

# Explaining Essences

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*Abstract.* This paper explores the prospects of combining two views. The first view is metaphysical rationalism (the principle of sufficient reason): all things have an explanation. The second view is metaphysical essentialism: there are real essences. The exploration is motivated by a conflict between the views. Metaphysical essentialism posits facts about essences. Metaphysical rationalism demands explanations for all facts. But facts about essences appear to resist explanation. I consider two solutions to the conflict. Exemption solutions attempt to exempt facts about essences from the demand for explanation. Explanation solutions attempt to explain facts about essences. I argue that exemption solutions are less promising than explanation solutions. I then consider how explanation solutions might be developed. I suggest that a “generative” approach is most promising. I tentatively conclude that the prospects for combining metaphysical rationalism and metaphysical essentialism turn on the viability of a generative approach. This sets the agenda for defending the combination as well as the more general project of explaining essences.

This paper concerns two views. The first view is *metaphysical rationalism*. It is also known as the *principle of sufficient reason (PSR)*. This is the view that all things have an explanation. The second view is *metaphysical essentialism*. This is the view that there are real essences, or facts about real essences.

My aim is to explore the prospects of combining these views. Although their combination is not inevitable, it is still alluring. Metaphysical rationalism appeals to those wanting to explain all things. Metaphysical essentialism appeals to those wanting explanations by essence. For example, they might say electrons are negatively charged because it is part of their nature or essence. Each view’s allure can be traced back to certain explanatory desires. One might thus expect an affinity in their combination.

But there is a conflict in combining the two views. Metaphysical essentialism posits facts about essences. Metaphysical rationalism demands explanations for these and all other facts. But facts about essences appear to resist explanation. If they do, they are counterexamples to the **PSR**. My focus will be on exploring this conflict and its implications.

A direct implication is for metaphysical rationalists. It concerns whether they can also accept metaphysical essentialism. But there are also broader implications. Anyone may think essences resist explanation but still wonder whether they are explainable. And the prospects for explaining them may affect whether to posit them. So we can expect implications for these general issues quite apart from one's views on metaphysical rationalism.<sup>1</sup>

The paper begins by clarifying metaphysical rationalism (§1) and metaphysical essentialism (§2). Then I describe their conflict (§3). I distinguish two kinds of solutions. *Exemption solutions* attempt to exempt facts about essences from the demand for explanation. I argue against two prominent exemption solutions (§4). This serves as an indirect argument for another kind of solution. *Explanation solutions* attempt to explain facts about essences. I sketch a “generative” approach to explaining essences (§5). Then I draw two tentative conclusions (§6). The first is that exemption solutions are unpromising. The second is that the prospects of explanation solutions turn on the viability of a generative approach. This sets the agenda for defending the combination as well as the more general project of explaining essences.

## 1 Metaphysical rationalism

*Metaphysical rationalism* is the view that all things have an explanation. The view comes from antiquity. In the early modern period, [Leibniz \[1989: §§32-33\]](#) formulated the view as the *principle of sufficient reason (PSR)*:

Our reasonings are based on *two great principles, that of contradiction, ... And that of sufficient reason*, by virtue of which we consider that we can find no true or existent fact, no true assertion, without there being a sufficient reason why it is thus and not otherwise.

The PSR was also prominent in [Spinoza \[1988\]](#), [Du Châtelet \[1740\]](#), [Kant \[1781/1997\]](#), [Schopenhauer \[1813/1974\]](#), and others. It is now prominent in [Pruss \[2006\]](#), [Della Rocca \[2010\]](#), [Dasgupta \[2016\]](#), and [Amijee \[2018\]](#).

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<sup>1</sup> But it might prevent confusion to state my views. I have no inclination toward metaphysical rationalism. Curiosity led me to consider combining it with metaphysical essentialism, to which I am inclined. I am especially intrigued by the prospects of explaining essences.

The qualifier ‘metaphysical’ distinguishes *metaphysical* from *epistemological rationalism*. Metaphysical rationalism implies that all things have an explanation. This neither requires nor prevents these explanations to be knowable, let alone knowable independent of experience. So it neither implies nor contradicts epistemological rationalism, the view that beings like us can have non-trivial non-empirical knowledge. I will ignore epistemological rationalism and so the qualifier ‘metaphysical’ will hereafter be dropped.

The core idea of the **PSR** is that all things have an explanation. This can be refined along at least four dimensions. One concerns the *scope* of ‘all’: is it unrestricted or restricted? Another concerns the *range* of ‘things’: is it objects, facts, events, or items of any sort? A third concerns the *force* of ‘have’: does it have modal force of some sort? And a fourth concerns the *kind* of ‘explanation’: is it *apriori*, conceptual, metaphysical, or something else?

Various **PSRs** may be distinguished over which loci they occupy along these dimensions. Some might be of special interest. Perhaps our interest is in which locus represents so-and-so’s view or deserves the honorific ‘**PSR**’. But I will not be concerned with these matters. My focus will be on a specific **PSR**:

**PSR**     All facts have grounds.

Like all versions of the **PSR**, this one is characterized by the locus it occupies along the four dimensions. Each loci can be motivated singly. But they can also be motivated together from the kind of explanation at issue.

Our **PSR** interprets ‘explanation’ as *ground*.<sup>2</sup> Various notions of ground have been discussed. I have in mind a distinctively metaphysical kind of determinative explanation. It is familiar enough for only a brief overview.<sup>3</sup>

We may first distinguish two ways to express ground. On the operator approach, ‘ground’ is an operator connecting a sentence stating what’s grounded to the sentences stating the grounds. On the relation approach, ‘ground’ is a relational predicate expressing a relation between the grounded fact and the facts grounding it. The approaches have complementary virtues.

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<sup>2</sup> [Della Rocca \[2012\]](#), [Dasgupta \[2016\]](#), [Levey \[2016\]](#), [Schnieder and Steinberg \[2016\]](#), and [Amijee \[2018\]](#) may each (more or less plausibly) be read as formulating **PSR** with ground.

<sup>3</sup> See [Raven \[2015\]](#) for a more detailed overview of ground.

The operator approach is neutral over whether there is a relation of ground and, if so, what its relata are. The relation approach engages with the metaphysics of facts and their relations. There are subtler differences too. But my main points won't be affected by sliding between them as convenient.

