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Facts: An Essay in Aporetics

1 Introduction

This essay explores a topic central to the work of David M. Armstrong, that of states of affairs or *facts* as I shall call them. In earlier work, much influenced by Armstrong and Gustav Bergmann, I took a realist line, defending concrete facts as the truth-makers of (some) contingently true sentences, and then putting them to work for ambitious metaphysical purposes. (Vallicella 2000, 2002) Since then I have become increasingly aware of how problematic facts are despite their seeming indispensability. I am now tempted by the aporetic conclusion that we cannot live with them and we cannot live without them. Facts are contested entities. Some, such as Panayot Butchvarov, deny their existence altogether. (Butchvarov 1979, 244–247) Others admit them but differ dramatically as to their nature. I see the main division among the friends of facts as that between concretists who locate them in the space-time world and abstractists who don't. I will begin with the concretist conception of facts as contingent truth-makers. This is the conception we find in Armstrong. The next task will be to confront Butchvarov's formidable anti-fact arguments. I then examine some of the problems with the concretist view, and how under dialectical pressure Armstrong came to modify his version of it near the end of his career. This is followed by a look at the abstractist view of facts that we find in Reinhardt Grossmann. Grossmann's could be called a hybrid abstractist view in that he considers first-order facts to have concrete subject constituents. (Grossmann 1992, 73–84) I will not discuss the purely abstractist view of states of affairs one finds in Roderick Chisholm according to which they are "abstract entities which exist necessarily and which are such that some but not all of them occur, take place or obtain." (Chisholm 1976, 114; cf. Plantinga 1974, 44–45) On the purely abstractist view facts are insufficiently different from propositions to warrant discussion here. Of the four main views of facts just distinguished, the eliminativist, the concretist, the hybrid abstractist, and the pure abstractist, I will therefore consider only the first three. I will conclude in good old Platonic fashion, aporetically, as intellectual honesty seems to demand. The road to the impasse, however, should prove instructive.

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2 Facts as contingently existing concreta

As for terminology, I use 'fact' and 'state of affairs' interchangeably, but favor 'fact' on account of its brevity. If facts are truth-makers, however, then we cannot mean by 'fact' what Frege means by *Tatsache*, namely, a true proposition, where a proposition or thought (*Gedanke*) is the sense (*Sinn*) of a context-free declarative sentence. (Frege 1976, 50) Propositions are either true or false, but no fact is either true or false. A proposition is a truth-*bearer*, but a fact is a truth-*maker*. Propositions are bivalent, but there is no corresponding bivalence with respect to facts on the concretist conception. It is not as if some facts obtain and other do not: a fact cannot exist without obtaining. Nor is it the case that some facts are possible and some are actual. A merely possible fact is not a fact. (In formal mode: 'merely possible' in 'merely possible fact' is an *alienans* adjective.) Moreover, on the concretist approach there is no such Meinongian distinction as we find in Reinhardt Grossmann between existent facts and nonexistent states of affairs. (Grossmann 1992, 73) All of this is in keeping with the consideration that facts as truth-makers are ontological grounds 'in the world,' not epistemic or referential intermediaries either 'in the mind' or in Frege's region of senses 'between' mind and world. Fregean propositions reside in a third realm 'between' minds and mental contents (the second realm) and the first realm of primary reference. The concrete facts presently under examination reside in the first realm. They are the referents of sentences, not the senses of sentences. They are concrete (spatiotemporal), not abstract (non-spatiotemporal). They are in the world and play a causal role there. Indeed, for Armstrong, they *are* the world, so much so that the world is one big fact or state of affairs. (Armstrong 1993, 429–440)

An example of a fact is a particular's instantiating a property, or two or more particulars' instantiating a relation. My being happy and my sitting on a rock are examples of facts. On all theories, facts or states of affairs have constituents. A fact is a sort of whole, and its constituents are its (proper) parts, though not in the precise sense of mereology. Thus the fact of *a's being F* has *a* and F-ness as its primary constituents, and the fact of *a's bearing R to b* has *a*, R, and *b* as its primary constituents. I say 'primary' to allow for secondary constituents such as a Bergmannian nexus of exemplification (Bergmann 1967, 9), although some theorists, Armstrong being one of them, deny the need for such a nexus. (Armstrong 1978, 108–111) Note that the fact of *Al's being fat* has Al himself, all 250 lbs of him, as one of its constituents, not a Fregean sense or other abstract surrogate that represents him. Otherwise this fact would not be a truth-maker but would need one.

A fact is a complex, but not every complex is a fact. The set {Al, fatness} is a two-membered complex, but it is distinct from the fact of *Al's being fat*. The exis-

tence of the set is entailed by the existence of its members, but the existence of the set and its members does not entail the existence of the fact. The same holds for the extension of the set, if you care to distinguish a set and its extension. The extension of the set does not entail the fact. The same goes for the mereological sum Al + fatness. It can exist without the fact existing. More simply, the existence of a fact's constituents does not entail the existence of the fact. Jack, Jill, and the relation *loves* could each exist without the fact of *Jack's loving Jill* existing. We can express this by saying that the constituents of a fact are externally related to one another: the nature of the constituents does not dictate or necessitate their relatedness. Thus a fact, while composed of its constituents, is more than its constituents: it is their peculiar fact-making togetherness, a togetherness whose peculiarity is that it ties the constituents into a truth-maker.

Every fact has one or more properties as constituents though there is controversy over whether properties are universals or tropes. Bergmann, Armstrong, and Reinhardt Grossmann maintain that properties are universals and that all universals are *immanent* in the sense that they cannot exist unexemplified. Thus for these philosophers they all exist *in rebus* in one sense of this phrase. But one could hold that universals are transcendent in the sense that they can exist unexemplified. It is important to realize that if universals are immanent it does not follow that they are constituents of the things that have them. Immanence and constituency are distinct concepts. For Armstrong, universals are both immanent – cannot exist uninstantiated – and are constituents of the things (thick particulars) that have them. For Grossmann, however, universals, while immanent, are not constituents of the things that have them. *In rebus* (in things), said of universals, is therefore ambiguous: it could mean that universals exist only if instantiated, or it could mean that universals exist only as constituents of things, or both. In Armstrong it means both. It is easy to become confused here since both 'immanent' and 'transcendent' are ambiguous. In my usage, a universal is immanent if and only if it cannot exist uninstantiated, if and only if it is metaphysically necessary that it have at least one instance. But 'immanent' could be used to mean that instantiated universals are 'in' things as their constituents. As for 'transcendent,' in my usage a transcendent universal is one that is metaphysically capable of existing uninstantiated. But it could be used to mean that no universals are 'in' things as their constituents. It follows on my usage of terms that if universals are transcendent, that does not rule out their being constituents of the things that have them. And if universals are immanent, that does not rule in or entail their being constituents of the things that have them. Thus the transcendent/immanent distinction-pair cuts perpendicular to the constituent/nonconstituent distinction-pair.

