

RELATIONS & TRUTH-MAKING

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1. Introduction

Russell held that there are relations amongst the ultimate constituents of reality. Only by admitting them, he argued, is it possible to comprehend the great continua of space, time and number. Russell forged his conception of relations in debate with Bradley and an extended engagement with the works of Leibniz, philosophers who, for different reasons, and in different ways, denied the existence of relations. He also held to the view that truth is not a property of propositions but itself a matter of relations: propositions are not true *simpliciter* but made true *by* existing things. Russell's views about relations and truth were destined to acquire the status of analytic orthodoxy, at least amongst philosophers of a realist persuasion. Without their guiding influence, the history of analytic ontology would likely have taken a quite different course.

Lately Russell's views about relations and truth have been cast into doubt. It has been questioned whether Russell's arguments against Bradley's monism in favour of pluralism were as effective as it has become orthodox to suppose. Espied from this lofty historical perspective, Peter Simon's contribution to the present symposium may be seen to cast into doubt the effectiveness of Russell's arguments against Leibniz' monadism. What has made it seem possible, or even desirable, to think about turning the intellectual clock back in this way? An important part of the answer to this question: a tectonic shift in the underlying conception of ontological commitment to which many philosophers adhere. No longer is to be simply to be the value of a variable. To be is to perform a role in making a proposition true or false. Once granted, this conception conspires with what, if Simons is right, the world is actually like, to bring Russell's views about relations and truth into significant, if not irreconcilable tension. Since very few of the relations Russell posited are required amongst the class of things that perform a role in actually making propositions true there is no necessity to admit them amongst the ultimate constituents of reality.

Of course Russell would not have been moved by this concern because he did not hold that to be is to play a role in making a proposition true or false. In this paper I will argue that we should be wary too of adopting this conception of ontological

commitment. Its employment masks rather than resolves metaphysical problems that are genuine and deep. There are other theoretical roles, besides truth making, for relations to perform.

I will explore these general themes by examining some of the specific ways in which Simons employs the truth making conception of ontological commitment in his paper. Simons does not define what it means to be a truth maker, or to perform a role in making a proposition true. Instead he treats truth making as a primitive notion, relying primarily upon examples of truth makers and their corresponding truths to enable us to catch on to what he means. For present purposes it suffices to follow Simons and proceed at this relatively intuitive level. But it is important to note that Simons rejects truth maker maximalism—the doctrine that every true proposition has a truth maker—on the grounds that when a negative existential is true this is so not because it has a truth maker but because its positive contradictory lacks one. Moreover he is inclined towards accepting the necessitation principle (NEC) that if a makes it true that p then the proposition that a exists logically necessitates that p .¹

2. *(Leibniz v Russell) v Simons*

I have suggested that seen from far above Simons' contribution casts into doubt a long prevailing assessment of the Leibniz-Russell dispute about relations, the assessment that Russell won whereas Leibniz lost. Let me spell out what I mean by this.

Leibniz advanced two arguments against relations. First, that for an attribute to have “one leg in one term and another leg in another term” is “contrary to the nature of attributes”.² Since a relation would be an attribute of this kind Leibniz concludes that there are no relations. Second, that a relation between two terms is reducible (in some sense) to the properties of the terms taken separately. If Leibniz is right, a proposition of the form aRb may be perspicuously resolved into a proposition of the form $Fa \ \& \ Gb$. Leibniz concluded that “the relation common to both terms is a mental thing, of which the modification of singulars are the foundation”.³

Russell came to the defence of relations. He dismissed the first argument as no more than a picturesque way of insisting that no attributes are relations. He dismissed

¹ See Simons 2008.

² See *Correspondence with Clarke*, Leibniz 1969: 704.

³ See *Letters to De Bosses*, Leibniz 1969: 609

the second argument on the grounds that any purported reduction of an asymmetric relational proposition to a conjunction of monadic ones will give rise to a vicious regress: “The proposition ‘A is greater than B’ is to be analysable into two propositions, one giving an adjective to A, the other giving one to B.... But then [Leibniz] will have to admit a relation between the magnitudes, which will be as asymmetrical as the relation which the magnitudes were to explain. Hence the magnitude will need new adjectives, and so on *ad infinitum*”.⁴ Let us contemplate the fact that Barack Obama is taller than David Cameron. By Leibniz’ reckoning this is not because Obama bears a relation (*being taller than*) to Cameron that Cameron does not bear to Obama. It is because Obama and Cameron have different heights. Whereas the former is (purportedly) 1.87 metres tall, the latter is only 1.83. But, Russell reflects, it only follows from Obama and Cameron having these different heights that the former is taller than the latter if we also assume that the height of Obama (1.87m) *is greater than* the height of Cameron (1.83m), *i.e.* if we presuppose the obtaining of another asymmetric relation between these heights. Russell concluded that asymmetric relations are incapable of being reduced to the properties of the things they relate.