We also distinguish *full* and *partial* ground. Consider some facts which ground another. Each *helps* ground the grounded fact even if no one of them by itself *fully* grounds it. But they all together *fully* ground it. A fact *partially* (or *helps*) ground another just in case it is among its *full* grounds. When I use 'ground' without qualification, I mean full ground.

I also follow orthodoxy in taking partial ground to be a strict partial order: it is *irreflexive* (nothing helps ground itself) and *transitive* (if one fact helps grounds a second and the second fact helps ground a third, then the first helps grounds the third). So full ground will have variants of these properties too. These assumptions are controversial despite their orthodoxy. But I don't expect these controversies to be relevant here.

Our **PSR** interprets 'have' *non-modally*. A modal interpretation would say that all things *must* have an explanation. This has a scope ambiguity. One disambiguation is that, necessarily, all things have some or other explanation. Another disambiguation is that each thing necessarily has the explanation it has. The **PSR** is often taken to have one or both modal implications. But our non-modal interpretation implies neither and is compatible with both.<sup>4</sup>

Our **PSR** takes 'things' to range just over *facts*. This is required by taking the kind of explanation to be ground and by taking ground to relate facts. It also has an independent motivation. Ranging over facts excludes non-fact items (e.g. ordinary objects, forces, fields, universals, tropes). The sense in which these can be explained often derives from explaining something else. To illustrate, consider a chair and ask, "What explains it?" One is tempted to answer, "What explains *what about* it? *That it exists?* Or *that it is brown?* Or *that...?*" The follow-up questions ask to explain *that* the chair is thus-and-so. They ask to explain some *fact* about it. A request to explain a non-fact item seems often, if not always, abbreviates a request to explain some *fact* about it.

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<sup>4</sup> Were we to interpret our **PSR** modally, it would concern *metaphysical* modality. This flows from the distinctively *metaphysical* kind of explanation at issue: ground.

Our PSR interprets ‘all’ unrestrictedly. It concerns *all* items, whatever those may be. These turn out to be facts because the kind of explanation is ground. The unrestricted scope of our PSR derives from the kind of explanation at issue. It seems one may ask of a fact whether it is or is not grounded. And it would seem at first that nothing prevents this question from arising for any fact.<sup>5</sup> This suggests that the PSR should be unrestricted. But I will later consider restricted versions of the PSR. They are best regarded as resulting from allowing *exemptions* to the unrestricted version.

## 2 Metaphysical essentialism

*Metaphysical essentialism* is the view that there are essences. It does not say which essences there are. Sometimes specific views about essences are also labelled ‘essentialism’.<sup>6</sup> But that is not how I will understand it. My understanding does not specify *which* essences there are. Essentialists all agree *that* there are essences even if they disagree over *which* there are.

The qualifier ‘metaphysical’ distinguishes metaphysical essentialism from *anti-realist essentialism*. Philosophers have meant many different things by ‘anti-realist’ and I won’t attempt to sort out what they did or should mean. What I have in mind derives from the old contrast between *real* and *nominal* essences.<sup>7</sup> Nominal essences are definitions of words or ideas. Anti-realist essentialism is the view that the only essences there are are nominal. Real essences are definitions of items themselves. I take ‘item’ to be neutral over any entity. So items may include words or ideas along with persons, material objects, social kinds, numbers, and so on. I use ‘essence’ to refer to real essences and so the qualifier ‘metaphysical’ will hereafter be dropped.

Essence concerns a distinctive kind of question. The question asks what some item is. It is not in general correct to answer by stating just any feature of that item. Suppose we ask what Socrates is. It is incorrect to answer that Socrates is snub-nosed. This is because it is no part of his identity or

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<sup>5</sup> [Della Rocca \[2010,2018\]](#) appeals to such considerations to defend an unrestricted PSR.

<sup>6</sup> The labelling is pernicious. For example, it can mask the invalidity of arguing against genders having essences by arguing that they do not have *biological* essences ([Witt \[1995\]](#)).

<sup>7</sup> The distinction is inspired by [Locke \[1689\]](#).

nature to be snub-nosed. Socrates is not essentially snub-nosed. But, presumably, it is correct to answer that Socrates is human. It is part of his identity or nature to be human. Socrates is essentially human.

Some essential features *constitute* what an item is whereas others are merely *consequential* (Fine [1994]). That Socrates is essentially human and mortal is consequential upon his being essentially human and his being essentially mortal. But that Socrates is essentially human is not consequential upon anything else. It is part of Socrates's *constitutive* essence that he is human, but not that he is human and mortal. It is only part of his *consequential* essence that he is human and mortal. Consequential essence lends itself better to formal investigation than does constitutive essence. But constitutive essence is arguably the primary conception. I will have it in mind.

An *essentialist statement* expresses that something is essentially thus-and-so. An example is 'Socrates is essentially human'. If Socrates is essentially human, then the essentialist statement 'Socrates is essentially human' is true. True essentialist statements may be called *true essentialities*.

A true essentiality is presumably made true by some state of reality. Such a state is an *essentialist fact*. It is controversial just what facts are in general. But before settling that controversy, we can still say that what makes a true essentiality true is the existence of a corresponding essentialist fact.

The contrast between true essentialities and essentialist facts tracks the operator and relational approaches to 'ground'. Essentialist statements can be connected to others by sentential operators. In particular, essentialist statements can be combined with others by the ground operator. This allows us to express claims about true essentialities grounding or being grounded by other truths. By also recognizing essentialist facts, we may take them to be the relata of the relation of ground. This allows us to express claims about essentialist facts grounding or being grounded by other facts. Nothing important is obscured by sliding between these modes of expression.

Essentialism was first formulated as the view that there are essences. This reifies essences. A second formulation is that there are essentialist facts. This does not reify essences (if essences are not facts). It does, however, reify facts. One might doubt whether trading one reification for another is beneficial. But our conception of fact is thin. Facts are just states of reality.

Essentialist facts are among them. They are facts concerning items being essentially thus-and-so. These facts can but needn't concern essences.<sup>8</sup> So the second formulation is preferable for its neutrality over essences. Our setup also requires it. Our **PSR** ranges over facts. Our question concerns combining it with essentialism. This is a non-starter except on the second formulation. So our official version of essentialism is that there are essentialist facts. But I will sometimes use 'essence' for 'essentialist fact' for stylistic reasons.

