do the needed work. To grasp what Armstrong is driving at, it will be useful to visit his discussion of the difference between haecceitism and anti-

haecceitism.

Haecceitism and Anti-Haecceitism

In *A World of States of Affairs*, Armstrong illustrates the difference between haecceitism and anti-haecceitism by asking us to suppose that we have a world that consists in only two simple individuals, a and b, with the former having simple property F and the latter having simple property G. Armstrong represents such a world in the following way:

(i) Fa & Gb,

where each of the conjuncts represents an atomic state of affairs. Then he asks us to consider:

(ii) Ga & Fb.

The crucial question is: Does (ii) represent a distinct world or merely the same world as (i)? That is, can there be a qualitatively identical world where the thin particulars are swapped, or, is a thing's qualitative nature all there is to its individuality? If qualitative nature exhausts individuality, then (ii) represents the same world as (i) (*WSA*, 107–108). The haecceitist says that (ii) represents a different world; the anti-haecceitist rejects this. Anti-haecceitism says, put a bit more formally:

AH For any worlds w_1 and w_2 , if w_1 and w_2 are qualitatively alike, then they are individually alike.

And haecceitism says:

H It is not the case that: for any worlds w_1 and w_2 , if w_1 and w_2 are qualitatively alike, then they are individually alike.

Two worlds are qualitatively alike when they do not differ concerning the qualitative properties and relations they have throughout time and space. AH says: if the worlds are qualitatively alike, then the worlds contain all the same individuals. H holds that qualitatively identical worlds differ with respect to the individuals that exist in the worlds. Anti-haecceitism entails the rejection of the possibility of “swap worlds,” that is, the possibility that in some world, things are qualitatively the same as they are in the actual world except that x has all of the qualitative properties that y has in the actual world, while y has all of the qualitative properties that x has in the actual world. Conversely, haecceitism accepts this possibility.

Now let us connect this distinction to Armstrong's proposal concerning alien individuals. What is the nature of the particulars that will serve as truthmakers for alien individuals? Readers familiar with Armstrong's discussion of alien individuals in *CTP* will recall that Armstrong adopted “weak anti-haecceitism”: a position that accepts AH and accepts the *intra-world* thesis that within a world indiscernible objects differ numerically.¹⁴ But Armstrong renounces weak anti-haecceitism in *WSA* because he is impressed by the following point made by Michael Tooley. Suppose that there are two indiscernible spheres in the same world (as in a Max Black

case). It seems that one sphere might go out of existence. Are there two possibilities here (b's ceasing to exist, a's ceasing to exist)? It seems so. But the weak anti-haecceitist cannot say this. This result leads Armstrong to renounce his weak anti-haecceitist position (*WSA*, 108).

Indeed, even setting this example aside, it is surprising that Armstrong adopted weak anti-haecceitism in the first place, for weak anti-haecceitism is inconsistent with Armstrong's combinatorialism. As noted, Armstrong adheres to the following combinatorial principle:

CP For any n -tuple of n ($n > 1$ or $n = 1$) distinct simple particulars, $\langle a_1, \dots, a_n \rangle$, and any simple n -adic universal, R , Ra_1, \dots, a_n is a possible atomic state of affairs.

And as noted, possible worlds are certain conjunctions of possible atomic states of affairs. As the principle emphasizes, Armstrong starts with an initial stock of simple particulars as inputs into the combinatorial operations. These are the entities that are supposed to recombine with simple universals to determine what is possible. The problem is that according to CP (i) and (ii) are distinct possible worlds whereas weak antihaecceitism denies this. Notice that this problem is worse than the Tooley case because it is one thing to deny an intuition about what seems possible, but the weak anti-haecceitist thesis entails the negation of a possibility that CP endorses.¹⁵ So the combinatorial theory faces a contradiction.¹⁶

Fortunately, because Armstrong finds Tooley's example compelling, he moves to a haecceitist position in *WSA*. So let us turn to this new position. Initially, it may seem that Armstrong cannot adopt haecceitism. As Armstrong notes, if particulars have unique inner natures, the way many reasonably find properties to have, then the truthmakers could not be actual particulars. This is due to the fact that none of the actual particulars would have the appropriate inner nature that corresponds to the truth (*CTP*, 59–60). So at least at first glance, it seems that Armstrong needs to accept haecceitism but cannot do so. So we are left at sea concerning what the nature of particularity is, according to Armstrong, and hence, what kind of particular is supposed to be the truthmaker for modal statements about alien individuals. Fortunately, Armstrong notices that there is a middle-route: he distinguishes two haecceitist positions, which he calls "strong haecceitism" and "weak haecceitism."