Where does Simons’ stand with respect to this dispute between Leibniz and Russell? On the one hand, Simons agrees with Leibniz that there is a sense in which a great many relations are reducible. This is because many relational predications are ‘internally true’, made true solely by virtue of the existence of the things whose relationships they describe. Take Simon’s example, the proposition that this proton is more massive than this electron. According to Simons we have no need to acknowledge the existence of an asymmetric relation, *being more massive than*, when specifying the truth makers for this prediction. Since “their masses are essential to them”, the joint existence of the electron and the proton suffice.⁵ And there are other relational predications that whilst they fail to be internally true are made true by the existence of some other plurality of individual things. Take another of Simons’ examples, the proposition that this sweater is darker than this shirt. The sweater and the shirt might both have existed and been of different hues so their existence does not suffice for the truth of the proposition in question. Nevertheless the existence of their trope hues does suffice for its truth. Why? Because it is essential to these tropes that

⁴ See Russell 1903: §214.

⁵ Of course one might question the assumption that tropes and electrons have their masses essentially. But I will leave that concern to one side for the time being.

they belong to their respective garments and moreover they jointly make it internally true that the hue of the sweater is darker than the hue of the shirt.

On the other hand, Simons agrees with Russell that Leibniz' first argument is a *petitio principii*.⁶ Simons also agrees with Russell that some relations may be irreducible. This is because some relational predications may fail to be made true by any plurality of individual things. Simons conjectures that spatio-temporal relations, including comparative geometrical relations, amongst the occupants of loci are irreducible in this way, *i.e.* properly external relations. The proposition that Obama is taller than Cameron may provide a case in point, a proposition that requires a truly external relation amongst its truth makers.

This still leaves us in the dark about how Simons' stands with respect to Russell's regress argument. Simons doesn't say anything about this aspect of Russell's thinking about relations but the following response dovetails with many things Simons does say. Russell is absolutely right that an internally true proposition aRb about how a and b are related cannot be formally deduced from a conjunction of two other propositions, one entirely about a , the other entirely about b . But this does not compromise the capacity of a and b to make the proposition that a and b are so related true. If a and b are truth makers for the proposition that aRb then it is absolutely impossible for them to exist and yet the proposition in question be false. Once these truth makers are recognized there is no need to admit further relations to account for the truth of the proposition in question. The parochial fact that we cannot pass by the formal rules of a particular language from statements of a monadic form to statements of a relational form does not belie this fact. The recognition of the methodological point that we should admit only those items into our ontology that "appear indispensable to account for the truth" of true propositions thus appears to enable Simons to take a middle way between the views of Leibniz and Russell.

Does Simons' appeal to truth-making here really provide for a cogent response to Russell's argument that relations cannot be reduced? I remain skeptical.⁷ It is important to recognize that this response to Russell fails to get the measure of his position. Russell was clearly not demanding that Leibniz provide *per impossible* a formal reduction of relational to monadic forms to vindicate reductionism about relations. Otherwise Russell would not have been able by his own lights to avoid the vicious regress he identified by appealing to a higher-order asymmetric relation. Russell thought that (1) the obtaining of a higher-order relation R^* between the

⁶ See Simons 2002/3:3.

⁷ Some Leibniz' commentators have certainly thought so. See, for example, Mates 1986: 214-8 and Cover 1989: 197-8. But for the reasons sketched above I think they are unfair to Russell.

magnitudes F and G , and (2) a is F and b is G , does explain (3) the obtaining of a lower-order relation R (*being greater than*) between a and b . But clearly a statement of the form aRb cannot be formally deduced from statements of the form $R^*(F, G)$ and $Fa \ \& \ Gb$.

