



The Grounding of Identities

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Received: 22 June 2020 / Revised: 15 January 2021 / Accepted: 20 January 2021

Published online: 01 March 2021

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Abstract

A popular stance amongst philosophers is one according to which, in Lewis' words, "identity is utterly simple and unproblematic". Building from Lewis' famous passage on the matter, we reconstruct, and then criticize, an argument to the conclusion that identities cannot be grounded. With the help of relatively uncontroversial assumption concerning identity facts, we show that not all identities are equi-fundamental, and, on the contrary, some appear to be provided potential grounding bases using two-level identity criteria. Further potential grounding bases for identities are presented. Identity might be utterly simple and unproblematic, but this is not sufficient to conclude that identities are ungrounded, or fundamental.

Keywords Identity · Identity criteria · Grounding · Fundamentality

1 Introduction

In a brief yet well-known passage from *On the Plurality of Worlds*, Lewis states that no problem concerning the so-called "transworld identity" is ever a problem about identity: in his own words,

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“[i]dentity is utterly simple and unproblematic. Everything is identical to itself; nothing is ever identical to anything else except itself. There is never any problem about what makes something identical to itself; nothing can fail to be. And there is never any problem about what makes two things identical; two things never can be identical.”¹

This passage is widely acknowledged and helped built a somewhat silent consensus concerning the identity relation: given a standard notion of identity, no analysis nor philosophically interesting story about identities can ever be given. One can, of course, provide an interesting story as to how two terms came to co-designate, but that is a distinct matter: there is something interesting to tell about how “Hesperus” and “Phosphorus” came to designate the same thing, but that Hesperus is Phosphorus is a *basic fact* which deserves no further investigation. This attitude is in fact so ingrained that is not often implicitly stated; we will call it the “Knee-Jerk Reaction”.² In this paper, we will argue that the Lewis’ passage fails to establish a clear motivation in favor of the Knee-Jerk Reaction, and in fact offers a wide variety of counterexamples involving identities. We will not assume anything peculiar about identity: identity is the relation that everything has with itself and nothing else, or the smallest equivalence relation –whose classes of equivalence are singletons. Similarly we will assume that identities are necessary. No funny business there. We will, however, make some more substantive assumptions cashing out talk of “making it the case” in Lewis’ passage: in what follows, we will employ the notions of *metaphysical grounding* and *fundamentality* to properly articulate the Knee-Jerk Reaction.³ Other ways to make sense of it will wait for another occasion.

In the next Section, we will introduce the basics of metaphysical grounding, and reconstruct Lewis’ passage into an argument to the conclusion that identities, insofar as they are necessities, cannot be grounded. The crucial premise that necessities cannot be grounded will be criticized. In Section 3, a different argument against the grounding of identities might be formulated by noticing not the necessity of identity, but its fundamentality. This argument also will be criticized, based on the crucial idea that identity facts are not all equifundamental; on the contrary some appear to be very derivative, and thus may be offered grounding bases with the help of the so-called two-level identity criteria. Finally, in Section 4, additional potential grounding bases for identities will be offered, eventually leading to the conclusion that if the Knee-Jerk Reaction against the analysis of identity wants to be defended, metaphysical grounding and fundamentality are not the right tools for the job.

¹ Lewis (1986: 192–193).

² E.g., Lowe and Noonan (1988: 80–81), Williamson (1990: 144–145), Jubien (1996), Block and Stalnaker (1999: 24), Salmon (2005: 153), Kim (2008: 102), Horsten (2010), and Fine (2016).

³ Other ways to make sense of it will wait for another occasion. (At this juncture, it might be worth pointing out that we are not interested in the exegetical reconstruction of Lewis’ thought process on the matter: on the contrary we will happily help ourselves with resources that he may or may not have intended to deploy.)

2 No Grounding Necessities

Someone familiar with recent developments in metametaphysics may think that the presence of “what makes it the case” locutions in Lewis’ passage betrays the presence of *metaphysical grounding*. We will – in a nutshell – take metaphysical grounding to be a non-causal determinative or explanatory connection, a strict partial order of relative fundamentality.⁴ With that in mind, Lewis’ passage may be reconstructed as an argument scheme (p being, in this instance, a placeholder for names of sentences).