Strong haecceitism is described by Armstrong in the following way: strong haecceitism "holds that a and b each have a unique inner essence, a metaphysical signature tune as it were, something apart from their repeatable properties F and G , which distinguishes them. Even abstracting from their repeatable properties, a and b differ in nature" (*CTP*, 59). It is difficult to get a grip on this notion of a unique inner essence that individuals have; the doctrine of a "metaphysical signature tune" is quite obscure. Readers comfortable with quiddities might think of a strong haecceity as being an essence above and beyond numerical distinctness in roughly the same way that quiddities, the unique inner essence that a universal possesses, are essences above and beyond each universal being merely numerically distinct from any other universal. But this unique inner essence in the case of haecceities is not supposed to be a property. "Weak haecceitism," in contrast, does not claim that individuals have inner essences of this sort; instead, individuals are merely barely numerically distinct. "There is certainly no call to think of haecceity as a unique inner nature or essence possessed by each particular, something property-like, although a property necessarily limited to one thing. When we have said that different

particulars are numerically different, then we appear to have said all that can be said about the nature of particularity” (WSA, 108). It is important to note that unlike weak anti-haecceitism, weak haecceitism regards (i) and (ii) as being distinct worlds. Hence, despite its rejection of unique inner natures, it is clearly a haecceitist thesis. It entails the rejection of AH; it is not the case that if w_1 and w_2 are qualitatively alike, then they are individually alike. What is needed for sameness of world, over and above qualitative sameness, is that the same qualitative properties be instantiated by all and only the very same individuals.

In sum, Armstrong moves from weak anti-haecceitism to a watered-down form of haecceitism. Armed with his view of particularity, we can finally turn to Armstrong’s solution to the problem of how to accommodate the possibility of alien individuals.

Armstrong’s Solution

As noted, to solve the problem, Armstrong proposes that individuals that are weak haecceities will serve as the needed truthmakers for modal statements involving alien individuals. More on this shortly. For now, it is important to take note of another facet of his proposal—that weak haecceitism does *not* characterize the nature of alien particulars.

Armstrong writes, “in talking about alien possibilities, haecceitism, thisness, even the very moderate haecceitism... is not involved” (WSA, 166). He explains:

One good way of bringing out this point is in terms of Carnap’s distinction between state-descriptions and structure-descriptions. We saw that state-descriptions, descriptions involving particular particulars, are required to do justice to actual states of affairs and combinatorially reached possible states of affairs. But for the outer sphere of possibility, the sphere of aliens, we need only structure-descriptions... (WSA, 166)

So the descriptions:

(i) Fb & Ga

(ii) Fa & Gb

describe different worlds when “a” and “b” name nonalien individuals; on the other hand, they describe the same world when “a” and “b” name aliens. So alien individuals lack haecceities.

Nonetheless, as mentioned, there is a sense in which weak haecceities are invoked in Armstrong’s solution. As noted, they are supposed to serve as truthmakers for statements about alien particulars. Armstrong states this point in a rather obscure way:

Consider a certain number of simple universals and simple (thin) particulars... We can go on to form the notion of a further such entity which is different from, other than, each of these original entities. We can specify further whether this entity is a particular or a universal, and if the latter

the number of ‘places’ this universal has. Relative to the original assemblage, this new entity is an alien. Our conception of it is in a way combinatorially formed; using the original assemblage and the relation of difference. If this is legitimate, it is easy to see that further relative aliens can be introduced, each alien different from each other as well as different from anything in the original assemblage. These aliens constitute an outer sphere with respect to the original assemblage. (WSA, 167)

Let us bracket a discussion of the case of alien universals (more on this issue shortly). As Armstrong explains, he conceives of the alien particulars in terms of existing particulars and the relation of difference. As he indicates in a subsequent passage, such will be the actual-world entities that are to serve as the truthmakers, or the ontological ground, for truths involving alien particulars (WSA, 167).

