

## Coincident Objects and The Grounding Problem

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### ABSTRACT

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Pluralists believe in the occurrence of numerically distinct spatiotemporally coincident objects. They argue that there are coincident objects that share all physical and spatiotemporal properties and relations; nevertheless, they differ in terms of modal and some other profiles. Appealing to the grounding problem according to which nothing can ground the modal differences between coincident objects, monists reject the occurrence of coincident objects. In the first part of this paper, I attempt to show that the dispute between monists and pluralists cannot be settled based upon the grounding problem tout court. I argue that the grounding problem or a very similar problem is a challenge for all monists and pluralists alike if they are ontologically committed to the existence of composite objects as independent entities. In the final part, adopting the Aristotelian account of essence, I propose a solution that enables pluralists to plausibly ground modal differences between coincident objects.

**Keywords:**

coincident objects, the  
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## Introduction

Is it possible that two material objects can be composed simultaneously of the same components? Are the statue and the lump of clay, or the ship and the collection of planks, the body and the person, two numerically distinct objects which are spatiotemporally coincident? The grounding problem is about the puzzle of numerically distinct spatiotemporally coincident objects. Suppose Lumpl (a lump of clay) and Goliath (the statue) are created and later destroyed, simultaneously.<sup>1</sup> They would share all spatiotemporal properties and relations, and they would be subject to all the same physical pushes and pulls. Any kick or wiggle administered to Lumpl would be administered to Goliath, and the other way around.

On the one hand, it would appear as though there is only one thing located exactly where Lumpl is—a clay statue which exists for some time and then goes out of existence. Metaphysicians holding this view— called ‘monists’— believe that even though we are using two different names, Lumpl and Goliath, for as long as they exist, they are entirely similar in terms of their physical and spatiotemporal structures. Thus, for monists, Lumpl is, ontologically speaking, identical to Goliath.

On the other hand, however, there is a straightforward answer to the puzzle: the lump and the statue have different properties and relations, and they differ in various ways. Lumpl and Goliath seem to have different modal properties. Lumpl, for instance, appears to be capable of being squashed into a ball, whereas Goliath does not appear to have this capability. They also seem to belong to different sorts or kinds. The latter is a statue, while the former is a lump of clay. In addition, they seem to differ in other ways: e.g., while Goliath might be aesthetically valuable or well-made, etc., these properties cannot be attributed to Lumpl. Let’s call the set of apparent properties and relations that make Goliath distinct from Lumpl, ‘sortalish properties and relations.’<sup>2</sup> Hence, if such sortalish differences are real, based on Leibniz’s law—the Indiscernibility of Identicals—Lumpl and Goliath are ontologically distinct. Metaphysicians who acknowledge the ontological distinction between coincident objects are called ‘pluralists’.

Historically, monists have challenged pluralism by holding that there appears to be nothing that can explain the apparent sortalish differences between coincident objects.<sup>3</sup> If they are physically and spatiotemporally identical, then the challenge for pluralists, as monists put it, is to answer the question of what grounds the sortalish differences between them. Some monists suspect that pluralists would not be able to find any plausible answer to the question at hand. These monists, therefore, conclude that the grounding problem gives them good reason to reject pluralism as an untenable approach towards the puzzle of coincident objects.

In the first part of this paper, I explain that the dispute between monists and pluralists cannot be settled by appealing to the grounding problem *tout court*. I show that the grounding problem, or a very similar problem, is a challenge for all monists and pluralists who take the existence of real

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<sup>1</sup>. The example is adopted from Gibbard (1975).

<sup>2</sup>. This term is adopted from Bennett (2004a).

<sup>3</sup>. See Heller (1990), Burke (1992), Olson (2001) *et al.*

mind-independent composite objects seriously. In the rest of the paper, I argue how a pluralist can plausibly deploy the essentialist account of modality to ground the sortalish differences between coincident objects.<sup>1</sup>

Before proceeding any further, I need to clarify what this paper does not aim to do. Throughout this paper, I argue in defense of neither monism nor pluralism; instead, I argue for a hypothetical claim: if pluralism is true, the grounding problem can be solved by appealing to the different essences of the coincident objects. Also, as I mentioned, coincident objects differ in various ways. In this paper, I only address the modal differences between them.

