Essence, triviality and fundamentality

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Abstract

I defend a new account of constitutive essence on which an entity's constitutively essential properties are its most fundamental, non-trivial necessary properties. I argue that this account accommodates the Finean counterexamples to classic modalism about essence, provides an independently plausible account of constitutive essence and does not run into clear counterexamples. I conclude that this theory provides a promising way forward for attempts to produce an adequate non-primitivist, modalist account of essence. As both triviality and fundamentality in the account are understood in terms of grounding, the theory also potentially has important implications for the relation between essence and grounding.

Key words: Essence; Modalism about Essence; Grounding; Fundamentality; Triviality

1 Introduction

Kit Fine's (1994) counterexamples to classic modalism about essence – on which an entity's essential properties are those it necessarily has if it exists[1] – are generally taken to show that classic modalism is

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[1] This is the existence-conditioned version of modalism. There is also a simple version of modalism, on which a property is essential to an entity just if the entity necessarily has that property, and an identity-conditioned version, on which a property is essential to an entity just if anything identical to the entity necessarily has the

untenable. Beyond this consensus, however, there is substantial disagreement about what a post-Finean conception of essence ought to look like. While some, including Fine (1994; 1995a; 1995b; 2000), think that the lesson of the Finean cases is that essence ought to be taken to be primitive, others think that essence is a poor candidate for a primitive (Wildman, 2013, 781; Denby 2014, 88–91).

Consequently, there have been numerous attempts to produce alternative analyses of essence that can accommodate the Finean cases.[2] The most prominent proposals have been to supplement classic modalism with a condition requiring that essential properties be either intrinsic (Denby 2014) or sparse properties (Wildman 2013). Thus far, though, none of these analyses has been widely accepted.[3]

A proposal that has received much less attention is that classic modalism ought to be supplemented by a triviality condition.[4] The idea is that an entity's essential properties are its *non-trivial* necessary properties. Unlike the analyses in terms of sparseness or intrinsicality, this approach has not been widely explored or developed in much detail. Indeed, one of the only recent discussions of this approach concludes that it clearly fails (Wildman 2016). Since then, only a single paper has explored the possibility of appealing to triviality in analysing essence (De 2020).[5]

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property. The existence-conditioned version, though, is the focus of most recent literature, and I focus just on it here.

[2] See, for instance, Almog (2003), Gorman (2005), Zalta (2006), Cowling (2013), Wildman (2013; 2016) and Denby (2014).

[3] For accounts of some of the difficulties facing these proposals, see Skiles (2015), Torza (2015), Wildman (2016) and Zylstra (2019).

[4] This idea is clearly stated and developed in Della Rocca (1996) but goes back to Barcan Marcus (1967).

[5] I am grateful to a referee for bringing De's paper to my attention. I think the paper constitutes a welcome step in more fully exploring the connection between essence and triviality. Like me, De argues that an adequate account

I argue here, though, that adequately developing the triviality condition provides a way around the Finean cases, and that combining this condition with a condition concerning relative fundamentality produces a promising analysis of essence. The key idea behind this analysis is that an entity's essential properties are its most fundamental, non-trivial necessary properties. As this analysis is independently plausible and avoids any clear counterexamples, it provides a promising way forward for attempts to produce a non-primitivist, post-Finean conception of essence.

Before proceeding, a couple of points need to be noted about the proposed analysis. Firstly, as just noted, it is an analysis of *constitutive* essence. Here I understand an entity's constitutive essence as what that entity is '*in its most core respects*'.[6] As De Rizzo (2022, 35) points out, while essentialist claims generally involve this conception of essence, getting a clear grasp on the notion has proven challenging. So, an adequate analysis of constitutive essence would be particularly valuable.

Secondly, I employ metaphysical grounding to formulate both the triviality and fundamentality conditions in the analysis. While this means that the analysis does not provide the kind of pure modal account of essence given by classic modalism, it is still in line with the weaker modalism generally found

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of the relevant sort of triviality provides a way around Wildman's objection to Della Rocca's account. However, De and I develop the notion of triviality and its application to the analysis of essence in different ways. The two analyses also have importantly different implications for the Finean cases.

[6] See Dasgupta (2016, 388), Zylstra (2018, 194) and Glazier (2017, 2873) for this conception of essence. The term 'constitutive essence', of course, comes from Fine (1995a; 1995c). While Zylstra (2018, 194; 2019, footnote 5) uses the notion of what something is at its core specifically to gloss this Finean term, Glazier (2017, footnote 3) expresses doubts that Fine had this sort of essence in mind. Nonetheless, Glazier (*ibid.*) does claim that this sort of essence is 'very close to Fine's notion of immediate constitutive essence'. I discuss my understanding of constitutive essence further in section 6.

in modalist responses to Fine. These responses do not aim to show that essence is fully accounted for in terms of necessity but rather that necessity provides a partial reduction of essence and, consequently, has priority over essence. Moreover, the role that grounding plays in the analysis means that the analysis comes with a novel account of the relation between essence and grounding.[7]

I begin in section 2 by outlining both the initial promise of the triviality condition on essence and the way Della Rocca's (1996) approach to developing this condition involves a flawed conception of triviality. In sections 3 and 4, I respond to this difficulty by developing a plausible analysis of the relevant sort of triviality. With this analysis in place, I argue in section 5 that the claim that all essential properties are non-trivial necessary properties can explain the Finean cases. In section 6 I respond to potential counterexamples to this triviality condition. In section 7 I argue that conjoining this condition with a fundamentality condition provides a promising overall account of constitutive essence.

2 Essentiality, triviality and Fine

Fine's attack on classic modalism proceeds by producing examples of properties that are necessary, but intuitively not essential, to an existent.[8] Some of these properties are necessary properties of all existents, such as *being such that there are infinitely many prime numbers*, *existing* and *being such that, necessarily, if the Eiffel Tower exists, then it is spatiotemporally continuous*. Because these properties are necessary properties of everything, they are necessary properties of Socrates. None, however, are intuitively essential to Socrates.