There have been two broad essentialist traditions since antiquity. In the Platonic tradition, essences are somehow *detached* from the world. Essences are given "prior" to their worldly instances. The core idea manifested in Plato's theory of Forms. A Form is an essence that participates in its instances while still transcending them. The paradigmatic cases of arithmetical or geometrical essences illustrate this. For example, the essence of cube (a "Platonic solid") is to be a regular, convex polygon with six square faces meeting at each of its eight vertices. Cubes are what they are by participating in this essence. But the essence transcends its worldly instantiations. Perhaps there are other ways to develop the core idea. But however it is developed, it will somehow *detach* essences from their worldly instances.<sup>9</sup> Essentialist facts are *detached* from the world.

In the Aristotelian tradition, essences are somehow *embedded* in the world. Essences are not prior (in the sense of the Platonic tradition) to their worldly instances. The core idea is that essences are as much a part of the world as their worldly instances. The paradigmatic cases of biological or artifactual essences illustrate this. For example, the essence of scissors is to be made for cutting. Scissors are what they are by being made for cutting. Their essence is somehow part of the world. Perhaps there are other ways to develop the core idea. But however it is developed, it will somehow *embed* essences *in* the world. Essentialist facts are *embedded* in the world.

Each tradition has its appeal. Those gripped by one may take it to apply uniformly to all essences. But uniformity is optional. Perhaps each

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<sup>8</sup> An essentialist fact might not concern essences if essences are *eliminable* (Raven [2016,2017]).

<sup>9</sup> Detachment requires clarification. A natural idea is to associate it with abstracta. But the details are fraught and deserve more discussion than I can provide here (although I discuss it elsewhere). My main points do not turn on the exact characterization of detachment.

tradition applies to some essences but not others. Perhaps some essences do not fit well into either tradition.<sup>10</sup> But sorting out each tradition's extent is a matter for another time. My immediate concern is with how each tradition influences solutions to the conflict between rationalism and essentialism.

### 3 The conflict

Essentialism recognizes essentialist facts. Rationalism requires explanations for these and all other facts. But essentialist facts appear to resist explanation. If so, then essentialist facts are counterexamples to the **PSR**. This is the conflict between essentialism and rationalism.

Solutions should be sensitive to the earlier distinction between constitutive and consequential essence. Part of Socrates's consequential essence is that he is human and mortal. It is a consequential essentialist fact that Socrates is essentially human and mortal. This consequential essentialist fact has an explanation. Part of Socrates's constitutive essence is that he is human. Another part is that he is mortal. One constitutive essentialist fact is that Socrates is essentially human. Another is that he is essentially mortal. These two constitutive essentialist facts together explain the consequential essentialist fact. Consequential essentialist facts are in general explained like this by constitutive essentialist facts. But our focus has been on constitutive essentialist facts. What, if anything, explains them?

One answer is 'Nothing'. Essentialist facts have no explanation. Non-rationalists may give this answer.<sup>11</sup> But it seems unavailable to rationalists. And yet some say that it is available after all. It is if essentialist facts are somehow "exempt" from the **PSR**'s demand for explanation.

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<sup>10</sup> Examples of such ill-fitting essences include social and artifactual essences. Elsewhere I discuss how a puzzle arises because these essences can seem at once embedded and detached.

<sup>11</sup> It is another matter whether the answer is correct. [Glazier \[2017: 2880\]](#) argues that it is incorrect. Roughly, his argument is that some essences are nonfundamental, but that this is so only if some essentialist facts have explanations.

*Exemption solutions* respond to the conflict by exempting essentialist facts from explanation.<sup>12</sup> Nothing explains essentialist facts. But this not supposed to conflict with the **PSR**'s demand for explanation. The challenge is to account for how essentialist facts avoid the demand. Such an account will restrict the scope of 'all' in the **PSR**. The **PSR** only demands explaining facts that satisfy the restriction. There is no demand to explain the rest.

*Explanation solutions* respond to the conflict by attempting to explain essentialist facts. Unlike with exemption solutions, there is no need to restrict the scope of 'all' in the **PSR**. This avoids drawing an invidious distinction between facts that demand explanation and those that don't. But it raises a new challenge to explain the essentialist facts.

Which solution a rationalist pursues depends in part on whether they are influenced by the Platonic or Aristotelian tradition. I don't mean to suggest that either tradition requires one solution rather than another. It's rather that a tradition might better promote one over another. As we will see, the Platonic tradition promotes exemption solutions, whereas the Aristotelian tradition promotes explanation solutions.

## 4 Exemption solutions

Exemption solutions respond to the conflict by attempting to exempt essentialist facts from explanation. The key task for any exemption solution is to justify its restriction of the **PSR**. Without this justification, the restriction would not seem to cohere with the **PSR** itself.

A natural way to justify a restriction assumes a sort of ought-implies-can principle. The principle is that there can be a legitimate demand to explain a fact only if it can be explained. An exemption solution, then, will specify a class of facts which cannot be explained. This, together with the principle, entails that facts in this class do not demand explanation. They are *exempt from the **PSR***, or just *exempt* for short. An unexplainable fact is not a

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<sup>12</sup> Exemption strategies have gone by other names. For instance, [Della Rocca \[2018\]](#) writes about strategies for *taming* the **PSR**. I think these are exemption strategies.

counterexample to the **PSR** if it is exempt. So the **PSR** needn't consider them. This justifies restricting the **PSR** to the remaining facts.<sup>13</sup>

An urgent question for exemption solutions is what makes exempt facts exempt. Without a good answer, exemption solutions appear to make *ad hoc* declarations that some facts do not demand explanation without saying why. Ironically, it might seem as if there must be a sufficient reason to demand explanations of some facts while exempting others from this demand. And if *this* is somehow exempt from the demand, one would like to hear a satisfying story as to why.

One way to motivate exemption solutions is to see them as natural if not inevitable outgrowths of the Platonic approach to essence. On the Platonic approach, essences are like definitions or axioms. This can make essences seem as if they are somehow prior to the worldly circumstances. Essences are detached from the worldly facts which might ground them. This promotes if not requires an exemption solution. If essences are detached from the world, then they might seem beyond explanation. There is nothing in the world to explain them. And it might seem as if nothing else could explain them either. Detaching essences thus makes them seem *exempt* from the sort of explanation the **PSR** requires.

