A world of truthmakers?

Philipp Keller*

presented at the colloquium on truthmakers in Aix-en-Provence, 11th December
2004
(this version: 12th December 2004)

Rough draft – comments and criticism very welcome

Abstract

I will present and criticise the two theories of truthmaking David Armstrong offers us in *Truth and Truthmakers*, show to what extent they are incompatible and identify troublemakers for both of them, an older one – Factualism – and a more recent one – Baxterianism. Factualism, combined with truthmaker necessitarianism – the view that truthmaking is necessitation – leads Armstrong to an all-embracing totality state of affairs, the world, that necessitates not only everything that is the case but also everything that is merely possible. All the things so dear to realists – rocks, natural properties, real persons – are just abstractions from this ontological monster. In some sense, Baxterianism, the view that every predication is necessary, is exactly the opposite: it does away with totality facts and, arguably, also with states of affairs. We just have particulars and universals, partially identical and necessarily connected, if naturalism is true, to everything else. There never was a crasser denial of Humean supervenience. Faced with the unappetising choice between equally rationalistic alternatives, I suggest returning to Armstrong's more empiricist past: the world is not a all-inclusive state of affairs, nor a microcosmos contained in every single particular and universal, but a plurality of particulars and universals, connected by a contingent relation of exemplification. While a close variant, truthmaker essentialism, can perhaps be saved, this means giving up on truthmaker necessitarianism. This is, I think, what it takes to steer clear between the Scylla of Spinozist general factness and the Charybdis of a Leibnizian overdose of brute modalities.

1   Truthmaker realism

As realists, we hold that truth depends on the world. What we hold true, we would like to be able to say, commits us to certain views about what exists and what does not. As serious metaphysicians, we should be prepared to pay the ontological bill of what we assert. But how are we to determine the price? A venerable method, championed by Quine, is to look at the domain of quantification of the variables occuring in (some regimentation of) what we are asserting. It was David Armstrong who pointed out that this is not always satisfactory: the ontological ground of our alleged truths does not only consist of things, but of their properties as well: we need an ontologically robust account of properties to say in virtue of which the alleged truths are true. In recent years, truthmaker realism has seen something of a *renaissance* and it is its recent defense in *Truth and Truthmakers* (Armstrong 2004) that I want to discuss in the following.

Let me emphasise the high degree of general agreement I have with Armstrong's views. I agree with him that asking the truthmaker question is a promising way to regiment metaphysical enquiry (Armstrong 2004: 4) and that, in particular, "continually to raise the truthmaker question about properties makes for ontological honesty" (Armstrong 2004: 43) and that "there is, in the general case, no cheap and easy way to determine the truth-makers even of simple descriptive sentences

---

*University of Geneva, Switzerland, philipp.keller@lettres.unige.ch.

via linguistic transformations" (Mulligan et al. (1984: 300), cf. Armstrong (2004: 16)). I also think that answering the question commits us to an ontology of sparse properties, "in terms of which the world's work is done" (Armstrong 2004: 17), and that this is motivated by the fact that, intuitively speaking, we do not need the whole of the particular to make non-relational predications true (Armstrong 2004: 41).

The truthmaking intuition that we appeal to in these arguments for the real existence of sparse properties, against ungrounded phenomenalist counterfactuals or Rylean dispositions is very general and has to be distinguished from its more specific theoretical articulations. It roughly consists of two basic tenets:

1. Truth is relational: being true is being *made* true by something. It is a further question whether this in virtue of which something is true has to be a state of affairs, some object(s) or ways some objects are.
2. Truth is grounded: some truthbearers are true *because* the world is how it is; truth is not always brute. It is a further question whether some truthbearers may ground themselves and what the grounding in question comes to.

This, of course, leaves many details to be settled. In the following, I will look at three theories, all at some time discussed by Armstrong, who has been in the truthmaking business for many years. The first theory, advocated by Armstrong in 1978 and a variant of which I would myself like to advocate, holds that the world is a world of particulars and universals, which are connected by a relation of exemplification. Armstrong never says much about this relation,[1] except that universals are "immanent", i.e. have to be exemplified,[2] that exemplification is a 'non-relational tie' (Armstrong 1978a: 109) making for an identity in nature of particulars that is "literally inexplicable":

> "I take it that the Realist ought to allow that two "numerically diverse" particulars which have the same property are not wholly diverse. They are partially identical in nature and so are partially identical." (Armstrong 1978a: 112)

Both David Lewis[3] and John Campbell[4] have interpreted him as holding that universals are non-spatiotemporal parts of the particulars exemplifying them and this is the variant of the theory I want to defend.

Although Armstrong introduced them already in 1978 (Armstrong 1978a: 113), states of affairs entered the scene via another truthmaker argument, providing entities 'encapsulating' the fundamental tie and *necessitating* the corresponding predications: Because the truthmaker for the

---

[1]Of exemplification, he said in 1978 that "it is interesting, but somewhat saddening, to notice that the great modern defenders of transcendent universals, Moore and Russell, do not even consider this problem of the nature of the relation between particulars and Forms to which Plato gave such close attention." (Armstrong 1978a: 67) It is interesting, but somewhat saddening, that the same can be said of the great contemporary defender of universals.

[2]Armstrong (2004: 42) characterises the alternative position, transcentalism, as the view that "put[s] properties 'outside' their particulars": "A theory that has particulars instantiating transcendent universals seems to put properties 'outside' their particulars. It offends against the original insight that the thing itself should serve as truthmaker, even if not as minimal truthmaker, for truths that particulars have certain (non-relational) properties. A theory of immanent universals is required if the truthmaker for a non-relational property of a particular is to be found 'within the particular'."

[3]"A universal is supposed to be wholly present wherever it is instantiated. It is a constituent part (though not a spatio-temporal part) of each particular that has it. [...] Things that share a universal have not just joined a single class. They literally have something in common. They are not entirely distinct. They overlap." (Lewis 1983a: 10–11). Cf. also Lewis (1986a: 80–81 and fn. 6): "Whenever it [a universal] is instantiated, it is a nonspatiotemporal part of the particular that instantiates it." and Lewis (1986b: 64, 67, cf. also 204–205): "It [the universal of charge] is located there, just as the particle itself is. Indeed, it is part of the particle. It it not a spatio-temporal part... [...] I reserve the word "universal" strictly for the things, if such there be, that are wholly present as non-spatio-temporal parts in each of the things that instantiate some perfectly natural property.".

[4]"This [Armstrong's] view requires us to acknowledge that there can be parts other than spatio-temporal parts." (Campbell 1990: 39); "The most promising reply to [the 'Third Man'] is that the substance *substratum* of Socrates neither contains nor resembles humanity, while the complete substance Socrates does contain humanity (has humanity inhering in him) and in that way resembles humanity. It is a one-sided case of partial identity (a non-spatio-temporal part of Socrates is identical with humanity)." (Campbell 1990: 42)

contingently true predication "Fa" must necessitate its truth, iit cannot be F or a alone, nor their fusion, for all the three of them could exist without "Fa"'s being true. Hence it is the state of affairs a's being F (cf. Armstrong (1989b: 88) and also Armstrong (1997: 115)):

> "If it is said that the truthmaker for a truth could have failed to make the truth true, then we will surely think that the alleged truthmaker was insufficient by itself and requires to be supplemented in some way. A contingently sufficient truthmaker will be true only *in circumstances that obtain in this world.* But then these circumstances, whatever they are, must be added to give the full truthmaker." (Armstrong 1997: 116)

So we get the following:

1 (Truthmaker Necessitarianism). *The determining of a truth by a truthmaker is an absolute necessitation.*

where "necessitation" stands for a "non-propositional necessity" (Armstrong 2004: 11).

2 Factualism

Truthmaker necessitarianism, coupled with truthmaker maximalism which is the view that every truth has a truthmaker, populates the world with entities which necessarily exists if and only if some corresponding truthbearer is true. If these entities are mereologically distinct from their corresponding truthbearers, we have a necessary connection between distinct existents. Truthmaker necessitarianism (1) thus violates what has been called Humean supervenience: Truthmakers and truthbearers, while different, stand in the truthmaking relation in every world in which they both exist – this violates combinatorialism, by ruling out combinations of both without the truthmaking relation holding between them.[5] Why is it, then, that whenever a makes it true that p, it has to do so in all worlds in which it exists?

Because, Armstrong (1997: 115) says, the truthmaking relation is internal. This brings out a viable intuition: the truthmaking relation cannot depend on facts about things outside the items it relates. If T makes it true that p, nothing else than T and p seem to have a bearing on this. If the truthmaking would depend on something outside T and p, this additional circumstance would have to be brought into T, as Armstrong says. Another, equally good reason to take the truthmaking relation to be internal is the following: external, but not internal relations are ontological additions to their terms. If truthmaking was an external relation, it were an addition to the "ontology of the situation" (Armstrong 2004: 9) – it itself would have to be brought into the truthmaker, creating an infinite regress.

"Internal relation", however, is a notoriously ambiguous term.[6] Bradley (1893a: 392) used it to characterise relations that "essentially penetrate[. . .] the being of [their] terms", Moore (1919–1920) for relations that supervene on monadic foundations which are "critical to the identity of the terms to which they belong" and Wittgenstein in the *Tractatus* for relations the relata of which are inconceivable without them (Wittgenstein 1921: §4.123). What does Armstrong mean by an "internal relation"? Armstrong (1978b: 85) defined an internal relation as follows: Two or more particulars are internally related if and only if there exist properties of the particulars which logically necessitate that the relation holds. They are externally related if and only if there are no properties which necessitate the relation or a part of it. The properties in question here must be understood as intrinsic properties. So we get the following account:

Definition 2 (Internal relations). *A relation is* internal *iff it supervenes on the intrinsic properties of its relata.*[7]

---

[5] This has most vividly been pointed out by David Lewis: ". . . sadly, the demand for truthmakers just *is* the demand for necessary connections" (Lewis 1998: 219).

[6] Ewing (1934) identifies ten senses of "internal relation".

