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# Truthmaking and Grounding

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This paper is concerned with the relation between two important metaphysical notions, ‘truthmaking’ and ‘grounding.’ I begin by considering various ways in which truthmaking could be explicated in terms of grounding, noting both strengths and weaknesses of these analyses. I go on to articulate a problem for any attempt to analyze truthmaking in terms of a generic and primitive notion of grounding based on differences we find among examples of grounding. Finally, I outline a more complex view of how truthmaking and grounding could relate. On the view explored, truthmaking is a species of grounding differentiated from other species of grounding by the unique form of dependence it involves.

## Introduction

‘Grounding’ has become a central metaphysical notion, not only in discussions of ontological dependence, fundamentality, and reduction, but also for framing the enterprise of metaphysics itself (cf. Schaffer 2009). Grounding is taken to be a kind of non-causal metaphysical dependence that is intimately linked to non-causal explanation. Phrases such as ‘in virtue of,’ ‘being ontologically prior to,’ and ‘being metaphysically explained by’ are thought to indicate the presence of grounding. Some putative cases of grounding include the dependence of

the singleton {Socrates} on Socrates himself, the dependence between moral facts and natural facts, and the dependence between wholes and their parts. The dependence of truth on being is another kind of dependence—“truthmaking”—that many philosophers acknowledge. For the truthmaker theorist, true propositions are true *in virtue of* the existence of certain entities, their “truthmakers.” This indicates that truthmaking and grounding are closely connected, but it is not exactly clear how. In this paper I consider how the two might be related. In §1 an introduction to the notions of truthmaking and grounding is given. §2 considers various ways in which truthmaking could be explicated in terms of grounding, noting both strengths and weaknesses of these analyses. I go on in §3 to articulate a problem for any attempt to analyze truthmaking in terms of a generic and primitive notion of grounding based on considering differences we find among examples of grounding. Finally, in §4, I outline a more complex view of how truthmaking and grounding could relate. On the view explored, truthmaking is a species of grounding differentiated from other species of grounding by the unique form of dependence it involves.

## **§1 An Introduction to Truthmaking and Grounding**

### *Truthmaking*

Motivated by the intuition that truth depends on being, truthmaker theorists hold that for every true proposition  $p$  (or some restricted class thereof), there exists some entity  $x$  that makes  $p$  true. For most truths, truthmakers are held to be non-propositional entities, e.g., states of affairs (particulars instantiating a property/relation) or tropes (individual property instances).<sup>1</sup>

Truthmakers are also said to explain, in some sense, the truth of the propositions they make true.

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<sup>1</sup> Armstrong (1997: 116ff.; 2004: 48) thinks of truthmakers as states of affairs. Mulligan et al. (1984: 289) take “moments” (existentially dependent entities such as tropes) to be truthmakers. I will use the angle brackets  $\langle, \rangle$  as an abbreviation for ‘the proposition that’ throughout the paper.

The truthmaking relation is a non-causal, metaphysical dependence relation that cannot be analyzed in purely modal terms, e.g., necessitation or supervenience. Despite the general agreement about this, it is controversial how the relation is best analyzed.<sup>2</sup> Because the relation typically holds between propositions and non-propositions it is *cross-categorial* in the sense that it can relate entities from different ontological categories. It is also *many-to-many*: one entity can be the truthmaker for multiple propositions and one proposition can be made true by multiple entities. Most hold that it is a necessary condition on truthmaking that the existence of a truthmaker *necessitates* the truth of the proposition it makes true, i.e., if  $x$  makes  $p$  true, then necessarily, if  $x$  exists, then  $p$  is true.<sup>3</sup> Since most instances of truthmaking relate a proposition to a non-proposition, most instances are asymmetric and irreflexive. This is not always the case. A proposition such as <propositions exist> is made true by any proposition, including itself. So at least some instances of truthmaking are reflexive and symmetrical.<sup>4</sup> Finally, the relation seems not to be transitive, for the dog Fido makes <Fido exists> true and <Fido exists> makes <propositions exist> true, but Fido does not plausibly make <propositions exist> true.

### *Grounding*

Grounding, like truthmaking, is taken to be a form of non-causal metaphysical dependence. Grounding is also supposed to be intimately connected to explanation. Some take it simply to be a kind of metaphysical explanation, whereas others hold that grounding relations underpin or track non-causal explanations.<sup>5</sup> As with truthmaking, there is a consensus that it

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<sup>2</sup> See Rami (2009: 13-24) for summary and discussion of the various attempts to analyze truthmaking found in the literature. At least one truthmaker theorist takes ‘in virtue of’ as primitive (Rodriguez-Pereyra (2005: 18)).

<sup>3</sup> However, not everyone holds that truthmakers necessitate their truths, e.g., Cameron (2005), Parsons (1999), and Mellor (2003).

<sup>4</sup> There are also seem to be symmetrical, but irreflexive, instances of truthmaking, e.g., <propositions exist> makes true <propositions about propositions exist> and vice versa. Thanks to an anonymous referee for this example.