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[7] See De Rizzo (2022) for a very recent, quite different analysis of essence that invokes grounding.

[8] As the focus in what follows is on existence-conditioned modalism, by a property's 'being necessary to an entity', I will generally mean that, necessarily, the entity exists only if it has that property.

Other of Fine's counterexamples employ properties that are necessary to only some existents. In particular, Fine points out that, necessarily, Socrates exists only if he is distinct from the Eiffel Tower and is a member of {Socrates}. However, neither *being distinct from the Eiffel Tower* nor *being a member of {Socrates}* are intuitively essential to Socrates.

The relation between Socrates and {Socrates} also has a further important dimension. While *being a member of {Socrates}* is intuitively not essential to Socrates, *having Socrates as member* does seem essential to {Socrates}. Nonetheless, Socrates is a member of {Socrates} at just the same possible worlds as {Socrates} has Socrates as a member. There is, then, an intuitive asymmetry between the essences of Socrates and {Socrates} that does not appear to track any modal distinctions between the two.

At face value, the idea that an entity's essential properties are its *non-trivial* necessary properties seems to provide a promising response to Fine's counterexamples, as it seems plausible that they do involve objectionably trivial properties. While this point is obvious in the case of universally necessary properties, it may also hold for a property such as *being a member of {Socrates}*. That Socrates has this property looks potentially trivial, because, after all, everything is a member of its singleton.[9]

It also seems initially plausible that it is just the triviality of the properties in the Finean counterexamples that renders them non-essential. Intuitively, a trivial property cannot 'bear, in the metaphysically significant sense of the phrase, on what an object is' (Fine 1994, 1) in the way that essential properties do. To put the point differently, trivial properties do not seem apt to be informative about an entity in the way that an entity's essential properties are. While an entity's essential properties convey

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[9] This is not to confuse x's being a member of {x} with x's being a member of {Socrates}. Instead, the idea is that the connection between these properties might render the latter trivial. Later in this section I indicate how this idea works given Della Rocca's account of triviality, while I give my own account in section 4.

substantial information about what it is to be that particular entity, [10] an entity's trivial properties do not seem capable of doing so. So, in addition to promising to deliver the right verdict on the properties in Fine's counterexamples, analysing essential properties as non-trivial necessary properties also promises to explain that verdict.

The idea that essential properties are non-trivial, necessary properties, then, seems to indicate an appealing line of response to Fine. The challenge, though, is to cash this idea out in a way that is precise and plausible. Della Rocca (1996) attempts to do so by analysing essential properties as follows:

> F is essential to x iff$_{df}$ (i) necessarily, if x exists, then x has F; and (ii) it's neither the case that, necessarily, every object has F if it exists, nor that x's having F logically follows from x's having G, where G is such that necessarily, every object has G if it exists.[11]

(i) here is, of course, the analysans in the classic modal analysis of essence. In Della Rocca's analysis, though, (i) is a necessary condition for being an essential property that is sufficient only in conjunction with (ii). (ii), in turn, is intended to capture the idea that only non-trivial properties can be essential by excluding two sorts of properties from an entity's essence. The first of these is necessary properties of any existent whatsoever, while the second is properties an existent has as a logical consequence of having such universally necessary properties. Following Wildman (2016, 179), I refer to the former as directly trivial properties and to the latter as indirectly trivial properties.

The exclusion of these properties from an entity's essence seems to allow Della Rocca's analysis to get around Fine's counterexamples. By excluding directly trivial properties, the analysis straightforwardly blocks counterexamples involving universally necessary properties, such as *being such that there are*

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[10] This sort of point is important to Gorman's (2005) account of essence.

[11] This formulation is due to Wildman (2016, 180).

infinitely many prime numbers. The exclusion of indirectly trivial properties, in turn, appears to block

Fine's other counterexamples. For instance, Socrates's *being a member of {Socrates}* is indirectly trivial,

as it follows logically from the fact that any existent is necessarily a member of its singleton.

Unfortunately, however, Wildman has shown that Della Rocca's proposal fails. The problem is that:

> for any property Φ and any object *x*, if *x* necessarily has Φ, there is a property *being necessarily*
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> Φ *if identical to x* that is directly trivial. Further, using only this property and the trivial fact that *x*
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> is self-identical, it logically follows that *x* necessarily has Φ. (Wildman 2016, 180–181)

An existent's necessarily having a property, then, always logically follows from its having trivial

properties. The result is that every necessary property comes out indirectly trivial on Della Rocca's

account. Consequently, Della Rocca's analysis fails, as it entails that every necessary property is trivial

and, so, that no property is ever essential.

3 Triviality and grounding

Importantly, though, the problem here is neither with the idea that essential properties are non-trivial

necessary properties, nor with the idea that the properties in the Finean counterexamples are non-

essential because they are trivial. Instead, the problem is that Della Rocca does not draw a meaningful

distinction between trivial and non-trivial properties. Over the next couple of sections, I respond to this

difficulty by drawing such a distinction.

I begin by clarifying the target notion of a trivial property. As in Della Rocca's account, the guiding idea is

that, if an entity's having a property is, in a significant sense, due to how everything must be, then the

entity's possession of that property is trivial in a way that keeps it from providing distinctive information

about the object. De (2020, 25), drawing on Barcan Marcus (1967), explains why this sort of triviality

seems relevant to the notion of constitutive essence:

If a property is trivial then it fails to tell us what it is to be a *particular* object over any other object, and so such properties do not play one of the primary roles associates with (constitutive) essences. In other words, the discrimination constraint [the requirement that essential properties are discriminating] ensures that essences really do shed light on the true natures of things.