- (P1) If p is a true identity sentence, it is necessary that p .
- (P2) If it is necessary that p , nothing grounds [p].
- (P3) p is a true identity sentence.
- (C) Thus, nothing grounds [p].

The argument scheme is deductively valid, and, for every true identity sentence p , yields the conclusion that nothing grounds [p]. So the argument quite straightforwardly states that identities, being necessary, cannot be grounded.

As before, grounding may not be the only way to make sense of the Knee-Jerk Reaction – not even when the necessity of identity is at stake. For example, Kim (2008: 102) suggests that identities, to the extent in which they are necessities, are not explainable – as nothing “makes it the case” that an identity is the case. Thus, we could expand the (P1)-(C) argument with an additional premise, as follows:

- (P1) If p is a true identity sentence, it is necessary that p .
- (P2) If it is necessary that p , nothing grounds [p].
- (P2.5) If nothing grounds [p], nothing explains [p].
- (P3) p is a true identity sentence.
- (C*) Thus, nothing explains [p].

Under an *Unionist* conception of grounding and explanation – according to which grounding is an explanatory relation (e.g., Thompson, 2016; Maurin, 2019) – the difference between the two arguments is negligible; but let us focus on the first one, and the grounding of identities proper.

⁴ The true story is obviously much more complicated than that, as grounding is one of the most discussed notions in contemporary philosophy. For an introduction, see Correia & Schnieder, 2012; Clark & Iiggins, 2012; Trogdon, 2013a; Bliss & Trogdon, 2014).

Although, like us, there are those who take metaphysical grounding to be a heavy-duty relation (usually between facts, as in Rosen, 2010), many subscribe to a deflated notion, usually by taking grounding to be a sentential connective instead (e.g., Dasgupta, 2014, 2017). We do not hope, in this paper, to weight the toll that metaphysical grounding takes on reality, and we provisionally take metaphysical grounding to relate facts. Thus, we take whatever it is that makes the case that p , to be the ground of [p] – where [p] is the fact that p . We take grounding to be a dyadic relation for the time being (e.g., [p] is grounded by [p]). Standardly, metaphysical grounding is a strict partial order (Maurin, 2018), although the irreflexivity of grounding has been questioned in Jenkins (2011), and its transitivity (*qua* relation between facts) in Schaffer (2012). Some further features of the notion (e.g., its modal status) will be discussed later on in this section.

One last thing should be noted: in this paper we will restrict the discussion about the grounding of identities to the discussion about the metaphysical grounding of identities – although we do not presume that all grounding is metaphysical. We leave for another time, an extension of our reconstruction of the broadly Lewisian argument against the grounding of identities which encompasses non-metaphysical grounding.

The crucial premise is (P2), according to which all necessary facts are ungrounded. As Cameron (2008: 262) points out “[that] a demand for grounding vanishes when the truth in question is necessary is a familiar thought”; that said, a claim as robust as this should not be accepted without motivation, its popularity notwithstanding.⁵ Rather than exploring which conception of metaphysical grounding underpins (P2) in the argument scheme above, we can quickly find counterexamples to it deploying standard grounding notions. For one, it is standardly accepted (e.g., using the “impure logic of ground” in Fine, 2012) that disjunctions are grounded in their true disjuncts, which straightforwardly turns disjunctive tautologies in counterexamples to (P2): for any given sentence p , it is necessary that p or not- p , yet $[p \vee \neg p]$ is grounded in either $[p]$ or $[\neg p]$ (depending on whether p is true or false). And similarly, as in Fine (2016: 6), if p is a necessary truth, $[p]$ likely grounds $[p \wedge q]$, for any q , although p ’s necessity makes $[p \wedge q]$ necessary as well.