So Armstrong’s solution is simply that modal statements about alien individuals lacking haecceities have, as truth-makers, actual particulars that are weak haecceities, together with the relation of difference. Not much explanation is given for these views: no motivation is given for the view that alien particulars lack weak haecceities; nor is it clear why actual particulars with haecceities and the relation of difference are suitable truthmakers. All in all, I find Armstrong’s solution to be undermotivated and problematic. Let me elaborate.

Recall Armstrong’s rationale for rejecting strong haecceitism; he was concerned that if one embraced the view that each particular had its own unique inner nature then there would be no thisworldly particulars to serve as truthmakers for statements about alien particulars. Thisworldly particulars would not do because the nature of the truthmaker would fail to match the nature of the alien entity. This point seems apt. But now compare this view to Armstrong’s present proposal that actual weak haecceities serve as truthmakers for statements about alien particulars that lack haecceities altogether. We should ask: Where in the actual world are there particulars lacking weak haecceities? Nowhere. So what good does it do to supply truthmakers that lack the same nature as the alien particulars? It seems that the alien particulars have a nature—a nonhaecceitist one—that is different than the nature of their truthmakers.

Fortunately, I believe that this problem can be remedied. Let us begin by asking: What could Armstrong’s motivation have been for the view that alien particulars lack haecceities? It cannot be that, as with the strong haecceities, if alien particulars had weak haecceities, there would be nothing in the actual world to serve as truthmakers for the relevant modal statements. There is not a unique inner nature that must be supplied for each alien individual. Each particular having a weak haecceity is like any other in that each differs *solo numero*. Of course there is still a sense in which any alien particular lacks an actual world correlate—there is not *that*, particular, numerically distinct individual, just others that are also numerically distinct from each other. But Armstrong claims that it is not the actual particulars, alone, that are the ontological ground for the alien particulars; it is the actual particulars, together with the mereological relation of difference. Intuitively, the truthmakers—actual haecceities and the relation of difference—seem to be truthmakers for statements about alien individuals that have nonactual weak haecceities and not, as Armstrong contends, for individuals lacking haecceities altogether. So we are left without a motivation to renounce weak haecceitism for alien individuals.

In light of this, I suggest that Armstrong embrace weak haecceitism for alien individuals as well.¹⁷ Armed with this modification, this treatment of alien individuals sounds promising; but my acceptance of the proposal is subject to the following qualification. Armstrong nowhere gives a general taxonomy of how modal truths are to be given truthmakers, although he writes “different modal truths may have to be provided with truthmakers in different ways” (WSA, 151). So my acceptance is qualified until I know how, in general, this accounting for modal truths in terms of truthmakers is supposed to work.

Suppose that Armstrong gives an apt general account. In this case, would his solution, modified in the way I have proposed, be effective in light of the theoretical commitments of his combinatorialism? I believe so; I suppose there is some divergence from the original combinatorial project: the alien particulars are not arrived at via a recombination of actual entities. But the divergence is harmless because combinatorialism was introduced in order that there be a naturalistic theory of modality. The modified solution meets the desideratum of naturalism. Nor, to the best of my knowledge, does it pose any new problems for the theory. So let us now turn to Armstrong’s treatment of alien universals.

4.

In *A Combinatorial Theory of Possibility*, Armstrong had denied the metaphysical possibility of alien universals: “I think that what the Combinatorialist must do is to take his courage in his hands and deny the possibility of alien universals” (CTP, 55). Notice the extent of his denial. If one denies the metaphysical possibility of alien universals, statements of both sorts turn out to be false:

(1) It is metaphysically possible that there be some novel fundamental property.

(2) It is metaphysically possible that there be some novel kind of fundamental particle.

Why is (2) not metaphysically possible, given that Armstrong allows alien individuals by analogy? Recall that even a fundamental particle, for Armstrong, consists in a thin particular and certain universals. To get a new kind of particle it needs to be metaphysically possible that there be novel fundamental properties.