Two central ideas, then, characterize the relevant notion of a trivial property. Firstly, an entity's having a trivial property, in some sense, follows from how everything must be. Secondly, as a result, the property does not provide discriminating or distinctive information about the entity and, so, seems ill-suited to be essential to it.

What Wildman's objection to Della Rocca indicates is that this notion of triviality cannot be cashed out in terms of logical consequence. I propose that the idea be understood, instead, in terms of metaphysical grounding:

F is a trivial property of *x* iff$_{df}$ either, necessarily, every object has F if it exists, or x's having F is at least partly *grounded in* x's having G, where, necessarily, every object has G if it exists.

I understand grounding as a relation of metaphysical determination, in which the grounded entity depends on, or is determined by, the grounding entity. This determination relation is either identical with or backs an explanatory relation, such that the grounding entity explains the grounded. The relevant sort of explanation is often picked out by 'in virtue of' locutions, such that, in general, where Φ grounds Ψ, Ψ exists at least partly in virtue of Φ.[12]

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[12] While I set aside most controversies about the nature of grounding or distinctions between kinds of grounding, I do assume that grounding is transitive. *x's having G*, then, grounds *x's having F*, as long as *x's having G* precedes *x's having F* in some hierarchy of grounding relations. As indicated by the phrase 'at least partly', the relevant

So, the key thought behind the proposed ground-theoretic account of triviality is that a property is indirectly trivial to an entity just if the entity has it in virtue of having some universally necessary property. At face value, this idea seems to fit well with the target notion of triviality. If an entity's having a property is determined and explained by how everything must be, then the property does not seem suited to provide distinctive information about that entity in particular.

This account also gets around Wildman's objection. While the conjunction of *x's being necessarily F if identical to x* and *x's being self-identical* logically entails that *x* necessarily has F, this conjunction does not ground the fact that *x* necessarily has F. Instead, it is far more plausible that *x's necessarily having F* grounds *x's necessarily being F if identical to x*. For instance, while it is plausible that *Socrates is necessarily human if identical to Socrates* in virtue of *Socrates's necessarily being human*, it is not true that *Socrates is necessarily human* in virtue of *Socrates's necessarily being human if identical to Socrates*.

The proposed analysis of triviality also has the consequence that some of the seemingly trivial properties in the Finean counterexamples do come out trivial. Most obviously, as the analysis incorporates Della Rocca's account of directly trivial properties, it straightforwardly entails that universally necessary properties are trivial. However, it also entails that Wildman's (2016, 179) modified Finean counterexample *being such that there are infinitely many prime numbers and human* is trivial.[13] Because conjunctions are grounded in their conjuncts, Socrates's having this property is partly grounded in his having the universally necessary property *being such that there are infinitely many prime numbers*. Consequently, the proposed analysis of triviality entails that the conjunctive property is trivial.

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grounding also need only be partial rather than full grounding. So, for *x's having G* to ground *x's having F* in the relevant sense requires only that *x's having G* is a partial ground of *x's having F*.

[13] While this example is due to Wildman, the idea to employ properties of this sort comes from Fine (1994, 7).

Of course, this conjunctive property is not *entirely* trivial in the way that *being such that there are infinitely many prime numbers* is. That *Socrates is such that there are infinitely many prime numbers and human* conveys the non-trivial information that Socrates is human. Nonetheless, this fact is *partially* trivial as it is partly constituted by the trivial fact that Socrates is such that there are infinitely many prime numbers. The above analysis, then, ought to be taken as an analysis of a property's being, *at least partly*, trivial. Given this clarification, the analysis gives the right result in this case.

On the other hand, the analysis appears to entail that *being a member of {Socrates}* is a non-trivial property of Socrates. This property is not universally necessary, nor does it appear to be a property that Socrates has in virtue of possessing any universally necessary property. In particular, it does not seem that *Socrates is necessarily a member of {Socrates}* in virtue of *everything's necessarily being a member of its singleton*. If anything, *Socrates's necessarily being a member of {Socrates}* seems to be a partial ground for this universally necessary fact.

For the same sorts of reasons, the analysis also entails that *being identical with Socrates* is a non-trivial property of Socrates. *Being identical with Socrates* is neither a universally necessary property, nor does Socrates's having this property appear to be grounded in his having some universally necessary property. If anything, Socrates's being self-identical partially grounds the fact that everything is necessarily self-identical.

4 Triviality and necessary universal generalizations

It seems intuitively plausible, though, that both Socrates's being a member of {Socrates} and his being identical to Socrates are connected to how everything must be in ways that render them trivial. As I pointed out in section 2, that Socrates is a member of {Socrates} looks trivial, because *everything* must be a member of its singleton. Similarly, that Socrates is identical with Socrates looks trivial, because *everything* must be identical with itself.

This connection between these facts and how everything must be, though, consists neither in their involving a universally necessary property nor in their being grounded by a fact involving such a property. Instead, the connection is that *these facts are instances of necessary universal generalizations*. *Socrates is a member of {Socrates}* is an instance of the necessary fact $\forall x(x \in \{x\})$, while *Socrates = Socrates* is an instance of the necessary fact $\forall x(x = x)$.

This characteristic of these facts, though, does seem to render them trivial in the relevant sense. That Socrates features in an instance of a necessary universal generalization tells us nothing distinctive about Socrates. Because everything must be identical with itself and a member of its singleton, Socrates's standing in these relations with himself is entirely uninformative about Socrates's particular nature. So, the relation between these facts and how everything must be does keep them from providing genuinely distinctive or discriminating information about Socrates.

These considerations indicate that the analysis of trivial properties given in the previous section needs to be modified to accommodate instances of necessary universal generalizations. To do so, I alter the analysis as follows:

> F is a trivial property of *x* iff$_{df}$, either, (i), where Φ is the fact that *x is F*, necessarily, for any object, if that object exists, substituting it for each occurrence of *x* in Φ results in a fact or, (ii), where Ψ is a fact that at least partly grounds the fact that *x is F*, necessarily, for any object, if that object exists, substituting it for each occurrence of *x* in Ψ results in a fact.[14]

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[14] This proposal might bring to mind Fine's (1995a, 277–278; 1995c, § 4) technique of 'generalizing out'. While I suspect that Fine's strategy is based on a similar intuition to the proposal here, the two also differ significantly. Fine's technique is aimed at 'generalizing away' objects that would enter any entity's essence via logical closure.

