

Joshua R. Sijuwade*

Modal Metaphysics and the Existence of God

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Abstract: In this article, I seek to assess the extent to which Theism, the claim that there is a God, can provide a true fundamental explanation for the existence of the infinite plurality of concrete and abstract possible worlds, posited by David K. Lewis and Alvin Plantinga. This assessment will be carried out within the (modified) explanatory framework of Richard Swinburne, which will lead to the conclusion that the existence of God provides a true fundamental explanation for these specific entities. And thus, given the truth of this type of explanation, we have another good abductive argument for God's existence and grounds for affirming a weaker form of the principle of methodological naturalism in our metaphysical theorising.

Keywords: god, modality, explanation, worlds, actuality, abduction

1 Introduction

Theism, the claim that there is a God, has traditionally been taken to be an explanation that plays an influential role in accounting for the various facets of the fundamental structure of reality, which have been systematically studied by the philosophical field of metaphysics. Yet, in contemporary metaphysics, Theism has been relegated to the sidelines, with various metaphysicians (epistemologists and ethicists etc.) following the precedent set by contemporary scientific practice and adopting a position of *methodological naturalism* as a guiding principle for their philosophical investigations. That is, the methodological orientation that is provided by naturalism has been, as noted by Rouse (2008), 'the predominant orientation in analytic philosophy for perhaps the last third of the 20th Century, especially in the United States; even its critics now commonly endorse some more tolerant and inclusive version of naturalism'. Hence, in understanding the nature

*Corresponding author: Joshua R. Sijuwade, London School of Theology, Green Lane, Northwood, HA6 2UW, UK, E-mail: joshua.sijuwade@lst.ac.uk

of this specific methodological orientation, we can follow Draper (2005, 279) and adopt the following construal of the notion (with a specific re-interpretation of it within a metaphysical context):¹

- (1) (Methodological Naturalism) An individual should not appeal to supernatural entities when they explain certain data that is in the explanatory scope of a metaphysical theory.

At the heart of the principle of methodological naturalism is a working assumption that supernatural entities – entities that are ‘not a part of nature and can affect nature’ (Draper, 2005, 277) – do not have any part to play in our metaphysical theorising. Now, as God is traditionally taken to be a supernatural entity, the existence (and action of) God is not to be viewed as a viable explanation for any of the ‘data’ that one is seeking to account for through their metaphysical theory. A key question to be answered is: is this position expressed by (1) warranted? One of the central aims of this article will be to argue that it is not, as it will be shown that Theism can indeed play an important role in accounting for certain data that is in the explanatory scope of two prominent theories within the field of contemporary metaphysics,² and thus, given this role, this data will also serve as evidence in favour of Theism. More precisely, this article will focus on assessing the manner in which Theism is the best explanation for the occurrence of a certain set of metaphysical data and thus, because of this, can play a ‘fundamental’ role in an important field of contemporary metaphysics. Hence, Theism is indeed a viable explanation that should not be sidelined in our metaphysical investigations. To achieve this end, I will assume in this article the cogency of Richard Swinburne’s explanatory framework and resituate it within a metaphysical context, which will provide a means for me to assess the extent to which Theism can provide a true fundamental explanation for the existence of certain entities that feature in the influential modal metaphysical theories proposed by David K. Lewis and Alvin Plantinga.³ And thus, given the

1 More fully, Draper (2005, 279) provides a definition of the notion of methodological naturalism within a scientific context. Nonetheless, this definition is flexible enough to capture the methodology that is also followed in the field of contemporary metaphysics (and the wider field of philosophy in general).

2 Though two specific concepts (of modal metaphysics) will be under focus, it is important to note that the argument formulated in this article can be extended to other concepts (of modal metaphysics) as well.

3 In the contemporary analytic philosophy of religion literature, there is a lively debate concerning the consistency of Theism and Lewis’ modal metaphysics – which has been termed ‘Theistic Modal Realism’. Outside of (Almeida 2017a), there has not been much focus on the theoretical

truth of this type of explanation, we will have in front of us a new *abductive* argument for the existence of God – specifically, an argument for God’s existence based on the fact of him being the best (fundamental) explanation for the existence for these entities, when otherwise we would not expect them to exist.⁴ Hence, at the end of our exploratory journey, we will thus have one more good reason to believe in the existence of God, and further reason to not adopt such a stringent methodological naturalistic methodology in our metaphysical investigations.

Thus the plan of action is as follows: in Section 2 (‘Explanatory Framework’), I detail the nature of Swinburne’s explanatory framework and resituate it within a metaphysical context. In Section 3 (‘Explanatory Target’), I explain the specific explanatory target that is under focus – the existence of an infinite plurality of concrete or abstract possible worlds. In Section 4 (‘Explanatory Analysis’), I assess Theism and the alternative positions provided by Lewis and Plantinga, which we can term ‘Primitivism’. Both of these explanatory options will be assessed in light of their fulfilment of the abductive criteria detailed in Section 1, with the final conclusion being that Theism is the only explanation that fulfils these criteria – it is the simplest explanation, fitting with our background knowledge, that leads us to expect the data, when otherwise it would not be expected. Theism is thus the best candidate to be a fundamental explanation of the existence of the data that is within the explanatory scope of the metaphysical theories under study. Finally, there will be a concluding section (‘Conclusion’) that will summarise the position that has been argued for in this article.

benefits of Theistic Modal Realism – and even in the aforementioned work, there has not been any analysis in the literature of the *veracity* of Theistic Modal Realism and the evidential basis that it is ground upon. This article thus seeks to provide this much-needed analysis that can help to push the discussion on from the consistency of Theistic Modal Realism onto a discussion concerning its veracity.