[7] Lewis (1986b: 62) calls an internal relation "intrinsic to its relata" (cf. also Lewis 1983a: 26, n. 16). A relation that is intrinsic but not internal is called *external* by Lewis & Langton (1998: 129) and "intrinsic to its pairs" by Lewis (1983a: 26, n. 16).

Armstrong, however, also characterises internal relations in some, at least *prima facie*, different way:

> "I mean by calling a relation internal that, given just the terms of the relation, the relation between them is necessitated." (Armstrong 2004: 9)

This turns the thesis that truthmaking is internal into truthmaker necessitarianism. How is such a transition to be justified? Armstrong (1997: 12, 87, 115) says that a relation is internal if and only if it is impossible that its terms should exist and the relation not exist, where the joint existence of the terms is possible. He then adds that "to fall under our definition of internal relations, the particulars involved must be taken as having their non-relational properties" (Armstrong 1997: 88). This means that the terms necessitating the internal relations are to be thought of as the "thick particulars", the particulars 'taken together' with their intrinsic properties.[8]

The thesis that truthmaking is internal in the sense of supervening on intrinsic properties of truthmaker and truthbearer is *prima facie* different from truthmaker necessitarianism because it can be reasonably questioned whether all intrinsic properties are "given just the terms of the relation". It may well be that some intrinsic properties of some truthmaker are not essential to it, i.e. such that the truthmaker could exist without exemplifying them. This, I think, is reason enough to distinguish truthmaker internalism from truthmaker necessitarianism:

3 (Truthmaker internalism). *Truthmaking is an internal relation.*

It is one thing to say that the truthmakers for the obtaining of an internal relation are just the terms of the relation (Armstrong 2004: 92,98,104,139) and that internal relations are ontologically innocent (Armstrong 2004: 104). It is another thing to take this to entail necessitarianism.

Truthmaker internalism (3) brings out the sense of sufficiency we are after in our hunt for truthmakers, for it means that it is a matter of how a thing is itself what truthbearers it makes true. We only have chosen our truthmaker inclusive enough if its truthmaking ties do not depend on anything 'outside' of it, i.e. if they cannot be made to vary by variation in the intrinsic properties of things disjoint of our truthmaker in question. Such a relation, however, can still be contingent. But why does Armstrong link internalism and necessitarianism so closely? Necessitarianism violates Humean supervenience not just by creating necessary ties between truthmakers and truthbearers but also by having the truthmaker *a's being F* necessitate it that *a is F* and hence necessitating both the existence of *a* and of *F*. But is this a necessary connection between distinct existences? It depends on what we mean by "distinct". By necessitarianism, *a*'s being *F* must exist if *and only if a* is *F*. If "*Fa*" is a contingent predication and *F* a genuine "one over many", then *a* and *F* could both exist without the other. More importantly, they could both exist without being related by the relation of exemplification. Accepting unrestricted composition, their fusion would then also exist, but not the state of affairs. So the state of affairs cannot be the fusion. Because he thinks exemplification is not a relation (more on this later) and because there is nothing else than *a* and *F* that *a*'s being *F* could plausibly contain, Armstrong concludes that states of affairs are built out of their components in a non-mereological way, a method of constitution which is such that different things can be constituted by the same components. [9]

The paradigm case of truthbearers in need of truthmakers are singular existentials, claims to the effect that such and such an entity exists. In such cases, it seems incontestable that the entity in question, iff it exists, makes the corresponding claim true. The truthmaker of "John exists" is John (Mulligan et al. 1984: 300). (Armstrong 2004: 6) calls the relation between John and the proposition that John exists "the simplest of all truthmaking relations". But how is this compatible with the world's being a world of states of affairs? John's existence, after all, is not a state of affairs (Armstrong 2004: 6). But perhaps John is?

---

[8]This is confirmed by Armstrong (1989a: 105), where he uses his later terminology of 'thick' particulars: particulars having certain properties are internally related by relation R iff in each possible world which contains them and where they have these properties, they are related by R.

[9](Cf. Armstrong 1989a: ix): The conjunction of *a*'s being *F* and *b*'s being *G* is different from the conjunction of *b*'s being *F* and *a*'s being *G*, whereas both states of affairs have the same constituents. The example is from Lewis (1986c: 108–109) and designed to show that the problem arises not only (as Armstrong seems to have originally thought) with non-symmetrical relations.

John is a non-mereological component of the state of affairs of John's being human, which is the truthmaker of the truth that John is human and hence, by the entailment principle, also for the truth that at least one human being exists (Armstrong 2004: 21). But is it a minimal truthmaker? Could not the remainder of the state of affairs be abstracted, leaving us just with John? Armstrong says it can: though every state of affairs involving horses is a truthmaker for the truth that at least one horse exists, only the individual horses are minimal truthmakers (Armstrong 2004: 55). But are they necessitating it? Only, some would say,[10] if they are essentially horses, i.e. cannot exist without being horses. But let this be assumed.[11] In some sense, then, John is more minimal a truthmaker than John's being human.

Sometimes, however, the (non-mereological) inclusion relation goes the other way round: while the mereological sum of Venus and Mars, for example, is a truthmaker for the truth that Venus is greater in size than Mars, it is not a minimal truthmaker:

> "For this truth, it seems that we do not need all the properties of the two objects, or even all their non-relational properties. It is enough that Venus is a ceratin particular size, and that Mars is a certain particular size. These are states of affairs. The minimal truthmaker appears to be the mereological sum of these two states of affairs. The other properties of Venus and Mars seem irrelevant." (Armstrong 2004: 50)

Here, the inclusion, goes the other way round: *Venus's being of size m+Mars's being of size n* is said to be more minimal than Venus+Mars. A distinction is needed.

In response to the criticism of Devitt (1980: 98) that his account renders exemplification obscure, Armstrong (1980: 109–110) claims that while we can distinguish the bare particular from its properties and the unexemplified universal from its exemplifications, neither can exist without the other.[12] The thin particular is the particular "taken apart from its properties" (Armstrong 1989b: 95), it is "the particularity of a particular, abstracted from its properties" (Armstrong 2004: 105).[13] It is the thin particular John that is contained within the state of affairs of John's being human. The thick particular, on the other hand, is the "particular taken along with all and only the particular's non-relational properties" (Armstrong 1997: 124). It is the state of affairs of the (thin!) particular's having all its nonrelational properties (Armstrong 1989b: 95). These properties are said to be "contained within it" (the scare quotes are Armstrong's) and it "enfolds" these properties "within itself". It is in the fusion of the thick particulars that *Venus?s being of size m* and *Mars?s being of size n* are contained.

Here we have the second violation of Humean supervenience: the thick particular depends on the thin and the thin on the thick. This dependence, however, is pretty mysterious: the thin particular, by necessitarianism, cannot make true any other truths than predications of essential properties (properties had by the particular if and only if it exists). But how can it even so much as exemplify any other properties? The "cross-categorial unity" of thin particulars and universals seems indeed "the most puzzling unity of all" (Armstrong 2004: 267).[14] But it is not just puzzling what it is, but even how it can be possible at all. Exemplification between a 'thin' particular and some properties, it seems, would be an external relation. Bradley's regress would follow.

---

[10]Cf. (Fox 1987: 194), (Restall 1996: 332) and (Lewis 1998).

[11]Curiously, Armstrong extends this account to merely possible entities. He says that the minimal truthmaker for the truth that there are no arctic penguins is the totality fact that these some fusion comprises all the arctic animals (Armstrong 2004: 75–76). He then continues: "In the same way, if we work with the totality of bird, we eliminate the phoenix" (Armstrong 2004: 76) But this presupposes that the phoenix, if it existed, were essentially a bird.

[12]I think this is the first appearance of the doctrine to be called "Baxterianism" in Armstrong's writings.

[13]Armstrong (1997: 109) says it is "the particular abstracted in thought from its non-relational properties".

[14]The puzzlement is not avoided by speaking of a non-relational tie. This is just to label the problem: "One's first response to this is naturally extremely negative: are there two constituents involved or not? If so, how can they fail to be distinct terms? If they are distinct terms, how can they be 'tied' together except by a relation? It is no good simply *talking* about non-relational ties: or, to put it another way, one philosopher's solution is another philosopher's problem." (Campbell 1990: 15); "A non-relational tie between distinct things is pretty mysterious. Seemingly, if the things are distinct then the tie is a relation. If the tie is not a relation then they are not distinct. So a non-relational tie could hold between distinct things only if they are not distinct. That's how it seems at first. Still, we need the tie if we want universals and particulars." (Baxter 2001a: 449)

Exemplification, however, is no less mysterious when considered a relation between the thick particular and its properties. The 'thick' particular, so to speak, already has its properties and thus does not need to exemplify them. Armstrong (1989a: 52) and Armstrong (1997: 125) say that the 'thick' particular has its properties *necessarily*. Strictly speaking, however, the 'thick' particular does not exemplify *any* of its (first-order) properties (except perhaps its relational properties). It is, so to say, already 'saturated' (the terminology is from Armstrong (1980: 109)); properties exemplified by it would be second-degree properties. Second-degree properties, however, would give us second-degree states of affairs, which are (according to Armstrong even necessarily) different from first-degree ones.

It seems mysterious, then, how either the thin or the thick particular could have any properties.[15] But even if they can, they do not exemplify them in a way that helps us in our hunt for truthmakers for contingent predications. The thin particular, even together with its property, does not necessitate the truth. The thick particular does necessitate the truth, but only because it necessarily has the property attributed to it. Necessitarian truthmaking by particulars of contingent predications and factualism are incompatible.