### 1. The Grounding Problem: a Challenge for Pluralist and Monist alike

Prima facie, one might think that only pluralists are obliged to grapple with the grounding problem. However, it is legitimate to say that monists are also expected to explain how Lump1 and Goliath are identical if they appear to be modally different. Monists need to provide a compelling explanation to show why such modal differences do not metaphysically distinguish between so-called (according to them) coincident objects.<sup>2</sup> Put differently, monists owe us an explanation for why sortalish (particularly the modal) differences between coincident objects cannot be metaphysically distinguishing.

Apparently, there is no doubt that there are modal (and other differences) differences between Goliath and Lump1. Goliath, for example, cannot be squashed into a ball, while there is such a possibility for Lump1. If Goliath and Lump1 are identical, then question for monists is how a single object can have different contradictory modal profiles. To reject pluralism, monists have to show that the apparent modal differences between Goliath and Lump1 are not ontologically differentiating. To consistently accomplish this task, monists might defend a version of modal antirealism/deflationism according to which modal profiles of objects are not ontologically speaking, real<sup>3</sup>. In the following paragraphs, I rely on Alan Sidelle's argument (2010) to put the success of such a project in doubt.

In his paper, "Modality and Object", Sidelle shows why someone cannot be realist about composite objects and defend anti-realism about the modal properties of the very same objects. For the sake of brevity, I avoid repeating Sidelle's argument here and just focus on its upshot. Those who believes in real composite objects, Sidelle argues, ought to concede that *de re* modal properties of the very same objects are real and metaphysically differentiating. In other words, realism about objects entails, Sidelle shows, realism about the modal profiles of the very same objects. One

<sup>1</sup>. A similar strategy based is defended by Koslicki (2018) based upon the hylomorphic account of objects.

<sup>2</sup>. The main challenge for monists is to explain the apparent modal differences among all of the apparent sortalish ones. Monists would not recognize any sortal differences in coincident objects.

<sup>3</sup>. Monists may have another theoretical approach at their disposal. More specifically, David Lewis's counterpart theory can explain away the modal differences between coincident objects, but the cost is a full commitment to Lewisian version of modal realism. I assume that many monists would not like to welcome Lewisian modal realism to reject pluralism; nevertheless, it seems to me that counterpart theory plus modal realism offer monists an available option to combine deal with about *de re* modality. To follow the discussion in detail, see the chapter two in Hashemi (2017).

cannot accept the former and reject the latter, and the other way around. Accordingly, Sidelle's argument, that seems sound and convincing, shows how the grounding problem rises a challenge for monists as well. Realist monists, who believe in concrete composite objects as real and mind-independent entities, should take a realist position regarding these objects' *de re* modal properties.

This mentioned point shows that the grounding problem, contrary to the false advertisement of some monists, cannot settle the dispute over the occurrence of coincident objects in favor of monism. Rather, both views face a similar challenge. On the one hand, pluralists have to show on what grounds modal (and other sortalish) properties (relations) between coincident objects differ. Monists, on the other hand, need to explain why the apparent sortalish differences between so-called coincident objects are not metaphysically differentiating.

Thus, the grounding problem solely does not support monism over pluralism since the proponents of both views must address a similar question of what it is in virtue of which an object has its sortal and *de re* modal properties. Hence, it is not extravagant to hold that the grounding problem, on the contrary of what some monists believe, does not threaten the possibility and plausibility of the pluralists' position with respect to the existence of numerically distinct spatiotemporally coincident objects. The reasons for adopting pluralism over monism (or vice versa) should be coherently supported from another perspective. For instance, the disagreement between monism and pluralism can be settled based upon a plausible theory of material composite objects which provides a systematic analysis of ordinary material objects. Some theories commit one to the existence of coincident objects; in contrast, some might not have such a commitment. If the best theory is committed to the occurrence of coincident objects, then one can legitimately adopt pluralism and welcome coincident objects into her ontology. In the absence of such a theory, pluralism is not a tenable position but not because of the grounding problem. Hence, the dispute between pluralism and monism should be settled based upon the answer to the question of what theory of material objects is preferable.