As noted, Armstrong’s denial of the metaphysical possibility of alien universals was considered by many to be a crucial drawback of his theory because many find their metaphysical possibility compelling. To return to the thought experiment raised at the outset of this paper, as Armstrong notes, the strongest way to summon the intuition in favor of alien universals is to consider the possibility of a world that is contracted relative to our world. Consider, for instance, a world without quark properties. Armstrong grants the metaphysical possibility of contracted worlds and, indeed, this possibility seems compelling to many. But if contracted worlds seem possible, then why not also grant that it is possible that there be richer worlds than ours? That is, why isn’t it also possible that our world be contracted relative to certain other worlds? But if it is possible

that our world is contracted relative to other worlds, then it is possible that alien universals exist (*CTP*, 56).

Armstrong himself does not reject the pull of this intuition: “I do concede that, offhand, alien universals look to be a possibility” (*CTP*, 57). In light of this, one wonders what motivated Armstrong to deny their possibility in the first place. After all, why not account for them in the same way as he accounted for alien individuals? In *CTP*, Armstrong explains that his rationale lies in his belief that universals have quiddities. If alien universals have unique inner natures, what entities in the actual world could serve as truthmakers for statements about them? An actual universal, having its own unique quiddity, cannot serve as the truthmaker for a statement involving a different, alien, quiddity (*CTP*, 55). This point strikes me as apt; as Armstrong notes in *WSA*, “Grasp the content of one particular and, as far as their bare particularity goes, you have grasped the nature of them all. Contrast universals with particulars... Each of them has its own nature, its whatness or quidditas, so that to have encountered one is emphatically not to have encountered all” (*WSA*, 168).

So Armstrong’s belief in quiddities forces him to adopt the rather counterintuitive claim that alien universals are not metaphysically possible. But recently, Armstrong has rejected the view that universals have unique inner natures, adopting a new, and surprising, view of the nature of universals. Instead, Armstrong now adopts the unusual view that universals are merely numerically distinct; that is, universals with the same –adicity will differ only insofar as each universal is barely numerically distinct from any other. In light of this new view he claims that he can give a plausible account of the metaphysical possibility of alien universals—one that is along the lines of his treatment of alien individuals. Armstrong explains his new view of the nature of universals in the following passage:

Here is a way, some may think it an implausible way, in which one might avoid having to postulate quiddities. One would say that every universal that had the same -adicity, that is, each property, dyadic relation, triadic relation,... was, if simple, merely numerically different from every other universal that had that same -adicity. The -adicity could not be conjured away. It would be essential to the universal and the possession of -adicity would continue to set a divide between what a particular is qua particular and a universal qua universal. But within an -adicity equivalence class (a class containing all and only the universals of a certain -adicity) the difference between different members would be no more than the difference between different particulars considered merely as particulars. One could think of this difference as a difference in another ‘dimension’, orthogonal to the dimensions of spacetime....

This deflationary account of the quiddity of universals restores the parallel with the (somewhat deflationary) account of haecceity that Skyrms, and now I, advocate. (*WSA*, 168)

Armstrong is suggesting that, within any -adicity equivalence class, universals, like thin particulars, differ in their natures *solo numero*. He calls this view “weak quidditism” to contrast it with his former view that universals have a unique inner nature (a position that he now calls “strong quidditism”).

With this new view of universals in hand, Armstrong extends his account of the metaphysical possibility of alien individuals to the case of alien universals. Universals having weak quiddities are supposed to serve as truthmakers for all statements about universals, alien or nonalien. However, alien universals lack weak quiddities, although, as noted, the truthmakers for statements about them are universals that have weak quiddities (WSA, 166). In sum, both accounts run parallel in the following ways: first, there is an attempt to deflate the nature of a (nonalien) entity of a certain ontological type to such an extent that the entities in question are said to be merely numerically distinct (e.g., a deflation from haecceities to weak haecceities). Then, there is a deflation of the alien entity in question beyond even this—that is, the alien entity lacks even a weak haecceity or weak quiddity. And finally, the alien entity, despite the fact that it lacks even a weak quiddity or weak haecceity, nonetheless has a more robust truthmaker—that is, the alien entity lacks a weak haecceity or a weak quiddity but the truthmaker, on the other hand, possesses one.