Taking essences to be detached fits a common conception of essences as *domain-fixers*. To grasp this conception, let us first contrast it with [Dasgupta \[2016: 388-89\]](#)'s characterization of an alternative on which:

...one starts with the idea that there are two ways to have a property—an essential way and an accidental way—and one then takes the essentialist fact about something to facts concerning which properties it has in the essential way. On this picture the essentialist facts are facts concerning which properties are had in that way *by a given domain of things*.

But this conception of essences seems unable to make sense of how they fix the domain. [Dasgupta \[2016: 389\]](#) prefers a conception on which:

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<sup>13</sup> Perhaps there is an exemption solution at work in Kant's claim that "the principle of sufficient reason, therefore, is the basis for possible experience" ([Kant \[1781/1997: B246\]](#)). Facts about possible experience demand explanation. Other facts (if there are any) do not. If among these other facts are essentialist facts, then they will be exempt. But I am unsure whether it is plausible to interpret Kant as having anything like these considerations in mind.

...the essentialist facts concern *what those things are* in the first place. It is not that there is some independently given domain and the essentialist facts are certain facts about what properties they have. It is rather that the essentialist facts specify *what the domain* is in the first place. It is *those* kinds of facts that strike me as autonomous.

Essentialist facts primarily *fix* the domain. They only secondarily *express* properties essential to things in the domain. Accordingly, essentialist facts are detached from goings-on of objects having properties, standing in relations, and the like. [Fine \[2005: 349\]](#) expresses similar sentiments when he writes:

The objects enter the world with their identity predetermined, as it were; and there is nothing in how things are that can have any bearing on what they are.

Essentialist facts are somehow detached from the circumstances.

I will focus on two exemption solutions inspired by the domain-fixing conception of essence. Both strategies agree that essentialist facts somehow fix the domain. They differ over how this makes essentialist facts exempt.

The first strategy stems from Dasgupta's remarks. It says that essentialist facts are exempt for being *autonomous*. Autonomous facts are not apt for explanation. There is no demand to explain facts not apt to be explained. Such facts are exempt.

The second strategy stems from Fine's remarks. It says that essentialist facts are exempt for being *transcendental*. Transcendental facts do not hold because of the circumstances. They hold regardless. There is no demand to explain facts holding regardless of the circumstances. Such facts are exempt.

These are not the only imaginable exemption solutions. But they seem to be the most promising. I will argue, however, that neither is promising. If there is a viable exemption solution, it is yet to be discovered.

## 4.1 *Autonomy*

One exemption solution relies on the notion of *autonomy*. Following [Dasgupta \[2014,2016\]](#), we may distinguish between *substantive* and *autonomous* facts. The exemption solution is that autonomous facts are exempt.

This exemption solution relies on the distinction between substantive and autonomous facts. They differ over whether they are apt or inapt for explanation.<sup>14</sup> *Substantive* facts are those for which the question of what grounds them legitimately arises. Substantive facts are *apt* for ground. But the question does not legitimately arise for *autonomous* facts. As [Dasgupta \[2016: 383\]](#) puts it, “the question as to why those underlying autonomous facts obtain does not even arise, and so there is no further question as to why the world turned out like *this*”. Autonomous facts are *not apt* for ground. This implies that they are not grounded. Autonomous facts are ungrounded. So they are not grounded in worldly facts. This provides a sense in which autonomous facts are detached.

Autonomous facts might seem exempt. It might be argued that they are exempt by way of an ought-implies-can principle: a fact demands explanation only if it can be explained. An autonomous fact is not apt for ground. So it cannot be grounded. By the principle, it follows that the autonomous fact does not demand explanation. It is therefore exempt.

A well-formulated **PSR** should be restricted only to substantive facts. This allows autonomous facts to explain substantive facts without themselves having or needing explanations. And that is what Dasgupta’s **PSR** says:

**PSR-Substantive** For every substantive fact *S*, there are some autonomous facts, the *As*, which ground *S*.

A response to the conflict emerges. The **PSR** demands only that substantive facts have explanations. Autonomous facts are exempt. Essentialist facts are autonomous. So they are not counterexamples to the **PSR**.

There are several challenges to this response. A challenge might target the existence of autonomous facts. One might argue for their existence by way

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<sup>14</sup> The label ‘substantive’ is apt to mislead. The usual contrast to *substantive* is *insubstantial*. This has the innuendo that facts which are not substantive are somehow insubstantial. The innuendo extends to essentialist facts if they are not substantive. This is congenial to those who say the project of discovering essences is insubstantial. But it is not congenial to those who say the project is substantive and central to philosophy. Perhaps a less misleading (but clunkier) label would have been ‘mootable’ (i.e. open for discussion or debate).

of the services they offer. One of these might be to clarify physicalism by clarifying a certain scaffolding metaphor.<sup>15</sup> [Dasgupta \[2014: 592\]](#) writes:

...[O]ne can think of physicalism pictorially as a multi-story building, with physical facts on the first floor, chemical facts on the second floor, and so on. My view, I said, is that the ungrounded connections between the physical and the nonphysical are not part of the building itself but are the scaffolding around which the building is built. ...The scaffolding that connects the floors consists in autonomous facts. They are not apt for grounding explanations and so do not appear on any particular floor of the building.

There are other services too ([Dasgupta \[2016\]](#)). One might argue that the hypothesis of autonomous facts is serviceable, and that this is a reason to think it true.<sup>16</sup> But this “true because serviceable” approach requires a comparative investigation of whether the services are needed or are better performed by other means. That is beyond the scope of this paper.

Even if we grant that there are autonomous facts, a second challenge arises. This challenge targets the autonomy of essentialist facts. Autonomous facts are ungrounded. If essentialist facts are autonomous, then they are also ungrounded. But perhaps not. [Glazier \[2017: 2880\]](#) argues that essentialist facts are grounded and therefore not autonomous. Later I will consider what might ground them (§5).