The grounding problem, as I understand it, is mainly connected to the question of how to ground modal (sortal) properties of objects. The problem poses a difficulty for pluralists who believe that the sortalish differences between coincident objects must be grounded in less controversial aspects of these objects, namely material and categorical properties. But this difficulty does not exclusively challenge pluralism since realist monists have a similar problem in grounding the modal properties of an object in its material and categorical properties. Given the soundness of Sidelle's argument, even if our best theory commits us to the existence of a single composite object, I think that a realist monist should still answer the question of what it is in virtue of which a concrete object has its own modal profiles.

Monism rejects the view that Socrates and his body, for example, are distinct entities. Suppose this is right, and there is only one genuine object (Socrates) which occupies the region of space-time. This object (Socrates) has real *de re* modal profiles; for example, he could have been a

carpenter, but he could not have been a poached egg, etc. The realist monist metaphysician should answer the question of what it is in virtue of which Socrates has such *de re* modal profiles. Indeed, for the reason mentioned earlier, the monist cannot hold that *de re* modal profiles of such Socrates are not metaphysically genuine.<sup>1</sup> Thus, a monist faces the challenge of how to ground the modal profiles of an object.

This problem is not fundamentally different from the problem of how to ground modal differences between coincident objects. If the best theory commits one to existence of coincident objects, then she has two or more objects with different modal profiles. These remarks show that realist accounts of monism come across a similar difficulty that is not fundamentally different from the grounding problem. Thus, the main goal is to determine exactly what it is, in virtue of which an object possesses its *de re* modal profiles.

In the first part of the paper, I tried to explain why the grounding problem is a problem for both monists and pluralists. It was argued that the dispute over the occurrence of coincident objects should be settled based on our best theory of composite material objects. Whatever the outcome of our theory is, in either way, one should find a ground for the modal profiles of the objects posited by the best theory. Now let us assume that the best theory commits one to the existence of coincident objects. In the rest of the paper, I address the question of how to find a ground for the modal differences between coincident objects.

## 2. The Grounding Problem: A Pluralist Solution

To deal with the grounding problem, as mentioned, we need to address a more fundamental question: in virtue of what does an object have its *de re* modal profiles? In the following paragraphs, I argue to that the Aristotelian essentialist account of modality, defended by Jonathan Lowe and Kit Fine in the contemporary literature, can address this question, and pluralists can avail themselves of this theory.<sup>2</sup> But first, I need to elucidate briefly what I intend by essence of an object in this account.<sup>3</sup> The notion of essence, according to this view, is whatever can eventually settle the fundamental question of *what a thing is*. In other words, essences of entities or things (in the broad sense) reveal the nature and identity of those entities or things.

Essence, Locke said, in the ‘proper original signification’ of the word, is ‘the very being of anything, whereby it is, what it is’. In short, the essence of something, X, is what X is, or what it is to be X. In another locution, X’s essence is the very identity of X — a locution that I am happy to adopt, provided that it is clearly understood that to speak of something’s ‘identity’ in this sense is

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<sup>1</sup>. The monist metaphysician cannot simply appeal to the material components or to the categorical properties of Socrates to ground the modal profiles in them. There are good reasons which show why the modal properties of an object cannot be explained in virtue of the categorical properties of the very same object. See Bennett 2004a and 2004b.

<sup>2</sup>. Monists can take a similar strategy to ground the modal profiles of an object as well.

<sup>3</sup>. For more information see Hashemi 2013 where I explained what the Aristotelian account of essence is.

quite different from speaking of the identity relation in which it necessarily stands to itself and to no other thing (Lowe 2018: 16).

Essence, in this view, is the very being of a thing, all entities have essences, but their essences are certainly not further entities related to them in some special way. As Lowe properly argues, it is simply incoherent to suppose that essences are entities; also “to know something’s essence is not to be acquainted with some further thing of a special kind, but simply to understand what exactly that thing is” (Ibid p. 17).