3 Factualist Truthmaking

But perhaps the very project of rescuing a notion of particulars from factualism was ill-conceived. Let us suppose then that the world is a world only of states of affairs and that states of affairs are the only truthmakers there are. Will this give us truthmakers for all the truths? It does not, says Armstrong:

> "If it is true that a certain conjunction of states of affairs is all the states of affairs, then this is only true because there are no more of them. [...] That there are no more of them must then somehow be brought into the truthmaker. [...] The truthmaker must be the fact or state of affairs that the great conjunction *is* all the states of affairs." (Armstrong 1997: 198)

Armstrong's account of totality facts is then the following: every fusion of states of affairs which are of the same 'sort' F is an object which may stand in a relation T to some 'unit-property' G that Armstrong (1997: 199) calls "alling" or "totalling". Whenever this relation holds, the totality state of affairs of the aggregate's 'totalling' the unit-property obtains. The sort of the states of affairs F and the 'unit-property' normally are non-basic, 'second-' or even 'third-degree' properties. The mereological sum of the black swans on the lake now, for example, totals the "distinctively second-rate property" *black swan on the lake now* (Armstrong 2004: 72)

Even if some totality facts were accepted, it would still be very unclear how many of them are needed. It will not do, as Armstrong (1997), Molnar (2000: 81) and Armstrong (2004: 74) seem to think, to dispense with lesser totality facts in favour of some all-inclusive totality fact, the most general state of affairs there is. This ontological economy is allegedly achieved both at the level of states of affairs involving one and the same individual, say Theatetus,[16] and at the level of all the states of affairs there are:

---

[15]This means that the introduction of states of affairs does not *explain* the relation of exemplification: This has been, e.g., Linsky's view: "The notion of a fact is introduced precisely to provide an explanation where others just provide truth conditions. Facts are deemed necessary in order to show what it is for an object to have a property." (Linsky 1994: 193) Armstrong is much more cautious: Armstrong (1997: 114–115) says that we need states of affairs because something "is needed to weld [universals and particulars] together" and Armstrong (2002a: 33) holds that the acceptance of states of affairs helps us avoiding the problem of explaining exemplification. States of affairs rather presuppose that we can already make sense of particulars and universals combining into entities that exist if and only if a corresponding proposition is true. They do not, contra Armstrong (2004: 24) provide the "ontological connection between subjects and predicates" but presuppose that it has already been made.

[16]"We get rid of the ontological nightmare of either a huge number of negative properties or a huge number of negative states of affairs, and substitute for them a single *all* state of affairs. It is a state of affairs (admittedly, a pretty large state of affairs, subsuming innumerable lesser allnesses), one that will serve as a truthmaker for the huge number of negative *truths* about Theaetetus among other particulars." (Armstrong 2004: 57)

"These states of affairs [i.e. the fusion of all states of affairs totalling both *being a state of affairs* and its totalling *being any existent at all*] are the biggest states of affairs of all. Given these huge states of affairs, each positive, all the lesser totality or limit states of affairs are also given. In the great catalogue of being, as it were, you need neither have any of the lesser *allings* nor, I have claimed, any other negative state of affairs." (Armstrong 2004: 74)

But this seems very mysterious. Take one of these most inclusive totality states of affairs and some lesser allness, say that some fusion of properties comprises all of Theatetus' properties. In which sense can the latter be said to be given by or contained in the former? For all properties F, G etc. of Theatetus, the totality states of affairs entails that Theatetus is F, that he is G etc. and that he has no other property. So we have certainly entailment – but do we have containment or yet another necessary connection between distinct existences? If the fusion totalling a property in the totality contains only positive states of affairs then the all-inclusivve totality state of affairs certainly does not contain any negative states of affairs. But does it contain at least the positive states of affairs?

States of affairs may be parts of each other both in a mereological and a non-mereological sense. When we fuse together all first-order states of affairs, for example, they become parts of the fusion in the ordinary, mereological sense. When we look for a truthmaker for, e.g., "This is Armstrong's favourite state of affairs", the state of affairs in question is a component, but not an ordinary part of the truthmaker – it and the property exemplified by it could both exist without being combined into this further state of affairs. In which sense is the state of affairs that these are all of Theatetus' properties contained in the all-inclusive state of affairs? Only in the second, non-mereological sense, it seems, for it and the property of totalling *being a state of affairs* could both exist without the all-inclusive state of affairs (Armstrong 2004: 59). But this means that it is "given by" or "supervenes on" the all-inclusive state of affairs in the sense in which some particular state of affairs is given by or supervenes on the state of affairs that it is Armstrong's favourite.[17] Suppose this is the state of affairs that Theatetus is not flying. While it is true that it must exist if it is Armstrong's favourite, it seems awkward to say that it exists *because* of this higher-order state of affairs. The order of explanation rather seems the other way round: it is because it exists (i.e. because Theatetus is not flying) that this state of affairs is an available candidate for being Armstrong's favourite. Applied to the totality fact of this fusion's being all of Theatetus properties, this means that we must acknowledge its existence *prior to* encapsulating it in further higher-order states of affairs.

If we are not interested in ontological economy in the 'gross tonnage' sense this question may not appear terribly important. Greater problems are still to come, however.

Totalling is a universal (Armstrong 2004: 73), which occurs as predicative component in each and every totality state of affairs. But this way, paradox looms.[18] Totalling not only occurs in all totality states of affairs, but also in the state of affairs that these are all the totality states of

---

[17]Strictly speaking, the connection is even looser than this. For the lesser totality states of affairs are only (mereological) proper parts of the subject component of the all-inclusive state of affairs. To be able to speak of supervenience in any acceptable way, we therefore have to assume that mereological wholes have all their parts necessarily. But even then the lesser totalities are given by and supervene on the all-inclusive totality only in the sense in which my foot supervenes on the state of affairs that I am sitting.

[18]The paradox to be discussed is not the one raised by Cox (1997: 56) and anticipated by Armstrong (1997: 198-199) concerning a regress of higher- and higher-order states of affairs. Cox's paradox can, but I think mine cannot, be met by turning the tables on the regress and suggesting that the very fact that higher-order state of affairs are necessitated by their immediate predecessors means that all we have is a regress of truths sharing as their truthmaker the totality state of affairs of the lowest order (cf. Armstrong (1989a: 94), Armstrong (1997: 198) and Armstrong (2004: 78)). I doubt that this answer works: there are, Armstrong (2004: 74) says, at least two most inclusive second-order states of affairs, one the totalling of *being a state of affairs* (or rather: *being a first-order state of affairs*), the other one totalling *being any existent at all*. If naturalism is true, then there is also a third one, the totalling of *being in space and time*. Naturalism, defined in Armstrong (1997: 35) and Armstrong (2004: 112) as the doctrine that the world of space and time is all there is, is a contingent thesis (Armstrong 2004: 112). So the state of affairs that there are three most-inclusive second-order states of affairs is itself contingent. So it is not necessitated by any one or the fusion of the second-order states of affairs. So the regress stops on the second third at the earliest.

affairs there are. But this cannot be. For if it holds between the fusion of all the totality states of affairs and itself, it is not *totalling* the fusion – because the fusion is only a proper part of the limit state of affairs that the fusion exhausts the property (Armstrong 2004: 56),[19] so the limit state of affairs is not a part of the fusion, so there is at least one totality state of affairs that is not contained in the fusion. If it does not hold between the fusion of all the totality states of affairs and itself, however, there is at least one totality state of affairs in which it does not occur. But if so, it cannot be a totalling relation.

This paradox can be generalised. We have seen that a totality state of affairs is the obtaining of the totalling relation between some fusion of states of affairs and some 'unit-property'. There is an important distinction between two types of totality states of affairs. In cases like the one of the black swans on the lake, the property, though second-rate, occurs as a 'predicative component' in the states of affairs (thick particulars) fused into the aggregate totalling it. In some other cases, however, this is not the case: the property of being a first-order state of affairs, for example, is not itself a component of the first-order states of affairs (all states of affairs of which it is a component are at least second-order). It is a state-of-affairs type that cannot be obtained by abstraction from the states of affairs of which it is the type. There is no guarantee, in other words, that it is exemplified at all.[20] This means that there is a totality states of affairs X of these being all the totality states of affairs of which the property totalled does not also occur as a component in the fusion totalling the property (call these the non-self-predicative states of affairs). Now, with respect to this totality state of affairs X, we may ask whether the property that is totalled, the property of being a non-self-predicative state of affairs, is a component of any of the states of affairs fused together (we may ask whether it is self-predicative). If it is self-predicative, then the property of being a non-self-predicative state of affairs occurs in some state of affairs in the fusion that is totalled by X. So it is the property totalled by at least one of the state of affairs in this fusion. But what fusion is totalling it? It cannot be the fusion of all the non-self-predicative states of affairs, for otherwise X would contain itself as a proper part. So we have a contradiction: some fusion is totalling the property of being a non-self-predicative state of affairs that is not the fusion of all the non-self-predicative states of affairs. If X is not self-predicative, however, then this state of affairs X belongs to the fusion totalling the property, so the property of being a non-self-predicative state of affairs is a component of a state of affairs in the fusion. So it is self-predicative after all.

Faced with these paradoxes, none of the familiar options seems plausible. Given unrestricted composition, we cannot deny that there is a fusion of all totality states of affairs, of all states of affairs or of all states of affairs in which the totalled property does not occur as a component. We could, perhaps, replace the totalling universal with an infinite family of totalling relations, each indexed to one order in the hierarchy. But this would not only rid us of truthmakers for truths such as "These are all and only the first- and second-order states of affairs" but also leave us with no index left for the relation totalling the fusion of all totality states of affairs. We could adopt a limitation of size principle, but this would break the connection between generality and negation. For any totality state of any order will have countless negative properties (for example, not being a black swan), and to account for these, we need another totality state of affairs one order higher up.

But there might still be something blocking the regress. It would be the fusion of all states of affairs, what Armstrong calls "W, the whole world, the whole that contains absolutely every thing that exists", that "greater than which nothing exists" (Armstrong 2004: 122–123). It cannot be put into any state of affairs:

> "States of affairs are ampliative, that is, they *embed* their subjects in something fur-
> ther. But if W really is *everything*, then there is nothing further, not just no further

[19]This follows from, but does not imply, Armstrong's earlier assertion that the totalling relation is external (Armstrong 1997: 199).