⁴ An abductive argument is a type of argument for the truth of a conclusion that employs ‘abductive reasoning’. Abductive reasoning is a form of reasoning that typically starts with a set of data and proceeds from this set to the ‘best’ explanation for it, in accord with certain explanatory criteria. Thus, the type of argument that will be formulated in this article is of this kind – though it will be stated at an informal level. For a further explanation of the nature of abductive reasoning, and a comparison of this type of reasoning with that of deductive and inductive reasoning, see (Douven 2021). Furthermore, the argument that features in this article is to be read as an extension of two similar arguments for the existence of God based on the existence of the non-fundamental entities that fill up the layered structure of reality, and the instantiation of the grounding relation that connects the non-fundamental entities within this structure, both of which featured in (Sijuwade 2021c) and (Sijuwade 2021d).

2 Explanatory Framework

2.1 Nature of Metaphysical Explanation

In contemporary metaphysics, the nature of a metaphysical explanation is a hotly contested issue. However, a minimal understanding of a *true* metaphysical explanation, as noted by individuals such as Maurin (2019, 1574), is that of it invoking entities and a non-causal explanatory connection, which accounts for the nature and/or existence of one entity with reference to another entity, that the former non-causally and synchronically depends upon. More precisely, we can construe the nature of a true metaphysical explanation as such:

- (2) (Metaphysical Explanation) An explanation is a true metaphysical explanation of the nature and/or existence of a given entity when it invokes a *what* (i.e. a ground) that the entity non-causally and synchronically depends upon and a *why* (i.e. a principle) that explains the reason for the dependence of the former entity on the latter entity.

Once *these* factors are in place – the *what* and *why* – we have a true metaphysical explanation for the nature and/or existence of a given entity at a specific time. More specifically, a true metaphysical explanation provides the correct answer to questions of what determines or makes one entity exist and be what it is. Moreover, a metaphysical explanation, unlike a general explanation, is focused on providing a *synchronic* explanation for the constitutive generation of a dependent outcome at a specific point in time. And this is done by invoking an entity and a principle or, more specifically, following Schaffer (2017, 305), a ‘law of metaphysics’ – which is simply that of a counterfactual-supporting general principle stating *what grounds what* – where grounding is an asymmetric, necessitating dependence relation that links the more fundamental entities to the less fundamental entities, and is best conceptualised as a type of causation: metaphysical causation. More fully, as an asymmetric, necessitating dependence relation, grounding has many important features in common with causation, which leads one to infer that the best explanation of this striking similarity is that of grounding being identical to *metaphysical* causation – which is to be held in distinction from *nomological* causation. Specifically, following Wilson (2018),⁵ we can take the grounding relation to be a special case of the causal relation where, as Wilson (2018, 724) notes,

⁵ In following Wilson in taking grounding to be identical to causation – metaphysical causation – we are not taking grounding to be analogous to, but distinct from, causation as Schaffer (2016) does. For the reasons why Schaffer does not make this identification, see (Schaffer, 2016, 94–96).

‘whenever A grounds B, A is a (metaphysical) cause of B and B is a (metaphysical) effect of A’. Metaphysical causation and nomological causation, are thus different species of the same genus: causation, such that, for the former, once one distinguishes the more from the less fundamental, it is quite natural to posit an explanatorily-backing, generative relation of metaphysical causation. Thus, the similarity between grounding (i.e. metaphysical causation) and causation (i.e. nomological causation) centres on the manner in which the *causal sufficiency relation* is mediated within a causal and grounding context. More precisely, if laws of nature mediate a given instance of the causal sufficiency relation, then it is a case of nomological causation – for example, the throwing of a stone is a sufficient *nomological* cause of the breaking of a window, as this causal relation is mediated by laws of nature. Whereas if the (law-like) *principles of grounding* fulfil the role of mediating a given instance of the causal sufficiency relation, then it is a case of metaphysical causation – for example, the existence of Socrates is a sufficient *metaphysical* cause of the existence of Socrates’ singleton set, as this causal relation is mediated by the (law-like) principles of grounding.⁶ Grounding (i.e. metaphysical causation) and nomological causation are thus simply *different ways* for the causal relation to be mediated and thus obtain (Wilson 2018).⁷ With this notion of grounding to hand, we can now turn back our attention onto elucidating our metaphysical explanatory framework.

In utilising Swinburne’s (2004) explanatory framework within a metaphysical context – which focuses on assessing the veracity of physical or scientific explanation – we can see that there are at least two possible kinds of metaphysical explanation: *inanimate* metaphysical explanation and *personal* metaphysical explanation.⁸ An inanimate metaphysical explanation is one that invokes an entity and a law of metaphysics in order to explain the nature and/or existence of another entity – the *what* is the former entity and the *why* is the holding of the law between it and the latter entity. Whilst, a personal metaphysical explanation is one that invokes an entity, the beliefs, powers and purposes of that entity *and* a law

And for a summary of reasons why someone should make this identification, see (Wilson, 2018, 748).

⁶ Wilson (2018, 1–2) is more instructive than Schaffer (2016) in highlighting the importance of the different ways that the causal sufficiency relation is mediated. Furthermore, Schaffer (2016, 57) uses the terms ‘laws of metaphysics’ rather than ‘principles of grounding’, which feature in a later article (Schaffer 2021). We can thus take both of these terms to be synonymous and continue using the latter.

⁷ For an explication of the notion of grounding within a theistic context, see (Sijuwade 2021b) and (Sijuwade 2021d).

⁸ For an extended unpacking of Swinburne’s understanding of the nature of general or scientific explanation, see (Swinburne 2004) and (Sijuwade 2021d).

of metaphysics in order to explain the nature and/or existence of another entity – the *what* is the former entity and the *why* are the beliefs, powers and purposes of that entity *and* the holding of the law between it and the latter entity. In the metaphysical domain, and unlike in the general explanatory domain, inanimate and personal metaphysical explanations converge – that is, laws of metaphysics are present in both – where the only difference between these two different kinds of explanation is that a personal metaphysical explanation, and not an inanimate metaphysical explanation, includes the beliefs, powers and purposes of an entity as an explanatory factor for the constitutive generation of a dependent outcome.

