

A Relation as the Unifier of States of Affairs

Bo R. MEINERTSEN

Published in *dialectica* 62 (2008), pp. 1-19

(Atomic first-order) states of affairs are instantiations of properties or relations by particulars. If and only if particulars x_1, \dots, x_n instantiate a property or relation, Ψ , there is the state of affairs that is the instantiation of Ψ by x_1, \dots, x_n .¹ Examples are monadic ones such as Plato's being bearded and polyadic ones such as Edinburgh's being north of London. A perennial problem for ontologies of states of affairs is to account for the way in which the constituents of a state of affairs are linked together in it. A classic attempt to solve this problem by positing a relation in the state of affairs to connect its constituents allegedly leads to an infinite regress, known as 'Bradley's regress', which is usually believed to be vicious (cf. Bergmann 1967, 9; Armstrong 1997, 114; Dodd 1999, 150) – in my view, correctly – and it is often held that as there is no viable alternative solution to the problem, states of affairs are untenable. Accounting for 'the way in which the constituents of a state of affairs are linked together in it' on my view principally involves accounting for the unity of a state of affairs, or a state of affairs's being unified, i.e. being one (Latin: unus) entity. In this paper, I shall attempt to provide such an account by arguing that a state of affairs is unified by a unique relation in it *without* giving rise to Bradley's regress. Crucially, this relation is (1) what I call 'naive': it is related to its relata; and (2) what I call 'self-relating': it is related to its relata by *itself*.

1. The problem of unity

What does the task of accounting for the unity of a state of affairs consist in, i.e. what is or are the relevant *explanandum* or *explananda*? Answering this question requires some preliminaries, but, as a first approximation, we can say that because states of affairs are complexes, it involves solving (for states of affairs) what Donald Mertz calls the 'problem of complexity' and defines as follows:

What account can be given of the unity of a complex which as such is a heterogeneous whole, a one and a many, whose constituents each remain distinct yet are unified into a further distinct whole, itself with new supervening properties and relations not possessed by the elements, singly or as a class? (1996, 16)

¹ As indicated by the expressions 'instantiate' and 'instantiation', I assume that properties and relations are (multiply) instantiable. The traditional notion of such a property or relation is of course that of a universal (though strictly speaking universals are merely one of several candidates for the ontological role played by such properties and relations).

It is hard to deny that this is a serious philosophical problem, for as Mertz goes on to say: ‘Complexes are ubiquitous, from the predication of a property to a subject, to the structure of atoms, to the neuro-network making up a central nervous system, to the universe and every subpart of it as spatiotemporal, causal micro- and macrostructure’ (ibid.). In order to appreciate the problem, let us ignore the addition about ‘supervening properties and relations’ in the first quotation and put the gist more simply:

(PC) In virtue of what do the many constituents of a complex give rise to one new entity, the complex?

The problem of complexity, and thus providing an answer to (PC), is particularly important for complexes with non-mereological existence conditions, which include all states of affairs. What this means can be seen from the following. Call the ordinary, uncontroversial constituents of a state of affairs its ‘material constituents’ (as opposed to its ‘formal constituents’, if any), e.g. a , b , and R of the state of affairs $R(a, b)$.² The mere existence of the material constituents of a state of affairs (in our sense, of course – a qualification we shall generally understand) does not entail the existence of the state of affairs.³ For if, to take a monadic example, (i) a is G , and (ii) a distinct particular b is F , and (iii) it is not the case that a is F , then a and F coexist, but a is not F . Because a and F coexist, the (mereological) sum of them exists, but as a is not F , a ’s being F does not exist. Similarly in other cases. Because of this difference in existence conditions, one might say that states of affairs are ‘non-mereological complexes’ and that sums are ‘mereological complexes’.⁴

An instructive consequence of these observations about the non-mereological existence conditions of states of affairs is that accounting for the way in which the constituents of a state of affairs are linked together in it (i.e. solving the problem of complexity for states of affairs) is equivalent to specifying the difference between a state of affairs and the sum of its constituents. For

² I refer to states of affairs with names like ‘ $R(a, b)$ ’ and ‘ a ’s being F ’ (or ‘ Fa ’). The former refers to the state of affairs that is the instantiation of the relation R by a and b ; the latter to the state of affairs that is the instantiation of the property F by a . These names should thus not be confused with the typographically similar expressions in first-order logic.

³ This view, that the existence conditions of a state of affairs are ‘contingent’, is very common – but, unsurprisingly, there are exceptions to it, e.g. the later Armstrong (2004).

⁴ In thus contrasting the existence conditions of a sum with those of a state of affairs, I have assumed for the constituents of states of affairs something like Lewis’s Principle of Unrestricted Composition, a thesis he describes as follows: ‘whenever there are some things, no matter how many or how unrelated or disparate in character they may be, they have a mereological [sum]’ (Lewis 1991, 7).

instance, whatever explains the way in which R , a , and b are unified into the state of affairs $R(a, b)$ also identifies the difference between this state of affairs and the sum $[R + a + b]$.

Because we shall be looking specifically at states of affairs, it will be convenient to have a handier name for the problem of complexity for them: we shall call it the problem of unity. A satisfactory solution to this problem must explain the *explanandum*:

(E) The constituents of a state of affairs are non-mereologically unified into it.

Equivalently, it must answer the question:

(E') How are the constituents of a state of affairs non-mereologically unified into it?⁵

Providing an answer to (E') is, in effect, to answer (PC) for the case of states of affairs. This paper does this by arguing that a state of affairs has a unique relation as constituent which, without leading to Bradley's regress, links all its constituents together and thereby non-mereologically unifies it. As we shall see, each of the alternative solution attempts to be examined fails to answer this, either because it only does it at the price of yielding Bradley's regress (§3), or else because it fails to answer it simpliciter (§4).