[20]This is the real difference between the totalling and the infinitely many numbering relations: in the latter case, the property with respect to which a fusion is numbered is always exemplified within this fusion (cf. Armstrong 2004: 116), but in the former it is not.

particulars, but no further properties or relations or anything else." (Armstrong 2004: 123)

But if W cannot be put into any state of affairs, then it cannot have any property and cannot stand in any relation. So, in particular, it cannot stand in the totalling relation to the property *being a state of affairs*. It does not help to say that it occurs in states of affairs, but that all these are merely possible (Armstrong 2004: 123). For W must occur in all most-inclusive totality states of affairs, totalling the 'properties' *being an existent* and, perhaps, also *being a state of affairs* and *being in space-time*.[21] These totality states of affairs cannot be mere possibilities, for they are the actual truthmakers of all truths asserting the possibility of something non-actual.[22]

This situation makes W look like a thick particular, and indeed it is the thickest of all particulars (this is another victory of particularity). It enfolds all properties and particulars there are within itself and makes true every truth. How it does, however, must be left unexplained: no property can be attributed to it and it cannot be said to stand in any relation. We cannot even truly say of it that it is all there is. It is with this Spinozist dead-end, I think, that factualism meets its *reductio*.

4 Baxterianism

Let us return to the factualist account of truthmakers for contingent intrinsic predications. The truthmaker of the truth that Fa, as we have seen, are required to necessitate that a is F. We have discussed some difficulties of this account: the minimal truthmaker cannot be the thin particular a, which is not necessarily F, nor can it be the thick particular, for it necessitates the exemplification of many properties other than F. So it must be an intermediate entity, a's being F, which 'enfolds' just F. This intermediate entity is itself a particular and depends on F: it could not be the entity it is without having F as its predicative component. But it also contains a, and it also does so essentially, creating a necessary connection between a and F. This connection is not symmetrical, however: while the thick particular necessitates the universal, the universal is only generically dependent on particulars. The thick particular could not be what it is whithout enfolding F, but F could be what it is without being enfolded in this thick particular. If we want to bind it to the particular, as we need if we want have a necessitating truthmaker, we need the intermediate entity, the state of affairs of a's being F.

On this account the "identities [that] run across the states of affairs" are "somehow mysterious" (Armstrong 1997: 265). This I think is because Armstrong, while he always rejected the identity of indiscernible particulars (cf. eg. Armstrong 1978a: 95 et seq.), he accepted this principle for universals.[23] Particulars, on this conception, are something over and above the states of affairs in which they occur: they can differ by "bare numerical difference" (Armstrong 1997: 109). Universals, on the other hand, can be reconstructed as "state-of-affair types".[24] The identities running through the states of affairs are then indeed mysterious: particulars, but not universals, depend on them.

If the link between a and F were itself necessary, however, the necessary connection would be symmetrical: not only were the particulars and universals fixed given the states of affairs, but the

---

[21] We do not have to take a stance here on the question whether the all-inclusive totality state of affairs is an ontological addition to W, an issue about Armstrong (2004) professes to be unsure.

[22] Armstrong gives two conflicting accounts of the situation: he says, on the one hand, that "W is the totality of being" is a contingent truth, having W as its truthmaker. By the Possibility principle, W will then also be the truthmaker for "It is possible that W is not the totality of being" (Armstrong 2004: 123). The latter truth, on the other hand, is equivalent to "It is possible that there are alien particulars or properties" and this truth, (Armstrong 2004: 88) says, is made true not by W but by the totality state of affairs that W is all there is.

[23] Armstrong expresses this by saying that universals are wholly 'qualitative': there is nothing that could distinguish two universals sharing all the qualitative features they bestow (cf. Armstrong (1978b: 110) and Armstrong (1989b: 106)).

[24] Cf, : "The universal is a gutted state of affairs; it is everything that is left in the state of affairs after the particular particulars involved in the state of affairs have been abstracted away in thought." (Armstrong 1997: 29) I am not sure whether this abstractionist conception of universals allows Armstrong to maintain his realism about universals.

states of affairs were fixed given the particulars and universals (Armstrong 2004: 84). No need then to postulate them as truthmakers: they come as a supervenient free lunch. While Armstrong (1997: 267) thought that "the contingency of states of affairs cannot be abandoned", he "now [has] sympathy with the view that predications are necessary truths" (Armstrong 2004: 51,126). This is the view I will call "Baxterianism":

> "What is contingent might not have existed. Suppose a to be F, with F a universal. If this state of affairs is contingent, then it might not have existed. Suppose it had not existed. The particular a, the particular with all its non-relational properties, what I have in the past called the 'thick particular', would not then have existed. Something quite like it could have existed instead: a particular with all of a's properties except F. But that would have been only a *close counterpart* of a, because the intersection with F, the partial identity with F, would be lacking. *Equally, it now seems to me, the universal F would not have existed.* A universal very like F could have existed: a universal that had the same instantiations as F except for instantiating a. But that would have only been a close counterpart of F, because the intersection with a, the partial identity with a, would not have existed. So, strictly, if a and F exist, then they *must* 'intersect'. They themselves can be, and I think are, contingent beings. But if a exists and F exists, then a must be F: a necessary connection between contingent beings." (Armstrong 2004: 47)

The thin particulars are abandoned: both particulars and universals are now conceived of as 'thick' – they overlap in states of affairs (Armstrong 2004: 47, fn. 6), they necessitate them because they have the state of affairs 'built into them':

> "Given a and given F, as opposed to mere counterparts of this particular and this universal, then the state of affairs of *a's being F* is automatically there. It is built into the two constituents of the state of affairs." (Armstrong 2004: 49)

The way in which the a's being F is built into both a and F is not mereological, however. Even though Armstrong (2004: 103) characterises partial identity as a relation "where one entity contains another with something to spare, or else where entities overlap each other", partial identity is *not* identity of a part:

> "... what is involved in a particular instantiating a property-universal is a partial identity of the particular and universal involved. It is not a mere mereological overlap, as when two streets intersect, but it is a partial identity." (Armstrong 2004: 47)

(Armstrong 1997: 15) used a notion of "loose identity" to counter the multiple location objection against universals,[25] namely the query how one and the same thing can non-contradictorily be present at different locations. Donald Baxter (2001a) has provided a new answer to this empiricist worry, saying that even if it begs the question by assuming that if something is at one location, it is at no separate location, we are left with the task of explaining its attractivity. Its attractivity, according to Baxter (2001a: 451), resides in its having a close and true variant, namely: "Something insofar as it is in one place, is not in a separate place":

> "... a universal insofar as it is in one location, is not in another. Insofar as it is in one location, it is separate from (spatially discontinuous from) itself insofar as it is in the other." (Baxter 2001a: 451)

A predication is contradictory only if it ascribes some property to something under some aspect and denies it from it under the same aspect, even though its aspects are numerically identical

---

[25]The relation discussed under the label of 'partial identity' by Armstrong (1997: §2.3.2) should not be confused with the partial identity involved in Baxterianism for it was strictly mereological: "These cases [like the identity of the morning and the evening star] tempt us to overlook such a case as that of Australia and its state of New South Wales and also that of two adjoining terrace or town houses that have a wall in common. These are partial identities. One is whole/part, the other is overlap. Mereology which deals with these notions, may be thought of as an extended logic of identity, extended to deal with such cases of partial identity." (Armstrong 1997: 18)

with it (Baxter 2001a: 449). The universal is located there under some aspect (insofar as it is exemplified by one particular), but located here under some other aspect (insofar as it is exemplified by a different particular). The apparent contradiction involved in the claim that identicals are discernible is removed by quantification over aspects: there is an aspect x of a and an aspect y of b such that a as x is discernible from b as y even though a and b are identical (Baxter 1989: 130). Baxter explains the difference between strict and loose identity in terms of different ways of counting. The partial identity (or, as Baxter (1988: 577) calls it, the 'many-one identity) is identity across different counts, a kind of identity "that holds between distinct things (counted on a strict standard) and a single thing (counted on a looser standard). It is identity because the several things (counting strictly) are identical with each other (counting loosely)" (Baxter 1988: 576). Partial identity is not parthood (not even parthood in the sense of partial strict identity), because *each one* of the – strictly counted – many things (and not just the sum of all of them together) is not numerically different from the – loosely counted – one thing, as a proper part would be (Baxter 1988: 578–579). So an aspect is not a proper part of the thing of which it is an aspect, but it is numerically identical with it.[26]

This answers the multiple location objection, but does it explain exemplification? It does, Baxter (2001a: 453) thinks, if we "think of a particular as like a universal in having aspects". Baxter's comments are rather enigmatic:

> "Here is the proposal in brief: the non-relational tie is the identity of an aspect of a universal with an aspect of a particular. If you think of aspects as parts, then the non-relational tie is the 'partial identity' of particular and universals. That's putting it Armstrong's suggestive way [reference to (Armstrong 1997: 17)]. The aspect is the part they have in common." (Baxter 2001a: 453)

The harm is done, even though Baxter immediately goes on to stress that this means "think[ing] of aspects in the count in which the whole counts as one" and that his notion of "partial identity" is rather like the one of (Bradley 1893b: 83), not like the one of Brentano (1981: 46) which is closer to Armstrong's. But let us see how this application of the aspect theory changes the picture: The loosely identical particulars are the exemplifications of one universal of which they are aspects. The loosely identical universals, however, are not, in this application, the differently located universals, they are the strictly different universals exemplified by one particular of which they are aspects. We count the similar particulars strictly as many and loosely as one. When we count them loosely as one, we have the universal. We count the properties of one and the same particular strictly as many and loosely as one – when we count them loosely, we have the particular. When a particular exemplifies a universal, it becomes an aspect of the universal. The universal exemplified by the particular, is then an aspect of the particular. The aspect of the universal is numerically identical with the universal, the aspect of the particular numerically identical with the particular. If both aspects are identical, then so are the universal and the particular. Not such a partial identity after all! Such 'identity in difference' has nothing to do with the mereological notion of partial identity discussed by Armstrong (1997: 17). Baxter understates the radicality of his proposal:

> "Here is an example. Suppose Hume is a particular, Benevolence is a universal, and Hume is benevolent. Then Hume has an aspect, Hume insofar as he is benevolent. Also Benevolence has an aspect, Benevolence insofar as Hume has it. These are the same aspect – Hume's benevolence." (Baxter 2001a: 454)

It is, of course, tempting to take the shared aspect, Hume's benevolence, to be a state of affairs. According to Baxter, however, both Hume and Hume insofar as he is benevolent and Benevolence and Benevolence insofar as Hume has it are numerically identical. So Hume's benevolence is both numerically identical to Hume and to Benevolence! But Benevolence, if it is multiply exemplifiable, is also numerically identical to, say, Mill. If Mill and Hume are not numerically identical, then

---

[26]Even granted that composition is identity, I think it is hopeless to think of aspects as parts: "On standard conceptions, the parts are all numerically distinct from each other, and each is numerically distinct from the whole they compose. Aspect's aren't like this. They are numerically identical with each other and the whole. Think of parts likewise." (Baxter 2001a: 453) I am sorry to say that I failed.