Easy counterexamples aside, it is not difficult to see how (P2) might be at odds with how we usually conceive metaphysical grounding; for one, we conceive it as hyperintensional (in the sense that, for any true sentences p , q , and r , such that q and r are intensionally equivalent, it might be the case that $[p]$ grounds $[q]$ but not that $[p]$ grounds $[r]$). One of the motivations for this feature is that any weaker conception would fail to detect grounding in the case of necessities, thus implicitly admitting that there are non-trivial differences amongst the grounds of necessities.⁶

In conclusion, we shouldn’t uphold the Knee-Jerk Reaction as the position according to which identities, as necessary, cannot be grounded, although the necessity of identity might motivate the Knee-Jerk Reaction in another way.⁷ We will follow a more closely related thread to that of grounding, however, and wonder whether the problem of identity does not stem from its necessity, but rather from its fundamentality.

3 No Grounding Fundamentals

If we extend our treatment of grounding with the principle that grounding is well-founded, there will be a number of absolutely fundamental facts at the bottom of the hierarchy, which are not grounded by anything else, and upon which the rest of the metaphysical hierarchy ultimately rests. Are identity facts amongst them? As Lewis rightfully claimed, identity is a very basic and unproblematic notion, a thought-process which can only be vindicated by noticing that identity cannot be non-circularly defined at the first-order (furthermore, purported second-order definitions may suffer from impredicativity). Perhaps the notion of numerical identity can be provided some additional meat by clarifying that if Hesperus is identical to Phosphorus then Hesperus and Phosphorus are one, but this heuristically useful procedure shouldn’t be given too much metaphysical weight (after all, Hesperus and Phosphorus are one because they

⁵ Fine (2016: 6) was of a similar advice.

⁶ E.g., Schaffer (2009: 364), Schnieder (2011: 445–446), Dasgupta (2014: 4).

⁷ E.g., it might lead to the conclusion that identities, as necessary, cannot be explained. See Cameron (2008: 262–263) for the difference between grounding and explanation when necessity is involved. For a treatment of the Knee-Jerk Reaction involving the explanation of identities – as opposed to their grounding –, see Azzano and Carrara (2020).

are identical). If there is a realm of fundamental facts, identities definitely look like they belong there.

Our retort to this inviting line of thought is that identity facts are not equi-fundamental, and while we do not deny that some identities are absolutely fundamental, we very much doubt whether all of them are. The reason hides in plain sight: given plausible assumptions, the fundamentality of an identity is not merely determined by the fundamentality of the identity relation, but by the fundamentality of the entities being identified. This is very clear with a structuralist conception of facts in mind,⁸ but in whatever metaphysical box identities belong to, it is very much possible that their prospects of grounding depend not entirely on the features of the identity relation (its necessity, or fundamentality), but also on the metaphysical status of the entities being identified. The kind of items picked out by the [...], be they events, facts, or what have you, can on many accounts be thoughts as involving, for lack of a more specific term, not only properties and relations, but the objects that instantiate them; thus, the presence of a somewhat derivative item such as Istanbul in [Istanbul is beautiful] is bound to make [Istanbul is beautiful] itself somewhat derivative; and the presence of Istanbul, or Constantinople, in [Istanbul is identical to Constantinople] is bound to make [Istanbul is identical to Constantinople] somewhat derivative too. More generally, the identities between ontologically dependent, or metaphysically derivative items may be open to grounding in a way that others are not.

We may formulate this train of thought with the help of two claims. Firstly, that there are differences in fundamentality between entities of different kinds (maybe entities, like facts, can be ordered with the help of a notion of relative fundamentality): according to this view, philosophically suspicious items such as directions of lines and numbers of concepts (but also boy-bands and parliaments) should not be excised from existence altogether, but be allowed to live as second-class citizens of reality – effectively striking a middle ground between eliminativism and egalitarianism that many will find appealing.⁹ Secondly, that the relation of numerical identity is absolute, in the sense that everything (unrestrictedly) is self-identical, be they electrons or boy-bands. Thus, the world may be layered, yet the same relation of numerical identity obtains across all layers: although the identity relation is the same for everything, the things which are said to be identical may enjoy very different metaphysical status; as a result the ensuing identity facts might enjoy very different metaphysical status, with only some identities being fundamental, while others being provided a grounding base.