For present purposes we will take properties and relations to be universals and universals to be immanent. Now consider an ordinary or 'Moorean' particu-

lar such as an apple or a round red spot or an electron. Moorean particulars are the items that we all agree pre-analytically are particulars whether or not they are everyday meso-particulars. Are such particulars facts? For Armstrong they are; for Grossmann they aren't. (Cumpa and Tegtmeier 2009, 43–45) For Armstrong, as for Bergmann, an ordinary particular such as a round red spot – an Iowa example! – is a fact. If N-ness is the conjunction of all of the spot's intrinsic (non-relational) properties, then the spot is the fact of *a's being N*. Reality for Armstrong, as for his teacher John Anderson, is sentence-like rather than list-like. (Armstrong 2010, 34) If ordinary particulars are facts, then the particular 'in' such a fact must be a 'thin' particular. What makes a thin particular thin is not that it instantiates no properties, but that it lacks a nature that necessitates that it instantiate certain properties but not others. Thin particulars are 'promiscuous' in the sense that they can connect or combine with any (first-order) property. A thin particular must have some properties or other, but it is contingent which properties it has. All of its properties are accidental. The necessity of having properties goes with the contingency of the properties had. And the same holds for (first-order) universals: they must be instantiated by some particulars or other, but it is contingent which particulars instantiate them. The necessity of being instantiated by particulars goes with the contingency of which particulars instantiate them.

Is there are a good reason to identify Moorean particulars with facts? Suppose that properties are universals and that universals are immanent. That is consistent with the universals being abstract (non-spatiotemporal) objects as on Grossmann's scheme. But if one is a naturalist, if one holds that reality is exhausted by space-time and its contents, then there is no realm of Platonica and the universals that things have must be ontological ingredients or constituents of them. A bundle-of-universals theory would satisfy this requirement. But if, as Armstrong holds, bundle theories are to be rejected, then Moorean particulars are facts.

3 The truth-maker argument for facts

The central and best among several arguments for facts is the Truth-Maker Argument. Take some such contingently true affirmative singular sentence as 'Al is fat.' Surely with respect to such sentences there is more to truth than the sentences that are true. There must be something external to a true sentence that grounds its being true, and this external something is not plausibly taken to be another sentence or the say-so of some person. 'Al is fat' is not just true; it is true *because* there is something in extralinguistic and extramental reality that 'makes' it true, something 'in virtue of which' it is true. There is this short man, Al, and the guy

weighs 250 lbs. There is nothing linguistic or mental about the man or his weight. Here is the sound core, at once both ancient and perennial, of correspondence theories of truth. Our sample sentence is not just true; it is true because of the way the world outside the mind and outside the sentence is configured. The 'because' is not a causal 'because.' The question is not the empirical-causal one as to why Al is fat. He is fat because he eats too much. The question concerns the ontological ground of the truth of the sentential representation, 'Al is fat.' Since it is obvious that the sentence cannot just be true – given that it is not true in virtue of its logical form or *ex vi terminorum* – we must posit something external to the sentence that 'makes' it true. I don't see how this can be avoided even though I cheerfully admit that 'makes true' is not perfectly clear. That (some) truths refer us to the world as to that which makes them true is so obvious and commonsensical and indeed 'Australian' that one ought to hesitate to reject the idea because of the undeniable puzzles that it engenders. Motion is puzzling too but presumably not to be denied on the ground of its being puzzling.

Now what is the nature of this external truth-maker? *Truth-maker* is an office. Who or what is a viable candidate? It can't be Al by himself, if Al is taken to be ontologically unstructured, an Armstrongian 'blob,' as opposed to a 'layer cake' and it can't be fatness by itself.[1] (Armstrong 1989a, 38, 58) If Al by himself were the truth-maker of 'Al is fat' then Al by himself would make true 'Al is not fat' and every sentence about Al whether true or false. If fatness by itself were the truth-maker, then fatness exemplified by some other person would be the truth-maker of 'Al is fat.' Nor can the truth-maker be the pair of the two. For it could be that Al exists and fatness exists, by being exemplified by Sal, say, but Al does not instantiate fatness. What is needed, apparently, is a proposition-like entity, the fact of *Al's being fat*. We need something in the world to undergird the predicative tie. So it seems we must add the category of fact to our ontology, to our categorial inventory. *Veritas sequitur esse* – the principle that truth follows being, that there are no truths about what lacks being or existence – is not enough. It is not enough that all truths are about existing items *pace* Meinong. It is not enough that 'Al' and 'fat' have worldly referents; the sentence as a whole needs a worldly referent. In many cases, though perhaps not in all, truth-makers cannot be 'things' – where a thing is either an individual or a property – or collections of same, but must be entities of a different categorial sort. Truth-making facts are therefore 'an addition to being,' not 'an ontological free lunch,' to employ a couple of signature Armstron-

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1 If Al is a blob, then he lacks ontological structure; but that is not to say that he lacks spatial or temporal parts. It is obvious that he has spatial parts; it is not obvious that he has ontological 'parts.' Thin particulars, properties, and nexus count as ontological 'parts.' Layer cakes have both spatiotemporal and ontological structure.

gian phrases. For the early Armstrong at least, facts do not supervene upon their constituents. This yields the following scheme. There are particulars and there are universals. The Truth-Maker Argument, however, shows or at least supports the contention that there must also be facts: particulars-instantiating-universals.[2] There are other arguments for facts, but they cannot be discussed here. And there are other candidates for the office of truth-maker such as tropes and Husserlian moments (Mulligan et al. 2009) but these other candidates cannot be discussed here either. Deeper than any particular argument for facts, or discussion of the nature of facts, lies the question whether realism about facts even makes sense. To this question we now turn.

4 Butchvarov's objections to realism about facts

The Truth-Maker Argument for facts is impressive, but the very notion of a fact, regardless of the arguments given for their admission, give rises to puzzles and protests. There is the Strawsonian protest that facts are merely hypostatized sentences, shadows genuine sentences cast upon the world. Panayot Butchvarov sympathetically quotes P. F. Strawson's seminal 1950 discussion: "If you prise the sentences off the world, you prise the facts off it too..." (Butchvarov 2010, 73–74; Strawson 1950) Strawson again: "The only plausible candidate for what (in the world) makes a sentence true is the fact it states; but the fact it states is not something in the world." Why aren't facts in the world? This section considers two formidable but inconclusive arguments.

4.1 An argument from imperceivability

'The table is against the wall.' This is a true contingent sentence. I know that it is true by seeing (or otherwise sense perceiving) that the table is against the wall. This seeing is arguably the seeing of a fact, where a fact is not a true proposition

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2 Are facts or states of affairs then a third category of entity in addition to particulars and universals? Armstrong fights shy of this admission: "I do not think that the recognition of states of affairs involves introducing a new entity [...] it seems misleading to say that there are particulars, universals, *and* states of affairs." (Armstrong 1978, 80) Here we begin to glimpse the internal instability of Armstrong's notion of a state of affairs. On the one hand, it is something in addition to its constituents: it does not reduce to them or supervene upon them. On the other hand, it is not a third category of entity. We shall see that this instability proves disastrous for Armstrong's ontology.

but the truth-maker of a true proposition. This seeing is not the seeing of a table (by itself), nor of a wall (by itself), nor of the pair of these two physical objects, nor of a relation (by itself). It is the seeing of a table's standing in the relation of being against a wall. It is the seeing of a truth-making fact. So it seems we have here an argument for adding facts to the categorial inventory. The relation, however, is not visible, as are the table and the wall. So how can the fact be visible, as it apparently must be if I am to be able to see (literally, with my eyes) that the table is against the wall? If the relation ingredient in a relational fact is invisible, how can the fact be visible? This is a problem Butchvarov poses for us. Let '*Rab*' symbolize a contingent relational truth about observables such as 'The table is against the wall.' We can then set up the problem as an aporetic pentad:

1. If one knows that Rab, then one knows this by seeing that Rab (or by otherwise sense-perceiving it).
2. To see that Rab is to see a fact.
3. To see a fact is to see each of its constituents.
4. The relation R is a constituent of the fact that Rab.
5. The relation R is not visible (or otherwise sense-perceivable).

