

Positive truthmakers for negative truths: a solution to Molnar’s problem

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Abstract The present paper addresses Molnar’s problem (Australas J Philos 78(1):72–86, 2000): that of finding positive truthmakers for negative truths. The proposed solution, called (Simple), is to hold truth and falsity to be primitive and positive features of propositions and to take every literal negative truth to be made true by the falsity of the atomic proposition that it embeds. The solution is shown to be compatible with Maximalism, Necessitarianism and with the Entailment Thesis, as well as with most if not all possible variants of truthmaking theory. Other advantages of (Simple) are noted: it doesn’t require the inclusion of exotic objects in one’s ontology; it doesn’t require any revision of one’s logic or of one’s theory of modality. The solution also allows one to eschew negative facts, tropes and properties while providing a definition of negativity (DefNegativity) for certain literal propositions. The paper ends by rebutting several objections that may be levelled against (Simple).

Keywords Metaphysics · Truthmaking · Negation · Negative facts · Facts · Correspondence theory of truth

1 Introduction

In a paper written shortly before his death, Molnar (2000) asked the following question:

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What makes negative statements true? I position this old question in the context of a realist metaphysics, described by four propositions: (i) the world is everything that exists; (ii) everything that exists is positive; (iii) some negative claims about the world are true; (iv) every true claim about the world is made true by something that exists. (i) to (iv) jointly imply that negative truths must have positive truthmakers. What are these positive truthmakers? (...) We do not have a satisfactory theory of truthmakers for negative truths. Each of (i)–(iv) is individually plausible, but the quartet may not be co-tenable.

Let us call the problem of providing a theory that satisfies the above four constraints (i)–(iv), i.e. the problem of finding positive truthmakers for negative truths: ‘Molnar’s problem’.

An example might help to clarify the task at hand: The Loch Ness Monster does not exist. Consequently, <The Loch Ness Monster does not exist>¹ is a true proposition² [thereby satisfying constraint (iii)]. In order to fulfil requirement (iv), one needs to identify something that exists and makes this proposition true, something in virtue of which it is true, i.e. its truthmaker.³ Is the truth of <The Loch Ness Monster does not exist> due to the state of the Loch Ness lake or to the state of the whole world? Is it due to the Monster having some sort of negative property (e.g. inexistence) or due to its lacking a property (e.g. existence)? Is it due to the absence of the Monster or to something else altogether? Requirement (ii) puts constraints on the form that such answers might take. Truthmakers are required to be positive and many of the aforementioned answers (like absences, lack of appropriate properties, possession of negative properties) are considered not to fulfil this requirement. Solving Molnar’s problem requires one to find a positive truthmaker for <The Loch Ness Monster does not exist> and likewise for all other true negative propositions.

In the light of this example, two remarks are in order:

It is important to realize first that only the last three of the four constraints listed in the quoted excerpt from Molnar (2000) are directly relevant to the problem of finding positive truthmakers for negative truths. The thesis according to which the world is everything that exists [constraint (i)] does not play any immediate role in the problem of finding positive truthmakers for negative truths, the necessity of conceiving truthmakers as things that exist being clearly laid out in thesis (iv). Nonetheless, despite not dealing directly with constraint (i), the solution presented in this paper will be perfectly compatible with it.

¹ Following current convention, ‘<P>’ abbreviates ‘the proposition that P’.

² In the above sentence and in the rest of the present paper, propositions are used as truth-bearers solely for the sake of convenience. Had she any qualms about propositions, the reader is welcome to use instead any other truthbearer judged fit.

³ For a general introduction to the topic of truthmaking, see the introductions to (Beebe and Dodd 2005) and to (Lowe and Rami 2009) as well as (Armstrong 2004; Rodriguez-Pereyra 2006; Macbride 2014). For the history of the notion, see (Mulligan et al. 1984; Fox 1987).