<sup>5</sup> Fine (2001) holds the view that grounding is metaphysical explanation. See Kim (1994) and Ruben (1992: chapter

cannot be reductively defined in modal terms such as necessitation or supervenience. Unlike truthmaking, grounding is thought to be a pervasive relation, involving many different kinds of entities at different levels of reality, e.g.,

- (1) The existence of {Socrates} is grounded in the existence of Socrates
- (2) Wholes are grounded in their parts
- (3) States of affairs are grounded in their constituents
- (4) Tropes are grounded in their bearers
- (5) Holes are grounded in their hosts
- (6) Mental states are grounded in brain states
- (7) Moral facts are grounded in natural facts
- (8) Aesthetic facts are grounded in natural facts

One divide between grounding theorists concerns the proper logic of grounding statements. On one side is the *operator* view, according to which grounding statements have the logical form ‘ $\psi$  because  $\phi$ ’ where ‘because’ is a non-truth-functional connective or operator that does not express a relation of grounding.<sup>6</sup> The other popular view of the logic of grounding is the *predicate* view, which takes grounding statements to have the form ‘ $\phi$  grounds  $\psi$ ’ where ‘grounds’ is a two-place predicate that takes designators for the grounded entity and designators for its grounds as arguments to form sentences.<sup>7</sup> On this view, the predicate ‘grounds’ expresses a relation of grounding between entities. Three versions of the predicate view can be distinguished: (A) the ‘truth-truth’ view, on which grounding only relates true propositions,<sup>8</sup> (B) the ‘fact-fact’ view, on which grounding only relates facts (understood as objects having properties or standing in relations),<sup>9</sup> and (C) the ‘arbitrary category’ view, on which grounding may relate entities of arbitrary ontological categories.<sup>10</sup> There is general agreement that grounding, if it is a relation, is

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7) for versions of the tracking view.

<sup>6</sup> Correia (2010), Schnieder (2006), and Fine (2001) and (2012) endorse the operator view.

<sup>7</sup> Audi (2012), Rosen (2010), and Schaffer (2009) opt for the relational view.

<sup>8</sup> See Cameron (2011). At points in his (2011: 15-16) Fine seems to endorse this view, but it seems not to be his considered view.

<sup>9</sup> This view is held by Audi (2012) and Rosen (2010). Liggins (2012: 266) also uses the name “fact-fact” view.

<sup>10</sup> Schaffer (2009) endorses this view.

governed by the following formal structural features: asymmetry, irreflexivity, transitivity, non-monotonicity (it is not the case that if  $\phi$  grounds  $\psi$ , then  $\phi$  and any arbitrary  $\rho$  together ground  $\psi$ ), and well-foundedness (grounding chains eventually terminate in something fundamental).<sup>11</sup> Finally, most grounding theorists seem happy to leave ‘grounds’ as an unanalyzed primitive.<sup>12</sup>

Because truthmaking and grounding are both kinds of non-causal dependence closely linked to explanation, we should inquire into the connection between them. There are three general ways in which they might be related: (i) that grounding can be analyzed in terms of truthmaking, (ii) that truthmaking can be analyzed in terms of grounding, (iii) that truthmaking and grounding are related in some other way than analysandum and analysans. I will not address option (i) because it is not a view anyone defends and because it is not very plausible to begin with. Cameron (2011), Fine (2012), and Liggins (2012) all identify problems with defining grounding or ‘in virtue of’ in terms of ‘makes true.’<sup>13</sup> Insofar as some instances of grounding do not concern propositions and their truth, I see no reason to think that every instance of grounding can be understood in terms of relations between truths and existing entities. Instead, I will begin with option (ii) because it is *prima facie* plausible and because a number of theorists have already attempted to analyze truthmaking in terms of grounding. However, I will end up exploring a view that falls under option (iii).

## §2 Truthmaking as Grounding

Analyzing truthmaking in terms of grounding is a natural way to think about the

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<sup>11</sup> There is general, but not unanimous, agreement on these principles. Jenkins (2011) and Lowe (2001) question the irreflexivity of grounding, Schaffer (2012) discusses counterexamples to the transitivity of grounding, and Cameron (2008) questions grounding’s well-foundedness.

<sup>12</sup> This is not universal. Correia (unpublished) attempts to analyze grounding in terms of essence.

<sup>13</sup> Cameron (2011) offers reasons for being dissatisfied with an analysis of ‘in virtue of’ in terms of ‘makes true.’ Fine (2012: section 1.3) thinks that truthmaking unnecessarily restricts what can serve as ground to existence and what is grounded to truths. Liggins provides some compelling examples of non-causal dependence that cannot be fit into the ‘making’ schema ‘*x* is made *F* by *o*’ (2012: 268-9).

connection between the two notions because grounding is more pervasive than truthmaking, i.e., the former has many instances involving many different kinds of entities, whereas truthmaking concerns only the dependence of truth on reality. It makes sense to understand the more specific dependence in terms of the more general dependence, if we can. Since most grounding theorists take ‘grounds’ to be primitive and unanalyzable, the easiest way to evaluate the prospects for an analysis of truthmaking in terms of grounding is to consider specific views on the logic and structure of grounding, viz. the operator view and the three versions of the predicate view mentioned in the last section. Before proceeding, let me say something about the nature and aim of these analyses. I take it that an analysis of truthmaking in terms of grounding is supposed to afford us theoretical unification through the reduction of one non-causal dependence notion to another. Such analyses seek to define the notion of truthmaking using the notion of grounding. Not only should the analyses provide exceptionless, universally generalized, bi-conditionals, the bi-conditionals should be read as holding necessarily. The analyses can, moreover, be given a stronger, metaphysical, reading, i.e., as providing a metaphysical definition of truthmaking; telling us what the truthmaking relation *is*. I will consider the viability of the metaphysical reading of some of the analyses.<sup>14</sup>

### *The Operator View*

According to the operator view, the logical form of grounding statements involves a ‘because’ operator rather than a relational predicate ‘grounds.’ An analysis of truthmaking in terms of the operator view of grounding would be:

(TMG<sub>O</sub>)       $x$  makes  $p$  true iff  $p$  is true because  $x$  exists.

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<sup>14</sup> The following sections of the paper were significantly influenced by some very helpful comments from an anonymous referee, who I would like to thank.