2. Relational internalism

It should be stressed that it is just my preference here to formulate the problem by using the notion of unity; other philosophers have chosen different expressions –literal or metaphorical – for what is essentially the same explanandum, especially ones that involve the notion of relation, e.g. how certain entities can be 'tied into' complexes (Bergmann 1967, 9); the problem of 'one thing's being related to another' (Fisk 1972, 139); 'how two things can be connected with each other' (Grossmann 1983, 169); how 'to bind together the constituents of a state of affairs' (Armstrong 1997, 119). That there are thus several ways of formulating the problem of unity should not lead one to overlook the fact that it is not identical to either of the two following closely related problems. First, the well-known 'problem of instantiation', i.e. the problem of the nature of the relationship between properties and relations and their instances (what instantiate them) –given that neither properties and relations nor their instances are just bundles, sets, or aggregates of each other – is clearly a more specific topic. Second, as is indicated by the abovementioned view that Bradley's regress follows

⁵ Note that 'constituents', 'into it', and 'non-mereologically' are just included in (E) and (E') for clarifying purposes. Truncated, but basically adequate, variants of (E) and (E') are simply: 'A state of affairs is unified' and 'How is a state of affairs unified?', respectively.

from a certain attempt at solving the problem of unity, the problem of Bradley's regress – how to avoid it – is not the same as the problem of unity. This is reflected in the fact that, as we shall see in §§3 and 4, the two problems can be solved, or not solved, independently of each other.

The general approach of this paper to the problem of unity is what I call relational internalism: a necessary and sufficient condition for a state of affairs's being unified is that some relation in it relates its other constituents; that is, a state of affairs is unified by (in virtue of) this relation's relating. This relation is usually considered to be a formal (topic-neutral) relation, being asserted as a constituent of any state of affairs, no matter what ontological type, (physical, mental, abstract, etc.) – but on one or two views, to be considered in §4, it is material. In either case, call this relation a U-relation, and abbreviate this 'U' whenever convenient. I shall assume that there can be a plurality of such entities – U-relations – each falling under different subtypes of U-relation, and of course also under the same most general type of U-relation, 'the U-relation'. (Corresponding to this, it is usually immaterial whether we talk in singular about a, or the, 'U-relation', or in plural about 'U-relations'.) Furthermore, for convenience of exposition, when naming any species of relational internalism, I shall generally understand the qualification 'relational' (thus e.g. 'naive internalism' rather than 'naive relational internalism'). In addition, for the same reason, I shall mostly understand that U does not just relate the state of affairs's material constituents simpliciter; it relates its material property or relation, Ψ , to what instantiates it, x_1, \dots, x_n .⁶

Needless to say, the mere postulation of U as a (formal) constituent of a state of affairs does not solve the problem of unity: it does not explain how the constituents of a state of affairs are unified into it, or equivalently, it does not explain the difference between a state of affairs and the mere sum of its constituents. Consider as an example the state of affairs $R(a, b)$. The sum $[R + a + b]$ exists whenever R , a , and b jointly exist, but this can be the case without $R(a, b)$ existing. The introduction

⁶ Examinations of relational internalism as well as of the problem of unity itself are quite rare in contemporary philosophy, despite their obvious importance for the topic of states of affairs, entities notably central to the recent metaphysics of Armstrong (1997). Some of the few exceptions to this neglect should be mentioned. One of the most important is William Vallicella (2000; 2002), who examines in detail a problem very similar to (E'). He even calls it the 'problem of unity' (2002, 14), although less pronouncedly than I use that expression. However, his problem is more extensive than ours, for he requires, it seems, that the unifier of a state of affairs, when it unifies, must somehow explain or ground that it unifies or, equivalently, ground its unification. Thus he says of his U that it 'contingently grounds its grounding of the unity of a fact's constituents' (ibid. 30; original emphasis). Now, on relational internalism U relates and hence unifies – grounds the unity of the state of affairs, if you like. How it does this, how it relates, is what I understand by 'the problem of unity'. The fact of its doing this, the fact of its relating – what I call its 'relating per se' – is not included in this. It is no surprise that the successful approach to Vallicella's problem manifestly is not relational internalist. Thus, for instance, he considers God and what he calls 'our own freedom' (on a libertarian theory of freedom of the will) as candidates for U. For other approaches which are not relational internalist either (but which prima facie address our problem of unity), see e.g. Herbert Hochberg (1999, 172); Donald Baxter (2001, 449ff); and – for the well-known attempt to make use of the Fregean concept of 'unsaturatedness' – Armstrong (1997, 29). These approaches are in my view untenable, but it is beyond the scope of the present paper to argue for this.

of U does not change this fact. Because U is a kind of universal, or at least multiply instantiable like other relations (cf. footnote 1), it can of course coexist with R , a , and b without these entities constituting this state of affairs. Equivalently, the sum $[U + R + a + b]$ can exist without $R(a, b)$ existing. The state of affairs exists if, and only if, U actually relates (and hence unifies) R , a , and b into $R(a, b)$.

Someone might deny that the U -relation's relating of what it relates is sufficient for its unifying of what it relates, whatever view one has of the requirement that its relating be necessary as well. However, by definition, on relational internalism it is sufficient. It is not my job in this paper to defend this (which to a considerable extent is indirect – by involving a refutation of the alternatives to relational internalism, cf. footnote 6 above); it is just something I shall assume. But it does seem very natural to do this, just as it seems intuitive that, for instance, you get one chain by putting its many links in the right topological relations to each other.

However, the fact that on relational internalism the U -relation's relating of its relata is sufficient for its unifying them does not mean that relational internalism solves the problem of unity by postulating this relation and merely claiming that it unifies the state of affairs when it relates the constituents of a state of affairs. For, I shall also assume, relational internalism gives rise to the following special case of question (E'):

(ER) How does U relate its relata?

For the relational internalist, answering this amounts to answering (PC) for the case of states of affairs. Thus, *any relational internalist solution to the problem of unity must answer (ER)*. It should be emphasized, however, that this desideratum does not mean that such a solution has to account for U 's relating (of its relata) in itself – what I call its 'relating per se'. Roughly, a relating per se is the relating of a relation in abstraction from entities or conditions that the relating presupposes, such as the state of affairs in which it occurs, the relation of which it is a relating, the relata of this relation (qua relata), etc. In my view, relatings per se are primitive (matters of brute fact; cf. footnote 16). Thus, it is prima facie a satisfactory answer to (ER) to say simply that U is related to its relata. Clearly, this does not 'explain' U 's relating per se; on the contrary, it merely presupposes some (other?) relating per se – precisely the one involved in U 's being related to its relata. Further, notice that answering (ER) entails answering (E'), but not conversely. Because, as we shall see in §4, some versions of relational internalism answer (E') but not (ER), they therefore fail.