Secondly, constraint (iii) deserves special comment due to the ambiguity of the expression ‘negative’.⁴ Despite there being grammatical criteria of negativity, the presence or absence of an odd⁵ number of embedded negative words or morphemes⁶ such as the English ‘anti-’, ‘non-’, ‘not’, ‘un-’, ‘in-’... in the expression of a proposition, although being a useful indication, is not sufficient for characterizing negativity. Indeed, leaving aside problems like those posed by the positive or negative nature of modal operators, certain adjectives like ‘cold’ or ‘dark’ and certain nouns like ‘lack’ or ‘void’ are frequently considered as being negative without comprising any such morphemes. The present paper will hopefully bring some clarification to the nature of negativity (c.f. DefNegativity below) but, provisionally, I shall define a negative proposition as one which has a logical form of the type $\langle \sim P \rangle$.⁷

Molnar’s problem has held a central position in metaphysics over the past decades for various reasons. It has been deemed to pose a serious threat to truthmaker Maximalism, i.e. to the thesis according to which all truths have at least one truthmaker. More importantly, the difficulty of solving Molnar’s problem has been considered to be an obstacle to the very project of elaborating a metaphysics based on the notion of truthmaking (Dodd 2007; Jago 2012), i.e. on the thesis that truths are true because or in virtue of certain entities. The task of addressing this problem is thus important for the theory of truthmaking, one of the most promising current versions of the correspondence theory of truth.⁸

It is the purpose of this paper to provide a solution to Molnar’s problem. Additionally, I shall try to make the present solution cohere with the theses that are most commonly accepted in the context of truthmaking theory and in particular with the following⁹:

Maximalism: All truths have at least one truthmaker. [In effect this is only a rephrasing of Molnar’s thesis (iv)].

Necessitarianism: If t is a truthmaker for $\langle P \rangle$ then, necessarily, if t exists then P .

Entailment Thesis: if $\langle P \rangle$ entails $\langle Q \rangle$ then all truthmakers for $\langle P \rangle$ are truthmakers for $\langle Q \rangle$.¹⁰

After briefly summarizing past attempts to find a solution to Molnar’s problem (in the next section of the present paper), I lay out my own answer to Molnar’s problem -the (Simple) thesis- according to which every simple negative truth is

⁴ Concerning the difficulty of defining negativity, see (Frege 1918–19b: 353; Russell 1918: 215–16; Molnar 2000; Parsons 2006; Cameron 2008).

⁵ Odd due to double negation elimination.

⁶ In linguistics, morphemes are the smallest meaningful linguistic units.

⁷ Where ‘ P ’ is a placeholder for an atomic formula (prefixed or not with an even number of negation signs).

⁸ For a defence of the view that truthmaker theory sharpens the traditional conception of truth as correspondence, c.f. (Armstrong 1997: ch.8: 128–131, 2004: ch.2) and the Introduction to (Beebe and Dodd 2005).

⁹ For an exposition of these theses, c.f. inter alia (Armstrong 2004: ch.2).

¹⁰ Entailment is here understood as a form of relevant entailment. C.f. (Restall 1996, 2000) for discussion.

made true by the falsity of the atomic proposition that it embeds (third section). I then note various advantages of the present view, stressing that it allows one to eschew negative facts, tropes and properties and provides a definition of negativity (DefNegativity) for certain literal propositions (fourth section). Finally, I anticipate various objections that could be mounted against (Simple) and try to rebut them (fifth section) before concluding the present paper.

2 Survey of past answers to Molnar's problem

Molnar's problem elicited a number of replies over the years that followed the publication of his paper in the year 2000. Whereas some philosophers attempted to give an account of negative truths' truthmakers that fitted with all of Molnar's constraints, most authors who have taken issue with the problem did so by rejecting one or more of the above three relevant theses [(ii)–(iv)], thereby effectively abandoning the task of solving Molnar's problem. By way of summary of the past debate, let us note that the various answers to our problem can be grouped along the following lines:

2. 1. Rejection of thesis (ii) A first group of authors rejects the thesis that all truthmakers are positive while trying to find a solution that coheres with Molnar's two other constraints. In retrospect, Russell's thesis (Russell 1918: 211–16) according to which some facts are negative would partake in this strand of thought. Recently, the existence of negative facts has been defended by Priest (2000), rejoined by Beall (2000), and by Jago and Barker (Jago 2011; Jago and Barker 2012). Admission of negative entities to do duty as negative truths' truthmakers have taken various other forms including the admission of negative properties (Van Fraassen 1969), of absences (Martin 1996; Kukso 2006) and of incompatibilities [attributed to (Demos 1917)¹¹]. In the same vein, Armstrong (1997: ch. 13; 2004: ch. 6) availed himself of totality states of affairs as truthmakers for negative truths and conceived these, rightly or wrongly, as having a negative nature (Armstrong 1997: ch.13; Armstrong 2004: ch.6).

2.2. Rejection of thesis (iii) To the best of my knowledge, at the time of writing this paper only one person has so far denied the existence of true negative propositions while respecting Molnar's two other constraints. In two papers published in 2007 (Mumford 2007a, b), Mumford endorsed this thesis, claiming that alleged true negative propositions were to be construed as falsities devoid of any metaphysical commitment (c.f. (Simons 2007) for criticism).

¹¹ As a matter of fact, Demos was not concerned with truthmaking either under that name or under any other. His thesis was that: 'As such, a negative proposition constitutes a description of some true positive proposition in terms of the relation of opposition which the latter sustains to some other positive proposition' (Demos 1917: 194). However, since the view according to which a negative truth of the form $\langle \sim P \rangle$ is made true by a fact incompatible with the fact that P has been (misleadingly) ascribed to him over the years, his paper is worth quoting in the present context.

2.3. Rejection of thesis (iv) A third group of authors rejects the thesis according to which all propositions have at least one truthmaker (Truthmaker Maximalism) while respecting Molnar's two other constraints. Some philosophers buttress this thesis by claiming that negative existential truths are true for lack of a falsemaker (Lewis 1992: 204, 207, 1998: 219–20, 2001: 610–12; Mellor 2003, 2008). Others substantiate their view by claiming that negative truths are 'true by default' (Simons 2005, 2008).

2.4. Acceptance of all three theses A last group of authors tries to fully address Molnar's problem and consequently accept all three theses [(ii)–(iv)]. Some of these scholars have claimed that the whole world is to do duty as negative truths' truthmaker (Cameron 2008; Cheyne and Pigden 2006¹²; Schaffer 2010). Others (Lewis 2003) and (Lewis and Rosen 2003) have defended the view that qua objects could do duty as truthmakers in general and in particular for negative truths¹³ (where object o qua F is o considered under a particular counterpart relation).

2.5 All of the above positions have been deemed problematic in some respects. Russell's endorsement of negative facts during a conference at Harvard allegedly (almost) sparked off a riot (Russell 1918: 211). Negative entities have been described as mysterious (Molnar 2000), not causally efficient (Molnar 2000; Dowe 2001), non-perceivable¹⁴ in a direct or non-inferential way (Demos 1917; Molnar 2000), non-physical and, generally speaking, mind-dependent.¹⁵ Armstrong's view has been criticized both as implicitly admitting negative states of affairs as well as on its own merits (Molnar 2000; Kukso 2006; Jago 2013). Mumford's position has been criticized in (Simons 2007) for eschewing negative propositions altogether and for requiring a revision of the schemata which govern the truth and falsity predicates. Non-Maximalism [i.e. the denial of thesis (iv)] has been described as altogether opposite to the very project of truthmaking theory (Jago 2012; Cameron 2008; Dodd 2007)¹⁶ not to mention its obvious arbitrariness. Lewis' first position¹⁷ has been *inter alia* criticized for not preserving the asymmetry of the determination of truth by reality (Rodriguez-Pereyra 2005). Lewis' second position¹⁸ and Rosen's endorsement of qua objects as truthmakers has been charged with trivialising truthmaking altogether (Jago 2013). Cameron's position has been criticized for being committed to the view that the world couldn't have been other than the way it actually is, not to mention the charge of being exposed to trivialisation (Jago 2013). Finally, Schaffer's position has been criticized for modifying the traditional notion of truthmaking and effectively abandoning Necessitarianism (Jago 2013).