This reflects that fact that the general project in which Russell was engaged was one of providing a substantive explanatory account of what makes necessary truths true. He was not willing to rest content with acknowledging brute modal regularities. Instead he sought to achieve insight into them by appealing to his realism: “All *a priori* knowledge” he declared, remember he didn’t distinguish necessity from apriority, “deals exclusively with relations between universals”.⁸ There is something very intuitive about Russell’s strategy for explaining necessities. Why (e.g.) should a ’s having one quantity and b ’s another entail that (e.g.) a is twice as massive as b ? Answer: because the property of having this mass stands in a certain relation of proportion to the property of having that mass!

Would Russell have been impressed by the reflection that relations were not required to serve as truth makers for internally true propositions? No. He would have been suspicious of the purported capacity of the terms described to make these propositions true without implicating relations in their explanatory wake, even if it is granted that they don’t serve as truth makers for these internally true propositions. Investigating more closely what Simons has to on behalf of relational tropes will help us get clearer about whether there is any real substance to this suspicion.

3. *The Case for Relational Tropes*

Our thinking about relations has been beset by two puzzles that have obdurately refused to go away. The first concerns the capacity of any relation whatsoever to hold between its terms. The second concerns the capacity of some relations, viz. non-symmetric ones, to hold between their terms in a plethora of different ways. In the form in which these puzzles are usually stated it is assumed that relations, if there are any, are universals, genuine ‘one-over-many’s that are capable of existing independently of whatever particulars they in fact relate. Simons makes the intriguing claim that these puzzles will go away if only we recognise that relations are tropes, i.e. items that are unique to their bearers and unable to exist without them. And this is crucially because relational tropes, by contrast to relational universals, are capable, all by themselves, of making relational propositions true. If Simons is right about this then he will have identified a critical respect in which theories committed to tropes

⁸ See Russell 1911: 59.

are to be preferred to theories that are committed to universals. So Simons raises the prospect here of breaking the deadlock that has so long endured between the champions of tropes and their rivals who favour universals.

3.1 *Bradley's regress*

Let us consider what Simons has to say about the first puzzle. This is Bradley's notorious regress argument designed to show that the very idea of a relation is unintelligible. Simons elaborates upon "Bradley's problem" only briefly: "If a relation such as *being upon* is to link this book and this table it would appear that it needs to be related to the book and the table. But this threatens an infinite regress." Simons suggests that whilst the prospects are bleak for blocking this regress if relations are universals, Bradley's problem cannot arise if relations are tropes. Simons characterises a relational trope as being "multiply dependent" upon its bearers so that it could not have existed without them. In particular, a binary dependent trope "must be such that it depends on two individuals... and the two individuals are related in a certain way in virtue of there being such a trope depending on them".⁹ It follows that if a relational trope exists then the things upon which it depends must be related in the relevant way. Because they are so dependent upon the individuals they relate, relational tropes make it true that the things they relate *are* related.

Simons' paradigm example of a relational trope is a particular clap of two hands. If this clap exists then the two hands upon which it depends must exist too and they must be related together in virtue of it's depending upon them. It follows that if this particular clap exists it makes true the proposition that these two hands clap together. Since the clap makes this relational proposition true all by itself Simons concludes that there can be no further Bradley style problem about how the clap is related to the hands upon which it depends.

What Simons says here stands in need of further elaboration. In the form that he actually states it, Bradley's regress appears to apply just as well to relational tropes as to universals: if a particular relation is to link this book and this table it would appear it needs to be related to this book and this table; but this threatens an infinite regress. So it remains unclear what it is about relational tropes that enables them to steal an advance on their universal brethren. However it is plausible that Simons is talking in short hand here and what he has in mind is a more sophisticated version of Bradley's argument.

⁹ See Simons 2002/3: 6.

Here is a thumbnail sketch. A relational universal R is supposed to be a genuine ‘one-over-many’. In other words, it is supposed to be something that is capable of existing independently of the particular terms it relates; a relational universal is something that could have failed to relate its actual terms and related different terms instead. A relation R of this kind cannot account for the fact (e.g.) that a and b are related thus-and-so. This is because the mere existence of R alongside a and b cannot suffice for a ’s bearing R to b . R , being a universal, may perfectly well exist, but instead of being borne by a to b , may be engaged elsewhere, relating together entirely different things, but not a and b . So to account for the fact that a is related thus-and-so to b it must be established not only that R exists but that R is itself related to a and b . But this further fact, if it is one, is a fact of the very same relational kind that we set out to explain. This makes it evident that relational universals lack the explanatory power to advance our understanding of relatedness. The positing of a universal like R simply results in the multiplication of the number of items that we must recognize to be related, items whose relatedness is still left unexplained.