All of the four versions of relational internalism I shall focus on before presenting my own can be found in the literature. The first and in many respects most natural, and certainly the most familiar one, to be examined in the following section, comes in a very inchoate shape. For this reason, my account of it is more an explication of what I think it ought to look like than a representation of a

held view. The three others, to be considered in §4, can be found in a more developed form, but may still have to undergo considerable streamlining to fit into this paper. As our purposes are entirely non-exegetical, however, that is of no consequence.

3. Naive internalism and relational unification

On relational internalism, any state of affairs is unified if and only if a unifying relation U in it links its material constituents together. This answers (E'). But this tells us nothing about how U relates these constituents (i.e. its relata), that is, it does not answer (ER). As a minimum, it seems, a further thesis is needed as supplement to answer this. Let this thesis be the plausible assumption that U relates its relata by (in virtue of) being related to them. Call the resulting position naive internalism. This view itself branches into at least two species. The species I shall consider first is the view that, roughly, (i) U is related to its relata by a further relation, U' , (ii) which in turn is related to its relata by yet a further relation, U'' , (iii) and – as it seems the same thing will always recur – so on indefinitely. Call this intuitive version of naive internalism *common internalism*.⁷ More precisely, it is the view that:

(CI) For all monadic states of affairs s_m and for all polyadic states of affairs s_p , s_m is unified iff there is an x and there is a Φ such that (i) $U(\Phi, x)$ exists, (ii) $U'(U, \Phi, x)$ exists, (iii) $U''(U', U, \Phi, x)$ exists, etc. and $s_m = U(\Phi, x), U'(U, \Phi, x), U''(U', U, \Phi, x), \dots$ and s_p is unified iff there is x_1, \dots, x_n and there is an R_n such that (iv) $U(R_n, x_1, \dots, x_n)$ exists, (v) $U'(U, R_n, x_1, \dots, x_n)$ exists, (vi) $U''(U', U, R_n, x_1, \dots, x_n)$ exists, etc. and $s_p = U(R_n, x_1, \dots, x_n), U'(U, R_n, x_1, \dots, x_n), U''(U', U, R_n, x_1, \dots, x_n), \dots$ ⁸

What, if fully spelt out, amounts to common internalism is, to my knowledge, the only version of naive internalism which occurs in the literature, where it might be seen as a flawed account of what links particulars and universals together (e.g. Armstrong 1997, 114) or a hopeless attempt to defend states of affairs – either as explicit entities (e.g. Dodd 1999, 150) or as what proponents of states of affairs would analyse as involving them (e.g. Fisk 1972, 141–142).

⁷ It seems natural if a common internalist posits a relation of instantiation (exemplification) and identifies it with U , or lets it play its ontological role (correspondingly, postulates relations of instantiation and identify them with, or lets them play the ontological roles of, U, U', U'' , etc.). However, given that the problem of unity is not the problem of instantiation (cf. §2), this is an independent thesis and hence not an issue we need to consider.

⁸ The state of affairs is thus identified with a series (whose terms are separated by the commas after the identity sign).

The fact that this has been its fate is not surprising, as it can easily be seen to yield Bradley's regress: in a rough formulation, this regress is simply the result of reading 'etc.' in (CI) as 'etc. ad *infinitum*' – 'Bradley's regress' is then short for 'Bradley's *infinite* regress'.⁹ This is a natural reading, for there seems to be nothing in common internalism that stops the series it launches. And, as it is often correctly maintained, this infinitism means that the regress is vicious: the task of unifying the initial state of affairs cannot go on endlessly if it is to be successful.¹⁰

Like any other vicious infinite regress, Bradley's regress does not by itself tell us which assumption to reject to evade it. Rejecting relational internalism is of course not one, as this is our general approach. What, then, are our options? To find out, it is necessary to explicate two crucial metaphysical principles, presupposed by the regress. Recall first that any relational internalism must answer (ER), i.e. how U relates its relata. As pointed out above, as a minimum, this seems to call for the tenet that U is related to its relata, i.e. it requires taking the step from the genus, relational internalism, to its species, naive internalism. This step corresponds to the following metaphysical principle:

(PU1) For all U-relations X, if X relates something to entities E_1, \dots, E_n , then X is related to E_1, \dots, E_n .

As we shall see in the next section, not all relational internalists accept this principle. But because it is the characteristic differentia of naive internalism, it is *essential* to both this and common internalism (as the latter is a species of the former and hence essentially includes it as a conjunct).

However, the thesis that U is related to its relata prompts the further question:

(ER') How is U related to its relata?

An answer to this question is suggested by the move from naive internalism to the species common internalism, that is, by maintaining that (i) U is related to its relata by a further relation, U', (ii) which in turn is related to its relata by yet a further relation, U'', (iii) and so on ad infinitum. Taking this step corresponds to another metaphysical principle:

(PU2) For all U-relations X, if X is related to entities E_1, \dots, E_n , then there is a U-relation Y that relates X to E_1, \dots, E_n and $X \neq Y$.

⁹ This seems, in essence, also to be the kind of regress expressed by some of Bradley's own formulations, e.g. Bradley 1897, 32–33.

¹⁰ Arguing for this view involves a detailed analysis of the regress, which space does not allow me to provide here.

Like (PU1), this principle is very plausible. In general, if a relation is related to its relata, then it seem there has to an entity in virtue of which this relating holds, and the most natural assumption is that this entity is a relation. Thus, even though (PU2) is closely associated with Bradley's regress, it seems that it should be upheld.