Even if we grant that essentialist facts are autonomous, a third challenge arises. This challenge targets the exemption of autonomous facts. Earlier we saw considerations supporting their exemption. Further clarifying autonomy should confirm them. But I will argue that it does not.<sup>17</sup>

There is more to autonomy than ungroundedness. The **PSR** prevents there being any ungrounded substantive facts. But nothing about ungroundedness by itself prevents substantiveness. An example of an ungrounded substantive fact might be the fact this isotope decayed when it did. What feature when added to an ungrounded fact makes it autonomous?

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<sup>15</sup> The scaffolding metaphor recalls young [Wittgenstein \[1921: 6.124\]](#)'s remarks about how the “propositions of logic describe the scaffolding of the world, or rather they represent it”.

<sup>16</sup> The claim echoes [Lewis \[1986: 3\]](#). Dasgupta writes as if he endorses something like it.

<sup>17</sup> [Glazier \[2017\]](#) gives similar criticisms of autonomy.

It is clear what it won't be. It won't be necessity. There can be necessary but ungrounded substantive facts. An example might be the fact that God exists, on certain theistic views. Nor is it analyticity. There can be analytic but ungrounded substantive facts. An example might be, again, that God exists, on certain versions of the ontological argument. Nor is it apriority. There can be apriori but ungrounded substantive facts. An example is that I exist, at least on certain Cartesian views of the self.

An analysis of autonomy would reveal what the feature is. But Dasgupta suspects autonomy is unanalyzable. He instead suggests taking autonomy as primitive. This does not prevent clarifying it in other ways.

Autonomy might be clarified by modeling it on analogous notions. One model is causal explanation. [Dasgupta \[2016: 6\]](#) writes:

The particle arrangement that happened to be the initial condition lacks a causal explanation even though it is a good question why those particles came to be arranged like that. The mathematical fact [ $1+2=3$ ] by contrast lacks one because it is not "apt for being causally explained" in the first place.

Just as the fact that  $1+2=3$  is not apt for causal explanation, so too autonomous facts are not apt for ground.

But causal explanation is a poor model for autonomy. The reason why facts like  $1+2=3$  do not seem apt for causal explanation has no analogue for ground. To illustrate, suppose that every correct causal explanation is, or is backed by, a causal relation. For example, if throwing the rock *causally explains* the window's shattering, then this causal explanation is, or is backed by, the throwing of the rock *causing* the window's shattering. If there is to be a *causal explanation* of the fact that  $1+2=3$ , then it will be, or will be backed by, something *causing* the fact that  $1+2=3$ . But, presumably, nothing *causes* the fact that  $1+2=3$ , at least in part because this fact is not an event, agent, or in space or time. It is not the sort of thing that can stand in causal relations. That's why there can be no causal explanation of it. But this has no analogue for ground. If ground is a relation among facts, then the fact that  $1+2=3$  is precisely the sort of thing that can stand in relations of ground.

Another model is definition. Even if it is legitimate to prove some axioms or theorems from others, not so for definitions. Were a student to ask

for a proof of a definition, one would reply that the student misunderstood its status as a definition. Definitions are not apt for proof.

Definitions can be given in the formal mode. Formal definitions are given in a metalanguage. They are notational conventions or abbreviations *for* but not *in* an object language. For example, given a language of classical logic with only disjunction and negation, we may add a conditional with a formal definition: Let ' $A \rightarrow B$ ' be defined as ' $\neg A \vee B$ '. Then sentences of the form ' $A \rightarrow B$ ' abbreviate object language sentences of the form ' $\neg A \vee B$ '.

But formal definitions are poor guides for autonomy. Granted, there is a sense in which they are not apt for proof. They are not even sentences in the object language. So they cannot be apt for proof within it. If they are sentences at all, they will or won't be declarative. If not declarative, then they do not state facts. Sentences not stating facts are poor guides for autonomous *facts*. But if declarative, then they state facts (e.g. facts about how symbols can be used). If so, this reinforces, not undermines, their aptness for ground.

Definitions can also be given in the material mode. They are given in an object language. As a result, they are apt for proof under familiar conceptions of proof. Any sensible *syntactic* conception of proof will validate proofs of ' $A$ ' from ' $A$ '. And any sensible *semantic* conception of proof will have ' $A$ ' be true in all models in which ' $A$ ' is true.<sup>18</sup> These proofs might be dull, trivial, inelegant, or uninformative. But they are valid proofs nonetheless.

One might characterize a sense of proof in which definitions are not apt for proof. This sense might be that of an *explanatory proof*. Roughly put, an explanatory proof is a proof that is neither dull, trivial, inelegant, nor uninformative. For example, a proof might be explanatory because it elegantly—perhaps even beautifully—illuminates why an interesting consequence of the axioms follows from them in a way that guides how to construct other proofs of other interesting consequences. Perhaps, then, definitions are not apt for explanatory proofs.

What makes a definition inapt for explanatory proof? One answer is that a definition is inapt if it is *self-evident*. There are many controversies over self-evidence. In the present context, we might look to Frege for inspiration.

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<sup>18</sup> This is compatible with the dialetheist's allowance that ' $\neg A$ ' also be true in those models.

For Frege, self-evidence is an epistemic notion. It concerns the justification of a proposition. Frege also thinks self-evidence is a cognitive notion. It concerns the content of a proposition. Propositions are self-evident when, according to [Burge \[1998\]](#), “their justification is carried in their own contents”. A self-evident definition is inapt for explanatory proof because it already contains its own explanation.

One might take this as a model for autonomy. An autonomous fact is inapt for ground because it already contains its own explanation. Now there is a question of how to interpret ‘explanation’.

If ‘explanation’ means ground, then the claim is that an autonomous fact is inapt for ground because it already contains its own ground. But that is not what Dasgupta has in mind. His view aside, the model implies that an autonomous fact grounds itself. That violates the irreflexivity of ground.

Perhaps then ‘explanation’ means something else. For example, it might be that an autonomous fact is inapt for ground because it somehow already contains its own justification.<sup>19</sup> But now the difficulty is that this makes autonomy an epistemic notion.