Some proponents of the operator view are drawn to it, because, they believe, it does not commit us to a relation of grounding or, consequently, to entities (e.g., facts or truths) that serve as the grounds or the grounded.<sup>15</sup> On their view, statements of grounding can be true even though ‘because’ is ontologically non-committing, similar to the way ‘and’ is in conjunctive statements. If this is correct and we take  $TMG_O$  to be a definition of truthmaking, then the principle entails the non-existence of the truthmaking relation.<sup>16</sup> Obviously, this should be regarded as a poor analysis of the truthmaking *relation* and should be rejected by anyone who thinks truth’s dependence on being is best articulated in terms of a relation between truths and entities in the world. One motivation for the operator view is its ontological neutrality. Correia, for example, writes, “My preference goes to [the operator view] for reasons of ontological neutrality: it should be possible to make claims of grounding and fail to believe in facts” (2010: 254).<sup>17</sup> I am sympathetic to the idea that we should be able to say as much as we can about grounding and truthmaking claims without having to make *specific* controversial ontological commitments, e.g., to facts or propositions. But it is not clear that we can affirm such claims without being committed to *some* things standing in *some* relation to each other.<sup>18</sup>

There is, however, a weaker reading of  $TMG_O$ . We need not see the principle as denying the existence of the truthmaking relation between a proposition and an entity or even as offering a metaphysical definition of the truthmaking relation. Instead, we can read  $TMG_O$  as saying that the truthmaking relation holds between  $x$  and  $p$  just in case  $p$  is true because of  $x$ ; it simply gives

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<sup>15</sup> Cf. Fine (2001) and Correia (2010). See Melia (2005) for a similar view of ‘makes true.’

<sup>16</sup> Liggins (2012) takes this to be a consequence of the operator view for truthmaker theory.

<sup>17</sup> Fine (2001 and 2012) expresses similar sentiments.

<sup>18</sup> None of this constitutes an argument against the operator view. In fact, this version of the operator view challenges the one who thinks that grounding is relational to justify the need to postulate a relation. I find Rodriguez-Pereyra’s (2005) argument for a relation of grounding compelling. But see Melia (2005), Hornsby (2005), and Schnieder (2006) for opposing views.

us necessary and sufficient conditions under which the truthmaking relation obtains between a proposition and an entity. Such a reading of  $TMG_O$  will be consistent with the view that truthmaking is a relation between propositions and non-propositional entities. In this case, the viability of  $TMG_O$  will largely depend on how well we understand the semantic and metaphysical features of ‘because.’<sup>19</sup>

### *The Truth-Truth View*

One version of the predicate view of the logic of grounding has it that ‘grounds’ is a predicate that expresses a relation of grounding, which holds exclusively between true propositions. An analysis of truthmaking on the ‘truth-truth’ view would be:

( $TMG_T$ )       $x$  makes  $p$  true iff  $\langle x \text{ exists} \rangle$  grounds  $\langle p \text{ is true} \rangle$ .<sup>20</sup>

This principle defines the truthmaking relation between an entity such as [the rose is red]<sup>21</sup> and  $\langle$ the rose is red $\rangle$  in terms of a grounding relation between truths, viz.  $\langle$ [the rose’s being red] exists $\rangle$  to ground  $\langle\langle$ the rose is red $\rangle$  is true $\rangle$ . I take it that what is distinctive about truthmaking is that it links two realms: the representational and the non-representational. The central motivation for truthmaking is the idea that propositions depend for their truth on what exists. I think this causes problems for  $TMG_T$ . For it is hard to see how a relation that links the representational to the non-representational can be defined by a relation that holds exclusively between representations. The notion of truthmaking is not the notion of a relation that holds exclusively between propositions. Nor is it plausible to think that *what it is* (metaphysically

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<sup>19</sup> See Rami (2009: 21-22) for discussion of a similar principle.

<sup>20</sup> Cameron (2011) defines truthmaking in terms of an ‘in virtue of’ relation between truths. McGrath (2003) holds that many propositions are made true by other propositions.

<sup>21</sup> Let  $[p]$  abbreviate ‘the fact that  $p$ .’



speaking) for an entity to make a proposition true is for some truth to stand in a relation to another truth. At most,  $TMG_T$  provides us with an exceptionless bi-conditional; it only tells us that the truthmaking relation holds between  $x$  and  $p$  just in case another relation—grounding—holds between  $\langle x \text{ exists} \rangle$  and  $\langle p \text{ is true} \rangle$ . But this does not tell us anything about the truthmaking relation itself. The connection between  $x$  and  $\langle x \text{ exists} \rangle$ ,  $p$  and  $\langle p \text{ is true} \rangle$ , and ‘makes true’ and ‘grounds’ remains unclear on this view. So it is not clear that  $TMG_T$  provides us with a reductive definition of truthmaking.

### *The Fact-Fact View*

Next, consider the ‘fact-fact’ view, according to which grounding only relates facts (understood as entities having properties or standing in relations). Truthmaking on such a view would be analyzed as follows:

( $TMG_F$ )  $x$  makes  $p$  true iff [ $x$  exists] grounds [ $p$  is true].