4. Classic internalism

On the basis of the two preceding paragraphs, to search for another way of escaping Bradley's regress seems more attractive than rejecting (PU2). One such way is to reject (PU1), the distinguishing principle of naive internalism. Call the position resulting from making this move *classic internalism*. We shall consider three species of this view. The first, implied by Russell (1903, 50; 1910, 375), denies that states of affairs are unified by a formal relation: it maintains instead that the material relation in a state of affairs performs the task (i.e. it identifies U with this relation or, if you please, lets the material relation play the ontological role of unification). The motivation for this Russellian position is simply the view that, trivially, any relation, when it relates – *qua* being a relating relation – relates its relata. Further, because (PU1) has been abandoned, a relation is precisely held to do this without being related to its relata. Call this view *Russellian internalism*.¹¹

So, by rejecting (PU1), Russellian internalism avoids Bradley's regress. At first sight this feature makes it seem very attractive: here we have a species of relational internalism that does not lead to Bradley's pernicious regress. But does it also solve the problem of unity, the main task of any relational internalism? Well, it surely answers (E'): the constituents of a state of affairs are non-mereologically unified into it in virtue of the material relation's relating its relata. However, as a relational internalism, it must of course also answer (ER). Intuitively, this it quite simply fails to do: it says nothing non-trivial at all about *how* material relations relate their relata. All it can say is that, when existing in states of affairs where they relate, they just do – '*qua* being relating relations'. Even if one disagrees with this assessment, another objection to Russellian internalism shows that it clearly fails. The objection is that, plainly, it does not solve the problem of unity for *monadic* states

¹¹ Someone might object to our claim that Russellian internalism rejects (PU1), on the grounds that it neither postulates nor considers U-relations, and that asserting that it rejects (or accepts) (PU1) therefore makes no sense. However, it is reasonable to make this assertion, for the following reason. We may say that it considers U-relations indirectly – either in a strict or in a loose sense. The strict sense is this: because, as claimed above, it identifies U with the material relation of a state of affairs (or lets the material relation play the ontological role of unification), it indirectly posits U-relations. And the loose sense it this: as U-relations, like material relations, are after all relations, we may say that Russellian internalism, by its tenet that (material) relations are not related to their relata, implies or suggests the U-relation is no exception. In the first sense, it rejects (PU1) in virtue of denying that the U-relation is related to its relata; in the second sense, it rejects it in virtue of denying that any relation is related to its relata.

of affairs, as by definition they do not contain any material relations. Hence, even if material relations, ‘when they relate’, can unify polyadic states of affairs, and Russellian internalism therefore solves the problem of unity for them, one must add a solution for the monadic case. As we saw in the previous section, common internalism provides no such solution without leading to Bradley’s regress.

Of course, the Russellian internalist might rejoin to this particular objection by maintaining that there is no categorial difference between relations and properties; that properties are indeed just ‘monadic relations’, as Russell himself claimed (1918, 199). Given this, a corresponding view for the unity of monadic states of affairs might be to propose something like ‘A property qualifies and hence unifies.’ But I would reject that there is no categorial difference between properties and relations and that the former (in any way relevant to relational internalism) is merely a special case of the latter. Defending this would take us too far afield, but fortunately it seems clear that the onus of proof is on advocates of this onto-logically highly counterintuitive view. (To my knowledge, this has not been met, not even by one of the most important contemporary advocates of it, Donald Mertz (1996).)

In any case, however, one might think only a minor addition is needed to do the trick: posit a U-relation in monadic states of affairs that, analogously to a material relation on Russellian internalism, is not related to its relata. Call the conjunction of this view of monadic states of affairs and Russellian internalism *hybrid internalism*. Reinhardt Grossmann (1983), in effect, proposes this view, and is, as far as I know, its only adherent.¹² It is clearly flawed: because Russellian internalism (for polyadic states of affairs) fails due to not providing a (non-trivial) answer to (ER), and hybrid internalism includes it as its only answer to the problem of unity for polyadic states of affairs, it fails too.

So, obviously, the relational internalist must at least posit a U-relation for *both* polyadic *and* monadic states of affairs. Let this be a U-relation which, like the one of hybrid internalism, is not related to its relata. The resultant view, call it *regular internalism*, which is as it were the paradigmatic classic internalism, is in effect the one held by Gustav Bergmann (1967).¹³ (It is also very similar to Strawson’s well-known view (1959) of the copula as a ‘non-relational tie’.)

¹² He postulates a relation of instantiation – a ‘nexus of exemplification’, as he calls it – in monadic states of affairs and in effect identifies it with U (or lets it play the ontological role of U). Because (PU1) is directly about U-relations, the concept of which Grossmann does not have, he of course does not explicitly consider it. Nonetheless, it is sensible to claim that he rejects it, for the following two reasons. Firstly, his position incorporates Russellian internalism (which, as we saw in the previous note, rejects it). Secondly, he maintains explicitly that relations are not related to their relata (Grossman 1983, 169), and implies that the U-relation is no exception (cf. *ibid.*, 119).

¹³ Like Grossmann for monadic states of affairs, Bergmann in effect identifies U with (or lets its ontological role be played by) a ‘nexus of exemplification’.

By rejecting (PU1), regular internalism of course avoids Bradley's regress – in the same way as the two previous species of classic internalism. But does it solve the problem of unity? It certainly answers (E'): the constituents of a state of affairs are non-mereologically unified into it in virtue of U's relating its relata together. However, like Russellian internalism, it fails to answer (ER): it too says nothing non-trivial about how U relates its relata. All it can say is that it just does. Adding that 'U is not related to its relata' does not change this in the least: it is simply irrelevant to the question. By the same token, hybrid internalism also fails to answer (ER) for *monadic* states of affairs. In short, each version of classic internalism fails to solve the problem of unity. That it nonetheless avoids Bradley's regress is evidence that, as pointed out above (§2), the problem of unity and the problem of Bradley's regress (how to avoid it) are two.

At this point, the classic internalist might put forward a 'global' response. She might reject my criticism on the grounds that she simply *does not recognize* (ER) – by saying something along the lines of 'On my view, the U-relation relates its relata and thereby unifies a state of affairs. Full stop. There is simply no 'how' to it. Therefore, it is begging the question to maintain, as you do, that any relational internalist solution to the problem of unity must answer (ER).' If this objection is plausible – and that I think is a big 'if' – my first response will be very quick indeed: *tu quoque!* I say rejecting (ER) for no independent reason, as the classical internalist does, is begging the question against *me* (my formulation of the problem of unity on relational internalism).