(i) here provides a new account of directly trivial properties. On this account, directly trivial properties are not simply necessary properties. Instead, F is a directly trivial property of *x* just if replacing the instances of *x* in the fact that *x is F* with a universally quantified variable would result in a necessary fact. (ii), in turn, provides a new account of indirectly trivial properties in terms of this sort of direct triviality. According to (ii), a property is indirectly trivial if an object's having it is, at least partly, grounded by that object's having the sort of directly trivial property described in (i).

This modified analysis entails that both *being identical to Socrates* and *being a member of {Socrates}* are directly trivial properties of Socrates. Substituting any existent, *a*, for Socrates in the fact that *Socrates is identical to Socrates* generates the necessary fact that *a* is identical to *a*. Similarly, substituting *a* for Socrates in the fact that *Socrates is a member of {Socrates}* generates the necessary fact that *a is a member of {a}*.

A possible objection is that this proposal does not work if we use the name '*a*' to refer to {Socrates}. In that case, we get the fact that *Socrates is a member of a*, but substituting Plato for Socrates in this fact does not produce a fact. Similarly, using 'F' to designate the property of *being identical to Socrates*, we could produce the fact that *Socrates is F*. However, substituting Plato for Socrates in this fact also does not produce a fact.

I think the lesson of this objection is that, in representing the facts in the analysis, names and predicates should only be used for mathematically and logically simple objects and properties. This qualification is not ad hoc, as it seems necessary for any account of metaphysically trivial properties. As various examples over the last couple of sections illustrate, this kind of triviality appears to be generated both

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On the other hand, the current proposal aims to define a property's triviality for *x* via the fact that substituting any object *for x* in the fact that *x* has that property generates a necessary fact.

by relations of set membership and identity and by operations like conjunction. So, to capture a notion of metaphysical triviality, this sort of mathematical and logical structure cannot be obscured.[15]

A potential remaining concern is that logically and mathematically complex entities can only be identified via their constitutive essences. If so, the qualification just proposed would make employing triviality to analyse constitutive essence circular.[16] The ground-theoretic framework that I am employing here, however, provides a promising way around this difficulty.

Proponents of grounding often hold that grounding connections are backed by 'metaphysical laws'.[17] Schaffer (2018, 13-14), for instance, claims that the existence of Socrates grounds the existence of {Socrates}, because of a metaphysical law that takes objects as inputs and gives sets containing them as outputs. Similarly, the existence of [A] and the existence of [B] ground the existence of [A & B], because of a metaphysical law that takes pairs of facts as inputs and produces conjunctive facts as outputs.

Given such laws, logically and mathematically complex entities can be identified via the laws that back the grounding of their existence. In general, an entity is logically complex, if the outputs of the relevant metaphysical law are more complex than its inputs. {Socrates}, for instance, counts as complex because, in this case, the relevant law takes objects as inputs and produces sets containing those objects as outputs.

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[15] An apparent consequence is that the notion of metaphysical triviality comes with a commitment to a sort of realism about logic and metaphysical structure that has recently received significant attention (for instance, Sider 2011; McSweeney 2018; Finocchiaro 2019).

[16] I'd like to thank a referee for pressing this point.

[17] Wilsch (2020) provides an overview of the literature on metaphysical laws and their connection to grounding.

My goal here is not to argue that this is necessarily the best or only way to account for mathematically and logically complex entities. Indeed, anyone who thinks that some such entities are fundamental would at least have to supplement this account, perhaps by invoking fundamental structure. I think, though, that the approach just outlined provides a promising way to individuate logically and mathematically complex objects and, so, indicates that doing so does not obviously presuppose the notion of constitutive essence.

To sum up this discussion, the triviality of a fact often depends on its logical structure. Consequently, any notion of *metaphysical* triviality requires that worldly facts have an objective logical and mathematical structure. This commitment can be accommodated in ground-theoretic terms by invoking metaphysical laws. On this approach, the operation of these laws determines the objective mathematical and logical structure of worldly facts and, if our representations are to capture facts of metaphysical triviality, they cannot obscure that structure.

This qualification ensures that, on the current account of triviality, both *being identical to Socrates* and *being a member of {Socrates}* are directly trivial properties of Socrates. At the same time, all properties that came out trivial on the analysis in the previous section also come out trivial on the current analysis. Where F is a universally necessary property, substituting any object for x in Fx results in a necessary fact. So, (i) entails that all universally necessary properties are directly trivial, and, consequently, (ii) entails that any properties grounded in universally necessary properties are indirectly trivial.

I take it, then, that this analysis captures a meaningful distinction between trivial and non-trivial properties. On this analysis, both universally necessary properties and properties such as self-identity and singleton set membership, as well as properties an entity has, at least partly, in virtue of having such properties all come out trivial. On the other hand, intuitively non-trivial properties, such as *being human*, *being a philosopher* or *being pale*, do not.

5 The triviality condition and the Finean cases

Given this analysis of triviality, the claim that all essential properties are non-trivial necessary properties straightforwardly accommodates most of the Finean cases:

> *being such that there are infinitely many prime numbers* is not an essential property of Socrates, because it is a universally necessary property. For the same reason, *existing* and *being such that, necessarily, the Eiffel Tower is spatiotemporally continuous, if it exists* are also not essential to Socrates.

> *being such that there are infinitely many prime numbers and human* is not an essential property of Socrates, because Socrates has this property partly *in virtue of* having the universally necessary property *being such that there are infinitely many prime numbers*.