The pentad is inconsistent: the conjunction of any four limbs entails the negation of the remaining one. To solve the problem, then, we must reject one of the propositions. But which one?

(1) is well-nigh undeniable: I sometimes know that the cat is on the mat, and I know that the cat is on the mat by seeing that he is. How else could I know that the cat is on the mat? I could know it on the basis of the testimony of a reliable witness, but then how would the witness know it? Sooner or later there must be an appeal to someone's direct seeing. (5) is also undeniable: I see the cat; I see the mat; but I don't see the relation picked out by '*x* is on *y*.' And it doesn't matter whether whether you assay relations as relation-instances or as universals. Either way, no relation appears to the senses.

Butchvarov in effect denies (2), thereby converting our pentad into an argument against facts, or rather an argument against facts about observable things. (Butchvarov 2010, 84–85; Butchvarov 1979, 244) The perceivability of relational facts involving observables stands and falls with the perceivability of relations, but relations, Butchvarov insists, are not perceivable. But if there are no facts about observable things, then it is reasonable to hold that there are no facts at all. So one solution to our problem is the 'No Fact Theory.'

One problem I have with Butchvarov's denial of facts is that (1) seems to entail (2). Now Butchvarov in effect grants (1). So why doesn't he grant (2)? In other words, if I can see (with my eyes) that the cat is on the mat, why isn't that excellent

evidence that I am seeing a fact and not just a cat and a mat? If you grant me that I sometimes see that such-and-such, must you not also grant me that I sometimes see facts? I am seeing something, and it is not a sentence or a shadow cast by a sentence. Nor am I seeing a cat, a mat, and a relation. I am seeing a cat's *being* in a familiar relation to a mat. And if there are no facts, then how do we explain the truth of contingently true sentences such as 'The cat is on the mat'? As explained above, there is more to the truth of this sentence than the sentence that is true. The sentence is not just true; it is true because of something external to it, something which, though not a proposition, is proposition-like.

Another theory arises by denying (3). Butchvarov would not find this denial plausible. If I see the cat and the mat, why can't I see the relation – assuming that I am seeing a fact and that a fact is composed of its constituents, one of them being a relation? As Butchvarov asks, rhetorically, "If you supposed that the relational fact is visible, but the relation is not, is the relation hidden? Or too small to see?" (Butchvarov 2010, 85)

A third theory comes of denying (4). One might deny that R is a constituent of the fact of *a's standing in R to b*. But surely this theory is a nonstarter. If there are relational facts, then relations must be constituents of some facts. Our problem seems to be insoluble. Each limb makes a very strong claim on our acceptance. But they cannot all be true. Butchvarov has not shown compellingly that there are no facts, but he has cast serious doubt upon them.

4.2 An argument from impossibility of reference

Perhaps the weakest argument Armstrong gives for facts is that we can refer to them and what we can refer to exists. (Armstrong 1989a, 89) But *can* we refer to them? Butchvarov thinks not. In his essay, "Facts," (Butchvarov 2010) Panayot Butchvarov generously cites me as a defender of realism and a proponent of facts. He credits me with doing something William P. Alston does not do in his theory of facts, namely, specifying their mode of reality:

> However, William Vallicella, also a defender of realism, does. He argues that true propositions require "truth-making facts." And he astutely points out that facts could be truth-making only if they are "proposition-like," "structured in a proposition-like way" – only if a fact has a structure that can mirror the structure of a proposition. (Vallicella 2002, 13, 166–7, 192–3) Vallicella's view is firmly in the spirit of Wittgenstein's account in the *Tractatus* of the notions of fact and correspondence to fact, but his formulation of it may invite deflationist attacks like Strawson's.

Butchvarov, however, is firmly against adding the category of facts to our ontological inventory. Butchvarov tells us (Butchvarov 2010, 86) that

> The metaphysical notion of fact is grounded in our use of declarative sentences, and the supposition that there are facts in the world depends at least in part on the assumption that sentences must correspond to something in the world, that somehow they must be names. But this assumption seems absurd. Sentences are not even nouns, much less names. They cannot serve as grammatical subjects or objects of verbs, which is the mark of nouns. [...] Notoriously, "p is true," if taken literally, is gibberish. "Snow is white is true" is just ill-formed. "'Snow is white' is true" is not, but its subject-term is not a sentence – it is the name of a sentence.

Here is what I take to be Butchvarov's argument in the above passage and surrounding text:

1. If there are facts, then some declarative sentences are names.
2. Every name can serve as the grammatical subject of a verb.
3. No declarative sentence can serve as the grammatical subject of a verb.
   Therefore
4. No declarative sentence is a name. (2, 3)
   Therefore
5. There are no facts. (1, 4)

The friend of facts ought to concede (1). If there are truth-making facts, then some declarative sentences refer to them, or have them as worldly correspondents. The realist holds that if a contingent sentence such as 'Al is fat' is true, then that is not just a matter of language, but a matter of how the extralinguistic world is arranged. The sentence is true because of *Al's being fat*. As for (2), it is undeniable. So if the argument is to be neutralized we must give reasons for not accepting (3). The trouble with (3) is that it is deeply paradoxical. It implies that the sentence 'Snow is white' is not a sentence and therefore cannot be true!

4.3 The Paradox of the Horse and the Paradox of Snow

Butchvarov is committed to holding that a sentence like 'Snow is white' is not a sentence but the name of a sentence. The paradox is similar to the paradox of the horse in Frege. (Frege 1960, 46) Frege notoriously holds that the concept *horse* is not a concept. Butchvarov is maintaining that the sentence 'Snow is white' is not a sentence. This paradox engenders others. If 'Snow is white' is not a sentence, but a name, then it is neither true nor false. But it is obviously true, not false. And

if 'Snow is white' is not a sentence, then how does it differ from 'snow' which is obviously not a sentence?

What is Frege's reasoning? He operates with a mutually exclusive distinction between names and predicates (concept words). No name is a predicate and no predicate a name. Corresponding to this linguistic distinction there is the mutually exclusive ontological distinction between objects and concepts. No object is a concept, and no concept an object. Objects are nameable while concepts are not. So if you try to name a concept you cannot succeed: willy-nilly you transform it into an object. Since 'the concept *horse*' is a name, its referent is an object. Hence the concept *horse* is not a concept but an object. It follows that one cannot say that the concept *horse* has instances. For that would be to say, nonsensically, that an object has instances. Nor can one say, meaningfully, that the concept *horse* includes the concept *mammal*. But it seems pretty clear that one can say that both meaningfully and with truth.

Similarly with Butchvarov. He operates with a mutually exclusive distinction between names and sentences. No name is a sentence, and no sentence a name. To refer to a sentence, I must use a name for it. To form the name of a sentence, I enclose it in quotation marks. Thus the sentence 'Snow is white' is not a sentence, but a name for a sentence. But then, since names are neither true nor false, 'Snow is white' is neither true nor false. Butchvarov thinks we face a dilemma. 'Snow is white' is not true, but 'Snow is white is true' is gibberish. Butchvarov finds it "absurd" that a sentence should name a fact. (Butchvarov 2010, 86) His reason is that a sentence is not a name. But it is equally or even more absurd to say that the sentence 'Snow is white' is not a sentence, but a name. For the sentence in question is true, and no name is either true or false.