However, what clearly would be an illegitimate position for me would be to maintain that a non-trivial answer to (ER) can be given only if U is related to its relata, i.e. if (PU1) is upheld. This would obviously be begging the question against the classic internalist, because she precisely rejects (PU1). Fortunately, I merely claim that holding that U is related to its relata is one way of enabling such an answer, which, alas, on natural assumptions, leads to Bradley's regress, as we have seen. There might be *another* way. But, even if there is, classic internalism does not suggest, let alone provide, any.

5. Self-relating internalism

Relational internalism seems to have reached an impasse: what is apparently the only version of naive internalism, common internalism, answers (ER), but leads to Bradley's regress; any species of classic internalism, by discarding (PU1), steers clear of this regress, but is then unable to answer (ER). However, we can cut the relational internalist's knot by maintaining that the U-relation at the first level in the regress, e.g. U in the dyadic state of affairs $U(R, a, b)$, although related to its relata by a relation, does not need a distinct relation to be related in this way. That is, we can reject (PU2)

but keep (PU1). The way to do this is to hold that the U-relation is related to its relata by *itself*.¹⁴ Call this view, a second species of naive internalism, *self-relating internalism* (using ‘self-relating’ as a noun), or ‘SR-internalism’ for short. It is not difficult to see that this will allow us to answer (ER) but avoid Bradley’s regress.

In a word, according to SR-internalism, for any state of affairs, the unifier U, a constituent of the state of affairs, unifies it by relating itself to the other constituents of the state of affairs. To put it differently, in any state of affairs, U is related to the other constituents by U itself. Thereby U unifies the state of affairs. Thus, U unifies without the need for any further U-relation; a single U-relation suffices. To emphasize this self-relating ability of U, I shall call it the ‘U*-relation’.¹⁵

What is self-relating? It can be characterized most generally as follows:

(SRR) For all R_n , R_n is self-relating iff (i) there is x_1, \dots, x_n such that $R_n(x_1, \dots, x_n)$ and (ii) $R_n = x_1$,
or..., $R_n = x_n$

Note that it should not be mixed up with reflexivity. Reflexivity is when a relation only has one relatum; self-relating (in the present sense) is when a relation has itself as relatum. The two phenomena are coincident, one might say, just in the case where a reflexive relation has itself as its relatum, i.e. when in (SRR) $n = 1$ and $R = x_1$ (e.g. in the case of the (putative) relation of identity, which of course is identical to itself). However, I concur with Armstrong (1978, II, 91–93) that there are in fact no reflexive relations, as opposed to reflexive predicates or concepts, and given this, such a coincidence is immaterial in the present context. In short, given this, self-relating is when a relation has itself as one of its relata.

(SRR) is neutral between naive and classic internalism, as it does not require that the self-relating relation, R_n , be related to its relata; only that it relate them. It is consistent with denying (PU1). As we have rejected classic internalism, we can obtain a more substantial definition of self-relating by simply adding this requirement:

(SRR*) For all R_n , R_n is self-relating iff (i) there is x_1, \dots, x_n such that $R_n(x_1, \dots, x_n)$ and (ii) $R_n = x_1$,
or..., $R_n = x_n$ and (iii) R_n is related to $x_1, \text{and} \dots, x_n$.

¹⁴ (PU2) is thus rejected only by denying its conjunct that $X \neq Y$; its intuitive claim that, roughly, a U-relation is related to its relata by a U-relation is maintained.

¹⁵ Perhaps this relation should be identified with, or have its ontological role played by, a relation of instantiation, but this is an independent thesis, just like the similar claim in common internalism, hybrid internalism, and regular internalism (cf. footnotes 7, 12, and 13 above).

On SR-internalism, a state of affairs is unified if and only if the U^* -relation relates itself to the material constituents of the state of affairs. For example, the state of affairs of $R(a, b)$ is unified if and only if the U^* -relation relates itself to R , a , and b or, alternatively put, if and only if the U^* -relation is related to R , a , and b by itself. Let us express SR-internalism as follows:

(SRI) For all monadic states of affairs s_m and for all polyadic states of affairs s_p , s_m is unified iff there is an x and there is a Φ such that $U^*(U^*, \Phi, x)$ exists and $s_m = U^*(U^*, x, \Phi)$ and s_p is unified iff there is x_1, \dots, x_n and there is an R_n such that $U^*(U^*, R_n, x_1, \dots, x_n)$ exists and $s_p = U^*(U^*, R_n, x_1, \dots, x_n)$.

(It should be noted that it is purely conventional that in the state of affairs names I have put ‘ U^* ’ in the first place inside the parentheses with the names of the relata. It might as well have been put in the last place. However, I would not place it anywhere in between, as this would be more likely than either of these options to give the wrong impression that U^* is on a par with the material constituents of the state of affairs, as it were.)

It is easy to see that SR-internalism answers (ER), the question of how the unifying relation relates its relata. For, unlike classic internalism, it says something non-trivial, if very simple, about how the U^* -relation relates its relata: it does this in virtue of being related to them. As a species of naive internalism, it must also answer (ER’), the question of how the unifying relation is related to its relata. This it does as well: the U^* -relation is related to its relata by an entity fit for the task –viz. the U^* -relation itself! In other words, the state of affairs $R(a, b)$ – to use this example again – is unified in virtue of the U^* -relation’s relating R , a , and b , and this relation is related to them by itself (i.e. it is itself one its relata): $U^*(U^*, R, a, b)$. The state of affairs $R(a, b)$ is thus really identical to the state of affairs $U^*(U^*, R, a, b)$; or, if you please, the name ‘ $R(a, b)$ ’ is in fact elliptic for ‘ $U^*(U^*, R, a, b)$ ’.

Having thus shown that SR-internalism answers (ER) and (ER’), we now face the question whether it does this without yielding Bradley’s regress. Yes, it succeeds at this point as well, for the simple reason that, unlike common internalism, it does not introduce a further relation to link the unifier to its relata: in our example, $U^*(U^*, R, a, b)$ – i.e. the state of affairs of the U^* -relation’s relating itself to R , a and b – the U^* -relation is related to its relata by itself. Because no further relation is introduced to relate the U^* -relation to its relata, the regress cannot get started.