> *being a member of {Socrates}* is not essential to Socrates, because, necessarily, for all *x*, *x* is a member of {*x*}.

Furthermore, that all essential properties are non-trivial necessary properties is consistent with {Socrates} essentially having Socrates as a member. It is neither the case that, necessarily, for all *x*, *x* has Socrates as a member, nor that {Socrates} has Socrates as a member in virtue of having some directly trivial property. Indeed, it is widely thought that, if {Socrates}'s having Socrates as a member is grounded in anything, then it is grounded in {Socrates}'s essentially having Socrates as a member, which is clearly not a directly trivial property. So, while the triviality condition entails that Socrates is not essentially a member of {Socrates}, it is consistent with {Socrates} essentially having Socrates as a member.

A potential concern here, though, is that it seems plausible that particular facts of set membership, such as [{Socrates} has Socrates as a member], obtain *partly because of* a general connection between

singletons, or sets in general, and their members.[18] This thought suggests that something like $[\forall x \forall y(y = \{x\} \rightarrow y$ has x as a member)] might be a partial ground for [{Socrates} has Socrates as a member]. For instance, this universal generalization might ground [{Socrates} is such that $\forall x(\{Socrates\} = \{x\} \rightarrow \{Socrates\}$ has x as a member)], which together with [{Socrates} = {Socrates}] might be taken to ground [{Socrates} has Socrates as a member]. On this account, though, [{Socrates} has Socrates as a member] is indirectly trivial, as it is grounded in two directly trivial facts about {Socrates}.[19]

However, the idea that $[\forall x \forall y(y = \{x\} \rightarrow y$ has x as a member)] is a ground for [{Socrates} has Socrates as a member] runs into a serious problem. On a standard account, [{Socrates} has Socrates as a member] would be a ground for [{Socrates} = {Socrates} $\rightarrow$ {Socrates} has Socrates as a member], which would, in turn, partially ground $[\forall x \forall y(y = \{x\} \rightarrow y$ has x as a member)]. The transitivity of grounding would, then, entail that [{Socrates} has Socrates as a member] partially grounds $[\forall x \forall y(y = \{x\} \rightarrow y$ has x as a member)]. So, given this standard account, it would be circular to claim that $[\forall x \forall y(y = \{x\} \rightarrow y$ has x as a member)] grounds [{Socrates} has Socrates as a member].[20]

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[18] I'd like to thank a referee for pressing this concern.

[19] So, the direct triviality of [{Socrates} is such that $\forall x(\{Socrates\} = \{x\} \rightarrow \{Socrates\}$ has x as a member)] is problematic when plugged into this account of the grounds for [{Socrates} has Socrates as a member]. In itself, however, the fact that *being such that $\forall x(\{Socrates\} = \{x\} \rightarrow \{Socrates\}$ has x as a member)* comes out a trivial property of {Socrates} is a good result, because this property does not seem essential to {Socrates}.

[20] Wilsch (2020, 426) gives a very similar argument for the conclusion that the universal generalization 'For all objects x, if x exists, then the singleton set {x} exists' cannot account for 'That Socrates exists explains that {Socrates} exists'. In line with the position that I outline in the next paragraph, he also argues that this explanation must, instead, be accounted for by a law of metaphysics.

The idea that a general connection between sets and their members has explanatory priority over a fact like [{Socrates} has Socrates as a member] can also be incorporated into the ground-theoretic framework in a less problematic way. Schaffer (2018, 18) claims that the metaphysical law that produces sets can be individuated by the following rule:

> The <Xs, y> pair such that the Xs arise at or below stage n, and y is the set at stage n + 1 with all and only the Xs as its members.

Such a law would not only give the output, {x}, from input, x, but also seems sufficient, together with the existence of *x*, for the fact that {x} has x as its member. So, the thought that facts like [{Socrates} has Socrates as a member] are explained by a general connection between sets and their members might be accommodated by invoking a law that produces a mapping between sets and their members. In line with the standard approach to the grounding of universal generalizations, this approach also allows that [$\forall x \forall y(y = \{x\} \rightarrow y$ has x as a member)] is grounded in its instances. From a ground-theoretic perspective, then, the idea that a general connection between sets and their members explains instances of set membership seems best accommodated by appeal to metaphysical laws.

Given this approach, though, the triviality condition is consistent with {Socrates} essentially having Socrates as a member. The approach entails that [{Socrates} has Socrates as a member] is grounded just in [Socrates exists]. While this fact involves a trivial property of *Socrates*, it does not involve a trivial property of {Socrates}. Consequently, given that [{Socrates} has Socrates as a member] is grounded in this way, *having Socrates as a member* is not an indirectly trivial property of {Socrates}. As the property is also not directly trivial, it remains non-trivial and eligible for being essential to {Socrates}.

I have, of course, not exhausted the potential ways that someone might argue [{Socrates} has Socrates as sole member] is grounded. What I hope to have done, though, is to show that there is significant reason to think that the triviality condition can successfully accommodate the intuitive asymmetry in the

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essences of Socrates and {Socrates}. On the one hand, Socrates is not essentially a member of

{Socrates}, because the fact that every entity is necessarily a member of its singleton renders this fact

trivial. On the other hand, it seems plausible that *having Socrates as a member* is not a trivial property

of Socrates, partly because it is not the case that everything has Socrates as a member. That the

condition can accommodate this asymmetry is particularly significant, because doing so has proven

especially problematic for attempts to give a non-primitivist response to the Finean cases.[21]

The remaining Finean case is the case of Socrates's *being distinct from the Eiffel Tower*. This property is

not directly trivial, as it is clearly not true that, necessarily, for all *x*, if *x* exists, then *x* is distinct from the

Eiffel Tower. So, the key question is whether Socrates's being distinct from the Eiffel Tower is, at least

partly, grounded in some directly trivial property of Socrates. To answer this question would require

answering the difficult and controversial question of what, in general, grounds facts of distinctness.