Against both Frege and Butchvarov I would say that it is not at all clear that we must make mutually exclusive distinctions between objects and concepts and between names and sentences. The essence of a concept is its predicability, but there is no compelling reason why an item cannot be both predicable and a subject of predication. Thus *horse* can be both predicated and made the subject of predication as when I say 'The concept *horse* includes the concept *mammal*.' Similarly with Butchvarov. It is not clear why we cannot say that some sentences can function as names without ceasing to be sentences. 'Snow is white' is both a sentence and a name. It is a sentence that names a fact. My tentative conclusion is that while realism about facts is dubious, so is Butchvarov's rejection of realism. Premise (3) in the above argument is rendered suspect by its paradoxicality.

5 Problems with the concretist conception of facts

Butchvarov's objections apply to facts on both the concretist and abstractist conceptions. The concretist conception gives rise to puzzles of its own. This section will address only some of them. The focus will be on Armstrong's concretism.

5.1 The collision of the compositional and necessitarian models

Facts have constituents and are nothing without them. No fact is simple, all are complex. Facts are wholes of parts, albeit in stretched senses of 'whole' and 'part.' (Armstrong 2010a, 32) In the first-order cases, whether monadic or polyadic, facts unify members of two mutually irreducible categories, particulars and universals. The categories are mutually irreducible because particulars cannot be assayed as bundles of compresent universals, and because universals cannot be reduced to particulars or to classes of particulars such as classes of resembling tropes. This suggests a building-block or *compositional model*: facts are built up out of ontologically more basic materials belonging to irreducibly different categories. Atomic facts are composed of particulars and universals. Of course, this building-up or composing is not a temporal process. Particulars and universals are not temporally prior to facts, but ontologically prior. Here is a crude analogy. Suppose that stone walls consisting of appropriately stacked stones and nothing else always existed: there was never a time when the stones composing a given wall were not arranged wall-wise. There was never a time when the stones were just laying about. We would nevertheless consider the stones to be the basic materials out of which the walls are constructed. Not that a wall is just stones: it is stones arranged wall-wise. The point is that the stones, even if always parts of walls, would be basic relative to walls. Furthermore, if stone s is a proper part of wall W, we would not say that s's nature dictates that it belong to W as opposed to W*. If there were 1000 stones total and ten walls each composed of 100 stones, we would not say that the ten actual wall-wise arrangements were the only combinatorially possible ones.

Armstrong's initial fact model is compositional and combinatorial: there is a stock of particulars and a stock of universals and these give rise to a set of possible combinations only some of which constitute facts. Suppose there are two particulars, *a*, *b*, and two monadic universals, F-ness, G-ness. Then there are four combinatorially possible combinations: *a* + F-ness, *a* + G-ness, *b* + F-ness, *b* + G-ness. But it may be that there are only two facts: *a's being F* and *b's being G*. The

other two combinations are not facts in the mode of mere possibility: they are not facts at all. All facts exist (obtain, are actual). But not all existents are facts: the subfactual constituents of facts exist but are not facts. This yields three categories of existent: particulars, universals, and facts, with members of the third category composed of members of the other two.

Facts on the compositional model are an addition to being: they do not supervene upon their constituents. They are not a 'free lunch' ontologically speaking. This is why not all possible combinations of fact-friendly items are facts. If a exists and F-ness exists, it does not follow that *a's being F* exists. So not every possible combination of a particular and a universal constitutes a fact. Not every such combination is one in which the particular instantiates the universal. Instantiation is contingent and non-supervenient. And yet Armstrong insists that facts "are primary, particulars and universals secondary." He takes this to mean that facts "are the least thing that can have *independent* existence." He goes on to say that particulars and universals are "false abstractions," "incapable of independent existence." (Armstrong 2010a, 27) Armstrong also speaks of "impossible abstractions" (Armstrong 2009, 42) and "illegitimate abstractions."

But here we face a deep unclarity. Does Armstrong mean to say that whatever exists exists independently, that particulars and universals do not exist independently, and that therefore, particulars and universals do not exist? Is that what is meant by talk of their being false or impossible abstractions? This seems highly unlikely. If particulars and universals do not exist, then facts, which exist, cannot be composed of them. Surely that is blindingly obvious. Facts may be unmereological compositions, but they are compositions of sub-factual elements. And yet puzzles lurk beneath the surface. In his book, *David Armstrong*, Stephen Mumford correctly notes that for Armstrong atomic facts are the "fundamental entities of the world," "the smallest possible units of existence." (97) They are "independent existences." (96) But of course facts have constituents: particulars, properties, and relations. Mumford tells us that "[...] while these are real enough, they are not themselves existents." (97) The particulars and universals within atomic facts, whether monadic or polyadic, are abstractions from what exists, namely, the facts. The analysis of an atomic fact into its sub-factual components is "by abstraction, not by any real process." (96) This is puzzling: how can the sub-factual constituents of a fact be real without existing? The puzzle as an aporetic triad:

1. To exist is to be real.
2. Facts alone exist: particulars, properties, and relations do not exist, being abstractions from what exists.
3. Particulars, properties, and relations are real.

The triad is plainly inconsistent. Much of what Armstrong writes suggests that the solution is to reject (2). Facts exist and their constituents exist. It is just that the constituents cannot exist apart from facts. That is equivalent to saying that particulars cannot exist without instantiating universals, and (first-order) universals cannot exist without being instantiated by particulars. But note that the impossibility is a general one and does not extend to the tie between any particular particular and any particular universal. If it did, Armstrong's combinatorial theory of possibility would be impossible. Let me explain.

In the fact of *a's being F*, there is no necessity that *a* instantiate F-ness or that F-ness be instantiated by *a*. The only necessity is that *a* have some property or other and that F-ness be instantiated by some particular or other. It is therefore possible that the constituents of a fact exist without the fact existing. What makes this possible is the circumstance that nothing about *a* dictates which properties it has and nothing about F-ness dictates which particulars instantiate it. So *a* and F-ness are independent of *a*'s being F in that the identity and existence of the constituents does not depend on the identity and existence of the fact. F-ness is F-ness regardless of which particulars instantiate it, and *a* is *a* regardless of which universals it instantiates. F-ness, after all, is a universal, a one-in-many. As such, its existence and identity are not exhausted by its constituency in any particular fact such as *a's being F*. It is the same universal in *b's being F*. And the same goes for the particular *a*. Although it is not a one-in-many, being unrepeatably and irreducibly particular, its 'promiscuity' ensures that its existence and identity are not exhausted by its being the particularity of any particular fact. Although *a* is not G, it might have been. The identity of the fact, however, does depend on the identity of the constituents: each fact has essentially the constituents it has. This fact-essentialism is an analog of mereological essentialism. Facts depend for their identity and existence on their constituents, but constituents do not depend for their identity and existence on the facts into which they enter. There is an asymmetry here. A fact cannot gain or lose constituents or have different constituents in different possible worlds. But a universal, even though it must be instantiated, can be instantiated by different particulars at different times and in different worlds. A particular, though necessarily such as to have properties, can gain or lose properties and have different properties in different worlds.