A metaphysical explanation of both kinds can come in three different forms. It can, first, be a partial metaphysical explanation, which is a form of metaphysical explanation that includes factors – an entity and a law of metaphysics – that another entity is only *partially* (non-causally and synchronically) dependent upon. For example, for an inanimate metaphysical explanation, the existence of an H_2O molecule is partially explained by the existence of an h atom. And, for a personal metaphysical explanation, the existence of a musical harmony at a certain time is partially explained by the existence of one individual who is singing a note at that specific time. Within both kinds of explanation, the existence of the latter entities does not necessitate the existence of the former entities. Second, a full metaphysical explanation is a form of a metaphysical explanation that includes factors – an entity and a law of metaphysics – that another entity is *fully* (non-causally and synchronically) dependent upon – the entity (or entities) that constitutes a part of the explanatory set of factors is (or are) a ‘full ground’ of the other entity and thus deductively entail, and really explain, its existence. For example, for an inanimate metaphysical explanation, the existence of an H_2O molecule is fully metaphysically explained by the existence and arrangement of 2 h atoms and an O atom. And, for a personal metaphysical explanation, the existence of a musical harmony at a certain time is fully metaphysically explained by the existence of two individuals who are singing a note at that specific time. Within both kinds of explanation, the existence (and arrangement) of the latter entities deductively entails, and really explains, the existence of the former entities. Third, a complete metaphysical explanation is a special form of metaphysical explanation that includes factors – an entity and a law of metaphysics – that another entity is fully (non-causally and synchronically) dependent upon, and which their existence is *not* (non-causally and synchronically) *dependent* upon another contemporaneously existing entity. In other words, the *what* and *why* – that is, the existence of the latter entity (and/or law) – is the *fundamental* reason for the former entity existing. So, given the importance of the notion of fundamentality for this form of explanation, we can now re-term a complete metaphysical explanation as a *fundamental* explanation. Thus, for example, and to pre-empt the main

discussion of this article, for an inanimate fundamental explanation, it *could* be the case that the existence of entities within the pluriverse or platonic realm is fundamentally explained by another physical entity, or, in fact, it could be that they lack an explanation due to these entities being fundamental entities. Or, for a personal fundamental explanation, it *could* be the case that the existence of the entities within the pluriverse is fundamentally explained by the existence of God (who is himself also a fundamental entity). Now, following Bennett (2011, 27) and Schaffer (2009), we can take the term ‘fundamental’ – that is at the heart of this type of explanation – to be synonymous with the term ‘ungrounded’ – such that if x grounds y , then x is *more fundamental than* y (though not *vice versa*), and if x is ungrounded, then x is absolutely fundamental – which is thus that of this type of entity being one that has nothing *in virtue of* which it exists, obtains, or occurs. Nevertheless, within both kinds of explanation, the existence of the latter entities deductively entails, and really explains, the existence of the former entities, and of which there is no further explanation, in the form of contemporaneous, or, *more fundamental* factors, for the former entities existing as they do. Taking all of this into account, these are the different kinds and forms of explanation that are available within a non-metaphysical and metaphysical context. The important question to be faced now then is: what are the justificatory grounds for one believing that they have acquired a true, complete explanation for the occurrence of a given phenomenon or a fundamental explanation for the existence of a given entity?

2.2 Justification of Metaphysical Explanation

In the context of determining the correct grounds for ‘theory choice’, the justificatory basis on which an explanation is judged to be a correct terminus in explanation – that is, how probable it is that this explanation is a fundamental explanation of a particular entity – centres on the extent to which it has (or can achieve a ‘trade-off’ between) the specific theoretical (or explanatory) virtues of minimising commitments (at the fundamental level) and maximising explanation of the data at hand. More specifically, this theoretical aim is (plausibly) achieved by a candidate explanation fulfilling the following abductive criteria:⁹

⁹ For the attentive reader, one will notice that the conceptualisation of the abductive criteria that is about to be provided is more fine-tuned and robust than that offered in (Sijuwade 2021c) and (Sijuwade 2021d) by it taking into account – and modifying at certain points – some helpful ideas concerning theory choice that have been proposed by Graham Oppy – and thus which are not to be found in the work of Swinburne. Thus, for a further helpful explanation of the importance of the ‘trade-off’ between minimising commitments and maximising explanation, see (Oppy, 2019,

- (i) The criterion of predictive power
- (ii) The criterion of background knowledge
- (iii) The criterion of scope
- (iv) The criterion of parsimony

For (i): the criterion of predictive power, this criterion assesses whether the postulated explanation predicts the existence of the entity, when otherwise this event or entity would not be expected to have existed. Importantly, however, as Swinburne (2004, 70) notes, the ability for an explanation (of a general and metaphysical kind) to predict the data does not imply that this explanation has to do this in a *literal* sense (i.e. that the event or entities that constitute the data will be observed to have occurred or to exist in the future). Rather, an explanation is only required to provide a *sufficient explanation* for the data, whether or not this data was obtained in the past. For (ii): the criterion of background knowledge, this criterion assesses whether the postulated explanation meshes with other explanations that are rendered probable by this abductive criteria. That is, an explanation fits with background knowledge if the entities invoked by the explanation are similar to those entities that are taken to exist (and fulfil some valuable explanatory role) within other neighbouring fields.¹⁰

For (iii): the criterion of scope, this criterion assesses how much the postulated explanation seeks to explain. Generally, an explanation that seeks to explain more data is less probably true than one that is more restricted in its explanatory range. However, as Swinburne (2004, 56) sees it, this criterion is not to be given very much weight, since the specific restrictions of the scope of an explanation are often arbitrary and complicated, and thus explanations that have a narrower scope are – although more probably true – typically less simple than explanations of a much wider scope. Thus, given the importance of the criterion of

120–121). Furthermore, knowledge concerning the truth of this abductive criteria, according to Swinburne (2001, 122), is obtainable *a priori*. Moreover, these criteria are taken to be at the heart of scientific and historical practice – that is, scientists and historians, according to Swinburne (2001, 74), regularly employ these abductive criteria in their investigations.