While it is not possible to adequately address this question here, there is at least one live approach to

answering it on which distinctness facts do come out trivial. On this approach, the fact that *x* is distinct

from *y* is grounded simply in the facts that *x* exists and *y* exists.[22] As *existing* is a directly trivial property,

this approach entails that *x*'s *being distinct from y* is partly grounded in a directly trivial property of *x*

and, so, is an indirectly trivial property of *x*.

However, if distinctness facts are, in this way, grounded in existence facts, then *being distinct from the*

Eiffel Tower fails to be essential to Socrates for reasons unrelated to the triviality of the property.

Because Socrates might have existed without the Eiffel Tower existing, this approach entails that

Socrates could have existed without having the property of *being distinct from the Eiffel Tower*.

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[21] See Zylstra (2019) for discussion of this point.

[22] Shumener (2020) provides an overview of the available approaches to grounding facts of identity and

distinctness. She identifies the approach discussed here as one of three live possibilities.

Socrates, then, would not be essentially distinct from the Eiffel Tower, just because Socrates might have existed without being distinct from the Eiffel Tower.

The example, though, could be reformulated in a way that avoids this difficulty by replacing the Eiffel Tower with a necessary existent, such as the number 2. If Socrates's *being distinct from the number 2* is grounded in the existence of Socrates and the number 2, then it is true that, necessarily, Socrates exists only if he is distinct from the number 2. Given that this distinctness fact has these grounds, though, it is indirectly trivial. So, while the approach to distinctness facts under consideration blocks the case involving the Eiffel Tower independently of considerations about triviality, it requires the triviality condition to block structurally identical cases involving necessary existents.

The relation between triviality and facts of distinctness deserves more attention, but the important point for now is that, on the analysis of triviality given here, a live approach to grounding distinctness facts entails that these facts are trivial. Given the work that the triviality condition does in accommodating the other Finean cases, especially the case of Socrates and {Socrates}, the strategy of blocking the Finean cases by appealing to the triviality condition deserves serious consideration. The main outstanding question in determining whether the strategy succeeds is whether it can accommodate the case of distinctness facts.

Clearly, though, this strategy is only tenable, if it is in general plausible that all essential properties are non-trivial necessary properties. This claim, however, faces other potential counterexamples. In the first place, I argued earlier that self-identity is a trivial property and, so, *being Socrates* is not essential to Socrates. While Della Rocca's account of triviality is explicitly intended to rule these sorts of properties out of the essences of entities (1996, 3), Spinelli (2021) points out that it has often been assumed that self-identity is an essential property. If *being identical to Socrates* is, indeed, both trivial and essential to Socrates, then it would provide a counterexample to the proposed triviality condition.

Another potential counterexample is given by the property *being such that there are infinitely many prime numbers*. While I have already argued that the triviality condition straightforwardly entails that this property is not essential to any entity, it might be thought that it is, in fact, essential to the natural numbers taken as a whole. Indeed, Fine's original paper contains a similar potential counterexample. There Fine (1994, 7) says 'we might be happy to say…that it is essential to the null set that there be sets', but *being such that there are sets* is a universally necessary property and, consequently, a trivial property.

It might also be argued that the triviality condition is inconsistent with substantive philosophical positions. Most obviously, the condition appears to be inconsistent with the standard theist claim that God essentially exists. The difficulty, of course, is that existence is a trivial property, and, so, God's essentially existing entails that some trivial properties are essential.

The condition might also seem inconsistent with certain structuralist ontologies. For instance, Shapiro's (1997) *ante rem* structuralism about mathematical entities appears to entail that the essences of those entities are fixed by necessarily existing mathematical structures. Similarly, platonic versions of dispositional essentialism about properties[23] entail that the essences of properties are fixed by necessarily existing causal or dispositional structures. The resulting concern is that these views entail that the existence of mathematical or causal structures is essential to mathematical entities or properties, even though everything is necessarily such that these structures exist.

If the triviality condition does turn out to be inconsistent with theistic or structuralist claims, it would entail that these claims are incoherent. Whether or not the claims are true, though, they do not appear

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[23] For this view, see Bird (2007) and Tugby (2013).

to be incoherent. So, it would be a serious problem for the triviality condition, if it were, in fact, inconsistent with them.

6 The triviality condition and constitutive essence

Most of the objections just raised can be dealt with by recalling that I am concerned specifically with *constitutive* essence, where an entity's constitutive essence is understood as what that entity is '*in its most core respects*'. In this sense of 'essence', the essence of *x* is standardly referred to using definitional locutions such as 'to be *x* is to be Φ'.[24] So, a reasonable test for whether a property is constitutively essential to *x* is whether it is plausibly constitutive of Φ in this phrase.[25]

Most of the properties in the putative counterexamples do not seem to be constitutively essential, even if they are essential in some respect. For instance, while *being identical to Socrates* is plausibly essential to Socrates in some respect, it does not appear to be constitutively essential. As Spinelli (2021, 1585) points out in arguing that self-identity is essential given a classic modal conception of essence but not a definitional account of essence, *being identical to Socrates* is surely not constitutive of what it is to be Socrates. Indeed, instead of providing a potential counterexample, this case might indicate that the triviality condition can do important work by explaining why *being identical to Socrates* does not enter into the real definition of Socrates. On this account, the property is not constitutive of Socrates's real

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[24] See Koslicki (2012, 197–201) for a discussion of the relation between such locutions, essences and 'real definitions'.

[25] Note that this is intended merely as a reasonable guide to constitutive essence and not as a substantive account of the metaphysics of constitutive essence. In particular, I do not intend to claim that being constitutively essential to *x* consists in *being constitutive of Φ* in the fact *to be x is to be Φ*. Instead, my claim is just that considering whether a property plausibly features in Φ in the sentence 'to be *x* is to be Φ' provides a useful heuristic for considering whether the property is constitutively essential to *x*.

definition, because it is a trivial property that does not provide distinctive or discriminating information about Socrates.