As we saw in §1, a useful consequence of the non-mereological existence conditions of states of affairs is that we can consider an answer to the problem of unity as equivalent to identifying the difference between a state of affairs and the sum of its constituents. Having finally discovered a tenable relational internalism, we should ask what this difference is according to SR-internalism? The answer is simple: in the state of affairs U^* actually relates and hence unifies the constituents (by

relating itself to them); in the sum in does not. For instance, the difference between the state of affairs $R(a, b)$ – i.e. on SR-internalism the state of affairs $U^*(U^*, R, a, b)$ – and the sum $[U^* + R + a + b]$, a sum which in accordance with the non-mereological existence conditions of states of affairs of course can exist without $U^*(U^*, R, a, b)$ existing, is that in the state of affairs U^* actually relates and hence unifies its constituents. In a word, in the state of affairs U^* relates; in the sum it does not.

In *The Principles of Mathematics*, Russell neatly stated what this difference is when we look at the unifying relation on its own, as it were. It is, he claimed, ‘the difference between a relation in itself and a relation actually relating’ (49).

What can we say about this difference between the U^* -relation ‘in itself’ and the U^* -relation ‘actually relating’? Not much. Fortunately, we do not have to. For the U^* -relation actually relating, i.e. its relating, is precisely its relating per se. And as I pointed out in §2, accounting for U^* ’s relating per se is an entirely different issue from the problem of unity.¹⁶

However, even if one is prepared to grant the above claims about the SR-internalist solution to the problem of unity and the avoidance of Bradley’s regress, one might have the following objection to the U^* -relation’s status in the very formulation of the theory, specifically in its state of affairs names, such as $U^*(U^*, R, a, b)$. The second occurrence of ‘ U^* ’ in these names seems to suggest that U^* plays a passive role, a role in which it does not do any relating. This role is similar to the passive role of, for example, the relation of instantiation in the state of affairs of (1) Kim’s thinking about instantiation, as opposed to the active role it plays in the state of affairs of (2) Kim’s instantiating the property of being wise. But as U^* , by definition, of course has an active, relating role in the state of affairs – as indicated by the first occurrence of ‘ U^* ’ in the state of affairs name – it ‘simultaneously’ has both an active and passive role, which is absurd.

Note that this objection is not that an active and a passive role cannot ‘simultaneously’ be played by one and the same relation. This is precisely what instantiation does in the example of the states of affairs (1) and (2). In the former, it plays a passive role; in the latter, an active one. However, the objection continues, the reason instantiation can play both of the roles is that these correspond to different states of affairs. There is one state of affairs, (1), where it plays the passive role; and another

¹⁶ As also mentioned in §2, I believe that relatings per se are primitive (matters of brute fact) so that they cannot be explained anyway. By contrast, Milton Fisk (1972) believes that they can be accounted for – not, as one might have suspected, by invoking relations, entities whose existence he denies, but by means of relational properties (and what he calls ‘foundations’ of these). This view seems remarkably idiosyncratic and implausible, as nowadays relational properties are commonly, and in my view correctly, seen as clearly presupposing the existence of relations, cf. e.g. Armstrong (1997, 91–93). In any case, I know of no plausible ontology – or at least no ontology congenial to the present paper – that even begins to explain relatings per se. However, other philosophers might wish to consider radically different ontologies with a view to this, perhaps some process philosophy (on which there might not really be any relations as such, and hence not really any relatings per se, but instead of both only ‘relating processes’, cf. Fisk, *ibid.*).

state of affairs, (2), where it plays the active role. This is completely unlike the way it is for U^* . There is only one state of affairs which the two roles (and the first and second occurrence of ‘ U^* ’) correspond to, e.g. $U^*(U^*, R, a, b)$.

This objection can be dismissed by a riposte: it is begging the question against SR-internalism. It makes the assumption that the active and passive role can be played by U^* only if each role corresponds to a different state of affairs, analogously to the difference between (1) and (2). It provides no independent evidence for this (extraordinarily speculative) claim. Asserting this assumption as an objection hence clearly commits a *petitio principii*: the two roles played by U^* on SR-internalism are precisely held to correspond to one and the same state of affairs.

More precisely, the relationship between the two roles and U^* is as follows. The active role corresponds to the first occurrence of ‘ U^* ’; the passive role corresponds to the second occurrence. This active role and first occurrence indicate that (i) U^* is a relation that relates constituents of the state of affairs (the $n + 1$ entities: $U^*, R_n, x_1, \dots, x_n$). The passive role and second occurrence indicate that (ii) indeed U^* itself is one of these constituents. The conjunction of (i) and (ii) is SR-internalism in a nutshell.

Having clarified the relationship between U^* and the two crucial roles played by it, let us now turn to its two central intrinsic qualities, its adicity and its feature of self-relating. Consider the former first. This is a most important feature of any relation. What is the adicity of the U^* -relation? In addition to relating the n material constituents of a state of affairs, it has itself as one of its relata. So it has $n + 1$ relata: $U^*, R_n, x_1, \dots, x_n$. Therefore, U^* is $(n + 2)$ -adic.

Now, this seems problematic. For it seems to imply that there are indefinitely many U^* -relations – one for each adicity n of state of affairs. This appears to be a considerable drawback in ontological economy. One way of avoiding this dis-agreeable outcome would be to allow what is often called ‘multigrade relations’, i.e. relations whose adicity differs throughout their instantiations, e.g. being a sibling of, fighting with, surrounding (for an influential formal account of them, see Morton 1975, 309ff), and hold that U^* is multigrade rather than $(n + 2)$ -adic.¹⁷ If so, a single U^* -relation would suffice for all the states of affairs of different adicities. However, as Armstrong has argued (1997, 85), multigrade relations are not universals, for a universal is by definition numerically identical in each of its instantiations and must hence (assuming adicity is not an extrinsic feature of it) be of the same adicity in each of them. I consider the U^* -relation to be a universal –or at least sufficiently

¹⁷ Someone might object that it is mistaken to distinguish between ‘multigrade’ and ‘ $(n + 2)$ -adic’ on the grounds that the n in the latter can vary so that it is ‘multigrade’ anyway. This is an objection I cannot pursue here. However, the distinction to be made shortly between U^* as genus and as species (with particular adicities) means that we can sidestep this issue.

similar to universals for this argument to apply to it (similarly to the fact that, as mentioned already in §2, I maintain that the U-relation of (any) relational internalism is multiply instantiable).¹⁸ Consequently, I believe we must postulate indefinitely many U*-relations.