¹⁰ Swinburne (2004, 60) sees the criterion of background knowledge as being limited in its usage, in that it is only applicable to explanations that have a narrow scope as, according to Swinburne, the amount of evidence that resides within the background knowledge, with which a given explanation will need to fit will decrease the range of its scope. Thus, in Swinburne's thought, there will not be any background knowledge that an explanation of enormous scope will need to fit with. In response to this, Philippe (2012, 210–212) has argued that Swinburne's reasoning in support of one eliminating the criterion of background knowledge is fallacious – it is subject to the 'fallacy of division' – and thus must be abandoned. Adjudicating this debate will take us too far afield, and thus going forward, we will simply continue to maintain this specific abductive criterion for our analysis of the candidate fundamental explanations.

parsimony which is to be seen now, the criterion of scope is generally less important for determining the probable truth of an explanation. For (iv): the criterion of parsimony (or simplicity),¹¹ this criterion focuses on assessing the *theoretical commitments* required by an explanation – and how successful it is at minimising these. The nature of these theoretical commitments can be conceived of *ontologically* (i.e. ontological parsimony) and *ideologically* (i.e. ideological parsimony). Ontological and ideological parsimony can come in two varieties: *quantitative ontological/ideological parsimony* and *qualitative/ideological parsimony*. For the former variety, an explanation is, first, quantitatively ontologically parsimonious if it postulates the fewest number of entities (i.e. objects, properties and relations). For example, suppose one wants to assess the explanatory virtue of two physical theories that equally explain a given set of physical phenomena – yet the first theory explains the phenomena by positing the existence of a single particle (i.e. one object), while the second theory explains the phenomena by positing the existence of two particles (i.e. two objects) – then the first theory, in comparison to the second theory, would posit the existence of the fewer number of entities and thus have greater quantitative ontological parsimony. Second, an explanation is quantitatively ideologically parsimonious if it includes the fewest number of theoretical primitives (i.e. undefined terms). For example, suppose one wants to assess the explanatory virtue of two mereological theories that equally explain a given set of metaphysical data – yet the first theory utilises ‘part’ to provide definitions for the terms ‘proper part’ and ‘overlap’ as well as other mereological and compositional relations, whilst the second theory does not, but instead leaves the terms ‘proper part’ and ‘overlap’ undefined – then the first theory, in comparison to the second theory, would include a fewer number of theoretical primitives and thus would have greater quantitative ideological parsimony (Finocchiaro 2021). For the second variety, an explanation is, first, qualitatively ontologically parsimonious if it postulates the fewest number of kinds (i.e. ontological categories and/or kinds of objects, properties and relations). For example, in analysing the

¹¹ I take the terms ‘theory’ and ‘explanation’ to be synonymous and I will also alternate between the terms ‘parsimony’ and ‘simplicity’ without any change in meaning. Furthermore, in previous work: (Sijuwade 2021c) and (Sijuwade 2021d), I utilised Swinburne’s conception of the criterion of simplicity, which states that an explanation is simple if it fewest entities, fewest properties of entities, fewest kinds of entities, fewest kinds of properties, properties that are more readily observable, the fewest separate laws with the fewest terms relating the fewest variables, and the simplest formulation of each law being mathematically simple (Swinburne, 2004, 53). Since the writing of those works, however, I have seen the importance of grounding this important criterion on a more robust conception of parsimony that draws a distinction between ontology and ideology in a manner that is more widespread in contemporary metaphysics. Nonetheless, with that said, Swinburne’s conception does fit with the new conception of simplicity that is being assumed in the present article.

explanatory virtue of a nominalist theory and a platonic realist theory – where the former theory does not posit the existence of abstract objects but takes every existing entity to have a spatial and/or temporal location, and the latter theory does posit the existence of abstract objects – then the former theory, in comparison to the latter theory, would posit (at least) one less kind (of entity) and thus have greater qualitative ontological parsimony (Finocchiaro 2021). Second, an explanation is qualitatively ideologically parsimonious if it includes the fewest number of kinds of theoretical primitives – which, following Finocchiaro (2021, 618), we can individuate by topic. For example, there is an ideological kind that corresponds to colour – which would be a kind that includes colour predicates like ‘red’, ‘green’ and ‘blue’ etc. Similarly, there is also an ideological kind that corresponds to mereology. However, as the thesis of mereological nihilism (i.e. the thesis that there are no objects with proper parts) does not utilise mereological terminology, in comparison to other metaphysical theses, it would involve fewer kinds of theoretical primitives and thus would have greater qualitative ideological parsimony. The criterion of parsimony thus centres on the quantitative and qualitative ontological/ ideological parsimony of an explanation. However, in following Schaffer (2015, 647),¹² and other leading contemporary metaphysicians,¹³ one can provide a further modification of this criterion within a metaphysical context by focusing the quantitative and qualitative parsimony of an explanation on that of *fundamental* entities, principles or laws, rather than all types of entities, principles or laws. A probably true fundamental explanation is thus one that is quantitatively and qualitatively ontologically/ideologically parsimonious. The quantitative and qualitative parsimony of a fundamental explanation is thus that of it postulating the fewest fundamental entities (i.e. fundamental objects and fundamental properties), fewest fundamental kinds, fewest fundamental theoretical primitives and fewest fundamental kinds of theoretical primitives. Hence,

12 Schaffer (2015), in a similar manner to Swinburne, also sees the importance of the criterion of parsimony (or ‘Occam’s Razor’) for metaphysical theorising. However, Schaffer believes that one must also include a specific restriction to the range of the Razor, which is that of it only being applicable to fundamental entities and/or properties – Schaffer terms this additional restriction the ‘Laser’. Interestingly, however, Schaffer’s Laser does not distinguish between quantitative and qualitative ontological/ideological parsimony. Nevertheless, there is nothing inherent within the Laser that should stop one from making this distinction.