I have just sketched the position Armstrong holds in most of his writings. But why the puzzling talk about false and impossible and illegitimate abstraction? It is widely accepted even among ontologists who reject facts that there are no unpropertied particulars and no uninstantiated universals. It would make good sense to speak of unpropertied particulars and uninstantiated universals as false or impossible or illegitimate or vicious abstractions. Indeed, Armstrong speaks of them as vicious abstractions in his book on the laws of nature where he distinguishes vi-

cious from non-vicious abstractions. (Armstrong 1983, 84) But a thin particular is not an unpropertied particular. What makes a thin particular thin is not its lacking properties but the manner in which it has the properties it *must* have. Thin particulars are necessarily such as to have properties, though it is contingent *which* properties they have. And an immanent universal is not a universal that lacks instances. Immanent universals are necessarily such as to have instances, though it is contingent *which* instances they have.

It makes no sense, therefore, to speak of thin particulars and immanent universals as false or impossible abstractions on the Compositional or Building Block model. To the extent that Armstrong (and Mumford) speak in this way, they are responding to dialectical pressure from a competing fact model which we can call the Necessitarian or Abstractionist (not abstractist) model. On the Necessitarian model, the general necessity that particulars instantiate universals, and that (first-order) universals be instantiated by particulars becomes a particular necessity within each fact. Thus in *a's being F*, *a* cannot exist except as a constituent of that fact: *a* is necessarily tied to F-ness. And F-ness is necessarily tied to *a* and to every other particular that instantiates it. On the Necessitarian approach, it does make sense to speak of sub-factual constituents as false or impossible or illegitimate abstractions. For on the Necessitarian model, the sub-factual constituents enjoy no independence of the facts in which they are constituents. On the Compositionalist model, by contrast, the sub-factual constituents retain a certain independence in that it is possible that *a*, which is F, but not G, not be F but be G instead, and it is possible that F-ness, which is instantiated by *a* and *b* but not *c* and *d* be instantiated by *c* and *d* but not *a* and *b*.

5.2 Problems with the compositionalist model

What I will now argue is that the Compositionalist model is deeply problematic and carries within it the seeds of its own destruction. It faces the Antinomy of Bare Particulars. Armstrong's solution to the antinomy in terms of his distinction between the thin and the thick particular, however, leads to an antinomy of predication I will call Aristotle's Revenge.

In *Universals: An Opinionated Introduction*, Armstrong discusses a problem John Quilter calls the "Antinomy of Bare Particulars." (Armstrong 1989, 95) Suppose *a* is F. The 'is' is not the 'is' of identity. It expresses the asymmetrical and external tie of instantiation: the particular *a* instantiates the universal F-ness. If so, *a* considered in itself is bare of properties. It is outside and other than all of its properties. But then *a* does not have the property F-ness and *a* is *not* F.

Armstrong attempts to defuse the above contradiction in the time-honored manner, by making a distinction. He distinguishes the thin from the thick particular. The thin particular is the particular "taken apart from its properties (substratum)." (Armstrong 1989, 95). It is linked to its properties by instantiation. The thick particular is the particular taken together with all its nonrelational (intrinsic) properties. Thick particulars "enfold" both thin particulars and the properties they instantiate. On this scheme, thick particulars are facts, plenary facts if you will. Let N ('N' for 'nature') be the conjunction of all of Socrates' nonrelational properties. Then Socrates = the plenary fact of *a's being N*. Socrates' being male, by contrast, is a non-plenary fact. This is my terminology, not Armstrong's.

With this thick versus thin distinction the above antinomy can be solved. We need to avoid the contradiction that *a* is F and *a* is not F. We can say this: the thick particular A is F while the thin particular *a* in A is not F. Thus thick Socrates is wise in virtue of having both thin Socrates and wisdom as constituents with thin Socrates' instantiating wisdom. Thick Socrates is characterized by wisdom but does not instantiate wisdom; thin Socrates instantiates wisdom, but is not characterized by wisdom. Problem solved. Unfortunately, Armstrong's solution give rise to a puzzle of its own.

If Socrates is a fact, and Socrates is seated, then some plenary fact, the fact of *a's being N*, is seated, where 'N' picks out the conjunction of Socrates' non-relational universals. Although it sounds very strange to say of a fact that it is seated, or wise, or sunburned, or in one place rather than another, this strangeness by itself does not amount to an objection. But if Socrates is seated, then this is contingently the case. For while he must be in some posture or other, there is presumably no necessity that he be seated. Now if Socrates is a fact, then the fact in question, *a's being N*, either instantiates the property of being seated or it contains this property as a constituent. But the fact cannot instantiate the property. For it is thin particulars that instantiate properties and by so doing constitute atomic facts. So the fact contains the property. But then the contingency of Socrates' being seated is lost. This because an analog of mereological essentialism holds for facts. Call it fact-essentialism: if F is a fact, and *c* is a constituent of F, then, necessarily, *c* is a constituent of F. A fact cannot gain or lose constituents or have different constituents in different possible worlds on pain of ceasing to be the very fact that it is. A fact's constituents are essential to it. So if Socrates is seated at time *t*, then necessarily Socrates is seated at *t*, contrary to the contingency datum with which we began. The antinomy should come as no surprise given that the relation of a fact to its constituents is a type of whole-part relation.

We could call this antinomy of predication Aristotle's Revenge. Thin particulars are not Aristotelian substances. They do not have natures or essences. That is what their thinness consists in. An ontological scheme in which thin particu-

lars instantiate universals is one in which the nexus of instantiation is and must be external. This implies that all properties are had accidentally and none essentially. But if the particulars we encounter in experience are thin, then we face Quilter's Antinomy of the Bare Particular. Particulars and universals are 'outside' each other and particulars considered in themselves are bereft of intrinsic properties. Thus an apple which is intrinsically (as opposed to relationally) red, if taken to be thin, is not intrinsically red, but only relationally red in virtue of standing in an external exemplification relation to a universal. This difficulty motivates Armstrong's suggestion that ordinary particulars are not mere or pure particulars, but facts or states of affairs composed of a particularizing factor – the thin particular – and a nature factor, the universals. But now Aristotle gets his revenge. Essences were banished, but now it turns out that facts, as non-mereological wholes, have their nature constituents, the universals, essentially! Particulars, thick particulars, have essences after all. It is of the essence of thick Socrates, if seated, to be seated.