Benevolence is numerically distinct from itself. This, according to Baxter (2001a: 454), is "Boethius problem [,] the deep problem [. . .] underlying the multiple location problem". Baxter's solution is bitting the bullet: Hume and Mill are identical insofar as they are the same universal, Benevolence (Baxter 2001a: 455). Two particulars in one count, one universal in another, where the counts are competing but equally strict. You can call this "realism", if you like (Baxter 2001a: 455), but it is a realism *either* about universals *or* about particulars. No need to have both entities of both categories if you can just count differently the entities in the one to get those in the other.

Already Armstrong (1997: 268) said that if predication is necessary, "[t]hen we shall have to say that particulars and universals are not "distinct existences" but that their identities are in some way entangled with each other". Though he sometimes presents it as an inference from the necessity of identity,[27] I think that Armstrong's Baxterianism is best taken as a substantive claim about the *nature* of universals and particulars: "The property F must have all its instances and it cannot have any others" (Armstrong 2004: 80-81) because otherwise it would not be the universal it is, "because the instantiations of any universal are part of what that universal is" (Armstrong 2004: 136).

This is how Baxterianism restores the symmetry Armstrong is looking for. He already had thick particulars, enfolding their properties. But these properties were only generically dependent on particulars. So he needed states of affairs to provide necessitating truthmakers. Baxterianism now gives him thick universals, enfolding their particulars. States of affairs are no longer needed – they are the intersections of thick particulars and thick universals.

At what price? Does the adoption of thick universals not, however, mean that every predication is necessary? It did not for Baxter. Baxter's explanation of the contingency of some predications is very simple: if the aspect of the particular exists, then it is numerically identical with the particular and necessarily so – but if it does not exist, then the particular might still exist and perhaps be necessarily numerically identical with other aspects.(Baxter 2001a: 458) Aspects, in short, are contingent beings.[28]

Why does Armstrong think otherwise? Because he thinks he needs *both* thick particulars and thick universals. If they *both* exist, their intersection is necessary. If you have both particulars and universals, respectively enfolding all the states of affairs in which they occur, then their common states of affairs are given. Armstrong has necessary predications because he conditionalises them both on the existence of the particular *and* of the universal. This becomes clear when he compares his Baxterianism to other conceptions. He says that advocates of non-transferable tropes are committed to it:

> "The idea is that the mass is held to be the mass of this stone *by necessity*. It is an identity condition for the property. Every property then becomes an essential property." (Armstrong 2004: 46)

This is a misunderstanding, however: even if the mass trope is non-transferable, it can still be held that it is only contingently the mass trope of this stone. While it could not have been the mass trope of another trope, it could not have existed. *If* the stone has it, the trope exists and could not be the mass trope of any other stone. But just given the stone, the existence of the mass trope and hence the predication is not necessitated. It is, however, necessitated by the existence of the stone *and* of the trope. But the contingency of the predication was not meant to be contingent on the existence of the trope.

While he is an eliminativist about countingency,[29] Armstrong says he can offer counterparts for

---

[27]Cf.: "I find the partial identity very attractive, but it seems to me that partial identity, like any identity, brings necessity with it. If a universal is partially identical with a certain particular, then to try to consider that very universal without it being instantiated by that particular is to consider a mere counterpart of the universal in question." (Armstrong 2004: 80)

[28]Compare: if Hesperus exists, then it is necessarily identical with Phosphorus. But Venus is still a contingent existent.

[29]Cf. his characterisation of the eliminativist strategy: "Eliminativists usually provide what one might think of as 'counterpart' truth that correspond to a degree to the propositions that they hold to be false." (Armstrong 2004: 33) It is false, for Armstrong, to say that a might not have been F, but it is true that something quite like a (except for being F) might have been something quite like F (except for being a property of a).

it:

> "I re-emphasize that such a theory can supply a *substitute* for contingency by offering counterparts. That a is F is necessary, but contingent a might not have existed and an a-like object that is not a might have existed that is not F. The situation is much the same as David Lewis's counterpart theory. For Lewis, an a that is an F strictly cannot exist in 'another possible world' without property F. All that can exist in the other world is a more or less close counterpart of a. He seems to be prepared to call this 'contingency', but it is contingency in only a *loose* sense. Strictly, I think, he is (or he should be) a *necessitarian* about predication." (Armstrong 2004: 48)

But Lewis is not. If a is contingently F, for him, this means that F, the very same F, can fail to be a property of some other-worldly counterpart of a. a cannot exist in other worlds, this is true, but F can. This is strict, not loose contingency: given just F, we do not have that a is F. Armstrong's picture is relevantly different: given the truth that a is F, we have the thick particular a and the thick universal F. Given them, we have their intersection, hence the truthmaker necessitating the truth. So every truth is necessary.

If we have not only thick particulars, but also thick universals, no other states of affairs than their intersections are needed; in particular, no totality states of affairs are needed to make true general truths:

> "...the conjunction of states of affairs *a's being F & b's being F* ... will serve as truthmaker for the truth <this conjunction is all the Fs>. *Allness* will supervene in this situation. A Russellian general fact or state of affairs will not be needed in addition. General facts seemed needed only because <this conjunction is all the Fs> was taken to be contingent." (Armstrong 2004: 81)

This only works for states of affairs where the property totalled is the common predicative component of the states of affairs fused together. It will not work, for example, for <these are all the first-order states of affairs>. For the states of affairs in the fusion totalling the property *being a first-order state of affairs* do *not* contain the property of being a first-order state of affairs (else they would be second-order). We can still say, of course, that *being a first-order state of affairs*, like any other property, has all its particulars essentially – given the property, the first-order states of affairs are fixed. But this shows that what is doing the work is the thick second-order universal, not the first-order necessary states of affairs.[30]

Armstrong thinks that even if we embrace Baxterianism, we still need at least one totality state of affairs:

> "...there seems to be need for at least one totality state of affairs. For even if it is *extensionally* correct to say, for instance, that reality is exhausted by states of affairs having particulars and universals as their constituents, it seems not to be a necessary truth that this is so. If this is correct, then the further truth that <and this is all> will require a further truthmaker, a totality state of affairs as I have argued." (Armstrong 2004: 81)

This seems, however to underestimate the power of thick universals. If *being an existent* , *being a state of affairs* and *being in space-time* are properties, then they too have their particulars essentially. Instead of a super-thick particular, the fusion of all states of affairs to which no other particular and universal may be added, we would then have a super-thick universal, exemplified by everything there is. Given just this property, everything else is fixed.

This is a very Leibnizian picture: Suppose there exists some thing, say a. Then the truth that a exists will be necessitated by some state of affairs[31] This state of affairs is or contains the

---

[30]The same is true for truthmakers of negative truths. That Theatetus is not flying, e.g., is not made true by the fusion of Theatetus and all its properties, even if Theatetus has them all essentially. It is made true, however, by Theatetus and the property *being a property of Theatetus*.

[31]I am not assuming, contra (Armstrong 2004: 6), that a's existing is a state of affairs. The state of affairs in question could just be the thick particular a itself.

intersection of the thick particular a with the super-thick universal exemplified by everything there is. So just the state of affairs making it true that a exists gives us the super-thick universal, which, in turn, gives us everything else. We get the whole world out of a single monad.

5   The riddle of exemplification

I take both positions reached to be somehow uncomfortable. I do not think Baxterianism is the sole culprit – it has, quite apart from guaranteeing truthmaker necessitarianism, some obvious advantages. I gives us an elegant and attractive answer to the one-over-many argument, sheds some light on the relation of exemplification and removes the need for a non-mereological mode of composition of states of affairs: the argument that a's being F cannot be the fusion of a and F no longer goes through. The existence of the fusion gives us its parts; the parts, in turn, necssitate the truth. It also gives us an attractive version of the one-over-many argument for universals: what a universal is, I think, is – in some way – just many particulars counted as one. Universals are postulate to ground facts of resemblance, to explain the fact that resembling particulars have something in common. Partial identity is an obvious answer and, I think, a plausible one.

I dislike Baxterianism for the reason Armstrong likes it. The symmetry introduced by "think[ing] of a particular as like a universal in having aspects" (Baxter 2001a: 453) and identifying the aspects of particulars with universals, I think, is harmful. It presupposes that a prior distinction can be made between particulars and universals. Baxter (2001a: 453) draws it in the following terms: universals can be instantiated by many particulars while particulars cannot: a particular cannot merely be an aspect of something with other aspects (Baxter 2001a: 461). But this presupposes, rather than delivers a prior understanding of how exemplification can be asymmetrical – partial identity and intersection, after all, are both symmetrical.

The problem with Baxterianism, I surmise, is not its introduction of thick universals. The problem rather is that they are added to thick particulars. The thick particulars, in my view, are responsible for the rationalistic flavour of the resulting ontologies. Once we dismiss thick particulars, we can accept thick universals without turning everything into a Leibnizian monad mirroring the whole world. Particulars are just what they are, neither thick nor thin. They exemplify properties, some essentially, others intrinsically, they stand in internal and external relations to other particulars. The universals to which they are connected by the exemplification relation are importantly different: these are generically dependent entities, bestowing qualitative features on their exemplifications. Universals are ways things are and their nature is exhausted by how they make things to be. Indiscernible universals, universals bestowing the same qualitative features on the same particulars, are just identical – there is nothing in which they could differ.

The aspects of a universal, we hold with Baxter, are indeed the particulars exemplifiying it, loosely counted as one. The aspects of a particular, however, are not the universals it exemplifies. What we get if we loosely count the universals exemplified by a particular as one is not the particular, but its nature, its type, the most inclusive property it exemplifies. But different particulars could exemplify that property, because indiscernible particulars need not be identical.