13 The other contemporary metaphysicians that believe that one should adopt Schaffer’s Laser as a criterion of theory choice, over that of Occam’s Razor, are that of Bennett (2017, 220), Cameron (2010, 262), Sider (2013, 240) and Korman (2015, 75–76). For specific reasons in support of Schaffer’s Laser – which can be divided into sub-arguments from thought experiments, analogy, ontological innocence and probability theory – see, (Schaffer 2015) and Bennett (2017, 220–224).

if a metaphysical explanation posits the existence of some new particular object, property or kind – and involves some theoretical primitives – it is required by the criterion of parsimony that it should postulate as few as possible, and it should postulate no more than those that are needed to explain the observational data – in short, it should minimise (ontological and ideological) commitments at *the fundamental level* and maximise explanation of the data at hand.

These are the abductive criteria that provide justificatory grounds for holding to the probable truth of a particular metaphysical explanation. Within a metaphysical explanation, we seek an explanation that minimises fundamental commitments and maximises explanation – more specifically, that is, it is the simplest explanation, fitting with our background knowledge, which leads us to expect the phenomena or entities that do in fact occur or exist, when otherwise this would not be expected. And the fulfilment of these criteria is the grounds for one determining the stopping point for a purported fundamental explanation. More precisely, a full metaphysical explanation of the existence of a collection of entities is a fundamental explanation, if we believe that the existence of the entities under question could only be explained further by postulating further full grounds acting contemporaneously with the entities, which *do not* have any more simplicity, greater fit with background knowledge and predictive power than the full grounds (and laws) featured in the former explanation – these full grounds would serve as the terminus of explanation as we do not have any further minimisation of commitments and maximisation of explanation. One would thus be justified in taking a certain candidate explanation to be a fundamental explanation if one had reason to believe that any particular gain in the fulfilment of one of the abductive factors (i.e. parsimony, fit with background knowledge or predictive power) would be outweighed by a corresponding loss of another. Thus, for example, any attempt to provide an alternative explanation of the existence of a given entity would result in one postulating a more complex explanation – and thus, it fails to fulfil Criterion (iv) – with only a potentially marginal gain in predictive power (or fit with background knowledge). One is thus to move *beyond* the data, and the currently existing explanations of it, only if there is a possibility of a greater fulfilment of the abductive criteria, and that will be so if there is a potential explanation that is simpler and/or explains the data better, whilst still fitting with background knowledge – in short, it allows us to make less commitments at the fundamental level and/or provides a better explanation of the data. Thus, in regards to Theism, and whether it can serve as a fundamental explanation of a certain set of metaphysical data, one will need to establish whether Theism, relative to the data, sufficiently meets the abductive criteria – in that it allows us to minimise (ontological and ideological) commitments at the fundamental level and maximise explanation of the data at hand (i.e. our explanatory target). And if

it does, given the nature that God is taken to have, he must serve as a fundamental explanation of this data. In short, once we establish that Theism is probably true – that is, it is the simplest explanation, fitting with our background knowledge, that led us to expect the data, when otherwise it would not be expected – then one has reached a terminus in explanation. So, the question that is now presented to us is: what is the nature of the particular phenomenon that we are seeking a fundamental explanation of? In other words, what is our explanatory target? And how do Theism and any other potential explanation seek to explain it?

3 Explanatory Target

3.1 Modal Structure

Humans regularly make modal statements. Modal statements are declarative sentences that concern what is *possibly* the case and what is *necessarily* the case – such as a person thinking to themselves ‘it is possible that I will become a doctor’ and ‘it is necessary that I am human’; or a teacher saying to their students ‘it is possible that Hitler won WWII’ and ‘it is necessary that Hitler’s mother was Klara Hitler’.¹⁴ One can ask, however, what determines the truth value of these statements that are part and parcel of our ordinary speech? In the thought of certain individuals working within the field of modal metaphysics, there is a certain fundamental, metaphysical structure – or, more specifically, a ‘modal structure’ – that *determines* the truth value of these statements. That is, the various modal statements that individuals use in ordinary speech are made true, and explained by, the existence of this modal structure. Thus, at a general level, modal metaphysics allows one to discover a fundamentality structure that the modal statements and locutions that feature in ordinary speech are dependent upon and determined by. Hence, given this dependence and determination, claims concerning this modal structure are to be taken to be *more fundamental* than the modal statements and locutions that feature in our ordinary speech. For illustrative purposes, we can depict this dependence and fundamentality structure at the general and more specific level in Figure 1 as such (where ‘*L*’ stands for ‘linked to’, ‘*MFT*’ stands for more fundamental than, ‘*E*’ stands for ‘explains’ and ‘*D*’ stands for ‘dependent’):¹⁵

¹⁴ Assuming, for the latter statement, that origin essentialism is correct.

¹⁵ This article will feature a number of illustrations throughout that will serve as heuristic devices that will help the reader to better grasp (or ‘digest’) the various notions that, at times, can be quite abstract and difficult to visualise when expressed through written prose.