Given these parallels, it is no surprise that Armstrong's account of alien universals faces the same problem that arose with respect to his account of alien individuals. Universals having weak quiddities are supposed to serve as truthmakers for statements about alien universals. But how can they do so if the alien universals lack weak quiddities? Recalling that, when a similar objection was leveled against Armstrong's account of alien individuals, it was suggested that Armstrong also adopt weak haecceitism for alien, as well as nonalien, individuals, one might suggest that, in a similar vein, Armstrong adopt weak quidditism for alien universals as well. After all, if alien universals within an *-adicity* equivalence class, like actual ones, differ *solo numero*, then it seems plausible that actual universals with the same *-adicity*, together with the relation of difference, could serve as suitable truthmakers for statements about them.

But is it really plausible to claim that universals, alien and nonalien alike, merely have weak quiddities? Weak quidditism seems to miss the nature of universals entirely. Consider the difference between any two universals with the same *-adicity*. Within any *-adicity* equivalence class, the universals seem to differ in ways that amount to more than just numerical distinctness; such differences seem to be due to differences in the nature of each universal.

Indeed, this new view of universals does not even cohere with Armstrong's overall metaphysical picture. It is well known that the phenomenon or fact that a theory of sparse properties, nominalist or realist, is often employed to explain is the apparent existence of identities in nature between different objects. In his numerous writings on properties, Armstrong has been an influential defender of the view that the only adequate account of the fact that objects appear to be identical in certain respects appeals to immanent universals. In addition to this, Armstrong believes that universals are needed to explain why objects have the causal powers that they have.

But if universals merely differ numerically and, when applicable, in their *-adicity*, then it is unclear how universals do either of these things. Consider, first, the case of causal powers. How do objects have the causal powers that they have and that serve to identify the universals? It cannot be in virtue of the nature of a universal, F, that *a* has causal power P; otherwise F would not merely be numerically different from other universals within its *-adicity* equivalence class, as something peculiar to the nature of F is needed to determine that F confers on objects the

particular causal power(s) that it confers. After all, if every universal with the same -adicity is merely numerically distinct, why don't they all simply confer the same causal powers?

A similar concern arises for the case of the appearance of identity in nature. What accounts for the fact that different objects appear to be identical in certain respect(s)? Armstrong's well-known answer is that the objects share the same universal. But now that Armstrong has renounced quiddities, it is unclear how he can say this. It cannot be in virtue of a universal's numerical distinctness or -adicity that objects that have it appear to be identical in a certain respect. If every universal with the same -adicity only differs numerically, then objects having *any* universal with the same -adicity should resemble each other equally. But this is obviously not the case.

A natural move would be to suggest that the laws serve to confer the causal powers, which, in turn, determine resemblances. Unfortunately, this would make resemblance an external relation, a view that Armstrong himself rejects. According to Armstrong, a relation is internal when it holds in every possible world where the relata exist.¹⁸ If resemblances are determined by the laws then resemblance would be an external relation because whether objects resemble would not solely depend on the universals that the objects have; rather, the resemblance would also depend on what laws of nature the universals that the objects have participate in. But Armstrong himself rejects the view that resemblance is external: "Given that two objects each have a certain nature, then their resemblance and its degrees are fixed. There is no possible world in which the objects remain unaltered but in which their degree of resemblance changes."¹⁹ In light of this, to claim that laws determine resemblances, Armstrong needs to argue, contra his previous position, that resemblance is an external relation. For now, Armstrong's new view of universals strips him of a manner of accounting for resemblances and causal powers.

This bare-bones view of universals raises yet another problem. It fails to cohere with Armstrong's well-known metaphysical views on laws of nature. According to Armstrong, laws of nature are dyadic relations of necessitation that hold between universals and are themselves higher-order universals.²⁰ Given that laws are universals, it seems that Armstrong will renounce strong quidditism with respect to laws as well. In addition, it seems that weak-quidditism is supposed to apply to the necessitation relation itself. However, it is clear that weakquidditism is false with respect to both laws and the necessitation relation. First of all, it is helpful to distinguish laws from the necessitation relation. I take it that the same necessitation relation is tokened, in each instantiation of a law, so that different instances of the same relation may relate different universals. On the other hand, the identity and difference of any law depends on what universals it relates.

It is easy to show that weak-quidditism fails to apply to laws or to the necessitation relation. Consider, first, the following laws:

No signals travel faster than the speed of light.