By contrast to their universal brethren, it is clear that relational tropes are not liable to this version of Bradley’s regress. A relational trope rI is incapable of existing independently of its terms. It is borne essentially by the things it relates, say a and b . So, necessarily, if rI exists then a and b exist too and they’re rI -related. Because of the way in which a relational trope depends upon its terms, the mere existence of a relational trope can account, where a relational universal cannot, for its terms being related.

3.2 Order

What does Simons have to say about the second puzzle? Simons invites us to consider whether non-symmetric relations have distinct converses. *Prima facie* there are a number of metaphysical hypotheses between which we will need to decide to settle this issue. Is it necessary to admit both *being larger than* and *being smaller than* into our ontology, or only one of them? Or is it possible that, as Fine has suggested, there is only one underlying relation that is neutral between the two different orders in which its terms may be mentioned? Simons’ view is that these are pseudo-questions “occasioned by adopting the view that the metaphysically ultimate nature of relations is universal”. But, Simons declares, we can avoid the impossible task of answering them by conceiving of relations as tropes. This is because “where a relational trope exists to link two or more individuals, in itself it is neutral. It depends equally on its various terms, though they need not depend on it”.

What Simons says here needs some polishing up before we can clear about its import. He says that questions about whether relations are distinct from their converses, or whether there is only one underlying neutral relation, are pseudo

questions. But Simons himself appears to recommend a position that provides negative answers to both these questions. According to Simons, relations are not distinct from their converses because relations do not apply to their terms in any significant order. Nor, if Simons is right, is there only one underlying neutral relation corresponding to the forms “ x is larger than y ” and “ x is shorter than y ”; in fact there are many neutral trope relations that do so. But if it is intelligible to think that there are many neutral relations corresponding to these forms, it is difficult to see how it can be *unintelligible* to think that there is only one. So this leaves us in the dark about why Simons thinks his own trope theoretic position is to be preferred to Fine’s who holds that there are neutral relational universals.

I would like to sketch another way in which Simons might have pressed his case against universals and which may indeed better reflect his underlying thinking about these matters, one that highlights the role of tropes as truth makers. The puzzle about converse relations that we owe to Russell and more recently to Fine arises out of the trying to understand the phenomenon of differential application, the fact that a binary non-symmetric relation can apply in two different ways, aRb and bRa .¹⁰ We can try to explain this by saying that R applies in one direction in the first case, in another direction in the second. But now equipped with the notion of a direction it is difficult to avoid conceding the possibility of a converse relation. If R applies to a and b (in that order) then a converse relation R^* may be defined as the relation that applies to b and a (in the reverse) order. Do both of these relations exist or only one of them? It seems arbitrary to privilege one over the other. Neither *being taller than* nor *being shorter than* appear to have the better claim to exist. But it also seems unacceptable to admit both relations, to admit that there is not only the circumstance that Peter is taller than Fraser but also another chunk of reality, the circumstance that Fraser is shorter than Peter.

Now, *prima facie*, tropes do allow us a way out of this uncomfortable situation. This is because relational tropes, by contrast to universals, are *not* capable of differential application. There are not two ways in which a given relational trope $r1$ can apply to a and b ; if it exists at all it holds between them in just one way. Hence, $r1$, if it exists makes true that aRb rather than bRa . Similarly, let us suppose that $r2$ if it exists makes it true that bRa rather than aRb . And this appears to provide us with an account of what makes the difference between its being true that aRb rather than bRa , the fact that $r1$ exists rather than $r2$.

3.3 The ‘Virtus Relativa’ Problem

¹⁰ See Russell 1903 and Fine 2000. I discuss the problem of order in greater detail in MacBride 2007.

I am sceptical of whether Simons has succeeded in showing that relational tropes avoid the aforementioned puzzles. I find his arguments unconvincing in a way that should make us wary of the more general employment of the truth maker methodology in metaphysics. We are often told that the failure to supply a schedule of truth makers for a given theory is a form of ‘cheating’. Recognizing the kinds of truth makers that are required to make our favoured theories true keeps us honest, keeps us on our guard against ‘brute’, ungrounded truths: brute counterfactuals, brute truths about the past and future and so on. But unless it is cautiously handled the truth maker methodology itself makes us liable to cheat.