Analogous to the way in which  $TMG_T$  defines truthmaking in terms of grounding between truths,  $TMG_F$  explicates a link between the representational and the non-representation in terms of the link between non-representational entities, i.e., facts. This would seem to pose a similar problem as the one identified for  $TMG_T$  above. But unlike  $TMG_T$ ,  $TMG_F$  allows the entities that the truthmaker theorist takes to be the relata of the truthmaking relation to be *constituents* of the relata of the grounding relation, e.g., Fido is a constituent of [Fido exists] which grounds [ $\langle$ Fido exists $\rangle$  is true] which has  $\langle$ Fido exists $\rangle$  as a constituent.<sup>22</sup>

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<sup>22</sup> Liggins (2012) worries that truthmaker theory is incompatible with the fact-fact view of non-causal dependence because, “according to the fact-fact theory, non-causal dependence only ever relates facts to facts. So it entails the non-existence of the truth-makers theorist’s grounding relation” (2012: 270). I am unsure why Liggins thinks that the truthmaker theorist should be unhappy with this. After all, she still gets a dependence relation between entities and indeed entities that involve what she originally thought was related by the truthmaking relation, viz. individuals, facts, etc. and propositions.

Another issue for TMG<sub>F</sub> is that it construes the grounding of ‘truth’ as the grounding of the fact/state of affairs involving a proposition’s instantiation of the property *being true*, a “truth-fact.”<sup>23</sup> Postulating the entity *p’s truth* runs afoul of the truthmaker theorists who do not acknowledge the existence of states of affairs.<sup>24</sup> The proposal also has at least three controversial consequences at the level of truthmakers (grounds): (i) TMG<sub>F</sub> requires every truthmaker to be a fact, but it seems that many truths are made true by entities of different ontological categories. For instance, <properties exist> would seem to be made true by any property, e.g., *being blue*, rather than the fact that *being blue* exists. (ii) To account for many instances of truthmaking, TMG<sub>F</sub> requires us to recognize the property *existence*, which many deny is a genuine property, e.g., [Socrates exists] involves Socrates instantiating the property *having existence*.<sup>25</sup> (iii) TMG<sub>F</sub> commits us to seemingly gratuitous facts. Take the instance of truthmaking, [a is F] makes <a is F> true, for example. According to TMG<sub>F</sub> it is [[a is F] exists] that grounds [<a is F> is true]. The postulation of such a complex grounding fact is gratuitous: [a is F] itself is the truthmaker for <a is F>; there is no need to recognize the fact of some fact existing.<sup>26</sup> So TMG<sub>F</sub> has some controversial features. But I do not think these drawbacks are decisive against TMG<sub>F</sub> as an analysis of truthmaking. For these features, if they are objectionable, it is for general metaphysical reasons and not because they are obviously incompatible with truthmaking.

### *The Arbitrary Categories View*

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<sup>23</sup> Schaffer has told me in conversation that this is how he understands the grounding of truth. Note, however, that Schaffer holds the arbitrary categories view and not the fact-fact version.

<sup>24</sup> For instance, Lowe (2007) and Mulligan et al. (1984).

<sup>25</sup> Armstrong (2004: 6) does not think we need to recognize a fact like [x exists] as a truthmaker for <x exists>. Audi (2012: 103) defends the view that grounding only relates facts. He also denies that grounding is present between existence facts because he denies that existence is a genuine property.

<sup>26</sup> An anonymous referee suggested to me the following response to this drawback: let different kinds of facts (e.g., existential facts and predicational facts) be truthmakers for different kinds of propositions (e.g., existential truths and predicational truths). Although this response diminishes the uniformity of the view, it is a reasonable one.

According to the arbitrary category view, grounding may relate entities of arbitrary ontological categories.<sup>27</sup> We could analyze truthmaking on this view as follows:

(TMG<sub>A</sub>)  $x$  makes  $p$  true iff  $x$  grounds [ $p$  is true].

Like TMG<sub>F</sub>, in TMG<sub>A</sub> the right-hand side of the bi-conditional takes a fact in the second argument place. This is because it is the *truth* of  $p$  and not the *existence* of  $p$  that is being grounded. So this principle must still reinterpret truthmaking as the grounding of truth-facts. Unlike TMG<sub>F</sub>, TMG<sub>A</sub> allows the grounds to be an entity from an arbitrary ontological category, hence  $x$  might be a fact, a trope, or an individual. This feature of the principle makes it more similar to traditional approaches to truthmaking, which let truthmakers come from different ontological categories. Because of this, TMG<sub>A</sub> does not require us to recognize facts involving the property *existence*. To this extent TMG<sub>A</sub> has the advantage over TMG<sub>F</sub>. Nevertheless, some are concerned that if grounding can relate entities of arbitrary ontological categories, then it cannot be the explanatory relation many take it to be. The problem is supposed to be that individuals or substances cannot ground fact because they do not, as Trogdon says, “have the right kind of structure to be an *explanans* of anything” (forthcoming), e.g., “mouth” does not explain why it is a fact that the smile exists.<sup>28</sup> However, the defender of TMG<sub>A</sub> could respond by noting that she need not take grounding *itself* to be an explanatory relation, but one that *tracks* explanatory relations. Then she could say that the individual  $x$ —which exists—grounds the fact that  $p$  is true and this tracks the explanation,  $p$  is true because  $x$  exists.

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<sup>27</sup> Schaffer (2009: 375) holds this view of grounding. See his (2010) for an account of truthmaking as “truth-grounding.”

<sup>28</sup> One might think that there are examples of grounding in which an individual is the explanans, e.g., A married B because of C (where C is B’s rich elderly father). However, it seems to me that C alone cannot explain the explanandum. It is the *fact* that C is rich and near death, etc. that explains why A marries B, not simply the individual C. Thanks to an anonymous referee for this example.

Up to this point I have considered four different ways in which to explicate truthmaking in terms of grounding. All of the analyses have some drawbacks.  $TMG_T$  fared the least well. In my view,  $TMG_A$  is the preferable analysis because it retains many of the features originally attributed to truthmaking, e.g., the relation is cross-categorial.