5.3 Necessitarianism and the collapse of Armstrong's fact ontology

Near the end of his career, Armstrong radically modifies his conception of facts or states of affairs. The modification is so drastic as to amount to an elimination of his original conception. As we have seen, Armstrong's initial approach is compositional and combinatorial. There are universals and there are particulars and they are mutually irreducible. Nominalism is out and so is what Armstrong dubs 'universalism,' according to which particulars are bundles of universals. (Armstrong 2004, 140) But of course universals are somehow tied to particulars and this tie is real, not merely logical or conceptual. Given this real-world tie, Armstrong finds the acceptance of facts "inevitable" since a (first-order) fact is just a particular instantiating a monadic universal or an *n*-tuple of particulars instantiating an *n*-adic universal. (Armstrong 2009, 39) Given naturalism, the view that reality is exhausted by the space-time system, universals must be denizens of space-time. But then they cannot be abstract objects residing in a realm apart from space-time but must be ontological constituents of the things whose universals they are. It is not enough that universals be immanent (existent only if instantiated); they must also literally reside as constituents in spatiotemporal things. Hence instantiation cannot be a chasm-spanning relation as it is for Grossmann, connecting the timeless to the time-bound, but must be internal to things even if it is not a separate constituent. The upshot is that ordinary particulars get construed as concrete facts. Ordinary particular A is identified with the fact of *a's being N*, where 'N' picks out

a conjunctive universal the conjuncts of which are A's non-relational universals. But then the postulation of thin particulars becomes inevitable. For it is not A that instantiates universals, but the thin particular a in A. Thin particulars must be thin, i.e. natureless, since they are the instantiators of properties external to them. The thinness of thin particulars entails the contingency of their connection to properties. The instantiation tie, being external, must be contingent. The contingency of the connection entails the promiscuous combinability of particulars and universals, which is essential to Armstrong's combinatorial theory of possibility. (Armstrong 1989, 47) It also entails a certain independence of a thin particular from the facts it is a constituent of, though not from facts in general. No thin particular and no universal can occur outside of a fact, but any such particular can combine with any first-order universal. Bertrand Russell could have been a poached egg, or rather the individuals that constitute Russell could, collectively, have had properties that would have made of those individuals parts of a poached egg. (Armstrong 1989, 51-53)

Armstrong backtracks on almost all of this as his earlier approach gives way to one that can be called necessitarian or 'abstractionist.' But my terminology may mislead. Armstrong's facts are and remain concrete (spatiotemporal). His facts are not 'abstract objects' as are Grossmann's. But while Armstrong's approach is concretist and not abstractist, it ceases to be compositionalist and becomes *abstractionist*. This abstractionism of the later Armstrong involves four major interconnected innovations. First of all, instantiation is assimilated to partial identity. (Armstrong 2004, 139) Second, and in consequence of the first innovation, the link between particulars and non-relational properties (universals) is no longer seen as contingent but as necessary. (Armstrong 2009, 41) Third, Armstrong decides that "The thin particular is an impossible abstraction." (Armstrong 2009, 42) This amounts to a rejection of thin particulars. His earlier view was that, while there are no unpropertied particulars, there are thin particulars that are in no way mental or unreal despite their being abstractions from facts. His talk of abstraction was meant to convey merely that thin particulars and universals "have no existence outside states of affairs." (Armstrong 1989, 43) His earlier view was that while unpropertied or 'bare' particulars are vicious abstractions, thin particulars are non-vicious abstractions. They exist outside the mind but they cannot exist outside of facts. Fourth, Armstrong comes to the view that facts supervene on their constituents. Earlier he held that constituents supervene on facts, but not vice versa. His final view is that the supervenience is symmetrical. (Armstrong 2009, 43) This symmetry of supervenience entails that *a* is necessarily F if *a* is F at all.

These innovations, though motivated by problems with the earlier view, are disastrous and as far as I can see they completely undermine Armstrong's fact ontology. Let's start with the assimilation of instantiation to partial identity. This

assimilation is motivated by the difficulty of understanding the link in reality between a particular and a universal it instantiates. On the one hand, instantiation is not identity: the 'is' is '*a* is F' is not the 'is' of identity but the 'is' of predication. On the other hand, *a* and F-ness are not wholly distinct existences. If they were, then, Armstrong thinks, the only way to connect them would be via instantiation construed as an external relation. But then Bradley's regress is up and running.[3] So Armstrong, following Donald Baxter, proposes that we think of instantiation as partial identity: particular and universal intersect or overlap. (Baxter 2001, 449–464) It seems clear that if *a* and F-ness are either wholly or partially identical, then no problem could arise as to their connection. Armstrong continues to reject the view that a particular is nothing more than a bundle of universals, and continues to uphold the substance-attribute view, insisting on an "ineliminable factor of particularity in particulars." (Armstrong 2004, 140) "There is something that has the properties…" but on the new view it cannot be a thin particular. Thin particulars are pure particulars that totally exclude universals, just as universals on the old conception totally exclude particulars. (Armstrong 2004, 143) The categories are disjoint and mutually irreducible. But if particulars and universals are partially identical, if the former participate in and overlap the latter, then thin particulars cannot be what have properties. We cannot conclude, however, that thick particulars have properties. For having is instantiation, and thick particulars do not instantiate properties, they contain them as constituents.

Armstrong faces a dilemma. Either universals are partially identical to thin particulars or to thick particulars. They cannot be partially identical to thin particulars because the latter are pure particulars lacking natures. As such, they totally exclude universals, hence cannot overlap them. How could something wholly nonqualitative overlap something that is essentially qualitiative such as the property of being blue? Would the overlap be nonqualitative or qualitative? Universals *can* be partially identical to, and overlap, thick particulars in a manner analogous to the way a part of a whole overlaps the whole in mereology. For a part of a whole, whether proper or improper, does not exclude the whole of which it is a part, and vice versa. But universals are not instantiated by thick particulars any more than a part of a whole is instantiated by the whole. Thick particulars do not instantiate universals; they have them as constituents, as non-mereological parts. So while one can appreciate the dialectic that leads away from instantiation as an external tie to instantiation as partial identity, it appears that Armstrong

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3 For a detailed discussion of Bradley's Regress and various responses to it, see Vallicella 2002, 195–239.

has merely traded the Bradley problem for the just-mentioned dilemma. But this is just the beginning of his troubles.

We also note that the rejection of thin particulars, which are not to be confused with unpropertied particulars, brings with it the rejection of thick particulars. That is to say, an ordinary or Moorean particular such as an apple or an electron cannot be conceptualized as a thick particular if there are no thin particulars. The thin and the thick particular define each other. A thick particular is a thin particular together with, instantiating, its non-relational universals, and a thin particular is a thick particular apart from these universals. So without thin particulars there can be no thick particulars. But a thick particular is a concrete fact. A thick particular is not a bundle of compresent universals, but a non-mereological whole in which one of the parts, the thin particular, instantiates the other parts, the universals. So if there are no thin particulars, then Moorean particulars cannot be construed as facts. But then Armstrong's whole ontology collapses. One of his central ideas is that the world, which for him is just the physical universe, is a world of states of affairs or facts. It is not a world of thin particulars whose universals are outside of space-time, not is it a world of bundles, whether of universals or of tropes.

The rejection of thin particulars as impossible abstractions also brings with it the rejection of instantiation, strictly understood. Instantiation as holding between particulars and universals is asymmetric: if a instantiates F-ness, then F-ness does not instantiate a. (Instantiation is not in general asymmetric, but non-symmetric: if one universal instatiates a second, it may or may not be the case that the second instantiates the first.) Partial identity, however, is symmetric: if a overlaps F-ness, then F-ness overlaps a. So, given that instantiation as holding between particulars and universals is asymmetric, it cannot be understood as partial identity or intersection or overlap. This is an argument as powerful as it is simple, and powerful in part because it is so simple and luminous to the intellect.