The basic strategy employed by Simons and other truth maker theorists is to pack enough information into the essence of a thing that its mere existence suffices for the truth of a target set of otherwise puzzling propositions. But this does not mean that positing the existence of a thing bestowed with such an essence will result in the dissolution of our original puzzlement. We may simply transfer our sense of intellectual unease about how it is possible for the target set of propositions to be true to how it is possible for a thing with such an essence to exist. It will not do to be simply told that no further explanation is required because a schedule of truth makers for these propositions has already been provided. This just masks the underlying problem that originally emerged from reflection upon the target propositions by, in effect, insisting, without having earned the privilege, that the only genuine ontological problems that can intelligibly be raised are those that can be answered by providing a schedule of truth makers.

Let’s investigate whether anything of this kind is going on when Simons’ attempts to resolve Bradley’s regress by positing relational tropes. To begin let us grant the following conditional upon which Simons relies: (RT) if a relational trope r exists then r relates its terms. This is plausibly established by Simon’s basic characterization of what a relational trope is. One might even think of it as a stipulation that provides a partial explanation of the concept of a relational trope. However, it doesn’t follow from (RT) that a relational trope’s relating of its terms is unproblematic. It doesn’t follow either that we can take for granted the possibility of r ’s existing. Compare: Frege’s fundamental characterization of an extension establishes that if Fregean extensions exist then they satisfy Axiom (V). But Russell showed that Axiom (V) gives rise to a contradiction. We won’t get around this contradiction by simply positing the existence of Fregean extensions. In fact Russell’s reasoning also demonstrates that it isn’t possible for Fregean extensions to exist. Similarly if Bradley did succeed in showing by his regress argument that “a relational way of thought—any one that moves by the machinery of terms and relations—must give appearance and not truth” then Bradley’s reasoning also establishes it isn’t

possible for relational tropes to exist either.¹¹ We cannot assume then that just because relational tropes if they existed would make relational propositions true that we are entitled to posit such entities. Why not? Because until we have solved, or resolved, Bradley's regress directly we're not entitled to presuppose that relational tropes are capable of existence.

This is not only a special problem for someone who only believes in relational tropes but applies more generally. Facts are often posited, e.g. by Armstrong and Mellor, as theoretical entities to solve Bradley's regress.¹² The idea is that whereas the mere existence of its constituents does not suffice for *a*'s bearing *R* to *b*, the fact that *aRb* does. But ask yourself the question, what is a fact? What distinguishes it from the mere plurality of its constituents? The best answer seems to be that the constituents of the fact are *related*. This means that unless we already have an account of how the constituents of a fact are capable of being so related we have no understanding of how a fact is possible. But Bradley's regress is precisely designed to show that we don't understand how it is possible for things to be related. So we can't appeal to the existence of facts—any more than relational tropes—in advance of independently solving, or dissolving, Bradley's regress argument.

Before he can legitimately appeal to the existence of relational tropes Simons' must therefore face squarely up to Bradley's Regress itself. Has he done so? We have already seen that there is case to be made for saying that because relational tropes are necessarily related to their terms they are immune to one version of Bradley's Regress that beset relational universals. However, I wish to maintain that Bradley's original argument raises a genuine difficulty for relations regardless of whether they are necessarily or contingently borne by their terms.

Bradley presented his original argument as a dilemma: Either [A] if a relation "is nothing to the [relata], then they are not related at all" or [B] "it is something to them [and] then clearly we now shall require a *new* connecting relation... being something itself, if it does not itself bear a relation to the terms in what intelligible way will it succeed in being anything to them? But here we are hurried off into the eddy of a hopeless process since we are forced to go on finding new relations without end".¹³ The problem for relations here is generated by reflection upon the fact that if a relation isn't related to its terms then it can hardly hold between them; but if a relation is related to its terms then we require a further relation to relate it to its terms and then we fall into a regress because the same reasoning applies to the relation newly introduced. This shows that if we attempt to explain what it takes for one thing to bear

¹¹ See Bradley 1893: 33.

¹² See Armstrong 1997: 115-6.

¹³ See Bradley 1893: 32-3.

a relation to another in terms of a further relation then we will never achieve explanatory closure.

Now do relational tropes evade this regress? It doesn't seem so. Bradley's reasoning appears to apply just as smoothly to the case of relational tropes as universals. For even a relational trope r must be something to a and b otherwise r can hardly hold between them. Hence it must be related to them. But this means there must be a further relational trope r^* to so relate r , a and b , and then things just keep falling apart after that concession. So it appears that relational tropes succumb to the regress if universals do.