Fortunately, there is a way round the apparent, serious ontological cost of this. It is to hold that these entities are merely species of the genus U*-relation. Only the genus, I shall assume, is an ontological category. Other things being equal, that arguably is decisive to our ontological economy. This position is in line with what one might call ‘Lewis’s Razor’, the plausible principle of qualitative ontological economy that of two competing theories that explain the explananda equally well, we should choose the one that requires the smallest number of ontological categories or ‘types’ (cf. Lewis 1973, 87).¹⁹ Of course, as the genus, it would have no specific adicity; rather, it would have (include) a determinable feature of something along the lines of ‘having some specific adicity’, analogously to, for example, the determinable *being coloured*’s inclusion of the determinable feature of ‘having some specific hue’.

Thus, observations about the adicity of U* does not cause trouble for SR-internalism. However, one might have concerns about the theory’s unique characteristic, self-relating. For given our rejection of reflexive relations, there does not seem to be any case of a self-relating relation which we have reason to believe in independently of this theory. This might in turn give us reason to suspect that ‘self-relating’ is merely concocted in order to solve the problem of unity. However, this criticism is too hasty. There might in fact be independent cases of self-relating. Consider first the relation of distinctness. It seems to be able to relate itself: $\neq(\neq, F)$, for instance. But, as *distinctness* is an internal relation, it is perhaps of relatively little metaphysical importance and thus an unsuitable example in our context.

Consider instead examples from the intentional realm: ‘John thinks about thinking’, and ‘John loves loving’. Now, many philosophers, following Brentano’s famous stance, will deny that intentionality involves a relation at all. The motivation for this is well known: we can have non-veridical perceptions; we can think about non-existent objects; we can think about non-existent states of affairs; and so on. If intentionality were a relation, the argument goes, it would therefore in such

¹⁸ It might be objected that adicity is in fact a relative, as opposed to intrinsic, feature of universals, such that multigrade relations can perfectly well be universals. This view is defended by Fraser MacBride (2005, 574–75). It is an interesting objection, but space does not permit us to examine it here.

¹⁹ Needless to say, the genus–species distinction is highly relative. For instance, U*-relation, while a genus relative to individual U*-relations with specific adicities, is itself a species, relative to (of) e.g. U-Relation – which in turn is a species relative to (of) e.g. Relation. This is the reason why it is probably vague which genera are ontological categories. Fortunately, however, this does not affect my argument: it only requires the mentioned thesis that U*-relation is a genus of individual U*-relations, and that is not relative.

cases hold between an existent (a mental act or state) and a non-existent, and this would be absurd. But Grossmann (1983, 189ff) denies that this would be absurd and insists that intentionality is merely an ‘abnormal relation’: it is ‘abnormal’ in the sense that its second place may be filled by either an existent or a non-existent, but is a genuine relation nonetheless. Suppose that Grossmann is right, and that cases of intentionality, like thinking and loving, are therefore real relations, even if ‘abnormal’. If so, the examples of ‘John thinks about thinking’ and ‘John loves loving’ seem to be genuine cases of self-relating.

However, I maintain that in fact they are not. For firstly, what John thinks about when we say that he thinks about ‘thinking’ is thinking in general. But when a subject thinks about something, X, the putative relation of thinking that it stands in to X surely is not ‘thinking in general’. What is more, ‘thinking in general’ is arguably not a relation at all, but at most an idea about a relation of thinking. Secondly, for ‘John thinks about thinking’ to be a case of self-relating, the particular mental act of thinking would have to be directed upon itself – and this seems to make little or no sense. Similarly with the example of loving.²⁰

Consider as an alternative another intentional example: “‘designation” designates *designation*’. Here the relation of *designation* is instantiated by the word ‘designation’ and – itself. This therefore is a genuine case of self-relating. Of course, construing it as such again presupposes Grossmann’s view that intentionality, including *designation*, is in indeed a relation, albeit an ‘abnormal’ one. Many or most philosophers reject this view. What is more, even if Grossmann is in fact right, it is far from certain that the word ‘designation’ actually designates this relation. There is no such transparent semantic relationship between (fundamental) properties and relations and the words (predicates) for them. This is a view that Armstrong has argued for cogently (cf. 1978, ch. 13; 1997, §3.4). This problem can perhaps be avoided by holding that designation is a non-fundamental relation, but if it is, it is unsuitable in our context for the same reason as our first example with *distinctness*.

These considerations involve contentious issues in the philosophy of mind and language. Fortunately, the plausibility of SR-internalism does not depend on them. SR-internalism, along with the U*-relation and its feature of self-relating, is postulated as explanation of the problem of unity, by abduction, if you like. This problem is so fundamental, and these postulations accordingly so

²⁰ Note that even on the assumption that thinking is a genuine relation, cases of ‘self-conscious’ thought differ manifestly from these prima facie cases of self-relating. A natural rendering of self-conscious thought is as involving that a subject S thinks that p if and only if S thinks that S thinks that p, or to put it more formally, thinking(S, that p) ↔ thinking[S, think-ing(S, that p)]. The relation of thinking is here not even prima facie related to itself; it is related to (the subject S and) an instantiation of itself.

fundamental, that not only should it not surprise us if – or that – there is no pre-theoretical ‘datum’ of a self-relating relation, we should *expect* that this is so.