### *Formal Structural Features*

I noted above that truthmaking is generally thought to be non-symmetric, non-reflexive, and non-transitive. Grounding, on the other hand, is taken to be asymmetric, irreflexive, and transitive. Truthmaking is not supposed to be irreflexive because there are instances of reflexive truthmaking, e.g.,  $\langle$ propositions exist $\rangle$  makes itself true. This discrepancy in formal structural principles might be seen as a *prima facie* reason against reducing truthmaking to grounding. However, if we conceive of truthmaking as the grounding of a truth-fact, i.e., a fact of the form  $[p$  is true], as both  $TMG_F$  and  $TMG_A$  do, then we can think of truthmaking as having the same formal structure as grounding is said to have.<sup>29</sup> But given  $TMG_{F/A}$ ,  $\langle$ propositions exist $\rangle$  makes  $\langle$ propositions exist $\rangle$  true is analyzed as  $[\langle$ propositions exist $\rangle$  exists] (or  $\langle$ propositions exist $\rangle$ ) grounds  $[\langle$ propositions exist $\rangle$  is true]. Since the facts flanking ‘grounds’ are different, there is no violation of the irreflexivity of grounding. Truthmaking seems to have symmetrical instances, e.g.,  $\langle$ propositions exist $\rangle$  makes true  $\langle$ propositions about propositions exist $\rangle$  and vice versa. Again, given  $TMG_{F/A}$ , the asymmetry of grounding is maintained:  $[\langle$ propositions exist $\rangle$  exists] grounds  $[\langle$ propositions about propositions exists $\rangle$  is true] and  $[\langle$ propositions about propositions exists $\rangle$  exists] grounds  $[\langle$ propositions exist $\rangle$  is true] are both asymmetrical; in each case an existence fact asymmetrically grounds a truth fact. Finally, consider transitivity. Truthmaking, on

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<sup>29</sup> I would especially like to thank an anonymous referee for helping me think through these examples. I am also indebted to Jonathan Schaffer, Kathrin Koslicki, and Noël Saenz for discussion on this section.

the standard conception, is not transitive:

Fido makes <Fido exists> true.  
<Fido exists> makes <propositions exist> true.  
Fido does NOT make <propositions exist> true.

But if we understand truthmaking in terms of grounding between facts, then we can see that the above is not a counterexample to transitivity:

[Fido exists] grounds [<Fido exists> is true].  
[<Fido exists> exists] grounds [<propositions exist> is true].  
[Fido exists] does NOT ground [<propositions exist> is true].

The counterexample fails because there is a shift in the second term from step one to step two, i.e., a shift from [<Fido exists> is true], to [<Fido exists> exists], which are different facts.

### §3 Varieties of Grounding?

In the last section I considered four different ways of analyzing truthmaking in terms of grounding. Here I will suppose that truthmaking can be defined in terms of grounding as the grounding of facts of the form [ $p$  is true]. If this is the case, we appear to have integrated truthmaking into a simple and unified account of non-causal dependence. But I will argue in this section that this is more appearance than reality; the allegedly simple and unified account of non-causal dependence into which truthmaking has been integrated exhibits significant disunity and complexity. There seem to be multiple forms of grounding and I will argue that truthmaking does not fit comfortably into any of them.

One consequence of the reduction of truthmaking to a generic and primitive notion of grounding is that it entails the nature of grounding is uniform across the different cases, irrespective of the nature of what is being grounded. For example, the *grounding* of truth, existence, identity, facts, individuals, tropes, wholes, etc. would be the same across these diverse

cases (even if they are governed by different constraints). I doubt, however, that a satisfying account of how an experience depends on a brain state could be given without careful consideration of the nature of phenomenal consciousness.<sup>30</sup> Likewise, I doubt that the dependence of truth on being could be adequately understood independently of the nature of truth and truth-bearers. If we do not understand what truth is, it will be difficult to determine not only *what* truth depends on but also *how* it depends on something. Whether or not truth is a property, a relational or monadic property, or pluralistic or monistic will make a difference to how we conceive of truth's dependence on reality. Likewise, how we understand the nature of truth-bearers (as contingent or necessary, concrete or abstract, structured or simple, etc.) will make a difference to our account of truth's dependence on being. The TMG principles, to their detriment, do not tell us anything specific about the nature of *truth's* dependence on reality.

By defining truthmaking in terms of the generic and primitive notion of grounding, we lump truthmaking together with other instances of grounding that seem to exhibit important differences. When we consider certain examples of grounding, we find that they involve a particular *form* of grounding. For example, the grounding of sets on their members, of wholes on their parts, and of facts on their constituents have the form of “construction” or “building” one out of many. In these cases, one thing is grounded in multiple things, hence the logical form of such a relation is one-many. Multiple entities somehow come together to make or form a unity. This form of grounding has been discussed by Bennett (2011) and Koslicki (2012), though in different terms and with different examples. Bennett suggests that composition and microbase determination involve many entities being “wrapped into one.” She writes, “Composition, for example, pulls several smaller things together to make a single larger thing. Similarly for microbased determination, the process by which properties of a thing's parts come together to

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<sup>30</sup> Schulte (2011: 420) makes this point.

determine the properties of the whole” (2011: 86). Koslicki claims that the dependence of sets on their members, water on H<sub>2</sub>O, and lightning on its electrons involves a kind of construction of an entity out of its constituents (2012: 196ff.). For her, the relatively independent entity figures in a “real definition” of the dependent entity and the latter is in some sense constructed out of the former.