A similar point holds for both the natural numbers' *being such that there are infinitely many prime numbers* and the null set's *being such that there are sets*. While both properties appear to be essential in some sense, neither looks constitutive of the core of what it is to be its bearer. Consequently, it is highly dubious that either property is constitutively essential.

The same sort of response can also be given to the objection from structuralist ontologies. These ontologies plausibly do entail that *being such that a particular structure exists* is both trivial and, in some sense, essential to certain entities. However, what is *constitutively* essential to the entities posited by these ontologies is not this trivial property but rather the non-trivial property of *occupying their particular places in the relevant structure*.

For instance, on a dispositional essentialist account of properties, to be the property *charge* is, at least in part, *to occupy charge's place in a dispositional or causal structure*. Similarly, for the mathematical structuralist, to be the number 3 is *to occupy that number's place in a mathematical structure*. It may well be that these accounts entail that the trivial properties of being such that a causal or mathematical structure exists are derivatively essential to *charge* or the number 3. This result, though, is no threat to the claim that all constitutively essential properties are non-trivial necessary properties.

Indeed, once it is specified that the triviality condition is a condition on constitutive essence, most potential counterexamples seem to fall away. The case of the theistic claim that God essentially exists, however, cannot be dealt with in this way, as the idea plausibly is that existence is constitutively essential to God.

Theistic claims about the essential existence of God, though, raise well-known closely related difficulties for classic modalism. As we have already seen in discussing the Finean cases, classic modalism entails

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that *everything* essentially exists. Apart from being problematic in its own right, this result is also inconsistent with the standard theist claim that *only* God essentially exists.

As Wildman (2013, 768) and Robertson and Atkins (2018) note, though, modalists can respond to this difficulty by interpreting the claim that only God essentially exists as the claim that only God essentially *necessarily* exists.[26] While this approach involves some reconstruction of standard theist expressions, Robertson and Atkins (2018) point out that such reconstruction seems defensible in this case. Philosophers often treat existence as a special property that requires special accommodations, and the accommodation here captures the key theist idea that it is essential to God to exist at every possible world.

The same move, though, can be made in the current context. Necessary existence is neither a directly nor an indirectly trivial property. Consequently, the claim that all essential properties are necessary non-trivial properties, as I have interpreted it, is consistent with God essentially necessarily existing. So, the classic modalist's approach to the claim that God essentially exists provides a plausible way to render this claim consistent with the triviality condition on essence.

I do not think, then, that the objections to the triviality condition raise serious difficulties for it. I also showed in the previous section that this condition provides a promising way to account for the Finean cases, including the problematic case of Socrates and {Socrates}. I have, moreover, argued that the

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[26] Both Wildman and Robertson and Atkins actually only explicitly say that the modalist can, instead of saying that God differs from other beings by essentially existing, say that God differs from other beings by necessarily existing. Given classic modalism, though, if God necessarily exists, then God essentially necessarily exists. I suspect that this is important because, as I note in the main text, I suspect that the theist's claim is intended to make a distinctive claim about the constitutive essence of God. If this is right, it might be significant that, given Wildman's sparse modalism, it is less clear that God would *essentially* necessarily exist.

condition is intuitively plausible, as trivial properties intuitively do not bear on what it is to be a particular entity in the way that essential properties must. For this reason, trivial properties also fail to be informative about their bearers in the way that essential properties are. Together these points constitute a strong case that all constitutively essential properties are non-trivial necessary properties.

7 Triviality, fundamentality and essence

On the other hand, not all non-trivial necessary properties are constitutively essential. *Having a member that is human* is a non-trivial, necessary property of {Socrates}. So, if being non-trivial and necessary were sufficient for being essential, then {Socrates} would essentially *have a member that is human*. However, while this result may hold on some interpretation of 'essential', it surely does not on the sense of 'essential' in play here. *Being human* is not constitutive of Φ in 'to be {Socrates} is to be Φ'.

This counterexample also cannot be dealt with by tinkering with the analysis of triviality. {Socrates} is necessarily such that its member is human, just because {Socrates} essentially has Socrates as a member and Socrates is essentially human. So, that the member of {Socrates} is human is a distinctive, and genuinely informative, fact about {Socrates} that is grounded in facts about what it is to be Socrates and what it is to be {Socrates}. A plausible account of the relevant sort of triviality, then, ought to imply that this property is non-trivial. Consequently, this counterexample indicates a fundamental problem with fully analysing essentiality in terms of non-trivial necessary properties and not simply a problem with how triviality has been analysed.

It is, moreover, easy to produce structurally similar cases. In general, where F is a non-trivial necessary property of *x*, *x* will have non-trivial and necessary, but intuitively non-essential, properties in virtue of having F. For example, Socrates has the necessary, non-trivial, but not constitutively essential, property of *being human or a unicorn* in virtue of having the non-trivial necessary, and intuitively constitutively

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essential, property of *being human*. Indeed, whenever F is constitutively essential to *x*, *x*'s having F will ground *x*'s having non-trivial necessary, but not constitutively essential, disjunctive properties.

Constitutive essence, then, cannot be fully analysed in terms of necessary non-trivial properties, because any entity will have such properties non-essentially just in virtue of having its essential properties. These cases, though, can be avoided by adding a further condition to the analysis. According to this condition, a property is constitutively essential to *x* only if *x*'s having that property is not grounded in *x*'s having some non-trivial necessary property.[27] Of course, the triviality condition on constitutively essential properties already entails that a constitutively essential property of *x* cannot be grounded in *x*'s having a trivial necessary property. So, adding the new condition implies that F is constitutively essential to *x* only if *x*'s having F is not grounded in *x*'s having a necessary property.