Autonomy is supposed to be a metaphysical notion. Although [Dasgupta \[2016: 387\]](#) admits to “glossing the notion [autonomy] in epistemic or cognitive terms”, he insists that “autonomy is not *defined* in epistemic or cognitive terms”. The glosses are supposed to be relevant because they signal the *metaphysical* notion of autonomy. But our considerations suggest otherwise. The point is not that autonomy must be purified of any epistemic/cognitive traces. It is rather to see how epistemic/cognitive glosses reveal anything about the facts themselves and not just our epistemic/cognitive relations to them. Asking what, if anything, grounds a fact might feel illegitimate in many ways. It might seem insubstantial because the fact is necessary or analytic or apriori or otherwise trivial. Or it might seem pointless because it is obvious that the fact has certain grounds or else that it has none. Or it might seem flummoxing because we don’t know how to approach it. But none of this implies that the fact itself somehow prevents the question even from arising.

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<sup>19</sup> This might be related to [Boghossian \[1996\]](#)’s notion of *epistemic analyticity*.

This raises a difficulty in principle for autonomy's relevance to the PSR. Autonomy resisted our attempts at clarification. Even if it could be clarified, it would still only concern our epistemic/cognitive relations to the facts and not the facts themselves. But then the autonomy of a fact is not a relevant justification for exemption from our metaphysical PSR.

## 4.2 *Transcendence*

Another exemption solution relies directly on the domain-fixing conception of essences. Dasgupta associated autonomy with the domain-fixing conception of essences. This might mislead one into conflating them. But they are different. Nothing in the domain-fixing conception requires autonomy. The question of ground is abstract and general. It may target any fact and ask what, if anything, grounds it. This question is indifferent to *which* fact is targeted. It is indifferent to whether the targeted fact fixes a domain or expresses a property. So taking essentialist facts to be domain-fixing does not make it inapt to ask what, if anything, grounds them.

Pruning autonomy from the domain-fixing conception avoids its problems. But it also prunes its justification for exemption. What justifies exempting domain-fixing facts, if not their autonomy?

One answer is that domain-fixing facts somehow “transcend” the circumstances involving the things they are about. This idea, or something near enough, seems implicit in [Fine \[2005: 348-49\]](#) when he writes:

...the identity of an object is independent of how things turn out...it is the core essential features of the object that will be independent of how things turn out and they will be independent in the sense of holding *regardless* of the circumstances, not *whatever* the circumstances.

Here Fine distinguishes between holding *because* of the circumstances as opposed to *regardless* of the circumstances.<sup>20</sup> This distinction can help

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<sup>20</sup> [Almog \[1989\]](#) discusses a related distinction between *lordly* and *worldly* perspectives on logical truths. This relates to the debate over whether logic is the most universal science.

characterize another exemption solution.<sup>21</sup> Its key idea is to exempt facts that hold regardless of the circumstances.

This exemption solution relies on the distinction between worldly and unworldly (or transcendental) facts.<sup>22</sup> To a first approximation, a *worldly* fact holds *because of* the circumstances, whereas an *unworldly* (or *transcendental*) fact holds *regardless of* the circumstances. [Fine \[2005: 338-39\]](#) writes:

...[Socrates's] being a man is an unworldly matter. It is something that holds 'off-stage', regardless of how things turn out; and so, in particular, it is something that holds regardless of whether or not he exists. Thus it is not that he is possibly a man *despite* his not existing. His existence or non-existence is simply irrelevant to his possible status as a man; and all that the possibility of his being a man and not existing comes down to is the genuine possibility of his not existing and the unworldly, or circumstance-indifferent, fact that he is a man.

Fine suggests that this distinction is like the more familiar *eternal/semipiternal* distinction. Eternal facts are *tenseless* statements true regardless of the time, whereas semipiternal facts are *tensed* statements true at every time. The difference emerges in an asymmetry in temporal predication. Consider:

- SI** Socrates is self-identical.
- SH** Socrates is human.<sup>23</sup>
- SE** Socrates exists.

A semipiternal statement allows temporalizing ('once existed'). But an eternal statement does not ('once was self-identical/ human'):

- SI\*** # Socrates once was self-identical.
- SH\*** # Socrates once was human.
- SE\*** Socrates once existed.

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<sup>21</sup> Fine gives no indication of considering an exemption solution of this sort.

<sup>22</sup> [Fine \[2005\]](#) writes about transcendental *truths*, rather than *facts*. But the difference shouldn't matter here. See [Kuhn \[forthcoming\]](#) for further discussion of transcendence.

<sup>23</sup> Fine's actual example is 'Socrates is a man'. But it is clear he means human by 'man'. I have adjusted Fine's example accordingly. It is important that the predicate 'human' not be read as 'existent human', which is a worldly predicate (cf. [Fine \[2005: 337\]](#)).

This illustrates how a sempiternal fact *turns* on the time, whereas an eternal fact holds *regardless* of the time. Analogously, **SI/SH** are *transcendental* because they are true *regardless* of the circumstances, whereas **SE** is *worldly* because its truth *turns* on the circumstances.

More should be said about the worldly/transcendental distinction. But let us help ourselves to it for now. Let us suppose that essentialist facts are transcendental. How might this help justify their exemption?

One might seek inspiration from autonomy's justification for exemption. Earlier we saw how autonomy combined with an ought-implies-can principle to justify restricting the scope of the **PSR**. Autonomous facts cannot be grounded. So the **PSR** ought not demand their explanation. That justified restricting the **PSR** to substantive facts. Analogously, transcendental facts do not hold because of the circumstances. They cannot have any worldly grounds. This, combined with an ought-implies-can principle, entails that transcendental facts do not demand explanation, at least not from worldly facts. Perhaps that justifies restricting the scope of the **PSR** to worldly facts.

But the analogy is weak. Even if transcendental facts do not demand explanation from worldly facts, it does not follow that they are unexplained. On the contrary, some transcendental facts have explanations. For example, conjunctive facts are explained by their conjuncts. This includes the conjunction of two transcendental facts. Such a conjunction will also be a transcendental fact. So it is a transcendental fact with an explanation.

These considerations undermine drawing inspiration from autonomy. Justifying the exemption of autonomous facts relies on their being ungrounded. Were an autonomous grounded, it would be apt for ground. We just saw how a transcendental conjunction is grounded in its transcendental conjuncts. This conjunction is apt for ground. It is therefore not autonomous. So the justification of exempting autonomous facts does not carry over to exempting transcendental facts.

These considerations also undermine relying on transcendence for an exemption solution. Some transcendental facts can have grounds. So there won't be any general illegitimacy in asking what, if anything, grounds a transcendental fact. But then it seems that nothing about a fact's being

transcendent makes it exempt. Transcendence by itself does not justify exemption. If it contributes at all to exempting a fact, it is only with help.