As hinted before, some identities, more than others, appear to be viable for this kind of treatment: specifically, the identities in the so-called two-level identity criteria (Williamson, 1990: 145–146), in which the identities between entities of a certain kind are characterized through a condition imposed upon entities of another kind; as Lowe (1989: 4) explicitly noted, there seems to be some kind of ontological dependence

⁸ An argument in this direction may be extrapolated with the help of Sider's (2011: 170–171) so-called "purity", according to which no fact can be more fundamental than any of its components; therefore, identity facts come in varying degrees of fundamentality, depending on the metaphysical status of its component objects. It may be worth noticing that Sider (2011) does not formulate fundamentality in terms of *grounding*, but *joint-carving*; and, for him, identity is.

⁹ For one, Bennett (2011: 28) famously takes the egalitarian option to be "crazypants", and one in regarding to which "every fiber of my being cries out in protest". Whether the position is false, is another matter entirely. Also see Schaffer (2012: 123).

relating the two classes of entities (e.g., directions of lines ontologically depend on lines, numbers of concepts ontologically depend on concepts, and so forth...). Although we have no clear account of this relation of ontological dependence between entities, and its relation with metaphysical grounding as discussed so far, this at least paves the way for thinking that some identities can be grounded; to deploy a standard metaphor in grounding literature, after determining that lines a and b were parallel, God didn't need to add anything to the world to make it so that their directions are identical; and similarly, after deciding that forks and knives on a table are in a bijection, God didn't need to add anything else to make it so that the number of forks is identical to the number of knives (for a discussion see Carrara & De Florio, 2018).

Not all identity criteria can be reduced to the kind of two-level identity criteria considered above (as discussed in Lowe, 1989: 4, 1991), and such, not all identities are provided such a potential grounding base.

4 Potential Grounds for Identities

It may at this point be worthwhile to notice that, once we make peace with the idea that identities might be grounded after all, a huge variety of potential grounding bases are immediately available: in this Section we present two, based respectively on *indistinguishability* and *existence* – with no pretense of exhaustiveness. The crucial difference between these potential grounding bases and the ones offered in the previous Section, through two-level identity criteria, is that these grounding bases are supposed to work for all identities, as opposed to only some.

Firstly, indistinguishability. One may extract grounding principles through a metaphysically robust reading of equivalence principles involving identities (or, weakly still, entailment principles). The more straightforward option is, of course, the problematic Identity of Indiscernibles, as in (at the second-order):

$$\forall x \forall y \forall F \left((Fx \leftrightarrow Fy) \rightarrow x = y \right)$$

which may be read as offering grounding principles of numerical identities between objects in terms of their qualitative identity. The first problem about (II) and the correspondent grounding principles is the well-known problem about the scope of the second-order quantifier: either the bound variable 'F' ranges over all properties, including identity-involving ones that would make (II) trivial, or some kind of restriction is imposed upon the quantifier, at the risk of making (II) false.

Yet even if that problem is solved, and the right balance is struck when restricting the quantification over properties (so as to make (II) both true and interesting), the risk exists that a circularity is involved insofar as qualitative identity somehow involves numerical identity.¹⁰ That qualitative identity presupposes numerical identity might be

¹⁰ This is especially a danger for property realists according to which two objects being similar in such-and-such respect amounts to them having the same property, where "same" is to be read as expressing numerical identity between properties; for nominalists, on the other hand, "qualitative identity" is not necessarily a matter of identity *tout court*, as in primitivists variants of nominalism (like Resemblance Nominalism) two objects resembling each other in some respect might be a primitive matter.

a problem if we wish to define numerical identity along the lines of (II) and its converse (the Indiscernibility of Identicals, as in McGinn, 2000: 7); yet assuming that such a definition is not forthcoming (identity is already given), we must now understand what are its consequences for the grounding of identities instead. Let us consider a toy world in which there only are three monadic properties P, Q, and R, and no relations; now let us consider objects a and b , such that $a=b$; if (II) can really offer grounding principles, then $[a=b]$ is grounded in the fact that a and b share all the properties. Thus, $[a=b]$ is grounded by $[\forall F(Fa \leftrightarrow Fb)]$; assuming universally quantified facts to be jointly grounded by their instances, the ultimate ground for both $[a=b]$ and $[\forall F(Fa \leftrightarrow Fb)]$ in our toy-world would be $[Pa \ \& \ Pb]$, $[Qa \ \& \ Qb]$ and $[Ra \ \& \ Rb]$.¹¹

One may note that, although $[Pa \ \& \ Pb]$, $[Qa \ \& \ Qb]$, and $[Ra \ \& \ Rb]$ can be described as stating that a and b possess the same properties P, Q, and R, they are not identify facts, nor they have identity as parts.