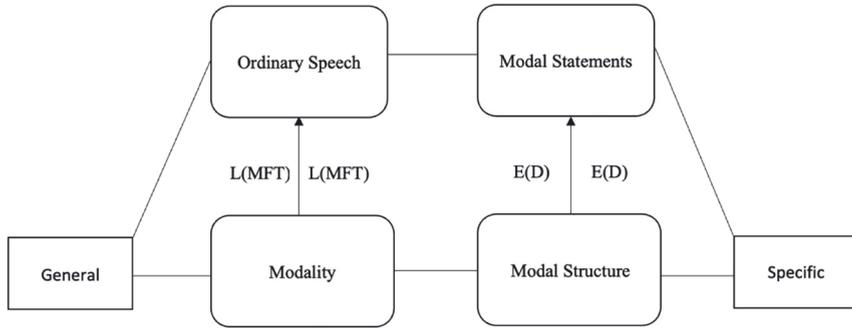


Figure 1: Modal structure (i).

In analysing our language use and its correspondence to reality, we see that our various modal statements and locutions are thus conceived of as truth-bearers that are *made true* by the modal structure that is inherent within reality. In other words, there is thus a ‘truthmaking’ relation connecting the modal statements and locutions to the (more fundamental) modal structure. Re-construing this truthmaking relation now within the explanatory framework that we are operating within, this modal structure provides a full metaphysical explanation for the truth of the various modal statements that are uttered by individuals, in that the truth of these statements is fully dependent on this modal structure and a law of metaphysics (i.e. a grounding relation), which together deductively entail, and really explain, its truth value.¹⁶

One can now ask, however, what is the nature of this modal structure that accounts for the truth of the modal statements and locutions that frequently feature in our ordinary speech? And what accounts for the existence of this structure itself? In contemporary metaphysics, a number of philosophers have postulated the existence of an infinite plurality of ‘possible worlds’, which are then identified as the modal structure under question. Taking this identification as our starting point, we can now take the following phenomenon as our explanatory target:

- (3) (Explanatory Target) There is an infinite plurality of possible worlds.

This explanatory target captures certain phenomena – namely, the infinite plurality of possible worlds – whose existence seems, in the minds of some

¹⁶ Philosophers writing in the field of modal metaphysics do not regularly utilise the language of grounding as has been done here. However, this type of language is very helpful in providing a more fine-grained understanding of the dependence relations that are inherent within the modal sphere.

individuals, to require a further, more fundamental explanation. In the next section, we will assess the manner in which Theism can serve as this fundamental explanation. However, it will be important to now (briefly) explicate the general notion of a possible world that features in our explanatory target, and some of the roles that this notion is taken to play. Following Inwagen (1986, 192–193), we can take the concept of a possible world to be a *functional concept*. The concept of a ‘possible world’ is one that ‘plays a certain role’ in *representing ways reality is or could be*. That is, as Inwagen (1986, 193) notes, at a general level, it ‘can fill a certain role in philosophical discourse about modality, essence, counterfactuality, truth-theories for natural languages, and so on’. One important function that the concept of a possible role has fulfilled within a modal context is that of it providing a means for one to explicate the important notion of *de dicto* modality, which can be stated succinctly through the following bi-conditional:

- (4) (De Dicto) It is possible that $x \leftrightarrow$ there is a w such that w is a possible world and at w , x .

As expressed by (4), the modal operator ‘it is possible that’ (and modal operators such as ‘it is necessary that’), within a modal metaphysics that utilises ‘possible world semantics’, is now conceived of as a quantifier over worlds, which thus provides a further explication and/or analysis of modality – which helps to dispel the mystery that has often surrounded these type of locutions (Bricker 2007). In addition to the provision of an analysis of *de dicto* terms, the utilisation of the notion of possible worlds also provides a means for one to analyse *de re* modality. However, the nature of this type of analysis is best grasped once the concept of a possible world is further fleshed out. In the contemporary literature, two specific realist metaphysical theses concerning the nature of the concept of a possible world have played an influential role: Concrete Modal Realism and Abstract Modal Realism. Concrete Modal Realism (hereafter, Concretism), proposed by David K. Lewis, is a *possibilist* theory (i.e. one that takes there to exist merely possible entities that are strictly non-actual) that seeks to provide a *reductionist* account of modality (i.e. it seeks to reduce modal notions to non-modal notions) and conceives of a possible world as a concrete object – and thus there being an infinite plurality of concrete possible worlds (amongst other things). Whereas Abstract Modal Realism (hereafter, Abstractionism), proposed by Alvin Plantinga, is an *actualist* theory (i.e. one that denies the existence of merely possible entities and takes the actual world to be the only possible world that does obtain) that seeks to provide a *non-reductionist* account of modality (i.e. it does not seek to reduce modal notions to non-modal notions) and conceives of a possible world as an abstract object – and thus there being an infinite plurality of abstract possible worlds (amongst other things). Hence, what we are

presented with through these metaphysical theses are two ontological concepts ('concreteness' and 'abstractness') – concerning two types of objects – that are coextensive with the functional concept 'possible world' (Inwagen 1986). It will be important to now further detail the nature of these two metaphysical theses,¹⁷ which can provide one with an analysis of *de re* modality and, more importantly, help us to further fine-tune our explanatory target. To this task, we now turn.

3.2 Concretism

According to Lewis (1983, 1986), Concretism is a metaphysical thesis that posits the existence of a 'logical space' or 'pluriverse' that is made up of an infinite plurality of concrete possible worlds.¹⁸ More specifically, the central tenets of Concretism, according to Lewis (1986, 69–81), can be stated as follows:

- (5) (Concretism)
- (a) *Pluriverse*: The totality of metaphysical reality and the largest domain of quantification that includes within it three ontological categories.
 - (b) *Concrete Worlds*: A possible individual x is a possible world w if there are some concrete entities such that each one of the entities is spatiotemporally related to every object that is one of the collections of entities, w is the fusion of these entities, and w is one of an infinite plurality of w s.
 - (c) *Isolation*: No possible individual x , that is part of a w , is spatiotemporally related to any x that is not one of the collections of individuals that are part of w .
 - (d) *Relative Actuality*: A possible individual x is an actual world w solely from the indexical perspective of an inhabitant of w .