This “construction” form of grounding is ill-suited to characterize truthmaking; truths are in no sense constructed out of their truthmakers. Truths are propositions and if propositions were constructed out of their truthmakers, then they could not exist without their truthmakers. But all contingent truths could exist without truthmakers, since they can exist and be false. It is also not plausible to think that a truth-fact such as [*<snow is white> is true*] is constructed out of its truthmaker, [*snow is white*], for none of its constituents are or are built out of its truthmaker. *<Snow is white>* is not built out of its truthmaker since it can exist and be false and I can see no sense in which the property *being true* could be constructed out of any particular truthmaker.<sup>31</sup>

Other examples of grounding involve, instead of construction, the ground somehow “upholding” or “supporting” the existence of the grounded entity and “fixes” its identity.<sup>32</sup> This seems to be the case with respect to tropes and their bearers, holes and hosts, and boundaries and their hosts. The existence of the apple, for example, is a condition for the existence of its particular redness and it fixes the identity of that redness as the very entity of its kind it is. Koslicki (2012) also discusses these cases and she suggests that what unifies these examples is that the grounded entity in some sense “corresponds to” a feature of its grounds.<sup>33</sup> A trope, for

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<sup>31</sup> But perhaps one might think that [*p is true*] is constructed out of its truthmaker *x* insofar as *x* is a constituent of the ‘real definition’ (a statement of what it is to be an entity) of this fact. Certainly, *x* will be mentioned in the real definition of [*p is true*], i.e., ‘to be [*p is true*] is to be the fact that obtains when *x* exists and...’ But this can be understood to mean that ‘obtaining when *x* exists’ is an essential property of [*p is true*] and not that this fact itself is constructed out of *x*. I would like to thank an anonymous referee for providing this objection.

<sup>32</sup> See Lowe (2009: section 4) on identity dependence.

<sup>33</sup> She leaves “corresponds to” undefined in order to allow it to have wide application. She writes, “I use the

example, corresponds to a feature of its bearer by being identical to a particular property instance of its bearer.

When we turn to truthmaking it is hard to see how truths or truth-facts could be “supported” or have their identities “fixed” by their truthmakers or “correspond to a feature of” their truthmakers. <Snow is white> does not depend for its existence on its truthmaker [snow is white] nor is its identity fixed by this fact for, again, the proposition can exist and be the very proposition it is independent of [snow is white]. What about [<snow is white> is true]? This fact could not exist in the absence of [snow is white] (assuming that this fact is its only truthmaker), but there is little sense in which [snow is white] fixes the identity of [<snow is white> is true] since, presumably, the latter depends on its constituents, <snow is white> and the property *being true*, for its identity (and its existence). I just cannot see how either the truth <snow is white> or [<snow is white> is true] is identical to or constitutive of any feature of its truthmaker (cf. Koslicki 2012: 209): <snow is white> and [<snow is white> is true] are propositions and facts, respectively, not features or properties of things like [snow is white].

One might be unconvinced that the forms of dependence I am discussing here (“construction” and “support”) count as genuine examples of grounding. One might think that grounding only ever relates facts and that truthmaking is best characterized in terms of the grounding of facts. But this depends on how fact-grounding is characterized. Audi (2012), who thinks that grounding relates facts, holds that the grounding of aesthetic facts in non-aesthetic facts is a paradigm example of grounding. On his account, grounding is intimately connected to the nature of the properties involved in the facts: “let us say that facts are suited to stand in a

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intentionally vague expression, “corresponds to,” in such a way as to leave room for different positions concerning the question of how exactly we should approach the relation between the entities to be defined (tropes, Aristotelian universals, holes, and boundaries) and the features had by an object when one of these entities is present in it” (2012: 209).



relation of grounding only if their constituent properties are *essentially connected*” (2012: 108). Suppose [the painting is an example of Chiaroscuro] is grounded in [the painting has physical features *f, g, h, ...*]. On Audi’s view, the latter fact would ground the former because of some essential connection between the physical features *f, g, h, ...* and the property *being an example of Chiaroscuro*. It may be the case that the properties in aesthetic facts and certain non-aesthetic facts are related in this way, but it is not clear that this can be applied to truthmaking. It is not plausible to think that [snow is white] grounds [*<snow is white>* is true], if it does, because the property *being white* and *being true* are essentially connected. If Audi is right that this sort of connection is constitutive of grounding, then it seems that truthmaking must be something else.<sup>34</sup>

It is sometimes said that the wrongness of an action or the beauty of a painting *consists in* other non-normative features of the action or painting, respectively. On Fine’s view of grounding, the explanans is “constitutive” of the explanandum. He writes, “the explanandum’s holding is nothing more than the obtaining of the explanans or explanantia” (2012: 39). Again, if this accurately represents the connection between, say, normative facts and natural facts, then truthmaking is quite different. It is hard to make sense of the idea that the truth of a proposition consists in ‘nothing more’ than the existence of its truthmaker. It is not plausible to think that *being true*, when instantiated by *<snow is white>*, is nothing more than the obtaining of [snow is white]. If truth is a property of *<snow is white>*, then it is distinct from [snow is white], which is a fact, not a property. Moreover, many truths have multiple truthmakers. It is not reasonable to think, for example, that the truth of *<dogs exist>* is nothing more than Fido’s existence *and* nothing more than Spot’s existence *and* nothing more than Rover’s existence, etc. It is plain to see that the property of *being true* cannot be reduced to, and certainly not be identical to, the

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<sup>34</sup> Note that Audi does *not* think truthmaking is the grounding of truth-facts (2012: 113).

property of *being a truthmaker*, since the latter involves the former; the notion of ‘truthmaking’ presupposes the notion of ‘truth.’