The result is a tripartite analysis of constitutive essence:

F is a constitutively essential property of *x* iff$_{df}$:

(i) necessarily, if *x* exists, then F*x*

(ii) where Φ is the fact that *x is F*, it is not the case that, necessarily, for any object, if that object exists, substituting that object for each occurrence of *x* in Φ results in a fact

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[27] Both Fine (2012, 79) and Rosen (2015, 195-196) propose a similar condition for distinguishing constitutive essence from consequential essence. In Fine's (Ibid.) words, 'The constitutive claims of essence can then be taken to be those consequentialist statements of essence that are not partly grounded in other such claims'. Rosen also uses this condition to exclude cases like disjunctive properties from an entity's constitutive essence. Of course, neither Rosen nor Fine employ this condition to develop a modal analysis of essence.

(iii) x's having F is grounded in x's having G only if it is not the case that necessarily, if x exists, then Gx

The new condition in this analysis not only blocks the counterexamples to analysing constitutive essence just in terms of necessary non-trivial properties but also is independently plausible.[28] Grounding relations are generally taken to track relations of ontological priority or relative fundamentality, such that Φ has ontological priority over Ψ just if Φ grounds Ψ or is part of the grounds for Ψ. So, the condition just added to the analysis ensures that F is not constitutively essential to x, if G is constitutively essential to x and x's having G has ontological priority over x's having F. It seems plausible, though, that, if some part of what it is to be x has ontological priority over x's having F, then F should be excluded from the *core* of what it is to be x.

The analysis just introduced, then, analyses constitutive essence in terms of metaphysical necessity, triviality and relative fundamentality. According to the analysis, F is constitutively essential to x just if F is a non-trivial necessary property of x, and it is not the case that x's having some other non-trivial necessary property has ontological priority over x's having F. This analysis, I think, provides an initially plausible account of essence that incorporates the idea that all essential properties are non-trivial

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[28] In addition to Fine and Rosen's proposals discussed in the previous footnote, the condition is also closely related to an extant approach to essential properties, on which x's essential properties are those that feature in explanations of x's having its other properties (Copi 1954; Teller 1975; Gorman 2005 and 2014). Gorman's (2014) account, which he traces to the Aristotelian/scholastic tradition, of x's essential properties as x's 'foundational properties' is especially closely related to this account. The analysis just proposed can, then, be thought of as conjoining this independently motivated explanatory approach to essence with the idea that all essential properties are non-trivial necessary properties.

necessary properties – along with the attendant benefits – while avoiding the counterexamples

introduced in this section.

A further advantage of the analysis is that it provides an alternative way to accommodate the one

Finean case – the case involving distinctness facts – that was not obviously dealt with by the triviality

condition. Shumener (2021) has recently argued that *x*'s being distinct from y is grounded in the fact

that *x* and *y* are not constituents in all the same facts, where facts are restricted to those that 'do not

involve identity, the constituency relation, or quantification over properties, relations, or facts'

(Shumener 2021, 16). Plausibly, though, at least some of those facts will be necessary facts about *x* and

y. If so, then the current analysis entails that *x*'s *being distinct from y* is not essential to *x*, even if it is

non-trivial.

The analysis just mooted, then, provides an intuitively appealing account of essence that accommodates

both the Finean cases and the counterexamples introduced in this section to a pure triviality analysis.

However, two possible counterexamples to the analysis can be found in the literature. Firstly, Zylstra

(2019, 199) claims that both Fido's *being a dog* and his *being an animal* are constitutively essential to

Fido, even though Fido's *being a dog* grounds his *being an animal*. Secondly, on one extant view,

whenever F is essential to *x*, *x*'s having F is grounded in *x*'s essentially being F. Because *x*'s essentially

being F is a necessary property of *x*, the analysis is inconsistent with this idea.

I do not think, though, that either case provides compelling grounds to reject an otherwise attractive

theory of essence. Regarding the latter, Glazier (2017) has argued at length, and in my view

convincingly, that *x*'s essentially being F does not ground *x*'s being F. Regarding the former, both the

essentialist and the grounding claims in the putative counterexample are questionable. It is far from

clear to me that the *core of what it is to be* Fido includes both Fido's *being a dog* and his *being an*

animal, and Rosen (2010, 127–128) has argued that genus membership is not grounded in species membership.

Both suggested counterexamples, then, have at best unclear significance. Furthermore, while one cannot, of course, be definitive on this matter, it does not seem to me that there are other clear counterexamples. So, I am going to conclude that the analysis given in this section appears, at least initially, to be extensionally adequate. When conjoined with the independent plausibility of the analysis, the result is a promising account of essence.

8 Conclusion

I have formulated and defended a tripartite analysis of constitutive essence in terms of necessity, triviality and fundamentality. A key part of my argument is that this analysis gets around the Finean cases without running into other clear counterexamples. I also argued, though, that the analysis provides an independently plausible account of constitutive essence, on which the core of what it is to be *x* consists in the most fundamental, non-trivial necessary properties of *x*.

The result is a novel, promising post-Finean, non-primitivist account of constitutive essence. While the account is not purely modal, it is squarely in line with the post-Finean modalist idea that essence is derivative from necessity and not vice versa. The account, though, also entails that essence is derivative from grounding, and, so, comes with a significant claim concerning the relation between grounding and essence. The account, then, both provides a promising modalist response to Fine and has significant implications for the connection between essence and grounding.

There are, of course, significant questions about the implications and prospects of this account. An immediate question is whether any compelling counterexamples to the analysis can ultimately be found. Another question is what implications the account has for the connection between grounding and essence and how these fit into the recent literature on the relation between essence, grounding and

explanation.[29] Finally, there is a significant question about the view's implications for particular essentialist theses, such as origin essentialism and sortal essentialism. In showing that the view that gives rise to these questions constitutes a promising new theory of essence, I hope to have motivated further inquiry into them.

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[29] Examples of this literature include Glazier (2017), Zylstra (2018; 2019) and Raven (2021).

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