¹⁷ I follow Inwagen (1986) in terming these theses 'Concretism' and 'Abstractionism'. Furthermore, Lewis' Concretism is usually termed 'genuine' modal realism – with Plantinga's Abstractionism frequently not being termed a modal realist account. However, following Plantinga's (2003, 192–228) own identification of his thesis as a modal realist thesis, I will break convention here in taking both theses to be alternative modal realist accounts.

¹⁸ In Concretism, there are no 'impossible worlds', and thus one can refer to a 'possible' world simply as a world. However, to keep in line with Abstractionism – which allows for impossible worlds – the qualifier 'possible' will be retained throughout.

For (a), the notion of the ‘Pluriverse’ functions in the framework of Concretism as the metaphysical terrain of the totality of reality. In Lewis’ (1983, 39–40) thought, the pluriverse is organised into three fundamental ontological categories: *possible individuals*, *impossible individuals* and *non-individuals*. These three ontological categories can be understood as follows: first, the category of possible individuals includes within it the entities that exist wholly within a possible world, i.e. as a part of that world. For the category of possible individuals, each of the worlds within the pluriverse is a (large) possible individual that has (smaller) possible individuals (such as atoms, humans and planets) as parts. Hence, any possible individual is ‘bound’ to a possible world through being a ‘part’ of it – with a possible world being an improper part of itself.¹⁹ Second, the category of impossible individuals includes within it the entities that do not exist wholly in any world, but are composed of possible individuals from two or more worlds. For the category of impossible individuals, these types of individuals are mereological summations of individuals within the pluriverse (Lewis 1983). More specifically, impossible, cross-world, individuals consist of parts from several distinct worlds within the pluriverse. As the name indicates, however, this type of individual is not a possible individual, as it is not in any world – it is partly in each of the many worlds. Third, the category of non-individuals includes within it the entities which do not exist in any world, but nevertheless exist ‘from the standpoint of a possible world’. That is, for the category of non-individuals, these types of entities – which are paradigmatically identified as ‘pure sets’ (i.e. numbers, properties, propositions and events) – do not exist in any world in the sense of them existing as a part of a possible world, nor do they exist as a mereological summation of the individuals that exist within the infinite number of distinct worlds; rather they exist from the *standpoint of a possible world*, by existing within the least restricted domain that is appropriate in evaluating the truth at the world of quantifications (Lewis 1983, 40). Thus, for Lewis (1983, 40), within the Concretism framework, we have three fundamental ontological categories: possible individuals, impossible individuals and non-individuals, that are individuated by three distinct relations: being in a possible world (i.e. being part of a possible world) for possible individuals, being partly in a possible world (i.e. having a part that is wholly in that world) for impossible individuals, and existing from the standpoint of a possible world for non-individuals. For illustrative purposes, we can depict the nature of the pluriverse in Figure 2 (where ‘PI’ stands for ‘possible individual’, ‘IPI’ stands for ‘impossible individuals’, ‘N-I’ stands for ‘non-individuals’, ‘W_n’ stands for a ‘particular world’, ‘the starred

¹⁹ More on world boundness below.

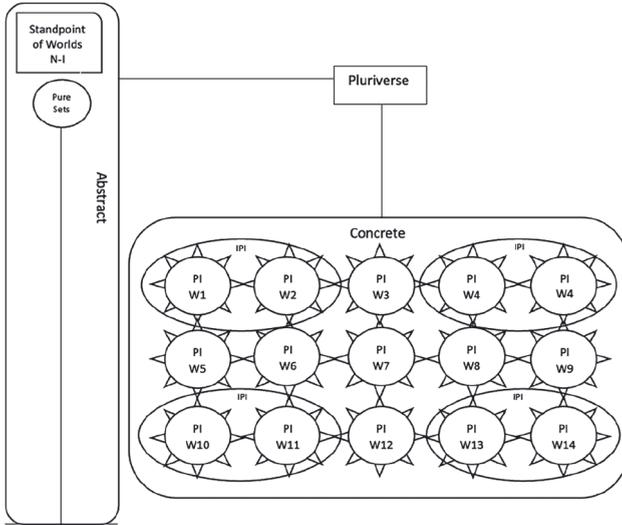


Figure 2: Nature of the pluriverse.

circles’ represents ‘(relative) actuality’, ‘Concrete’ stands for ‘concrete domain’ and ‘Abstract’ stands for ‘abstract domain’).

Now, the positing of the existence of the pluriverse enables one to provide a *reductive account of modality*. That is, Concretism, through the notion of the pluriverse (and, more importantly, the notion of a possible world), seeks to provide an analysis or reductive account of modal notions such that one can understand the meaning of modal locutions without them depending upon further modal notions – namely, these locutions being reducible to concrete possible worlds – and thus modality not being primitive. To further explicate the metaphysical thesis of Concretism, and its modal reductionism, it will be important to now further detail the notion of a possible world, as expressed by (b)–(d) of (5).