The idea then is to combine Baxter's insight into the nature of universals not with Factualism but with Armstrong's earlier theory, realism about particulars and universals, connected together by a relation of exemplification. But didn't Armstrong provide arguments to the effect that exemplification cannot be a relation? It is to these arguments we now turn.

Armstrong's first argument is based on Bradley's regress (which he also calls the 'relation regress') and is designed to show that exemplification is not a relation. If exemplification were a relation between, say, a particular a and a property F, and hence a universal, a further relation would be needed to connect a, F and the exemplification relation (Armstrong 1978a: 20, 41, 54, 70). An ontologically and epistemologically vicious regress would follow.[32] This argument assumes that if

---

[32]"It appears, then, that the Relation regress holds against *all* Relational analyses of what it is for an object to have a property or relation. If a's being F is analyzed as a's having R to a θ, then $Ra\theta$ is one of the situations of the sort that the theory undertakes to analyze. So it must be a matter of the ordered pair $\langle a, \theta \rangle$ having R' to a new θ-like entity: θ_R. If R and R' are different, the same problem arises with R' and so *ad infinitum*. If R and

exemplification were a relation, it would be an external one.[33] If exemplification were internal, the regress is harmless.

If exemplification is an internal relation, supervening on intrinsic properties of the exemplifying particular and the exemplified universal, then the regress, I think, is harmless and may be compared to the truth-regress (if p is true, then it is true that p is true and so forth), on all sides agreed to be harmless:[34]

> "The subsequent facts in the chain are not involved in the specification of the truth conditions for the initial statements, which is what would make the chain a vicious regress." (Hochberg 1988: 193)

While exemplification is exemplified by the particular, the universal and the exemplification relation, this supervenes on the particular exemplifying the universal. As (Armstrong 2004: 106) says, "the predicates may ascend, but not the reality in virtue of which they apply".

Armstrong, in his non-Baxterian period, had arguments against exemplification being an internal relation. It would then not, Armstrong (1997: 115) says, hold contingently. But it seems that both some given particular and a universal it (actually, but not necessarily) exemplifies can exist without being related by exemplification. For a relation to be internal, in Armstrong's use of the term, is for it to be necessitated *by the properties* of the relata. In this sense, exemplification is an internal relation: given a particular has the properties it in fact has, it exemplifies exactly the universals it in fact exemplifies. This does not, as Armstrong seems to think,[35] imply that it does so necessarily. There is an important distinction to be drawn between intrinsic and essential properties of particulars.[36] How 'external' vs. 'internal', when used in Armstrong's sense, becomes a false dichotomy, is particularly clear in Baxter's presentation of Armstrong's argument that exemplification, if it were a relation, could be neither internal nor external:

> "If you believe in universals and particulars, and you believe that neither are simply bundles of the other, then you need to make sense of instantiation... [...] It needs to be a 'non-relational tie [...] That is, it can be neither an internal nor an external relation, as Armstrong construes them [...]. Internal relations are always necessary – the relata can't exist without them ... [...] External relations are or involve additional entities..." (Baxter 2001a: 449)

It can – and should be – accepted that exemplification is neither internal nor external in these senses, but it can still – and should be hold – that exemplification is internal in the sense of Def. (2), supervening on intrinsic properties of its relata. Exemplification, I hold, is a genuine universal, a "one over many" that holds contingently between different entities capable of independent existence. If exemplification is a relation, what kind of relation is it? My answer, simple, but perhaps surprising is: partial identity – partial identity not in the quite special sense Armstrong takes over from Baxter, but ordinarily mereological overlap: the universal is literally part of the particular that exemplifies it, two resembling particulars literally have a part in common. If you do not like talking of parthood in this connection, think of the particular as extended in more than four dimensions: for every universal particulars may have, add a dimension to them, in which they either are or are not extended.

R' are identical, then the projected analysis of $Ra\theta$ has appealed to R itself, which is circular." (Armstrong 1978a: 70–71)

[33]"But in general at least and perhaps in every case, the fact that an object instantiates a certain property does not flow from the nature of the object and the nature of the universal that are involved." (Armstrong 1989b: 109) Armstrong (1997: 101) says that the "connection between things and their properties" is an external relation.

[34]E.g. by Armstrong (1978a: 56), Armstrong (1997: 119), Hochberg (1999: 196) and Armstrong (2004: 78-79). One could even consider the truth regress to be but a special case of the exemplification regress: if a sentence-type is a property of sentence-tokens, then truth is both a second-degree and a second-order property, of types and tokens respectively.

[35]It is difficult to find Armstrong explicitly advocating this doctrine. The above quoted argument for exemplification being external, however, continues with "The connection is contingent." (Armstrong 1989b: 109). He also believes that the 'thick' particular has its properties essentially.

[36]*Being n meter tall* is an intrinsic, but not an essential property of mine. Armstrong (1997: 92) himself warned against the confusion of intrinsic and essential properties.

Even if some sense could be made of properties being parts of particulars that intrinsically exemplify them, they will be contingent parts – so how could they be truthmakers? I agree that if a contingently has the intrinsic property F, it is contingent that a has an F-part – a could have lacked it and still be F. Even though a has properties as parts, it does not 'enfold' them; it is not a thick particular.

But can such a contingent part of a be a truthmaker for the intrinsic predication that a is F? Armstrong seems committed to the answer that it can. With respect to the 'ordinary general proposition' "All ravens are black", he says:

> "There are, *prima facie*, two totalities: the mereological whole of the black ravens and the mereological whole of the ravens. [...] It then becomes clear that if and only if the two totalities are identical, then the proposition is true, and this one totality is its (minimal) truthmaker. If there are two distinct totalities, with the totality of the black ravens no more than a proper part of the totality of ravens, then the proposition is made false..." (Armstrong 2004: 74)

This seems to contradict necessitarianism, however. Suppose the proposition is true. Then there is some fusion, X, which is the fusion of all the ravens and also the fusion of all the black ravens. So X is the truthmaker of the proposition that all ravens are black. But is it *necessitating* this truth? It does not seem so. The fusion of the black ravens could very well exist, and very well be the very same fusion, without making true the proposition (because there is, say, another white raven). It would not then, to be sure, also be the fusion of all the ravens – but this is not a fact of existence but a fact about the fusion having this or that property. Armstrong might reply that the real truthmaker is not the fusion of the black ravens, but the state of affairs that the fusion of the black ravens is (identical to) the fusion of the ravens. But this, it seems, is just the fusion itself, for the truthmaker of "a is identical with itself" is just a (Armstrong 2004: 39). He could say, of course, that the truthmaker is the state of affairs of the fusion of all ravens totalling the property *being a black raven*. But this seems just another way of saying that the two fusions are identical. A better answer, I think, would be to say that fusion of the ravens is the truthmaker, but not just because it exists but in virtue of it's being identical with the fusion of the black ravens. The identity of the fusions is an internal, mereological, perhaps formal relation, and it is in virtue of that relation that the fusion of the ravens makes the proposition true.

Generalising this from identity to partial identity, we could say: it is in virtue of its standing in the internal, mereological and perhaps formal relation of having an F part that a makes it true that it is F, it is in virtue of $F \oplus a$ being the very same fusion than a that it makes it true that a is F. Is this view extendible to extrinsic predications? I think it is. Whenever a is extrinsically F, a could cease to be F through variation in the outside world. Because truthmaking is an internal relation (3), the circumstances on which the exemplification of F by a depends must be brought into the truthmaker. What makes it true that a is extrinsically F will be something that is intrinsically such that it makes true that a is F.[37] Intrinsic properties could perhaps even be *defined* as those that have as truthmaker just the thing that exemplifies them:

> "'Fa' is an intrinsic predication of a if its truthmaker is or inheres in a." (Fox 1987: 198)

If F is an intrinsic property of a, then a will make it true that a is F *if* a has the intrinsic properties it has; every world where a has a counterpart that is also an intrinsic duplicate is a world where it is true that a is F. This is what Parsons (1999) calls truthmaking*. Still, we might have thought

---

[37]There are obvious problems with asymmetric relations. What distinguishes, for an asymmetric relation R, the truthmaker for a's being R-related to b from the truthmaker for b's being R-related to a? I think, however, that this problem equally arises for states of affairs. While discussing his principle that the same ultimate constituents constitute different states of affairs only if they are differently organised, Armstrong (1997: 121–122) claims that relations (or, at least, asymmetric relations) have a "direction", which he represents by indexing the blanks in the corresponding state-of-affairs type. It is not clear to me, however, what this 'direction' is supposed to be: a second-degree property of the relation? This will not do, as we still would not be able to explain the difference between Rab and Rba.

that we can do better than this. As David Lewis has shown in "Things qua truthmakers" (Lewis 2003), we can *provided* we are flexible about essences. For we can then postulate, for any particular a and any of a's intrinsic properties F, that there is an object, a qua F, which is identical to a and essentially F. This means that the gloss "qua F" selects a counterpart relation R_F which is such that any R_F-counterpart of a is F. a qua F then is a truthmaker for the truth that Fa and essentially so. a qua F, while it differs from a in its essence (if F was not already an essential property of a), is nothing else than a:

> "Thanks to the multiplicity of counterpart relations, we have no need to multiply entities. [...] One identical thing can have different potentialities and different essences if it has them relative to different counterpart relations." (Lewis 2003: 28)
>
> "... [Long] has different essences under different counterpart relations. The name 'Long' evokes one counterpart relation; the (novel) name "Long qua black" evokes another. The counterparts of Long qua black / Long under the second counterpart relation are just those of his counterparts under the first counterpart relation that are black." (Lewis 2003: 31)

If all the intrinsic properties of a form a property of a we have a qua just as it is which, an object which is a (non-minimal in general) truthmaker for all intrinsic predications about a and nothing other than a itself. As before, we can extend this truthmaker-producing procedure to extrinsic and relational predications. Negative existentials like "there are no unicorns" are made true by the actual world qua lacking unicorns (Lewis & Rosen 2003). As his postscript with Gideon Rosen argues, the lack of Fs, while not an intrinsic property of any ordinary object, is an intrinsic property of the world in which there are no Fs. Even if a world w may have non-total counterparts (counterparts which are only proper parts of worlds), w qua total cannot. So the actual world qua total qua lacking unicorns is a truthmaker for the negative existential "there are no unicorns". Another, though not minimal truthmaker for this truth is the actual world qua just as it is (for it's being total and it's lacking unicorns are among its intrinsic properties). If totality is an intrinsic property, the actual world qua just as it is may be identified with Armstrong's totality state of affairs, the actual world's being all there is, another 'thick' particular. I suspect it is not, however (at least it does not satisfy Lewis' criteria for intrinsicness in (Lewis & Langton 1998 Lewis 2001)), but leave that matter for the moment.