¹² C.f. (Parsons 2006) for criticism of their paper.

¹³ C.f. (Lewis 2003: 30; Macbride 2005) for discussion.

¹⁴ C.f. (Taylor 1952) for the claim that we directly perceive negative facts.

¹⁵ C.f. (Martin 1996; Kukso 2006; Jago and Barker 2012) for discussion and reply to these objections.

¹⁶ C.f. (Schaffer 2010; Jago 2011; Jago 2012) for a defence of Maximalism; c.f. (Simons 2005; Mellor 2003; Mellor 2008; Lewis 1992; Mulligan et al. 1984) for a defence of Non-Maximalism.

¹⁷ Expounded in (Lewis 1992: 204, 207, 1998: 219–20).

¹⁸ Developed in (Lewis 2003) and in (Lewis and Rosen 2003).

3 Another solution: (Simple)

I will not comment upon these views and criticisms here. Instead, I shall introduce another solution to Molnar's problem that I hope avoids the various pitfalls that have plagued earlier attempts to address the issue. This solution is designed to fit with all three of Molnar's constraints as well as with Maximalism, Necessitarianism and the Entailment Thesis while being compatible with various ways one might want to flesh out truthmaking theory.

My proposal is, taking falsity as the default status of all propositions, to hold the following thesis:

(Simple): Every simple negative truth is made true by the falsity of the atomic proposition that it embeds.

According to (Simple), the truthmaker of a true proposition of the type $\langle \sim P \rangle$ ($\langle P \rangle$ being an atomic proposition) is $\langle P \rangle$'s falsity, where falsity is taken as a brute and primitive (undefined) positive characteristic, to the effect that nothing grounds or 'makes' false propositions false (c.f. below for a defence of this thesis). The fact that nothing 'makes' false propositions false, by contrast with truths, which are 'made' true by their respective truthmakers, provides a fundamental difference between truth and falsity: only truths 'correspond' to reality.¹⁹

In the above thesis, the adjective 'simple' qualifies propositions which are either atomic or the negation of atomic propositions (i.e. they are expressed by the literals of a 'logically ideal' language). I intend the adjectives 'atomic' and 'literal' to be understood in a sufficiently loose sense to allow for the possibility that the falsity of 'atomic' existential propositions (propositions of the type $\langle \exists x p(x) \rangle$ with 'p(x)' being an atomic matrix) can (but need not) explain the truth of matching 'simple' true negative existentials (propositions of the type $\langle \sim \exists x p(x) \rangle$).

Similarly, when equivalent to 'simple' true negative existentials, true universal propositions can (but need not) be understood as requiring the same type of truthmakers, i.e. as being made true by the falsity of the appropriate existential propositions.²⁰ Thus, according to (Simple), two of the truthbearers deemed most problematic for truthmaker theory, simple negative existential and universal truths, can be endowed with truthmakers.

Additionally, according to (Simple), true molecular propositions which have true negative literals as components can be endowed with truthmakers. For example, their truthmakers could be identified with those of the disjuncts, immediately manifest when the molecular proposition is written in disjunctive normal form, that happen to be true. Thus, the truthmakers of such truths could be identified with those of true literals and conjunctions of literals.²¹

¹⁹ It is worth noticing that the fact that sentential connectives are truth-functional does not undermine this point. Indeed, the fact that: $\langle P \wedge Q \rangle$ is false iff $\langle P \rangle$ is false or $\langle Q \rangle$ is false does not imply that $\langle P \wedge Q \rangle$ is false because $\langle P \rangle$ is false or $\langle Q \rangle$ is false. The word 'because' being distinct from the biconditional 'iff'.

²⁰ In effect, the choice of adopting or not the above view will depend upon one's theory concerning universal and existential propositions and their truthmakers.