One might seek to resist this line of reasoning by arguing that relational tropes are not related to their terms and therefore immune to Bradley's regress. Because a relational trope r holds necessarily between the terms it relates, this may make it appear questionable whether r requires to be related to its terms in the way that relational universals do. After all, r is incapable of floating free from the terms upon which it depends to hold amongst alternative relata as universals do. But necessary co-existence of a relation and its terms is not enough to ensure that the relation holds between its terms. It's not enough that they exist in all and only the same worlds. What more then is required of them? Obviously that they are *related!* So even a relation that necessarily relates its terms must be something to its terms and therefore liable to Bradley's Regress.

More radically, one might argue that there is no need to posit a further relation in order to explain how a bears the relational trope r to b because there is nothing further about the possibility of relations relating that stands in need of explanation. It is the very *nature* of r to be borne (if it exists) by a to b . So the mere existence of r necessitates its holding between a and b without need of further relations. However it is difficult to avoid the suspicion that to endorse this line of reasoning would be to license a form of cheating. For how can positing the existence of a relational trope like r explain anything about its capacity to relate when it has been stipulated to be the very essence of R that it relates a to b ? It is as though the capacity of relational tropes to relate is explained by mentioning the fact that they have a 'virtus relativa'.¹⁴ But this no more explains r 's capacity to relate than the doctor in Molière's *Le Malade imaginaire* assigning opium a 'virtus dormitiva' explains its capacity to put people to sleep.

Similar difficulties afflict Simons' claim that positing relational tropes and eschewing universals enables us to resolve the second puzzle. Here it also appears that Simons has simply packed into the essence of a non-symmetric relational trope

¹⁴ I am grateful to David Sedley for suggesting this Latin form. Alternatives include 'virtus relationalis' and 'virtus relativis'.

the ordering function it is supposed to perform but without giving us any insight into how this is possible. What made it appear plausible that preferring relational tropes to universals enables us to avoid the second puzzle was the fact that we can't ask the question about a binary relational trope that we can ask about a corresponding universal, namely how is it possible for *it* to apply in two different ways? But we can ask: what is it about $r1$ that distinguishes it from $r2$ in such a way that if $r1$ exists then aRb , whereas if $r2$ exists then bRa ? $r1$ and $r2$ depend upon just the same terms, viz. a and b . So there's no distinguishing between them via their terms. Therefore it appears that Simons is left with an uncomfortable choice. Either he can distinguish $r1$ and $r2$ by virtue of the different directions that they depend upon their terms. But this enables us to define the notion of a converse relational trope and then we are embroiled once more in the cluster of difficulties from which the admission of tropes was supposed to free us. Or alternatively he can assign relations an innate capacity to order. But then it is difficult to see how positing relational tropes can provide any explanatory insight into the fact that our world is one of order and series.

This impression is compounded when we reflect that if relational tropes are entirely neutral as Simons supposes then it is difficult to see how order can ever arise in the world. Some relational tropes are symmetric whereas others are asymmetric. But if Simons is right that relational tropes are neutral then there is no underlying difference between these relations in the way they depend upon their terms. So this leaves saddles us with a mystery that the appeal to relational tropes as truth makers cannot resolve: just how the existence of one relational trope can suffice for the truth of a symmetric construction whereas the existence of another suffices for the truth of a non-symmetric construction.

4. *Is Entailment a Relation?*

It is difficult to avoid the suspicion that if we try to push the relational carpet down in one place it will simply bulge up in another. And the more abstract and general our thinking about the world becomes the harder it becomes to find plausible candidates for truth-makers that don't involve a commitment to relations. It is conspicuous in this regard that Simons nowhere includes entailment on his list of putative relations, especially since this notion appears in the principle (NEC) that provides a partial elucidation of the notion of truth making itself: if a makes it true that p then the proposition that a exists logically necessitates that p . But *prima facie* truths about entailment are relational in form, encoding a non-symmetric relation between premise or premises and a conclusion. This raises the question of whether the relation of entailment is external, internal or neither.

Certainly it is difficult to see how entailment could be an external relation.

The obtaining of an external relation is not implied by the existence or the attributes of the terms it relates, whereas the fact that p entails q plausibly flows from the nature of the premise and the conclusion. It is not a matter of arbitrary fortune that they are linked together in this way. But it is also difficult to see how entailment could be an internal relation either.