In all closed systems the quantity of energy remains constant.

Their –adicity and numerical distinctness is not sufficient to differentiate them; what is required is that they be differentiated by the properties that they relate. So weak-quidditism with respect to laws is false. But perhaps weak-quidditism applies to the necessitation relation. However, this cannot be the case if Armstrong is to maintain his well-known view that the laws govern, for Armstrong has claimed that necessitation is a relation with a unique inner nature that confers nomic necessity on the laws. If universals lack a unique inner nature, then how can it be claimed that there is something special about the necessitation relation such that, when it obtains, a law has been instanced? Indeed, on this new view of universals, necessitation and constant conjunction would merely differ numerically.

Perhaps it should just be admitted that the necessitation relation has a quiddity. Given this, Armstrong could also claim that laws, although they relate lower-order universals that lack quiddities, have quiddities in the sense that the necessitation relation has a quiddity. But in this case Armstrong owes us an argument for the bizarre view that the universals that the necessitation relates are not quiddities while quidditism doesn't seem to apply to laws themselves.

In sum, Armstrong's new view of universals fails to cohere with other parts of his metaphysical theory. For one thing, it conflicts with his work on laws. For another, it renders mysterious the way in which universals determine resemblances and confer causal powers on the objects that have them. So I remain very skeptical of Armstrong's treatment of alien universals and hope that Armstrong will provide some further exposition.

Perhaps, in light of these problems, Armstrong should return to his previous position that alien universals are not metaphysically possible. Of course, in order to make this claim defensible, Armstrong would need to explain away our apparent intuitions that alien universals are a metaphysical possibility. Thus far, Armstrong has not succeeded in this task. In *A Combinatorial Theory of Possibility*, a number of things were said to deflate the strong intuition that many have that alien universals are a metaphysical possibility. Two of the "stronger" points were: (i) Armstrong claims that it is consistent that (a) alien universals be metaphysically impossible and (b) alien universals are doxastically possible (he uses "doxastically possible" interchangeably with "conceivable"). (He gives the example of Goldbach's conjecture, which is conceivably false, but, if true, is a necessary truth). (ii) Armstrong reminds us that "the actual universals set a limit, a limit given by the totality of their recombinations, to the possible universals" (*CTP*, 56).

Both of these deflationary remarks do little. Consider (i). In order for Armstrong to effectively shift the philosophical burden to doxastic possibility, he needs to provide an account of the doxastic possibility of alien universals. Unfortunately, Armstrong's brief discussion of doxastic possibility concerns an unrelated case. All that is said about the case of alien universals is that they "fit smoothly into the present account of doxastically possible worlds" (*CTP*, 73). He never explains how. Concerning (ii), this remark is unsatisfying because it assumes that the combinatorial theory is correct. But this is precisely what is at stake, as many would reject Armstrong's theory on the grounds that it cannot accommodate the metaphysical possibility of alien universals.

5.

So my conclusion is that the combinatorial theory fails to provide a plausible way of accommodating or denying the metaphysical possibility of alien universals. And, since most find the possibility of alien universals compelling, this failure strikes many as a serious drawback to Armstrong's theory. In addition, the implausibility of his attempt to accommodate alien universals is particularly worrisome because its failure impacts more than just the combinatorial theory. It involves an important and implausible revision of his well-known theory of universals. I hope my remarks encourage further clarification of these matters. Many have found Armstrong's theory of universals persuasive and I suspect that they too will find Armstrong's radical revision quite puzzling. And Armstrong's combinatorial project, despite its flaws, is still intriguing to many naturalists. An improved account of alien universals and a clarification of his new view of the nature of universals are certainly worth serious effort.

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Notes

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²Armstrong, "The Nature of Possibility," *The Canadian Journal of Philosophy*, 16, no. 4 (December 1986): 575.

³Lewis coined the expressions "alien universals" and "alien individuals." For his discussion, see *On the Plurality of Worlds* (Oxford: Blackwell, 1986), 91–92.

⁴It should be noted that otherworldly entities that are novel recombinations of actual universals and individuals (e.g., a monkey with a zebra's stripes) are not problematic for the combinatorial theory. They are unproblematic because they are merely recombinations of actual universals and individuals. Although such recombinations are nonactual, they are not "aliens" in the sense that Armstrong has in mind.