Having this Aristotelian concept of essence in mind, Kit Fine (1994a) argues that the notion of essence is more fine-grained and fundamental than necessity. Thus, instead of analyzing essence in terms of necessity, he proposes that necessity should be understood in terms of essence. Highlighting this asymmetrical relation between essence and necessity, Fine holds that the essence (or *parts* of essence) of an object must be taken as a primitive notion which grounds *de re* necessary profiles of an object. Fine believes that metaphysically necessary truths of an object can be identified with those — “propositions which are true in virtue of the nature of all objects whatever” (Fine 1994a: 9). Based on this view, what must metaphysically (necessarily or possibly) be the case, is restricted by the essences or natures of things. Put it more precisely, propositions concerning what is metaphysically necessary are grounded in propositions about the natures or identities of things. Based on this conception of essence, one can also provide an account of individual essences. The individual essence of any object can be identified with the class of all those propositions that are true in virtue of its nature (Fine 1994b: 55). For example, the proposition that Socrates is essentially a man is part of the essence of Socrates insofar as the proposition is true in virtue of the nature of Socrates. In contrast to the essential truths which concern what is essentially the case with respect to an individual object. Fine distinguishes another significant class of essentialist truths viz. essentialist truths regarding what is essentially the case in accordance with certain groups or collections of objects. Socrates, for example, is necessarily distinct from Plato. This metaphysically necessary truth does not hold just in virtue of the nature of Socrates or Plato separately; rather, Fine would say, it is true in virtue of the essence of Socrates and of Plato taken together (Ibid, p. 54). Thus, in some cases, the metaphysically necessary truths are true either in virtue of the nature of a certain object or the natures of certain objects taken together. Each object, or selection of objects, substantially contributes to the totality of necessary truths, and one can hardly expect to determine from the totality itself what the different contributions were (Fine 1994a: 9).

If metaphysical necessities are grounded as explained above, we can define the metaphysically possible properties of an object as properties that are compatible with the essence of it. In other words, a property is metaphysically possible for a thing because nothing in its essence prevents it from possessing the property. For example, it is possible to have a house made of woods, bricks, metals, rocks, or any other unknown materials. Also, the house can be made in various ways (there

are ways for building a house which are unknown to us at this time). The notion of the house has all of these real possibilities in terms of its nature or real definition, i.e., so long as all of these possibilities are in accordance with the nature of the house. If there are impossibilities for making a house, they are determined by the nature of the house as well.

According to this model of understanding modality and essence, the metaphysically modal properties of an object are grounded in its essential features. Hence, a bit of clarification about the grounding relation is insightful. The notion of grounding is introduced as a non-truth-functional operation, which is linguistically articulated by something like ‘because’ or ‘in virtue of’. To keep the necessary condition of ontological priority and dependency, grounding is defined as an irreflexive, asymmetric, and transitive relation which holds between the grounded entity and what grounds it. One of the most significant aspects of the grounding relation which makes it appealing to the problem in question is that grounding is a non-monotonic or multigrade relation. Based on this feature, one fact may be grounded in several facts taken collectively; the grounding relation is officially plural on the basic level. This means, roughly, that it can be the case that  $x$  is grounded in  $y$ , and also grounded in  $y$  plus something else –an additional  $z$ ; for example, propositions about the set {Socrates, Plato} is grounded in facts about both Socrates and Plato (not in Socrates or Plato separately). The failure of monotonicity is a general feature of explanatory relations. This feature allows more complex features to contribute to the process of grounding a proposition. Among proponents of the notion of grounding, there is a controversy concerning what kinds of entities can stand as the relata of this relation. Gideon Rosen (2010), for instance, defines grounding as a relation among facts (the relation which holds between entities of the same type). In this model, — $A$  is  $F$  in virtue of  $B$ 's being  $G$ , but this is shorthand for the claim that the fact that  $A$  is  $F$  obtains in virtue of (is grounded in) the fact that  $B$  is  $G$ ” (Rosen 2010: 114). According to this view, facts are structured entities that are made out of worldly items like objects, relations, connectives, quantifiers, etc. (similar to the way that sentences are built up from words), and can be identified with true Russellian concept of propositions (Ibid p. 114). Here, as it will be explained, I have this notion of grounding in mind when I say that metaphysical necessities are grounded in essences.

Following the aforementioned conception of the grounding relation, Fine’s claim that —whenever  $p$  is a necessary truth,  $p$  must be grounded in the nature of some thing or things— can be interpreted in a way that makes a connection between different facts: facts concerning the metaphysically modal features of an object, and facts about its essential ones. Rosen holds that existentially general facts are grounded in their instances. Based on this view, if  $p$  is a metaphysically necessary proposition, the fact that  $p$  is metaphysically necessary is grounded in the existentially general fact that there are some objects  $X$  (or there are collections of objects,  $Xs$ ) such that  $p$  is true in virtue of the nature of the  $X$  ( $Xs$ ) (Ibid p. 121). Thus, facts about which propositions are metaphysically necessary are grounded in facts about which propositions are true in virtue of the nature of things, and this itself is equivalent to the view that facts about which

propositions are metaphysically necessary are grounded in facts about the essences of things. Likewise, facts about metaphysical possibilities of an object can be explained. If  $p$  is a metaphysically possible proposition, the fact that  $p$  is *metaphysically possible* is explained in terms of the existential general fact that there is an object X (or there are collections of objects, Xs) such that  $p$  is compatible with the propositions, which are true in virtue of the nature of the object.