²¹ Unless of course one were to refrain from Maximalism and adopt the view that only simple truths have truthmakers.

4 Advantages of (Simple)

Before addressing some of the objections that could be mounted against (Simple) I shall first note its advantages:

4.1 (Simple) coheres with Molnar's theses (ii)–(iv) (as well as with thesis (i), which we saw is not immediately relevant to the problem of negative truths' positive truthmakers). (Simple) is indeed compatible with Molnar's thesis (ii) given that the posited truthmakers for simple negative propositions, i.e. the falsity of the embedded atomic proposition, can be deemed positive provided we take the notion of falsity as being primitive and positive (c.f. below for a defence of this thesis). The compatibility of (Simple) with Molnar's constraints (iii) and (iv) does not seem to require any gloss.

4.2 (Simple) is also consistent with the Entailment Thesis and with Necessitarianism. Concerning the Entailment Thesis, one can for example define the notion of (relevant) entailment in terms of truthmaking as follows: $\langle P \rangle$ relevantly entails $\langle Q \rangle$ iff, necessarily, all truthmakers for $\langle P \rangle$ are truthmakers for $\langle Q \rangle$ (Restall 1996, 2000). Note that, although $\langle \sim P \rangle$ ²² would according to this definition conjoined with (Simple) be (relevantly) equivalent to $\langle \langle P \rangle$ is false \rangle , both being made true by the fact that $\langle P \rangle$ is false/the trope of $\langle P \rangle$'s falsity,²³ this cannot be charged for being circular, the fact that $\langle P \rangle$ is false (a fact)/the trope of $\langle P \rangle$'s falsity (a trope) being both distinct from $\langle \langle P \rangle$ is false \rangle (a proposition). I do not believe that the compatibility of (Simple) with Necessitarianism requires any gloss.

4.3 Furthermore, (Simple) is compatible with most if not all of the variants of truthmaking theory one may wish to adopt²⁴:

4.3.1 First, (Simple) is compatible with most if not all views one could wish to adopt concerning the nature of truthbearers. (Simple) is of course compatible with truthbearers being propositions (Russellian, Fregean or other), but also, *mutatis mutandis*, with truthbearers being construed as sentences, statements, thoughts, judgements, beliefs, etc. Indeed, as already noted, if one were uncomfortable with the view that truthbearers are propositions, one could harmlessly replace in (Simple) the word 'proposition' with the words 'sentence', 'statement', 'thought', 'judgement' or with the name of whatever one's favoured truthbearers happen to be, assuming of course this choice to be coherent with one's version of truthmaking.

4.3.2 Secondly, (Simple) is compatible with most if not all views concerning the nature of truthmakers. (Simple) is indeed compatible with truthmakers being facts or states of affairs, i.e. objects-having-properties or objects-bearing-relations-to-one-another [c.f. *inter alia* (Armstrong 1997: 113–119)], or tropes, i.e. particularized

²² $\langle P \rangle$ being here an atomic proposition.

²³ Or any other way to metaphysically understand $\langle P \rangle$'s falsity.

²⁴ For a review of various positions concerning the nature of truthbearers, truthmakers and truthmaking c.f. Introductions to (Beebe and Dodd 2005) and to (Lowe and Rami 2009) as well as (Armstrong 2004; Rodriguez-Pereyra 2006; Macbride 2014).

properties or relations [c.f. *inter alia* (Mulligan et al. 1984)] or with truthmakers being ways things are [a view which is close but not identical to that of Lewis (1992: 206, 2001) and Dodd (2001)²⁵] by contrast with being entities and, *mutatis mutandis*, with whatever one's favourite candidates for truthmakers happen to be to the extent, of course, that this choice is compatible with truthmaking theory itself. By way of illustration, assuming $\langle \sim P \rangle$ to be true ($\langle P \rangle$ being an atomic proposition), the fact eligible for being $\langle \sim P \rangle$'s truthmaker would be the fact that $\langle P \rangle$ is false or the fact that $\langle P \rangle$ instantiates falsity; the trope eligible for the same role would be $\langle P \rangle$'s falsity, considered as a particularized property; the 'way things are' eligible for such a role would be the way $\langle P \rangle$ is, namely false, etc.