Perhaps the grounding of truth or truth-facts is like the grounding of mental states in brain states. It is difficult to say. When philosophers of mind discuss the dependence of the mental on the physical, they often employ notions such as constitution, realization, emergence, and reduction. They do not make use of a generic and primitive notion like grounding. It is the one who thinks that the dependence of a truth or truth-fact on its truthmaker is the same as the dependence of being in pain on a neural state that owes us an explanation of why this is case. And if she thinks that truth-facts are realized by, emerge from, or are reducible to their truthmakers, then it is her obligation to explain this since it is not immediately clear how to understand these novel claims.

So far I have been arguing that we should recognize differences in various examples of grounding and also that truthmaking does not seem to be adequately characterized by any of the forms considered. If this is correct, then one purported advantage of a TMG principle is undermined. Proponents of such principles seek theoretical unity through the reduction of two non-causal dependence relations to one. It allegedly allows truthmaking to be integrated into a simple and unified account of grounding. But the drawback of such principles is that we have sacrificed specificity for generality; (potentially) very significant differences between truthmaking and other examples of non-causal dependence are ignored, which threaten our chances of understanding the specific nature of these kinds of non-causal dependence. The upshot of this section is that there is no such simple and unified theory of grounding into which truthmaking can be integrated. If we still want to think of truthmaking in terms of grounding, the

task becomes more difficult for we must provide an account of how truthmaking fits into the diverse family of grounding.

#### **§4 Towards a Theory of Grounding**

The concerns presented in §3 point to a more nuanced account of the connection between truthmaking and grounding than simply the reduction of the former to the latter. The following constitutes a first step towards such an account. It is merely programmatic and requires development beyond what is possible in this limited space.

If grounding exhibits diversity in the ways outlined in the last section, then we need some account of what unifies the various forms as forms of grounding. To do this, I want to develop what I will call the “core notion” of grounding. Let us take “grounding” to be the most general or generic notion of metaphysical dependence and metaphysical explanation. It serves as our basic concept of metaphysical structure (cf. Schaffer 2009: 364). One reason it makes sense to treat grounding this way is that most examples of non-casual dependence can be paraphrased in terms of grounding, e.g., tropes are grounded in their bearers, smiles are grounded in mouths, sets are grounded in their members, moral facts are grounded in natural facts, etc. The formal features of grounding relation include, at least, asymmetry and irreflexivity. Grounding relates what is more fundamental (the grounds) to what is less fundamental (the grounded). These features are widely recognized, but I want to draw attention to an essential feature of grounding that is not always made explicit. In all instances of grounding, the ground (non-causally) *does something* to what it grounds; there is some sort of (non-causal) directed action from grounds to grounded. I will call this characteristic feature of grounding “generation.” In each case of grounding, what is grounded is in some way generated from its grounds (more on this to follow). None of what I’ve

said here constitutes an analysis of the core notion of grounding, merely a description. I leave it open whether the core notion is primitive or analyzable.<sup>35</sup>

Grounding, we have said, is a pervasive relation; it has many instances involving many different kinds of entities, e.g., mental facts, truths, moral facts, tropes, smiles, sets, etc.<sup>36</sup> What unites all these instances is that they exemplify the core notion of grounding, i.e., they are non-causal, explanatory, asymmetric, and irreflexive relations that relate what is less fundamental to what is more fundamental, which all involve some kind of generation of one thing from another. In the last section I suggested that there are different *forms* that grounding can take. We can fit this suggestion into our theory of grounding by understanding these forms be different kinds of generation. Then we can say that different kinds of grounding are distinguished by the different ways in which the ground generates the grounded. This suggests that we think of grounding as a genus under which distinct species of grounding fall.<sup>37</sup> This allows us to define each species of grounding in terms of the core notion of grounding and its differentia, viz. its form of generation. Because I think there are many distinct grounding relations that are unified in a particular way, I am endorsing something like the view that Trogon (forthcoming) calls “generic pluralism” about grounding.

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<sup>35</sup> This characterization of grounding is similar in many ways to Bennett’s (2011: section 6) core notion of ‘building.’ Yet one important difference is that for Bennett, in all building relations the more fundamental entity “in some sense overlaps” (e.g., mereological overlap or spatial colocation) the less fundamental entity. This seems accurate for the relations she is considering, e.g., constitution, composition, realization, etc. but not for all instances of grounding, especially not for truthmaking.

<sup>36</sup> Because of the diversity of grounding instances, I endorse the arbitrary categories view, which allows grounding to relate entities for different ontological categories. Not only does this allow for grounding to take a variety of forms, it also provides the desirable amount of ontological neutrality: it does not legislate in advance what the relata of each instance of grounding are or the exact nature of each instance of the grounding relation itself. So it allows for different views about what is related by grounding, though it entails that there are grounds, the grounded, and grounding.

<sup>37</sup> Alternatively, the relation might be conceived as that of determinable to determinate. I opt for the genus/species taxonomy because there seem to be features (differentia) of different instances of grounding that distinguish them. The only thing that distinguishes determinates (e.g., red, blue) of a determinable (e.g., color) is the determinate instance itself.

What kinds of generation are there? I described the form of grounding involved between sets and their members, wholes and parts, and facts and their constituents as the “constructing” of one entity out of another. The grounding of tropes on their bearers was described as one entity “supporting” the existence and “fixing” identity of another. We saw that Audi (2012) takes grounding to hold between facts only when the properties in the facts are essentially connected. I will call this form of generation “arising” because with it, one property (or set of properties) ‘arises from’ the nature of another property (or set of properties) of the very same entity. Fine’s idea that what is grounded is nothing more than its grounds might be called “constituting” generation. There are no doubt more forms we could describe, but these seem distinctive and exclusive. Unfortunately, I will not be able to say any more about them than what I have here and in the previous section.