⁵Armstrong, *A Combinatorial Theory of Possibility* (New York: Cambridge University Press, 1989), hereafter cited in the text as *CTP*.

⁶For Armstrong's discussion of contracted worlds, see *CTP*, 61–63. His combinatorialism allows for contracted worlds. (For an illustration of this, see principles CP and PW).

⁷Armstrong cites David Lewis's *On the Plurality of Worlds* (Oxford: Blackwell, 1986), 159–165. Indeed, although Armstrong initially denied the metaphysical possibility of alien universals, he admitted that this thought experiment has an intuitive pull (*CTP*, 57).— 592 — For further discussion of these issues, see section four of this paper.

⁸Armstrong, *A World of States of Affairs* (New York: Cambridge University Press, 1997), hereafter cited in the text as *WSA*.

⁹As I will explain in section three, Armstrong has second thoughts about his treatment of alien individuals in *CTP* and offers a different view in *WSA*.

¹⁰Armstrong says that a “truthmaker” is, put simply, “whatever in the world makes a truth true” (WSA, 2).

¹¹As Lewis explains, the guiding idea behind sparse universals is that they are supposed to “comprise a minimal basis for characterizing the world completely. Universals that do not contribute at all to this end are unwelcome, and so are universals that contribute only redundantly” (191). For further discussion see Lewis’s “New Work for a Theory of Universals,” in *Properties*, ed. D. H. Mellor and Alex Oliver (Oxford: Oxford University Press, 1997).

¹²This formulation is from Holly Gail Thomas, “The Principle of Recombination and the Principle of Distinctness: A Puzzle for Armstrong’s Theory of Modality,” *Australasian Journal of Philosophy*, 73, no. 3 (September 1995), 444–457.

¹³Armstrong, “The Nature of Possibility,” *The Canadian Journal of Philosophy*, 16, no. 4 (December 1986), 582.

¹⁴A “strong anti-haecceitist,” on the other hand, would deny that, within a world, indiscernible objects differ numerically. For further discussion of these theses, see Armstrong’s discussion in *CTP*.

¹⁵Indeed, there are numerous possibilities that the weak antihaecceitist must deny that CP will endorse since CP generates numerous swap worlds. But (of course) only one contradiction is needed to render a theory false.

¹⁶I suppose that the Combinatorialist might make a last-ditch effort to maintain weak anti-haecceitism by recombining only universals, rather than universals and particulars, to generate what is possible. Doing so, she might believe, allows the theory to avoid treating (i) and (ii) as distinct possibilities. However, this maneuver will not be consistent with weak anti-haecceitism either: merely recombining universals will fail to generate *intra*world differences in particularity between indiscernible objects. As noted, this is a difference that weak anti-haecceitism endorses.

¹⁷Indeed, this modification allows Armstrong to accommodate a possibility that he was previously unable to accommodate: swap worlds involving alien particulars. Suppose that in the actual world *a* has F, G, H while *b* has J, K, L. That is, $F_a \& G_a \& H_a \& J_b \& K_b \& L_b$ Armstrong, being a weak haecceitist, grants that relative to the actual world it is possible that there is a qualitatively identical world where *a* and *b* swap roles. That is, there is a world such that: $F_b \& G_b \& H_b \& J_a \& K_a \& L_a$ Now, Armstrong can accommodate the possibility that *beta* is a nonactual but possible world containing two extra individuals, *c* and *d*, that do not exist in the actual world. But notice that although Armstrong can represent the possibility that actual particulars swap— 593 — roles, without the modification that I propose he cannot represent the possibility that *c* and *d* swap roles because *c* and *d* lack haecceities. But many find this possibility intuitively compelling: after all, if one finds that swapping cases involving actual individuals seems possible, then one is also likely to find it possible that alien individuals could swap properties as well. Armed with weak haecceitism for these aliens, his combinatorialism can now accommodate this intuition.

¹⁸Armstrong, *Universals* (Boulder: Westview Press, 1989), 43.

¹⁹*Ibid.*, 44.

²⁰Armstrong, *What is a Law of Nature?* (Cambridge: Cambridge University Press, 1983).