4.3.3 Thirdly, (Simple) is compatible with most if not all theories concerning the nature of the truthmaking relation itself. Assuming $\langle P \rangle$ to be false ($\langle P \rangle$ being an atomic proposition), $\langle P \rangle$'s falsity can be said to ground (Rodríguez-Pereyra 2005) explain, determine, necessitate (Armstrong 2004: ch.2) or make (Austin 1950:154) $\langle \sim P \rangle$ true. Additionally, (making the same assumption concerning the falsity of $\langle P \rangle$), $\langle \sim P \rangle$ can be said to depend essentially for its truth upon $\langle P \rangle$'s falsity (Lowe 2006: ch.12: 203). Continuing the enumeration, $\langle \sim P \rangle$ can be deemed to be true because or in virtue of the falsity of $\langle P \rangle$ (Rodríguez-Pereyra 2002: ch. 2.1; Rodríguez-Pereyra 2005) or to be supervenient (Bigelow 1988: 132) on $\langle P \rangle$'s falsity. Alternatively, \langle the falsity of $\langle P \rangle$ exists \rangle can also be said to relevantly entail $\langle \sim P \rangle$ (Armstrong 2004: ch.2).

4.4 Additionally, assuming $\langle P \rangle$ to be false, the said falsity can be considered as constituting a minimal truthmaker for $\langle \sim P \rangle$ i.e. as being the smallest truthmaker included in all truthmakers for $\langle \sim P \rangle$ (C.f. (Armstrong 2004: 19–21) for the notion of minimal truthmakers).²⁶ Furthermore, $\langle P \rangle$'s falsity, however conceived, is certainly vastly 'narrower' or more 'discerning', to use Armstrong's telling phrases (Armstrong 2004: 18, 36), than many of the other candidates for being negative truths' truthmakers (e.g. the whole world or totality states of affairs).

4.5 (Simple) has further advantages. It doesn't require the inclusion of any exotic objects in one's ontology. This contrasts strongly with views positing negative facts, totality facts or absences as truthmakers for negative truths (Russell 1918; Priest 2000; Beall 2000; Jago and Barker 2012; Martin 1996; Kukso 2006; Armstrong 1997, 2004). In fact, (Simple) doesn't require any modification of one's ontology, given that, by the previous adoption of truthmaking theory, one is already committed to the existence of propositions or to the existence of whatever one's favourite truthbearers happens to be. Only one's ideology is subject to a slight alteration by taking falsity as a positive and primitive notion (see below for defence of this move). Neither does (Simple) require any revision of one's logic. It is compatible with classical as well as with non-classical logic to the extent that truthmaker's theory already is (in contrast to Mumford's view which requires a

²⁵ Note that, strictly speaking, Dodd (2001) should not be considered as adopting truthmaking theory.

²⁶ To the extent, of course, that mereological predicates can be meaningfully applied to propositions and truthbearers.

thorough revision of the schemata governing the predicates of truth and falsity). It doesn't require either any revision of one's theory of modality (in contrast to Cameron's views). Additionally, Jago's problem (Jago 2012) about knowledge states, a problem for non-maximalists because allegedly forcing them to accept negative entities, is not one for (Simple): <Max knows that Ern Malley does not exist> can be endowed with positive truthmakers without further ado. Indeed, according to (Simple), the truthmakers of the former proposition are none other than the bearing of a knowledge relation by the knower (Max) to a negative proposition (<Ern Malley does not exist>) together with the falsity of <Ern Malley does exist>. Furthermore, given that, according to (Simple), the truth of simple negative propositions is explained by the falsity of the atomic propositions that they embed and that falsity is to be conceived as a positive and primitive property,²⁷ the present view allows one to eschew negative facts, tropes and properties. This vindicates philosophy and common sense's long-time prejudice in favour of the positive. The fact of being actually or potentially made true by a falsity also provides us with a much-needed necessary condition of negativity for literal propositions.²⁸ This necessary condition falls short of being a definition of negativity for all literal propositions due to the fact that true propositions of the type <<P> is false> are made true by <P>'s falsity without, according to the present view, being negative. However, by restricting the condition to simple and non metalinguistic (or rather non metapropositional) propositions one gets the following definition of negativity:

(DefNegativity): A non-metapropositional simple proposition is negative iff it is or could be made true by the falsity of an atomic proposition.

5 Anticipation of various objections to (Simple) along with replies

I anticipate various objections that may be levelled against the thesis that simple negative truths are made true by the falsity of the atomic propositions that they embed:

5.1 I believe most philosophers' immediate reaction to (Simple) will be to deny that the falsity of a proposition is a positive characteristic, thereby making the present view flout Molnar's constraints (ii) or (iv). Indeed, when laying out the semantics of classical logic, one rather speaks of a formula not being true (in a model) than of a formula being false (in that very model). In an ideal language, 'false' should be treated as a derived predicate defined as 'not true'. Thus, according to this line of thought, falsity should be considered as a negative property.

I believe that this objection can be dodged by taking the twin notions of truth and falsity (or the related notions of being true of and of being false of) as positive and

²⁷ C.f. below for a defence of this thesis.

²⁸ Concerning the difficulty of finding such a condition, see (Frege 1918–19b: 353; Russell 1918: 215–16; Molnar 2000; Parsons 2006; Cameron 2008).

primitive concepts standing for positive and primitive features of propositions (or of predicative concepts). Such a move can be justified in several ways:

First, taking truth and falsity to be primitive notions corresponding to equally fundamental features or objects has a venerable pedigree. Indeed, such was Frege's stance when he introduced in philosophy and in logic the notion of a truth-value. In his *Über Sinn und Bedeutung* (Frege 1892), Frege introduced two objects, the True and the False, as references ('Bedeutungen') of sentences, not defining one as the negative of the other but rather taking both as primitive objects:

We are therefore driven into accepting the *truth-value* of a sentence as constituting its *Bedeutung*. By the truth-value of a sentence I understand the circumstance that it is true or false. There are no further truth-values. For brevity I call the one the True, the other, the False.²⁹

Second, one may note that if it is usual, when dealing with a classical logic, to say that a proposition is false iff it is not true, one could just as well hold instead that a proposition is true iff it is not false, taking the notion of falsity as primitive (and taking falsity as a positive feature of propositions) and the notion of truth as derivative (and taking truth as a negative feature of propositions). Similarly, instead of saying that any formula composed of a single monadic predicate is true in any appropriate model iff the value of its objectual constant (or of its objectual variable under a valuation) belongs to the extension of its predicate (in that model) and false otherwise, one may hold instead that any such formula is false in any appropriate model iff the value of its objectual constant (or of its objectual variable under a valuation) belongs to the extension* of its predicate (in that model) and is true otherwise (where, in any model, the extension* of a predicate is the set of objects of which the predicate is false).³⁰ Inasmuch as two definitions are symmetrically related and interchangeable, thereby making the roles of its definiens and definiendum equally interchangeable, it seems advisable not to privilege one notion over the other and to take both notions as primitive and positive.³¹ Consequently, taking the notions of truth and falsity (or of being true of and of being false of) as primitive and positive seems to be a recommended move when dealing with classical logic.

Thirdly, it is customary in non-classical logics to introduce the notion of false (in a model) alongside that of truth (in a model) without defining one as the negation of the other. Indeed, when using logics with truth-value gaps or with many-valued

²⁹ (Frege 1892: 157–158).

³⁰ Similar remarks apply of course to polyadic predicates.