On what could the obtaining of this relation possibly depend? There appear to be three options worth considering. According to the first option, the proposition that p entails q is made true by the inconsistency of the premise and the negation of the conclusion. But consistency appears itself to be a relation between propositions and so the carpet has just bulged up again.

According to the second option, validity is conceived as a primitive feature of whole arguments. This option has some plausibility in the light of the fact that logicians plausibly treat arguments as single items (for example, they count, compare and contrast them). In effect this approach corresponds to the monistic reduction of relations ($aRb = R(a+b)$) that Russell also criticized.¹⁵ And it appears liable to the something like Russell's earlier criticism of monism. Simply treating validity as a monadic feature of an argument gives us no insight into the fact that the argument is valid because the premises and conclusion are related one way rather than another (that p entails q even though q doesn't entail p).

According to the third option, it is the premises and conclusions of a valid argument that are themselves responsible for the truth of the proposition that p entails q . But this option provides no solace to an advocate of nominalism such as Simons. Interpreted sentence tokens may be nominalistically acceptable but there are insufficiently many of them to make all the truths of entailment true. Propositions and possible worlds are sufficiently numerous to perform the truth-making role for all these truths about entailment. But neither propositions nor possible worlds can plausibly serve as truth makers for truths about entailment so far as Simons is concerned; they appear to be abstract objects, like universals, that Simons wishes to eschew.

This suggests the more radically possibility that truths about entailment lack truth makers altogether. So they can neither be classified as internally nor externally true and no corresponding distinction can be drawn between the relations they purportedly implicate. However this option is uncomfortable for the truth maker

¹⁵ See Russell 1903: §215.

theorist in a different way. The application of the truth maker methodology was supposed to keep us honest, to keep us cognizant of the fact that there's no truth without something taking worldly responsibility for it's being so. But now, if we take this route out, it turns out that some truths, *viz.* those about entailment, must be taken as brute. But if it is conceded that some propositions enjoy the privilege of truth this threatens to undermine the motivation for the demand for truth makers in the first place. If some propositions can be true without benefit of truth makers then why not others? It is sometimes suggested that necessary truths are can be exempted from the demand for truth makers in a principled way because they are true come what may. But it doesn't follow from the fact that something never comes down that nothing is keeping it up. Similarly it doesn't follow that from the fact something is necessarily true that nothing is responsible for its being so.

The temptation to think otherwise is no doubt due to the fact that we lie intellectually downstream from the *Tractatus*, the work that told us "logic must take care of itself" (5.473). Wittgenstein there conceived logical truths, by contrast to contingent truths which make substantive demands upon the world, to be merely structural: "When the truth of one proposition follows from the truth of others, we can see this from the structure of the propositions" (5.13). Wittgenstein tried to substantiate this view by arguing that inference is grounded in structure of the sentences themselves. Inference expresses a relationship between truth-grounds of propositions: "In particular, the truth of a proposition 'p' follows from the truth of another proposition 'q' if all the truth grounds of the latter are truth grounds of the former" (5.12). And the truth-grounds of a proposition are determined by the representational powers of the elementary propositions settling what has to be the case for them to be true. This fundamental thought is expressed in the *Notes on Logic*: "Molecular propositions contain nothing beyond what is contained in their atoms".¹⁶ So once the picturing capacities of the atomic propositions are fixed, their inferential liaisons are fixed too.

However, Wittgenstein's 'structural' conception of entailment cannot be applied to the class of entailments especially germane to our present discussion. These are entailments that take conjunctions of monadic propositions to deliver relational ones. According to Wittgenstein, inference is a form of stuttering: it is reaffirming in

¹⁶ See Wittgenstein 1961: 98.

the conclusion some of the pictures that were already affirmed by the premises. But since relational forms are irreducible to monadic forms, relational propositions cannot be reduced to a collection of pictures that are implicitly isomorphic to the same states of affairs as monadic propositions picture.

Since Wittgenstein's structural conception of logic cannot help Simons must make out (1) an alternative conception of the distinction between merely structural truths that come for free and substantial truths that demand an ontology of truth makers. He must then show (2) that the relevant entailment truths lie upon the structural side of this distinction. Until and unless these tasks are effectively executed, it remains to be settled what if any truths, relational or otherwise, are possessed of truth makers.¹⁷

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