Armstrong, aware of the difficulty, attempts to accomodate the undeniable asymmetry involved in a particular's instantiating a universal by appealing to the "categorial difference" between particulars and universals and claiming that the asymmetry supervenes upon this difference. (Armstrong 2004, 146) But this move is unavailing. For what does the categorial difference consist in if not the difference between instantiable entities and non-instantiable entities? All and only universals are instantiable; all and only particulars are non-instantiable. Instantiability *constitutes* the categorial difference; it does not merely supervene upon it. But then instantiation cannot be partial identity. I don't see that calling it "non-mereological partial identity" helps. (Armstrong 2004, 141) It is clear that a fact is not a mereological sum of its constituents. It is nonetheless a complex object. So Armstrong concludes that mereological composition is not the only kind of com-

position. Having convinced himself that instantiation is partial identity, he infers that it too is "non-mereological." (Armstrong 2004, 142) This may be granted, assuming we know what it means, but it does nothing to remove the symmetry of partial identity or to blunt the force of the simple and powerful objection raised in the preceding paragraph. And do we know what it means? I know what it means to say that the fact of *a's being F* is composed of *a* and F-ness but is more than the mere sum of the two. And I know what it means to say that *a* instantiates F-ness. I also know what it would mean if someone were to say that instantiation, as a real tie, is non-mereological in that its holding between *a* and F-ness generates a non-mereological whole. But I have no idea what it could mean to say that partial identity or overlap or intersection are non-merelogical unless I presuppose the existence of facts as non-mereological compositions and confusedly transfer the property of being non-mereological from the fact to the partial identity that is supposed to bring together the constituents. It is some such confusion as this to which Armstrong seems to succumb. Facts are non-mereological compositions because the constituents are contingently connected; but if the connection is partial identity, then the connection is necessary. Talk of partial identity as non-mereological seems just confused.

Armstrong cites the repeatability of universals as a mark of their difference from particulars. (Armstrong 2004, 147) But repeatability in the relevant sense is just multiple instantiability, which brings us back to the asymmetry of instantiation. There is of course a sense in which particulars are repeatable. One and the same particular *a* is repeated in the facts *Fa*, *Ga*, *Ha*, *Rab*. But this is different from the sense in which F-ness is repeated in *Fa*, *Fb*, *Fc*. Multiple instantiability is not the same as being the subject of multiple attributes. Armstrong also points to Instantial Invariance as distinguishing universals from particulars. (Armstrong 2004, 147) Particulars are not instantially invariant. There is nothing to stop *a* from entering into the following facts: *Fa*, *Rab*, *Sabc*, *Tabcd*, etc. Particulars can connect with universals of different 'adicities.' But there is no universal U such that *Ua*, *Uab*, *Uabc*. Universals are instantially invariant in that they are either exclusively monadic, dyadic, triadic, etc. Let us grant that there is this difference between universals and particulars. But it cannot be the difference that makes the difference between universals and particulars. Obviously the difference is grounded much deeper in the difference between instantiable and non-instantiable entities and thus in the asymmetry of instantion. It is therefore not a way of distinguishing universals and particulars that is independent of the asymmetry of instantiation. I think we ought to conclude that Armstrong's attempts to turn aside the simple and powerful objection above are brave but ineffective. He is attempting the impossible: he wants to preserve the asymmetry of instantiation while identifying instantiation with a relation that is plainly symmetrical.

Surely he is committed to the asymmetry of instantiation by his rejection of bundle theories and his espousal of the "subject-attribute view." (Armstrong 2004, 140) I would go so far as to say that 'asymmetrical instantion' is a pleonastic expression: instantiation by definition is asymmetrical. After all, it is a technical term like 'compresence,' which is symmetrical by definition.

If instantiation falls, then so do atomic facts. For an atomic fact just is one or more particulars' instantiating a universal. Thin particulars, thick particulars, particulars-as-facts, and instantiation all go together. To reject one is to reject the others. But there is worse to come.

We now consider whether facts can survive supervenience upon their constituents. My thesis is that they cannot: the new view implies that there are no facts. In numerous passages Armstrong tells us that the existence of a and the existence of F-ness do not suffice for the existence of the fact of *a's being F*. That was his old view and it makes perfect sense. If Al is bald and Sal is fat, then Al exists and so does fatness; but it doesn't follow that Al is fat. This is because a fact is an item in addition to its constituents. This in turn is grounded in the contingency of the connection between particulars and universals. Not only are particulars and universals contingent, their connection is as well. That was the old view. But if instantiation is partial identity, then, while the particulars and universals remain contingent, the connection becomes necessary. Contingency, which used to reside within the 'guts' of each fact, no longer resides there. This implies that, given the actual particulars and the actual universals, each fact is necessary. (Armstrong 2004, 144) A fact cannot fail to have the very constituents it has, and the constituents it has cannot fail to form that very fact. Facts supervene on their constituents. But if facts supervene on their constituents, then there is no difference in point of existence beween the mereological sum a + F-ness and the fact of *a's being F*: both exist automatically given the existence of Al and fatness. There is a notional difference but no difference in reality and no possibility that a, which is F, might not have been F. As far as I can see, the new view implies that there simply are no facts. A fact that is not something in addition to its subfactual constituents is no fact at all.

That Armstrong's new view makes hash of his combinatorial theory of possibility should be obvious. That theory required the promiscuous combinability of thin particulars and universals. On the new view, however, there are no thin particulars, no first-order instantiation (strictly understood as asymmetrical), and no contingency within facts. Given the actual particulars and the actual universals, the only possible combinations are the actual ones. The actual world becomes one big block of necessity. If a is F, then a cannot (logically) fail to be F. How then accommodate the intuition that Al might not have been fat, that there is no logical or metaphysical necessity that he be fat? One could invoke counterparts in other

worlds. Al in our world at time *t* is fat, but he has counteparts in other worlds who are not fat at *t*. But such a scheme does not comport with Armstrong's naturalism according to which reality is exhausted by the space-time system, *this* space-time system.

Finally, what becomes of truth-making on the new view? The best argument for facts is the Truth-Maker Argument sketched above. At least some truths need truth-makers. They require ontological grounds of their being true. In some cases, an Armstrongian 'blob' will do the trick: if it is true that *a* exists, then it would seems that the existence of *a* alone suffices to make the truth-bearer true. And the same goes if *a* is essentially F. If *a* cannot exist without being F, then it would seem that the mere existence of a would suffice as truth-maker. But it other cases we need an Armstrongian 'layer-cake': if it is contingently true that *a* is F, then neither *a* nor F-ness alone suffice as truth-makers. There is need of a proposition-like entity as truth-ground. Enter facts or states of affairs. It is the fact of *a's being F* that grounds the truth of '*a* is F.' Here then we have an argument for facts as truth-makers (assuming that other truth-making candidates can be excluded). But if instantiation is partial identity, then, as Armstrong puts it, *a* is necessarily F: *a* cannot exist without being F. (And given the partial identity of particulars and universals, F-ness cannot exist without being instantiated by *a*!) But if *a* is necessarily F, then *a* alone suffices as truth-maker for '*a* is F' and the argument from truth-making to facts collapses.

6 Facts as abstract objects: Reinhardt Grossmann

There seem to be insurmountable problems with facts on the concretist conception, facts as truth-making denizens of space-time. So we turn to the abstractist conception of Reinhardt Grossmann. It fares no better in my judgment. But there is not the space to canvass all the arguments. I will present two. The first is an inconclusive Grossmannian argument against concrete facts; the second is an argument against Grossmann's abstractist conception. First, some preliminaries.

Like Armstrong, Grossmann maintains both that properties and relations are universals and that they cannot exist unexemplified. Unlike Armstrong, Grossmann maintains that universals are abstract where 'abstract' means 'not spatiotemporal.' (Grossmann 1992, 7) It follows that Grossmann's universals, unlike Armstrong's, cannot be ontological constituents of spatiotemporal particulars or constituents of space-time itself. If they were, they would either be spatiotemporally located or constitutive of spatiotemporal locations. As remarked earlier, immanency and constituency are distinct notions: first-order universals that cannot

exist unexemplified, and are in this sense immanent as opposed to transcendent, need not be constituents of the particulars that exemplify them.