Lewis unified solution comes at a considerable price: not only do we have to be flexible about essences, we also have to distinguish the different counterpart relations by the fact that they derive from different properties of one and the same thing.[38] Exemplification, once again, becomes a mystery. While blackness, by the standard mereological argument, cannot be a part of Long (Lewis 2003: 35). We can, however, mereologically construct states of affairs, but the truthmaker we get are the fusion of Long and blackness *qua state of affairs*, which has to be distinguished from the same fusion *qua fusion* – but to consider the fusion qua state of affairs is just to consider it insofar as Long exemplifies blackness.

6   Thick universals

I think that Baxter's insight into the nature of universals – that they have their exemplifying particulars essentially – may help us here. We do not quite get truthmaker necessitarianism, but we get something that many consider as good as it: truthmaker essentialism. But let me start this last section with two preliminaries.

---

[38]Lewis expresses this by talking of "resemblance in a respect": "...counterpart relations are a matter of overall resemblance in a variety of respects. If we vary the relative importances of different respects of similarity and dissimilarity, we will get different counterpart relations. Two respects of similarity and dissimilarity among enduring things are, first, person-hood and personal traits, and, second, body-hood and bodily traits. If we assign great weight to the former, we get the *personal counterpart* relation. Only a person, or something very like a person, can resemble a person in respect of person-hood and personal traits enough to be his personal counterpart. But if we assign great weight to the latter, we get the *bodily counterpart* relation. Only a body, or something very like a body, can resemble a body in respect to body-hood and bodily traits enough to be its bodily counterpart." (Lewis 1971: 51–52)

Let me make two preliminary remarks. First, I take it that the modal account of essence is bankrupt, i.e. that it is only a necessary but not a sufficient condition for a's being essentially F that all counterparts of a are F. We will not, then, identify the essential properties of a with the properties a has in all world where it exists. Whenever a exists, it is a member of its singleton, but it is not essentially a member of its singleton (Fine 1994). Furthermore, I assume, at least for dyadic asymmetric relations R, that the relational properties $\lambda x R(x, b)$ and $\lambda x R(x, a)$ exist and that they are monadic in the sense that b and a respectively are not 'retrievable' from them.

Baxter's insight that a universal would not be the universal it is if it had different exemplifications, is best brought out in terms of possible world: framed in this language, it says that properties do not have counterparts. We may, of course, introduce counterpart relations for properties, e.g. one in which the property of being the biggest pig in w is a counterpart of the property of being the biggest pig in v, and we may say that the first is, but the second is not, exemplified by the oldest pig in my house (in w and v respectively). These singular terms do not designate, however, the property of being the biggest pig. They designate, respectively, *being the biggest pig in w* and *being the biggest pig in v*. When we say that Sam, actually the oldest pig in my house, is the biggest pig but might not have been, we say that Sam and his counterpart in v differ in that Sam has the first property, but his counterpart lacks the latter. In order for this to make sense, however, the property with respect to which they differ has to be the same. It makes no sense to say that the two properties of being the biggest pig, the one in w and the other in v, differ because they are exemplified by different particulars. They might be exemplified by different particulars and still be exactly the same – namely if the particulars were indiscernible. To say that the properties are different I would have to say that they are exemplified by dissimilar particulars – but that just means by particulars that do not have all their properties in common.[39]

We need, therefore, strict identity of properties across possible worlds. And these are the properties most aptly called "universals". To specify them, we have to say what the particulars exemplifying them are like, be they actual or merely possible. But this means that, given what the property is, it could not have been exemplified by (qualitatively) different particulars. We may, on the other hand, very well specify what a particular is without mentioning all its properties. This is the metaphysical asymmetry between universals and particulars.

Whenever a exemplifies F, two relational properties are exemplified by a and F respectively, namely *having F as a property* and *being a property of a*. The first of these just mimics F in modal behaviour. The latter, however, differs from F in at least one important respect, or so I want to claim: whenever it is had by a property G, it is an essential property of G. How is this possible? Here are some arguments from authority that it better had be possible: Aquinas thought that it is essential to the world to have been created by God but it is not essential to God to have created the world. Kripke thought that it is essential to me to have the parents I have, while it is presumably not essential to my parents to have begotten me. Fine thinks that it is essential to the set $\{a, b\}$ that a is its member while it is not essential to a to be a member of the set. That one and the same relation gives rise to relational properties that differ in whether they are exemplified essentially is precisely one of the reasons to think that the modal account of essence (a is essentially F iff a is F in all worlds in which it exists) only gives a necessary but not a sufficient criterion.

But even if there is room in logical space for the claim that *being a property of a* is exemplified essentially, while *having F as a property* for non-essential Fs is not, why should we believe it? Consider the following analogy: we may specify sets 'extensionally', by their members, or 'in-

---

[39]Heller (1998: 301–302) defines the similarity relation making for counterparthood of properties as similarity between the roles they play in their respective worlds: "To describe a property P's role completely, we say 'it is such that . . .', where the ellipsis is filled in with the rest of the description of the entire world: P is such that it has such-and-such a distribution among other properties $P1$, $P2$, and so on, that have so-and-so distributions. Where a world is a Ramsey sentence [. . .], a property's role in that world would be the open sentence that results from dropping the existential quantifier that binds that property." I just do not see how properties, if roles are defined as open sentences, can have similar roles that are not identical: they either satisfy the sentence, i.e. have the role, or not. If by similarity of role he means similarity in the *patterns* of property distributions (Heller 1998: 303), then he has not done away with cross-world property identity: for to be so-and-so distributed is a property of a distribution and to have similar patterns is in this or that respect to be identical.

tensionally', by some qualitative characteristic shared by their members. Sets, it is said, have their members essentially[40] – may we then say that some actually, but contingently, green thing a essentially is a member of the set of all and only the green things? Well, it depends. If we are talking about the set S, which we, in this world, pick out by $S = \{x \mid x \text{ is green}\}$, the answer is yes; if we are talking about $\{x \mid x \text{ is green}\}$ *tout court*, however, the right answer seems no. Both answers, however, are uncomfortable: in the first case, we have to say that it is possible that the set of all and only the green things contains things which are not green; in the second, we are not talking about one set in particular, but rather using a singular term whose referent varies from world to world.[41] But that referent cannot be a set , for sets are necessary existents. Properties are like sets in this respect: when a is contingently F, we should not say that a could not have failed to exemplify F. But this does not mean that F could have failed to be exemplified by a – if it would, it would not be the property it is.

Properties are best characterised, as we argued above, by what they bestow on the particulars exemplifying them. They are what they are *because* these, and not others, particulars exemplify them.[42] Aristotelian properties, at least, cannot exist unexemplified and they do not only owe their existence, but their nature as well to the exemplifying particulars: if they were different, the universal would be a different one from the one it actually is. Given that the universal is just these particulars, counted loosely as identical, it could not have failed to be exemplified by them.

Our problem was that, even for intrinsic predications, a, containing F as a part, does not necessitate the truth that a is F. a could lack its F part and would not then make it true that a is F. But if F has the essential property of being exemplified by a and if F is a part of a, then it is given with the truthmaker. And so it necessitates the truth that a is F. This does not make the truth necessary, for a could have lacked an F part. But given that a has an F part, the truth is necessitated. We are looking for truthmakers in this, not in other worlds.

What about negative and general truths? The truth that Theatetus is not flying is not made true by Theatetus nor by any of its parts. It is made true by the property of flying which would not exist if it were a property of Theatetus. This allows for negative truths about alien particulars – Pegasus is *not* yellow, after all. Does it allow for alien properties? If they are not impossible, it does. Properties are characterised not just by their actual, but by all their possible particulars. If they have possible exemplifications, they exist – not just possibly but actually. So they are here to make it true that they have no exemplifications.

What about general truths? That all ravens are black is made true by the fusion of the ravens, including their common blackness and raven parts. Blackness could be what it is if there were a raven lacking it. But the property of being a raven could not. Given that the black ravens are all and only the ravens there are, nothing else, and a fortiori nothing non-black could have been a raven.

What about the all-inclusive totality, the world? The world could, of course, have contained more or less things. But *existence* would not have been the same.

---

[40] Kit Fine (1981: 179) has called this "rigidity of membership": "... it is essential to the identity of a set that it have the members that it does."

[41] A related phenomenon has been argued for by Kit Fine (1977: 141) a long time ago: Think of propositions as sets of possible worlds and consider the set of *all* possible worlds. Viewed as a proposition, Fine says, this set exists necessarily: whatever our possible worlds are, they necessarily form a set (or a proper class for that matter). Viewed as a set, however, its existence depends on the existence of each possible world. If their existence were contingent, then the existence of their set would be contingent too. The universal proposition is what it is quite independently of what possible worlds there are. Sets, however, depend for their existence on their members.

[42] At least if we think of them on the model of Aristotelean properties. With respect to a more Platonic model of properties, Michael Dunn (1990: 16) might well be right (substituting, in accordance with Dunn's intentions, "essential" for "relevant"): "... membership determines relevant properties in only its second position. [...] It is interesting to contrast membership with exemplification, which very plausibly determines relevant properties (though typically not necessary ones) only in its first position, at least given a common Platonic view of properties ("forms")."

References

Armstrong, David Malet 1978a. *Nominalism & Realism: Universals and Scientific Realism, Volume I*. Cambridge: Cambridge University Press.

Armstrong, David Malet 1978b. *A Theory of Universals: Universals and Scientific Realism, Volume II*. Cambridge: Cambridge University Press.