### 2-1. How to Ground Modal Differences between Coincident Objects

Having this model of grounding *de re* modalities in the essences of things in mind, let's turn to the story of coincident objects and the *de re* modal properties that distinguish them. If our theory, as mentioned in the previous part, commits us to the existence of coincident objects; we have distinct entities which have distinct essences. According to the model of grounding modalities in essences, facts about modal profiles of each of coincident objects are expected to be grounded in facts about their own distinct primitive essences. As mentioned, Goliath, for example, does not have the possibility of being squashed into a ball, while Lumpl does. To ground these modal features, we can appeal to the essences of Lumpl and Goliath as two distinct objects with different essences.

In this example, we have two modal facts. It is a metaphysical possibility for Lumpl to be squashed into a ball, and Goliath necessarily is not squashed into a ball. These modal properties are determined based upon the facts about the natures or the essences of Lumpl and Goliath respectively. The nature of Lumpl as a clay statue does not prevent it from being squashed into a ball since when it is squashed, it will still be the same lump of clay as long as the same atoms and molecules are preserved. Suppose *being a lump* is defined as a compact mass of a substance in any shape, and *being clay* is defined as stiff and sticky fine-grained earth, and the nature of Lumpl is defined as a lump of clay. Since neither the nature of lump nor the nature of clay are defined as having a particular shape, there is nothing in the nature of either that prevents Lumpl from being squashed into a ball. The squashed lump of clay is still Lumpl insofar as the same material components of it are completely preserved. Thus, this essence, if it is true, allows Lumpl as a clay lump to be in the shape of a ball. Thus, we can say that the metaphysically possible proposition that *Lumpl can be squashed into a ball* holds true in virtue of the fact that there is an object or collections of objects, Lumpl, e.g., such that the proposition holding that Lumpl can be squashed into a ball is compatible with the propositions which are true in virtue of the nature of Lumpl.

In the same vein, we can appeal to the essences of the objects of which Goliath is composed of so that we can explain its modal profiles. Goliath is a clay statue, and both the nature of clay and the nature of statue play a significant role in determining the modal properties of Goliath. Goliath does not have the possibility of being squashed into a ball owing to its essence which is the combinations of the essences of both clay and statue. It is reasonable to imagine an object in the shape of a statue—constituted from some kinds of elastic and flexible materials—which retains its shape or restores it when the object is being squashed. Thus, being a statue necessarily cannot prevent Goliath from being squashed into a ball. But Goliath is not just a statue; rather, it is a *clay*



statue, and the essences of both elements ground its modal profiles. When a statue is made of clay, it would entirely change its shape or form when it was squashed into a ball. The clay in the form of a ball would no longer be Goliath since the clay in its nature does not have the elasticity and flexibility to be restored or remain in the same shape when it is squashed. More precisely, the proposition that *Goliath can be squashed into a ball* is metaphysically impossible. So, this proposition is incompatible with the propositions that are true in virtue of the nature of Goliath. To formulate the point more precisely, we can say there is an object (or collection of objects) such that the proposition *Goliath can be squashed into a ball* is incompatible with the propositions which are true in virtue of the nature of the object (or the collection of the objects). All the real modal profiles of Lump1 and Goliath similarly are grounded in the nature of Lump1 and Goliath, respectively. This typical example illustrates how the modal profiles of coincident objects can be grounded in their primitive natures or essences.

### Conclusion

In this paper, first, I tried to show that the grounding problem, contrary to the false advertisement of some monists, cannot settle the dispute between monists and pluralists over the existence of numerically distinct spatiotemporally coincident objects. Rather the dispute should be solved on the basis of a plausible theory of material composite objects. In the second part, I developed a hypothetical claim. Assuming that pluralism is true, I tried to address the question of how to find a ground for the modal differences between coincident objects.

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