The U*-relation might seem rather odd as a denizen of the ontological zoo, but how does it compare with ordinary, material relations, such as *being north of*? This question raises several complex issues, and a detailed answer to it is unfortunately beyond the scope of this paper. However, we can make a few observations briefly. The U*-relation both resembles and differs from these relations in significant ways. As to the similarity, it shares two important features with them. First, it is polyadic and has a specific number of relata in each of its instantiations. Second, like the U-relation on any version of relational internalism (as mentioned above in §2), it is multiply instantiable: it is instantiated by the material constituents of any state of affairs (and itself). As to the difference, there are also two points. Firstly, and obviously, the U*-relation *unifies*. Secondly, it is related to its relata directly (as it is related to them by itself), but this is not the case for ordinary relations: it is precisely the U*-relation that is ‘between’ them and their relata.

However, the observation that U* is related to its relata directly, not in the mediated way of ordinary, material relations, might prompt the following very radical objection. Given this observation, it might seem that we now cannot really say that U* is ‘related to its relata’. For the sense of ‘related to its relata’ is, the objection goes, precisely the sense of this mediated relating of ordinary, material relations. If it were not, the SR-internalist would be trying to explain the unfamiliar with the less familiar. Accordingly, she can only, using scare quotes, say that U* is ‘related’ to its relata, in the mentioned direct, non-ordinary sense. But once this is said, it is not clear that U* answers (ER), how it is related to its relata, in any way that the U-relation of classic internalism does not. This latter U-relation may well be ‘related’ to its relata in the same way! It is a ‘non-relational’ tie, to use Strawson’s term (1959, 167) – and ‘relational’ here is the sense of ordinary, material relations. And of course SR-internalism does not differ on this point: the U*-relation is *no less* ‘non-relational’. In short, the U-relation of classic internalism has just as good a claim to be ‘related’ to its relata as the U*-relation of SR-internalism has – and hence just as good a claim to be solving the problem of unity.

My reply to this objection is quite simple. On the one hand, I acknowledge that the U*-relation’s way of being related to its relata is indeed not the same as that of ordinary, material relations. However, I maintain that the former way is sufficiently similar to the latter for us to hold that it is related to its relata, not just ‘related’ to them. On the other hand, I also acknowledge that the sense in which the U-relation of classic internalism is denied being related to its relata is not the same that is at issue for ordinary, material relations. However, I maintain that the former sense is sufficiently similar to the latter for us to claim that it is not related to its relata (in any way). And because no

alternative account is given of how it can nonetheless relate them, classic internalism thus fails to provide an answer to the problem of unity.

This contrast between U and U* on the one hand and ordinary, material relations on the other – and my view that there is sufficient similarity between the two corresponding ways of being, or not being, related to the relata – is supported by my reading of one of the main classic internalists, Reinhardt Grossmann (1983, 169, 119; cf. footnote 12). He is very clear that ordinary, material relations are ‘not related to what they relate’, and this view he simply extends to his ‘nexus’ for monadic states of affairs (exemplification). As we saw in §4, the former relations together with this nexus in effect serve as his U-relation. In a word: Grossmann’s U-relation is not related to its relata. Similarly for the straightforward generalization of this view to regular internalism. (For this reason, the objection is misleading and wrong to claim that although the U-relation of classic internalism is not related to its relata, it nonetheless is, or may be, ‘related’ to them.) By contrast, SR-internalism simply makes the contrary claim that its U-relation is related to its relata.

In short, my solution to the problem of unity is this: the U*-relation (i) unifies a state of affairs in virtue of relating its material constituents (relational internalism), (ii) relates these constituents in virtue of being related to them (naïve internalism), and (iii) is related to them by itself (self-relating, which avoids Bradley’s regress).²¹

References

- Armstrong, D.M. 1978. *Universals and Scientific Realism*, 2 vols, Cambridge: Cambridge University Press.
- Armstrong, D. M. 1997. *A World of States of Affairs*, Cambridge: Cambridge University Press.
- Armstrong, D. M. 2004. *Truth and Truthmakers*, Cambridge: Cambridge University Press.
- Baxter, D. 2001. ‘Instantiation as Partial Identity’, *Australasian Journal of Philosophy* **79**, pp. 449–465.
- Bergmann, G. 1967. *Realism: A Critique of Brentano and Meinong*, Madison: The University of Wisconsin Press.
- Bradley, F. H. 1897. *Appearance and Reality*, 2nd ed., Oxford: Oxford University Press.
- Dodd, J. 1999. ‘Farewell to States of Affairs’, *Australasian Journal of Philosophy* **77**, pp. 146–160.
- Fisk, M. 1972. ‘Relatedness without Relations’, *Noûs* **6**, pp. 139–151.
- Grossmann, R. 1983. *The Categorical Structure of the World*, Bloomington: Indiana University Press.
- Hochberg, H. 1999. *Complexes and Consciousness*, Stockholm: Library of Theoria.
- Lewis, D. 1973. *Counterfactuals*, Oxford: Blackwell.
- Lewis, D. 1991. *Parts of Classes*, Oxford: Blackwell.
- MacBride, F. 2005. ‘The Particular–Universal Distinction: A Dogma of Metaphysics?’ *Mind* **114**, pp.565–614.
- Mertz, D. 1996. *Moderate Realism and its Logic*, New Haven, CT: Yale University Press.

²¹ For many helpful comments on earlier drafts of this paper, I am grateful to Andrew McGonigal, Joseph Melia, Erwin Tegtmeier, William Vallicella, the anonymous referees for *dialectica*, and in particular John Divers, Scott Shalkowski, and Peter Simons.

- Morton, A. 1975. 'Complex Individuals and Multigrade Relations', *Noûs* **9**, pp. 309–318
- Russell, B. 1903. *The Principles of Mathematics*, Cambridge: Cambridge University Press.
- Russell, B. 1910. 'Some Explanations in Reply to Mr. Bradley', *Mind* **19**, pp. 373–378.
- Russell, B. 1918. *The Philosophy of Logical Atomism*, repr. in *Logic and Knowledge*, ed. R. C. March, London: Allen and Unwin, 1956.
- Strawson, P. F. 1959. *Individuals*, London: Methuen & Co.
- Vallicella, W. F. 2000. 'Three Conceptions of States of Affairs', *Noûs* **33**, pp. 237–257.
- Vallicella, W. F. 2002. 'Relations, Monism, and the Vindication of Bradley's Regress', *dialectica* **56**, pp. 3–35.