What is more, an advantageous peculiarity of taking $[a=b]$ to be grounded in $[\forall F(Fa \leftrightarrow Fb)]$ is that it neutralizes a well-known problem in the grounding of universal quantification in its instances (as discussed in Fine, 2012: 60–62). The problem is the following: assume another toy-world in which $[\forall xPx]$ is jointly grounded by $[Pa]$ and $[Pb]$, being a and b the only things that exist, which are both P; now assume that grounding is necessary in the sense that for every sentences p and q such that $[p]$ is grounded by $[q]$, then $\Box(q \rightarrow p)$. Let us call this thesis grounding necessitarianism, or (N).¹² Given these assumptions, at all worlds in which it is the case that both a and b are P, it should also be the case that everything is P; yet this is patently false. It is easy to conceive of a world in which another entity c exist, which is not P. The idea is that $[Pa]$ and $[Pb]$ are not sufficient to ground the universal fact: one also has to add that a and b are all that exists (perhaps in the form of a totality or a negative fact). A similar counterexample might be formulated against the claim that $[Pa \ \& \ Pb]$, $[Qa \ \& \ Qb]$ and $[Ra \ \& \ Rb]$ jointly ground $[\forall F(Fa \leftrightarrow Fb)]$. In fact, consider a qualitatively expanded world with the additional alien property S (which does not actually exist), such that, in that world, a possess S, but not b (or vice versa); in that world, however, a and b share P, Q and R as before. S does not exist in the original toy-world, and thus does not fall in the scope of the quantifier in $\forall F(Fa \leftrightarrow Fb)$. In our qualitatively expanded world, $[Pa \ \& \ Pb]$, $[Qa \ \& \ Qb]$ and $[Ra \ \& \ Rb]$ are the case, but not $[\forall F(Fa \leftrightarrow Fb)]$, *contra* (N).

Interestingly, such considerations cut no ice in our present case, given that we are already assuming that $[a=b]$ is grounded by $[\forall F(Fa \leftrightarrow Fb)]$; a and b being identical, and necessarily so, makes it impossible that in this qualitatively expanded world a has S, but not b (by the uncontroversial *Indiscernibility of Identicals*). Taking an identity $[a=b]$ to be grounded by $[\forall F(Fa \leftrightarrow Fb)]$ makes it so that even if (N) is true, qualitatively expanded worlds do not provide counterexamples to the idea that $[Pa \ \& \ Pb]$, $[Qa \ \& \ Qb]$

¹¹ Two things to notice. Firstly, we introduced grounding as a binary relation, but perhaps it would be best to consider it as a variably polyadic relation in which one item is grounded by a plurality of items, where the one-to-one case of grounding constitutes a limiting case of it (in the sense that a plurality of one is a limiting case of plurality). Secondly, assuming grounding to be transitive, it makes little difference to take $[a=b]$ to be grounded by $[Pa \ \& \ Pb]$, $[Qa \ \& \ Qb]$, and $[Ra \ \& \ Rb]$, rather than $[Pa]$, $[Pb]$, $[Qa]$, $[Qb]$, $[Ra]$, and $[Rb]$, if in turn we assume that conjunctions are grounded by their conjuncts.