## 5 Explanation solutions

Explanation solutions respond to the conflict by attempting to explain essentialist facts. But it is not altogether clear how they might be explained. So the key task is to provide the explanations.

I will consider some approaches toward explaining essentialist facts. These differ over what they take the grounds of the essentialist facts to be.<sup>24</sup> My aim is not to be comprehensive but suggestive. My main suggestion is that the last approach is least developed but most deserving of development.

### 5.1 *Theistic explanations*

Theistic explanations of essence were once prominent. For example, [Spinoza \[1988: 1P25; 1P33S1\]](#) accepts the demand to explain the essences of things. He also attempts to meet the demand. Spinoza says God is “the cause of the essence of things”. God explains the essentialist facts.

But theistic explanations are no longer as prominent as they were. Even those who wish to give a theistic explanation of essentialist facts might admit that nothing in rationalism or essentialism itself requires the appeal to theism. One might therefore suppose that if essentialist facts can be explained at all, their explanations would have to be secular and available to theists and non-theists alike. For this reason, I will focus on secular explanations.

A secular explanation can be given within the Platonic tradition. This would involve identifying some transcendental facts to explain the essentialist facts. A natural idea is that they are the essentialist facts themselves. So some essentialist facts would explain others. But this risks a familiar infinite regress of explanation. It is controversial whether such an infinite regress would be

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<sup>24</sup> Alleged cases of grounded essentialist facts are relevant to the discussion of autonomy (§4.1). Any such case will be a counterexample to the autonomy of essentialist facts.

vicious.<sup>25</sup> Until that controversy is resolved, one might hope to explain essentialist facts by other means. It is, however, hard to see what other kind of transcendental facts might explain essentialist facts.

These considerations might suggest that secular explanations are more at home within the Aristotelian tradition. Indeed, the Aristotelian tradition promotes if not requires an explanation solution. If essences are embedded in the world, then they cannot be exempted for being detached. It is unclear how else they could be exempted. So it seems that embedding essences makes them apt for explanation, which will be worldly.

But worldly explanations of essence might seem incoherent to those gripped by the domain-fixing conception of essence. How could essentialist facts fix the identities of items prior to the worldly circumstances involving them if these facts hold because of the worldly circumstances? A satisfying answer might seem unattainable. And so one might conclude that the domain-fixing conception does not cohere with the Aristotelian tradition.

This conclusion seems premature. One may concede that the Aristotelian tradition conflicts with some of the metaphorical descriptions of the domain-fixing conception. This, however, does not show that it conflicts with the conception itself. It remains to be seen whether worldly circumstances can explain essentialist facts and thereby fix the domain. In what follows, I will briefly consider two approaches to doing so.

## 5.2 *Anti-realist explanations*

One worldly approach to explaining essences is “anti-realist”. This approach explains essences in terms of facts about our language, concepts, or conventions.<sup>26</sup> These *anthropocentric* facts, if you will, ground essentialist facts.

Nothing about the approach specifies which or how anthropocentric facts ground essentialist facts. One variant takes essentialist facts to be grounded in anthropocentric facts about our concepts. Another variant takes

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<sup>25</sup> Some essays in [Bliss and Priest \[2018\]](#) consider whether such infinite regress are vicious.

<sup>26</sup> Cf. [Glazier \[2017: 2879\]](#).

essentialist facts to be grounded in linguistic facts about definitions or analytic truths.<sup>27</sup> A third variant takes essentialist facts to be grounded in anthropocentric facts that are “non-factual” in [Fine \[2001\]](#)’s sense. Perhaps there are other variants as well.

The anti-realist approach and its variants belong to a venerable tradition. But it is a tradition I will set aside. This is because the anti-realist approach appears to yield only nominal essences. This is often by design. The point is to avoid real essences. And even when that is not the point, the challenge remains how the anti-realist approach could yield anything but nominal essences. Whatever the point, our focus has been on real essences. It is unclear how the anti-realist approach could accommodate them. So my focus will remain on approaches more accommodating to real essences.

### 5.3 *Generative explanations*

One such approach is inspired by Almog’s conception of natures or essences.<sup>28</sup> The conception changes and evolves over several articles ([Almog \[1991,1996,1999,2003,2010\]](#)). In them, Almog often describes his conception as ‘worldly’. But it should not be assumed that he means by ‘worldly’ what Fine means. Nevertheless, Almog’s meaning seems similar enough to be relevant here. So I will explore how his conception of worldly essences might be developed in service of an explanation solution.<sup>29</sup>

Almog’s idea is that essences are produced by “generative cosmic processes” ([Almog \[2010\]](#)). Almog does not say precisely what a generative cosmic process is. But he does say enough to give a rough gloss. First, a generative cosmic process is a *process*. It is a sequence of events or circumstances. Second, it is *cosmic*. The sequence’s constituent events or circumstances are part of this cosmos, the actual cosmos. That makes them worldly. Third, it is *generative*. The sequence’s constituent events or

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<sup>27</sup> Perhaps these linguistic facts are grounded in mental facts about the intentions of speakers, as suggested by the Gricean Program to explain sentence meaning by speaker meaning.

<sup>28</sup> Almog tends to prefer the term ‘natures’ over ‘essences’. But I will use ‘essences’.

<sup>29</sup> I do not attribute any of the claims I explore to Almog. This is in part because he does not discuss the **PSR** and also in part because I am not always sure how to interpret his views.

circumstances somehow conspire to produce items. It would seem then that essences produced by generative cosmic processes will be embedded.<sup>30</sup>

This characterization of a generative cosmic process is abstract. It does not specify any particular generative cosmic processes or what they generate. But Almog suggests some examples. A familiar process involving a particular human sperm and egg produced Socrates. Another familiar process involving the set-builder operation produced the singleton set {Socrates}.<sup>31</sup> Various chemical processes produce molecules. In general, Almog believes that what things are—the natures or essences of things—results from generative cosmic processes of one sort or another.

One can adapt these points to the present context. Given that a generative cosmic process transpired, we may posit the fact that it did. Such a fact is a *generative fact*. A generative fact captures the worldly circumstances producing an essence. We may understand production as ground. Then a generative fact concerning some item grounds a corresponding essentialist fact about that item. Call this the *generative approach* to essences.