Armstrong, David Malet 1980. *The Nature of Mind, and other Essays*. St. Lucia, Queensland: Queensland University Press.

Armstrong, David Malet 1989a. *A Combinatorial Theory of Possibility*. Cambridge: Cambridge University Press.

Armstrong, David Malet 1989b. *Universals: An Opiniated Introduction*. Boulder, Colorado: Westview Press.

Armstrong, David Malet 1997. *A World of States of Affairs*. Cambridge: Cambridge University Press.

Armstrong, David Malet 2000. "Difficult Cases in the Theory of Truthmaking". *The Monist* 83(1), pp. 150–160.

Armstrong, David Malet 2002a. "Truth and Truthmakers". In: Schantz, Richard (ed.), *What Is Truth?*, pp. 27–37. Berlin: Walter de Gruyter.

Armstrong, David Malet 2002b. "Vérifacteurs pour les vérites modales". *Revue de Métaphysique et de Morale* 4/2002, pp. 491–507.

Armstrong, David Malet 2003. "Truthmakers for modal truths". In: Lillehammer & Rodriguez-Pereyra (2003), pp. 12–24.

Armstrong, David Malet 2004. *Truth and Truthmakers*. (Cambridge Studies in Philosophy), Cambridge: Cambridge University Press.

Baxter, Donald L.M. 1988. "Identity in the Loose and Popular Sense". *Mind* 97(388), pp. 575–582.

Baxter, Donald L.M. 1989. "Identity through Time and the Discernibility of Identicals". *Analysis* 49, pp. 125–131.

Baxter, Donald L.M. 2001a. "Instantiation as Partial Identity". *Australasian Journal of Philosophy* 79(4), pp. 449–464.

Baxter, Donald L.M. 2001b. "Loose Identity and Becoming Something Else". *Noûs* 35(4), pp. 592–601.

Bradley, F.H. 1893a. *Appearance and Reality – A Metaphysical Essay*. Oxford: Clarendon Press. 2nd edition: Bradley (1930).

Bradley, F.H. 1893b. "On Professor James's Doctrine of Simple Resemblance (I)". *Mind* 2(5), pp. 83–88. Reprinted in Bradley (1935: 287–294).

Bradley, F.H. 1930. *Appearance and Reality – A Metaphysical Essay*. Second edition. Oxford: Clarendon Press.

Bradley, F.H. 1935. *Collected Essays*, volume I. Oxford: Clarendon Press.

Brentano, Franz 1933. *Kategorienlehre*. Leipzig: Felix Meiner Verlag. Edited by A. Kastil; English translation by R.M. Chisholm and N. Guterman: Brentano (1981).

Brentano, Franz 1981. *The Theory of Categories*. Den Haag: Martinus Nijhoff Publishers. English translation by R.M. Chisholm and N. Guterman of Brentano (1933).

Campbell, Keith 1990. *Abstract Particulars*. Oxford: Basil Blackwell Publishers.

Cox, Damian 1997. "The Trouble with Truth-Makers". *Pacific Philosophical Quarterly* 78(1), pp. 45–62.

Devitt, Michael 1980. " 'Ostrich Nominalism' or 'Mirage Realism' ". *Pacific Philosophical Quarterly* 61, pp. 433–439. Reprinted in Mellor & Oliver (1997).

Dunn, Michael J. 1990. "Relevant Predication III: Essential Properties". In: Dunn, Michael J. & Gupta, Anil (eds.), *Truth or Consequences: Essays in Honor of Nuel Belnap*, pp. 77–95. Dordrecht: Kluwer Academic Publishers.

Ewing, A.C. 1934. *Idealism, A Critical Survey*. London: Methuen & Co.

Fine, Kit 1977. "Properties, Propositions and Sets". *The Journal of Philosophical Logic* 6(2), pp. 135–191.

Fine, Kit 1981. "First-Order Modal Theories I – Sets". *Noûs* 15, pp. 177–205.

Fine, Kit 1994. "Essence and Modality". In: Tomberlin, James E. (ed.), *Philosophical Perspectives 8: Logic and Language*, pp. 1–16. Oxford: Basil Blackwell Publishers. The Second Philosophical Perspectives Lecture.

Fox, John F 1987. "Truthmaker". *Australasian Journal of Philosophy* 65, pp. 188–207.

Heller, Mark 1998. "Property Counterparts in Ersatz Worlds". *The Journal of Philosophy* 95(6), pp. 293–316.

Hochberg, Herbert 1988. "A Refutation of Moderate Nominalism". *Australasian Journal of Philosophy* 66, pp. 188–207.

Hochberg, Herbert 1999. *Complexes and Consciousness.* Stockholm: Thales.

Jackson, Frank 1994. "Armchair metaphysics". In: Michaelis, Michael & O'Leary Hawthorne, John (eds.), *Philosophy in Mind: the Place of Philosophy in the Study of Mind*, pp. 23–42. Dordrecht: Kluwer Academic Publishers. Reprinted in Jackson (1998b) and elaborated into the first three chapters of Jackson (1998a).

Jackson, Frank 1998a. *From Metaphysics to Ethics: A Defense of Conceptual Analysis.* Oxford: Oxford University Press.

Jackson, Frank 1998b. *Mind, Method, and Conditionals: Selected Essays.* London: Routledge. ISBN 0415165741 (hardcover).

Lewis, David K. 1971. "Counterparts of Persons and Their Bodies". *The Journal of Philosophy* 68, pp. 203–11. Reprinted in Lewis (1983b).

Lewis, David K. 1983a. "New Work for a Theory of Universals". *Australasian Journal of Philosophy* 61, pp. 343–377. Reprinted in Lewis (1999: 8–55).

Lewis, David K. 1983b. *Philosophical Papers*, volume 1. Oxford: Oxford University Press.

Lewis, David K. 1986a. "Against Structured Universals". *Australasian Journal of Philosophy* 64, pp. 25–46. Reprinted in Lewis (1999: 78–107).

Lewis, David K. 1986b. *On the Plurality of Worlds.* Oxford: Basil Blackwell Publishers.

Lewis, David K. 1986c. *Philosophical Papers*, volume 2. Oxford: Oxford University Press.

Lewis, David K. 1998. "A world of truthmakers? Review of Armstrong (1997)". *Times Literary Supplement* 14.02.02, p. 30. Reprinted in Lewis (1999: 215–229).

Lewis, David K. 1999. *Papers in Metaphysics and Epistemology.* Cambridge: Cambridge University Press. ISBN 521582482.

Lewis, David K. 2001. "Redefining "Intrinsic"". *Philosophy and Phenomenological Research* 63(2), pp. 381–398.

Lewis, David K. 2003. "Things qua Truthmakers". In: Lillehammer & Rodriguez-Pereyra (2003), pp. 25–38.

Lewis, David K. & Langton, Rae 1998. "Defining "intrinsic"". *Philosophy and Phenomenological Research* 58(2), pp. 333–345. Reprinted in Lewis (1999: 116–132).

Lewis, David K. & Rosen, Gideon 2003. "Postscript to "Things qua Truthmakers": negative existentials". In: Lillehammer & Rodriguez-Pereyra (2003), pp. 39–42.

Lillehammer, Hallvard & Rodriguez-Pereyra, Gonzalo (eds.) 2003. *Real Metaphysics – Essays in honour of D.H. Mellor.* Routledge Studies in twentieth-century Philosophy, London: Routledge.

Linsky, Bernard 1994. "Truth Makers for Modal Propositions". *The Monist* 77, pp. 192–206.

Mellor, D.H. & Oliver, Alex (eds.) 1997. *Properties.* Oxford: Oxford University Press.

Molnar, George 2000. "Truthmakers for Negative Truths". *Australasian Journal of Philosophy* 78(1), pp. 72–86.

Moore, George Edward 1919–1920. "External and Internal Relations". *Proceedings of the Aristotelian Society* 20, pp. 40–62. Reprinted in Moore (1922: 253–275).

Moore, George Edward 1922. *Philosophical Studies.* London: Routledge and Kegan Paul, Ltd.

Mulligan, Kevin 1993. "Internal Relations". In: Garrett, Brian J. & Menzies, Peter (eds.), *Working Papers in Philosophy*, volume 2, pp. 1–22. Canberra: RSSS Australasian National University.

Mulligan, Kevin 1998. "Relations – Through Thick and Thin". *Erkenntnis* 48, pp. 325–353.

Mulligan, Kevin 2000. "Métaphysique et Ontologie". In: Engel, Pascal (ed.), *Précis de philosophie analytique*, pp. 5—33. Paris: Presses Universitaires de France.

Mulligan, Kevin 2003. "The Truth-Truthmaking Tie". To appear in the Proceedings of the 2002 Manchester Truth-Making Conference.

Mulligan, Kevin, Simons, Peter & Smith, Barry 1984. "Truth-Makers". *Philosophy and Phenomenological Research* 44, pp. 287–321.

Parsons, Josh 1999. "There is no 'Truthmaker' Argument against Nominalism". *Australasian Journal of Philosophy* 77(3), pp. 325–334.

Restall, Greg 1996. "Truthmakers, Entailment and Necessity". *Australasian Journal of Philosophy* 74(2), pp. 331–340.

Simons, Peter 1994. "Particulars in Particular Clothing: Three Trope Theories of Substance". *Philosophy and Phenomenological Research* 54, pp. 553–557.

Simons, Peter 2000. "Truth-Maker Optimalism". *Logique et Analyse* 43(169–170).

Smith, Barry 1999. "Truthmaker Realism". *Australasian Journal of Philosophy* 77(3), pp. 274–291.

Smith, Barry & Brogaard, Berit 2000. "A Unified Theory of Truth and Reference". *Logique et Analyse* 43(169–170).

Wittgenstein, Ludwig 1921. "Logisch-philosophische Abhandlung". *Annalen der Natur- und Kunstphilosophie* 14, pp. 184–261. Cited after Wittgenstein (1998).

Wittgenstein, Ludwig 1998. *Logisch-philosophische Abhandlung / Tractatus logico-philosophicus.* Frankfurt a.M.: Suhrkamp Verlag. Critical ed. by Brian McGuiness and Joachim Schulte.