¹² Although it is hard to say whether grounding necessitarianism is part of the orthodoxy about metaphysical grounding, it is often assumed. See Trogon (2013b) and Skiles (2015) for critical discussion.

and $[Ra \ \& \ Rb]$ ground $[\forall F(Fa \leftrightarrow Fb)]$ —although in such worlds P , Q , and R are not all the properties that exist.¹³

Secondly, existence. We might consider the possibility that identities may be grounded by existence facts (e.g., Salmon, 2005: 153; Burgess, 2012: 90). One of the reasons behind the Knee-Jerk Reaction is that identity is, by standard definition, a very undemanding thing to occur: not much is required from Hesperus and Phosphorus for them to be identical. However, something *is* in fact required of them: it is required that they exist. Thus, or so the idea goes, existence facts may be a suitable grounding base for identities. To employ the same metaphor as above, once God had added things to the world (and thus, their existence), She didn't need to add identities between them: identity comes for free once objects are put into existence, and thus appears particularly suitable to be grounded upon existence facts. Alternatively, the identity between Hesperus and Phosphorus may not be grounded by the fact that Hesperus exists (or, equivalently, the fact that Phosphorus exists), but rather by Hesperus (Phosphorus) itself -viz. the planet Venus-, a suggestion that would force us to reconsider grounding as a trans-categorical relation, which can also related objects, as in Schaffer (2009). A similar consideration can be put forward by those who think that facts need to be composed by properties and relations, yet deny existence the status of (real) property.

Another reason to eschew existence talk entirely, as noted in Shumener (2017: 5), is that the most common definition of the existence predicate crucially deploys identity. Here is how the problem may be formulated: assuming the fact $[a=a]$ to be grounded in the fact that a exists, the fact that a exists may take the form $[\exists x(x=a)]$; however, existential quantifications are standardly taken to be grounded in their true instances; thus, $[\exists x(x=a)]$ is grounded in $[a=a]$. Thus, if we start with the assumption that $[a=a]$ needs to be grounded in the fact that exists, the transitivity of grounding dictates that $[a=a]$ is grounded upon itself. Yet if grounding is irreflexive, that is a problematic conclusion.¹⁴¹⁵

5 Concluding Remarks

Identity might be utterly simple and unproblematic as Lewis claimed, but given certain assumptions on grounding as a relation of relative fundamentality between facts, it is not so obvious that identity facts are either ungrounded or fundamental. While some potential grounding bases have been offered with the help of indiscernibility and existence facts, we have also highlighted the crucial fact that not all identities are on

¹³ This case highlights the difference between grounding necessitarianism as in (N), and the stronger thesis that if a (collection of) facts grounds a fact, it necessarily does. This thesis is presumably falsified here: although at no world $[Pa \ \& \ Pb]$, $[Qa \ \& \ Qb]$ and $[Ra \ \& \ Rb]$ are the case without $[\forall F(Fa \leftrightarrow Fb)]$ also being the case, in a qualitatively expanded world with the additional alien property S , it would probably not be the case that $[Pa \ \& \ Pb]$, $[Qa \ \& \ Qb]$ and $[Ra \ \& \ Rb]$ jointly ground $[\forall F(Fa \leftrightarrow Fb)]$. The correct grounding base would probably be $[Pa \ \& \ Pb]$, $[Qa \ \& \ Qb]$, $[Ra \ \& \ Rb]$ and $[Sa \ \& \ Sb]$. We leave this matter for another time.

¹⁴ Fine (2012: 59–60) offers additional consideration as to why the existence of a (in the sense of $[\exists x(x=a)]$, or in a more generic sense) should not be grounded in a 's self-identity fact $[a=a]$.

¹⁵ One may argue that, identity being a fundamental relation, the self-grounding of identity facts such as $[a=a]$ may in fact constitute a palatable option; this would of course expand the landscape of potential grounds for identity in a way that violates the irreflexivity of metaphysical grounding. We would like to thank an anonymous reviewer for suggesting this possibility to us.

the same boat in this respect: depending on the metaphysical status of the items being identified, some identities are bound to be more fundamental than others, and more derivative identities may have grounds through two-level identity criteria.

These results fit more general considerations regarding the status of identities. A popular knee-jerk reaction amongst philosophers regarding identity is that once it is stated that, say, Hesperus and Phosphorus are identical (or equivalently, that Hesperus and Phosphorus are one), there's nothing left to say on the matter of philosophical interest. That said, even accepting that there's hardly any conceptual analysis or definition of identity forthcoming, it remains to be seen whether there is no explanatory or otherwise metaphysical value to entailment principles concerning identities, such as indiscernibility principles or identity criteria.

Funding Open access funding provided by Università degli Studi di Padova within the CRUI-CARE Agreement.

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