The generative approach provides an explanation solution. Generative facts ground essentialist facts. So essentialist facts are explained. Their generative grounds explain them. Call this the *generative solution*.

Our statement of the generative solution is abstract. It does not specify any particular generative facts or the essentialist facts they ground. But there is a general recipe yielding examples. The recipe begins with a generative cosmic process. Then there will be the generative fact that this process obtained. Finally, the generative fact is taken to ground an essentialist fact.

The recipe can be illustrated by applying it to one of the cases above. Start with the process of forming Socrates from particular human sperm and egg. Then there will be the generative fact that this process obtained. Finally, this generative fact grounds the fact that Socrates is essentially human. The recipe can be applied to the other cases from above as well.

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<sup>30</sup> Indeed, [Almog \[2010: 360\]](#) uses the term ‘re-embed’ when describing a similar view.

<sup>31</sup> This might puzzle those who think of sets as abstract but interpret ‘cosmic’ as implying concrete. But Almog seems to think that sets are no less cosmic than Socrates ([Almog \[1999\]](#)).

The generative approach can be further illustrated by considering its applications to other domains. I'll briefly consider four:

First, fictional entities. Suppose they have essences. Perhaps James Bond is essentially British. One might think that fictional entities are produced by processes involving the intentions and activities of authors.<sup>32</sup> If so, the generative facts that these processes obtain might then ground the essentialist facts about fictional entities.

Second, artifacts. Suppose they have essences. Perhaps scissors are essentially for cutting. One might think that artifacts are produced by processes involving the intentions and activities of inventors and craftspeople.<sup>33</sup> If so, the generative facts that these processes obtain might then ground the essentialist facts about artifacts.

Third, social items. Suppose they have essences. Perhaps women are essentially oppressed.<sup>34</sup> One might think that social items are produced by processes involving the collective activities and intentions of individuals.<sup>35</sup> If so, the generative facts that these processes obtain might then ground the essentialist facts about social items.

Fourth, mathematical objects. Suppose they have essences. Perhaps the number two is essentially prime. One might think that mathematical objects are produced by processes involving the activities of mathematicians.<sup>36</sup> If so, the generative facts that these processes obtain might then ground the essentialist facts about mathematical objects.

These sketchy remarks about the generative approach fall far short of a theory. Still, they offer a glimpse of what a theory might be. Further

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<sup>32</sup> For similar views on fictional entities, see [Evnine \[2016\]](#), [Fine \[1982\]](#), [Kripke \[2013\]](#), [Salmon \[2005\]](#), [Schiffer \[2003\]](#), [Thomasson \[1999\]](#), and [van Inwagen \[2001\]](#).

<sup>33</sup> For similar views on artifacts, see [Baker \[2008\]](#), [Evnine \[2016\]](#), [Hilpinen \[2011\]](#), [Raven \[2018\]](#), and [Thomasson \[2014\]](#).

<sup>34</sup> A view of this sort is developed and defended by [Haslanger \[2012\]](#).

<sup>35</sup> For similar views on social items, see [Epstein \[2015\]](#), [Passinsky \[2016\]](#), [Ritchie \[2015\]](#), [Searle \[1995\]](#), [Smith \[2001\]](#), [Smith and Varzi \[2000\]](#), [Sveinsdóttir \[2008\]](#), and [Thomasson \[2003\]](#).

<sup>36</sup> Views of this sort are discussed in some of the papers in [Benacerraf and Putnam \[1983\]](#).

developing it will involve confronting various difficulties. I will mention a few to give a sense of the challenges that await.

One difficulty is to identify the genuine essence-generating cosmic processes. Some might allow *every* cosmic process to generate an essence. The result is a plenitude of essences. Others might find this plenitude objectionable. They might try to avoid it by distinguishing between cosmic processes which do and those which do not generate essences. But what accounts for the difference? One might wish to appeal to the essence itself to identify a process as essence-generating. But this might seem circular or otherwise unilluminating. Nor is it clear how else to identify it.<sup>37</sup>

Another difficulty is to account for the modal force of essences. The modal force is that essence implies necessity. If some item essentially has a feature, then it cannot lack that feature. Given that essences are generated by *contingent* actual cosmic processes, then it might seem as if these contingencies would also have to generate the necessities implied by essence. But one might doubt whether contingencies can account for these necessities.<sup>38</sup>

There are other difficulties awaiting the generative approach as well. Further developing it is needed to assess whether it can overcome them. But that is a task for another occasion.

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<sup>37</sup> It might appear that there is a related difficulty of “meta-ground”. Suppose an essentialist fact **E** has certain grounds **G**. What, if anything, grounds the fact that **G** grounds **E**? Some have held the view that essentialist facts help ground such facts about ground ([Rosen \[2010\]](#); [Dasgupta \[2016\]](#)). They might expect **E** to help ground the fact that **G** grounds **E**. One might think this implies that **E** helps ground itself, thereby violating the irreflexivity of ground. But there is no such implication. It does not follow from **E**’s helping ground **G** that **E** grounds itself. Much like necessity ( $\Box(A \vee B)$ ) does not distribute over disjunction ( $\Box A \vee \Box B$ ), so too grounds (**E**) do not distribute over connections of ground (**G** grounds **E**). [REDACTED] pointed out to me that there is a genuine difficulty if one thinks essentialist facts somehow “back” grounding explanations (without being among the grounds). For then it seems the essentialist fact will back its own explanation, which may seem illegitimate.

<sup>38</sup> The force of this worry depends on distinguishing between **C** explaining **N** (where **C** is contingent and **N** is necessary) and **C** explaining  $\Box\mathbf{N}$ . Our focus is on the second case. [Wildman \[2018\]](#) argues that some contingencies can explain necessities in this sense.

## 6 Conclusion

I wish to draw two tentative conclusions. The first conclusion is that exemption solutions are unpromising. This is an indirect argument for explanation solutions. The second conclusion is that prospects for an explanation solution turn on developing a viable generative approach to explaining essences. If it can be done, it would vindicate the combination of rationalism and essentialism. And if not, it would seem to make the combination untenable. Either way, the agenda is set for defending the combination as well as the more general project of explaining essences.<sup>39</sup>

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<sup>39</sup> Thanks...

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