Let us turn now to truthmaking. If truthmaking is a kind of grounding, it must be differentiated from other species of grounding by its form of generation. We saw that the generation of truth or truth-facts from truthmakers is not that of constructing, supporting, arising, or constituting. Truthmaking is concerned with the grounding of facts such as [*p* is true]. Though it is not concerned with how [*p* is true] is grounded in its constituents, *p* and *being true*. Nor is it concerned with the grounding of *p*’s existence or of the existence of the property *being true*. After all, these constituents could exist independently of [*p* is true]: *p* might exist and be false and *being true* might be instantiated by *q* rather than *p*. Facts are *arrangements* of things and properties (or relations), so their grounding primarily concerns the grounding of an arrangement, i.e., of the *instantiation* of one thing by another. If this is right, then the grounding of [*p* is true] is ultimately the grounding of the instantiation of *being true* by *p* in some entity which is (typically) distinct from *p*, *being true*, and [*p* is true]. The kind of generation at work in

truthmaking seems to be captured most perspicuously by the very notion we started with, viz. that of ‘making F’ or ‘rendering F’: one entity ‘makes’ another distinct entity have a certain feature F; one entity ‘renders’ another F. Schematically, ‘ $\psi$  is made F by  $\phi$ ’ (where  $\phi \neq \psi$  nor is  $\phi$  a part of [ $\psi$  is F]).<sup>38</sup> Perhaps ‘making F’ is analyzable, perhaps not. I will not seek to determine this here. But whatever account of ‘making true’ we end up with should incorporate a few things. First, it should be clear about what it is that propositions are being made to have. That is, it should be clear about what truth is and what kind of thing it is, e.g., is it correspondence or coherence? Is it a property? Is it a relational or monadic property? Second, the account should be informed by the nature of truth-bearers, e.g., propositions. Propositions are, by their nature, truth-value bearers; they are (assuming bi-valence) either true or false; they are somehow associated with conditions under which they are true, i.e., conditions setting specific requirements on what the world must be like in order for the proposition to be true; propositions are representations; they are about certain portions of reality and not others. Exactly how an account of truthmaking incorporates all this has yet to be determined and will have to wait for another time.

After clarifying each species of grounding, the next task is to show how they are related to each other. One way in which truthmaking might relate to other forms of grounding is that certain truths are grounded in entities, which are themselves grounded in more, or the, fundamental entities. The grounding of the truth—grounding<sub>(truthmaking)</sub>—and the grounding of the truthmaker—grounding<sub>(species s)</sub>—are going to be different species of grounding. For example, [ $\langle$ Snow is white $\rangle$  is true] is grounded<sub>(truthmaking)</sub> in [Snow is white], which is in turn grounded<sub>(species s)</sub> in a fact or facts concerning, perhaps, the micro-physical structure of snow.

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<sup>38</sup> Liggins (2012: 268) briefly explores the idea that the truthmaker theorist might develop a schema for non-causal dependence such as ‘ $\psi$  is made F by  $\phi$ .’ But he rejects this because too many instances of grounding do not seem to fit the schema. My suggestion is only that some instances of grounding (e.g., truth and perhaps some other facts) can be fit into the ‘ $\psi$  is made F by  $\phi$ ’ schema.

Perhaps there are more grounding links in the chain. The truthmaker theorists should be interested in the grounding of the truthmaker because it helps her understand how truths are ultimately grounded in what is fundamental. The grounding must be generic since it seems to hold in virtue of the linking of different species of grounding up from the fundamental entities to the truth of the proposition.<sup>39</sup>

Obviously, much more needs to be said about truthmaking as a species of grounding and about how the different species of grounding relate. Nevertheless, if this version of generic pluralism about grounding is correct, then it causes problems for the TMG principles discussed above, which seek to analyze truthmaking in terms of a generic and primitive notion of grounding. One upshot of the above proposal is, as I said, that the relation between truthmaking and grounding is more complex than the simple reduction of the former to the latter. Differences among instances of grounding suggest a species/genus structure according to which each species of grounding has a characteristic form of grounding, what I have been calling ‘generation.’ If the kind of generation involved in truthmaking is that of making an entity have a certain feature, then it does no good to reductively analyze truthmaking in terms of grounding, since the relevant form of grounding is that of ‘making F.’ Where TMG principles go wrong is that they reduce the notion of truthmaking to the generic core notion of grounding. Truthmaking may be a species of grounding, which entails that a definition of truthmaking includes the core notion of grounding, but it is different in many ways from other species. These differences need to be explored in detail. Bennett (2011: 102) is right that we can learn from lumping notions together rather than

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<sup>39</sup> Schaffer (2009) and (2010) seems to have this kind of view in mind. Schulte (2011: section 2) explores a similar view, suggesting that there are two types of truthmaker explanations: simple and substantial. A simple truthmaker explanation takes the form  $\langle p \rangle$  is true because  $[p]$ , where  $[p]$  is what he calls a “higher-level” fact. A substantial truthmaker explanation involves the explanation of a “higher-level” fact,  $[p]$ , in terms of a “lower-level” fact  $[q]$ , to which  $[p]$  is reducible. We need not follow Schulte in thinking that the grounding of higher-level fact in lower-level facts is the reductive explanation (understood as conceptual entailment) of the former to the latter to accept the view described above.

pulling them apart, but occasionally the desire for unification and simplicity can lead us to miss important diversity and complexity. I think the simple reduction of truthmaking to grounding is one of those occasions.<sup>40</sup>

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