³¹ Similar remarks apply to the strategy of taking ' \sim ' as a primitive sign in order to define falsity using the following schema: $\langle P \rangle$ is false iff $\langle \sim P \rangle$ is true, given that truth could be likewise defined using the schema: $\langle P \rangle$ is true iff $\langle \sim P \rangle$ is false.

logics,³² whether three- or n -valued (for any positive integer n) or continuously-valued logics, one cannot define falsity as the negation of truth³³ and is thereby led to treat other truth-values, besides that of truth, as primitive. Similarly, in paraconsistent logics, one commonly uses the notions of truth-in-a-model and of false-in-a-model, together with those of extension and extension*³⁴, as primitive. Consequently, inasmuch as truthmaker theory shouldn't beg the question in favour of classical logic over the non-classical logics considered above, taking truth and falsity as primitive notions corresponding to positive features of reality is further backed by the fact that 'false' is not and usually cannot be defined as 'non-true' in these theoretical contexts.³⁵ Thus, the strategy of taking falsity and related semantic concepts as positive and primitive notions corresponding to positive and primitive features of propositions is not a stipulation enabling one to solve Molnar's problem or a consequence of the notorious difficulty of finding a criterion enabling one to distinguish between negative and positive features of reality³⁶ but is independently motivated by considerations pertaining both to classical and to non-classical logic.

5.2 One could object that (Simple) has failed to provide a 'real' or 'worldly' or 'causally efficient' truthmaker for simple negative truths. One might also consider that the difficulties facing someone who would want to ascribe locations to propositions makes the present thesis unattractive to those inclined towards naturalism, a position adopted by some of truthmaking's leading proponents (e.g. Armstrong). Given that propositions represent reality, how can they constitute such 'worldly', 'real', 'causally-efficient',³⁷ 'located' truthmakers?

In reply to this putative objection, let us recall that the existence of propositions is admitted by most if not all philosophers who have dealt with the topic of truthmaking. Such authors are thereby already ontologically committed to propositions independently of any consideration of Molnar's problem so that they have to hold propositions as being 'real' or 'part of the world' or 'worldly', in some sense of these phrases. Furthermore, as already noted, had one any qualms about propositions' reality one could easily accommodate (Simple) to fit with any other candidate truthbearers.

³² C.f. (Urquhart 2001) for an introduction to many-valued logics.

³³ Using the notion of exclusive negation (in the exclusive sense of negation, $\langle \text{not } P \rangle$ being true iff $\langle P \rangle$ is false or devoid of any truth value) to redefine 'False' as done at the beginning of (Salmon 1998) only achieves just that, a change of the meaning of 'False'.

³⁴ C.f. for example (Priest 2006: Part II) where extension and extension* are respectively called extension and anti-extension.

³⁵ In non-classical contexts, dedicated 'makers' should be included to explain the possession by propositions of truth-values other than truth and falsity, or their lack of any truth-value. For example, one could consider that some objects sometimes only indeterminately instantiate certain properties, by contrast with determinately instantiating them, to the effect that the lack of a truth-value of $\langle P(o) \rangle$ would be due to o indeterminately instantiating property P .

³⁶ Concerning the difficulty of finding such a criterion, see (Frege 1918–19b: 353; Russell 1918: 215–16; Molnar 2000; Parsons 2006; Cameron 2008).

³⁷ For the view that propositions ('Gedanken') are causally efficient by affecting those who 'grasp' them, c.f. (Frege 1918–19a: 344).

6 Conclusion

(Simple) aims at solving Molnar's problem by claiming that the truthmakers of simple true negative propositions³⁸ are the falsities of the atomic propositions that they embed. (Simple) coheres with all three of Molnar's relevant constraints [(ii)–(iv)], with different variants of truthmaking theory one might wish to adopt as well as with truthmaker Maximalism, Necessitarianism and with the Entailment thesis. Furthermore, (Simple) allows one to eschew negative facts, tropes and properties and provides a definition of negativity (DefNegativity) for certain literal propositions. The solution to Molnar's problem laid out in (Simple) therefore seems adequate.

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³⁸ Or of any other simple true negative bearers of truth-value judged fit.

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