And while both philosophers agree that there are facts, Grossmann holds that they, like universals, are abstract, including those facts with concrete constituents. (Grossmann 1992, 73-84)The fact of *Al's being fat* (or as Grossmann would express it, the fact that Al is fat) has a concrete subject constituent, Al himself, and an abstract property constituent, but the fact itself is abstract. It is a hybrid entity. The concrete particular exemplifies the abstract universal where exemplification is a full-fledged relation, and itself an abstract entity. Exemplification in a case like this spans the chasm separating the concrete realm of time and change from the timeless realm of Platonica. And the same holds for every fact that involves concrete particulars, even those that do not include an exemplification relation. The fact that Al loves Beatrice, for example, does not on Grossmann's view include an exemplification relation, a point on which he draws fire from Armstrong. (Cumpa and Tegtmeier (eds.), 2009, 48-51) But it too unites the concrete and abstract realms. Facts are the fundamental ontological category for Grossmann precisely because they bring together the two realms that Plato had sundered. (Grossmann 1990, 129; Grossmann 1984, 114)

It follows that for Grossmann, ordinary concrete particulars are not facts. This is a key difference with Armstrong for whom ordinary (thick) particulars are facts. With considerable injustice to the historical Aristotle and the historical Plato, we can say that Armstrong's position is 'Aristotelian' in that he brings universals 'down to earth' from 'Plato's heaven' whereas Grossmann's position is Platonic in that he leaves universals 'in heaven' but connects them to the concrete particulars here below by means of the nexus of exemplification. His facts, then, bridge the gap between the particulars in the realm of time and change and the universals in the timeless realm of Forms. For this reason, Grossmann's particulars cannot be facts. And because concrete particulars are not facts, Grossmann does not view the properties of such particulars as constituents of them. Facts have ontological constituents, but concrete particulars are not facts. Why not?

6.1 The localization argument against concrete facts

Consider a white billiard ball, A. If A is a fact, then some fact has a size, shape, color, and location. "But facts, it seems to me, do not have shapes and sizes." (Grossmann 1992, 29) And if they don't have shapes and sizes, then they don't have colors and locations. We are invited to conclude that concrete spatiotemporal particulars are not facts. It is easy to see that this argument does not settle the question. It appears merely to beg it by assuming that facts are abstract, i.e., not

spatiotemporal. For if ordinary particulars are facts, then some facts do have size, shape, etc.

A stronger consideration is that if billiard ball A is a fact, then, at the place where A is located, there is a whole. But this cannot be a spatial whole, says Grossmann, because the 'is' in 'A is white' does not pick out a spatial relation, but the relation of exemplification. (Grossmann 1992, 29) A billiard ball, however, is a spatial whole having spatial parts. So a billiard ball is not a fact. This argument is not decisive either. Why could not a whole of spatial parts also be a 'whole' of ontological 'parts'? If a billiard ball is fact, then it has both spatial parts and ontological constituents, with the relation of exemplification among the latter.

Grossmann sketches a third argument. On Armstrong's approach one distinguishes between the thick and the thin particular, where thick particulars are facts. The thick particular A factors into the thin particular *a* and its nature N-ness. N-ness is a conjunctive property each conjunct of which is an intrinsic property of A. So for Armstrong, A = *a's being N* where whiteness is included in the nature N-ness. But then what are we saying when we say that A is white? We are not talking about the thin particular, *a*. We are talking about the thick particular, A. But the thick particular is a fact. According to Grossmann, this is a mistake: we can't be saying that the fact of *a's being N* exemplifies whiteness. Talk about individual things is not talk about facts, and conversely. Individual things are colored, but no fact is colored. (29) But Armstrong has a response. "I suspect that what is needed is a translation of ordinary subject-predicate talk into fact talk, a move which does not look too difficult to make." (Cumpa, 38) The idea, I take it, is that 'This billiard ball is white' is translatable by 'This billiard ball has whiteness as one of its property constituents' or 'A's nature N-ness includes whiteness.'

As I see it, none of Grossmann's arguments decisively refutes Armstrong's conception. And we are about to see that Grossman's conception is open to serious objection.

6.2 The 'bare particular' objection to abstract facts

As Grossmann rightly maintains, if particulars are bare, then, unlike Aristotelian substances, they do not have natures or essences. (Grossmann 1974, 97) Equivalently, if particulars are bare, then their properties cannot be divided into essential and accidental. This amounts to saying that the connection between a particular and its properties is the external nexus of exemplification. What makes a particular bare is not its having no properties, but the manner in which it has the properties it has. On this understanding of 'bare particular,' which is Grossmann's own, his concrete spatiotemporal particulars are all of them bare. For all of their prop-

erties are 'outside' of them, and tied to them by the external relation of exemplification. There is nothing in the definition of 'bare particular' to require that such particulars be constituents of ordinary particulars as they are for Bergmann and Armstrong. For Grossmann, ordinary concrete particulars are bare. They exemplify properties, but these properties are abstract (non-spatiotemporal) entities. They are not constituents of the things that exemplify them. Grossmann's particulars have spatial and temporal parts, but no ontological constituents. They are not facts, but constituents of facts, all of which are abstract, even those with concrete constituents.

If particulars are bare, then, to borrow a phrase from Butchvarov, they are "ontologically distant" from their properties with unpalatable consequences. (Butchvarov 1986, 131) Suppose Max, a billiard ball, is white. Whiteness is an intrinsic property of Max: he is not white in virtue of a relation to something else. Being white is thus unlike the property of being 12 inches from Moritz, a second billiard ball. But if Max is a bare particular, then he is white in virtue of standing in the external relation of exemplification to the abstract object, whiteness. It follows that Max, in himself, is not white. He is no more intrinsically white, white in his own nature, than he is intrinsically 12 inches from Moritz. We are thus brought back to Quilter's Antinomy of the Bare Particular discussed above. Max is intrinsically white and Max is not intrinsically white. That Max is intrinsically white is a datum, and that he is not intrinsically white is a consequence of Grossmann's theory of property possession.

Armstrong found a way around the antinomy by construing ordinary particulars as facts or states of affairs with thin particulars and universals as their ontological constituents. By bringing thin particulars and universals together in thick particulars construed as truth-making facts, Armstrong dramatically lessened the "ontological distance" between them. But this escape route is not available to Grossmann. His facts are not truth-making concreta but chasm-spanning abstracta linking spatiotemporal – or in the case of thoughts merely temporal – particulars with non-spatiotemporal universals.

7 Concluding aporetic postscript

David Armstrong was well-known for his intellectual honesty, and we should all strive to imitate this virtue of his. What intellectual honesty demands, however, is not clear when we get down to cases. In the present case it demands of me a recognition of the force of the Truth-Maker Argument for concrete facts, but also a recognition of how problematic facts are. I don't know how to get past this im-

passe. I conjecture that some if not all of the perennial problems of philosophy are genuine but insoluble. But I haven't show this. Not by a long shot. It is unlikely that it could be shown to the satisfaction of all competent practitioners. But I may have contributed something to an appreciation of the difficulty of one set of problems in ontology.

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