For (b), the notion of ‘Concrete Worlds’ expresses the fact that there exists an infinite plurality of concrete possible worlds within logical space that are identified as *maximal mereological sums of spatiotemporally related individuals*. The ‘concreteness’ of a possible world expresses the idea that the ‘merely possible worlds’ that make up the pluriverse are of the *same ontological kind* as the ‘actual world’. Lewis (1986), however, is hesitant to directly affirm the concreteness of possible worlds, given the ambiguity and lack of clarity that surrounds the abstract/concrete distinction in contemporary philosophy. Nevertheless, Lewis (1986, 82–86) distinguishes four different ways of conceiving of the abstract/concrete distinction, and the manner in which worlds fit with these ways: first, the *Way of Example*: worlds have parts that are taken to be paradigmatically concrete (i.e. donkeys, protons, stars and galaxies). Second, the *Way of*

Conflation: worlds are taken to be particulars and individuals, rather than universals and sets. Third, the *Negative Way*: worlds have parts that are taken to stand in spatiotemporal relation to one another. Fourth, the *Way of Abstraction*: worlds are taken to be fully determinate entities that are not abstractions from any other entity. In each of these four ways, according to Lewis (1986, 82), worlds (and most of their parts) can be conceived of as concrete entities – with all other types of entities (namely, non-individuals) being conceived of as abstract entities, due to the fact that these entities are not spatiotemporal *and* fail to meet the four-fold criteria. So, a possible world is a concrete entity, yet, there is not only one world in logical space, but an ‘infinite plurality’ of worlds. More specifically, *any way a world could possibly be is a way that some world is* – in short, according to the *Principle of Plenitude*, worlds are abundant such that there are no ‘gaps in logical space’. In underwriting this principle, Lewis posits the holding of a more specific principle: *the Principle of Recombination*, according to which, as Lewis (1986, 88–89) writes, ‘patching together parts of different possible worlds yields another possible world’. More specifically, the Principle of Recombination states that *anything can co-exist, or fail to co-exist, with anything else*. Thus, for example, as Lewis (1986, 88) notes, ‘if there could be a dragon, and there could be a unicorn, but there couldn’t be a dragon and a unicorn side by side, that would be an unacceptable gap in logical space, a failure of plenitude’. Thus, from the first half of this principle – that anything can co-exist with anything else – as illustrated by this example, we infer that any number of entities from different worlds can be brought together in any world, in any specific arrangement permitted by shape and size. However, for the second half of the principle – that anything can fail to co-exist with anything else – we have the example, as Lewis (1986, 88) writes, that ‘if there could be a talking head contiguous to the rest of a living human body, but there couldn’t be a talking head separate from the rest of a human body, that too would be a failure of plenitude’. We thus infer from this half of the principle, which expresses the Humean denial of necessary connections between distinct entities, that there is another world where one of these entities exists without the other (Bricker 2007).²⁰ Thus, for the Principle of Recombination as a whole, anything can co-exist with anything, and anything can fail to co-exist with anything, so long as they are able to come together within the possible size and shape of spacetime that comprises the world that they are parts of (Lewis, 1986, 90). The pluriverse is thus made up of an *infinite number (and variety) of concrete possible worlds*.

²⁰ However, as worlds do not overlap in the Concretism framework, this principle is to be understood in terms of *intrinsic duplication* – a given world is composed of duplicates of the entities that are brought together from other worlds.

For (c), the notion of ‘Isolation’ expresses the fact that there are no connections between worlds in the pluriverse – in that a given possible world is *spatiotemporally (and causally) isolated from other worlds*. The lack of spatiotemporal and causal connections between worlds results in the inhabitants of a given world being ‘world bound’. More specifically, a possible world is demarcated as a maximal individual whose parts are spatiotemporally related to one another and *not* anything else. That is, a possible world, according to Lewis (1986, 69), has possible individuals as parts, and is thus ‘the mereological sum of all possible individuals of one another’. In a possible world, if two things are parts of the same world, then they are – what Lewis (1986, 69) terms – *worldmates*. Individuals are thus worldmates if, and only if, they are spatiotemporally related. Thus, whatever is in a spatiotemporal relation with another is *part of that world*. A possible world is therefore unified, as Lewis (1986, 71) notes, ‘by the spatiotemporal interrelation of its parts’. However, there are no spatiotemporal relations that connect one world to another. That is, each world – which is simply the (maximal) mereological fusion of a certain set of concrete entities – is *spatiotemporally isolated* from every other world, as Lewis writes, ‘Worlds do not overlap; unlike Siamese twins, they have no shared parts... no possible individual is part of two worlds’ (Lewis 1983, 39). In other words, as the spatiotemporal relation is an equivalence relation, each individual (that is, in a possible world) is part of exactly one world – there is no overlap between distinct worlds; rather, each world is *spatiotemporally isolated* and exists *as* the maximal sum of all of the individuals that are spatiotemporally related to it.

For (d), the notion of ‘Relative Actuality’ expresses the fact that all of the (‘merely’) possible worlds within the pluriverse have the *same ontological status* as the ‘actual world’ – such that the notion of actuality is an *indexical* term that simply singles out the specific utterer of the sentence in the particular world in which they located at. In Lewis’ (1986, 92–96) mind, actuality is a *relative* notion, such that each world is actual relative to itself and the individuals that inhabit it (and is thus non-actual relative to all the other worlds and individuals that inhabit those worlds). Hence, as mentioned above, for Lewis, actuality is an indexical notion. That is, the word ‘actual’ is to be analysed in indexical terms, which is that of its reference varying dependent upon the relevant features of the context of utterance. Thus, as Lewis (1999, 293) notes, ‘According to the indexical analysis I propose, ‘actual’ (in its primary sense) refers at any world *w* to the world *w*. ‘Actual’ is analogous to ‘present, an indexical term whose reference varies depending on a different feature of context’. Therefore, something *being actual* to a given individual is that of it being part of the world that the individual inhabits – in other words, it is *spatiotemporally related* to that specific individual. Every world is thus *actual at* itself, which renders all worlds as being on par with

one another. Thus, no world has the ontological status of being *absolutely actual* – the merely possible worlds are not to be distinguished from the ‘actual world’ in ontological status. This is the nature of the pluriverse and the various worlds that exist within it. So, with this in hand, we can now turn our attention back onto assessing how Concretism provides a means for one to analyse *de re* modality.

According to Lewis (1983, 1986), the analysis of *de re* modal statement is best provided through *counterpart theory*, which brings together the central tenets of Concretism found in (5). More specifically, within the framework provided by Concretism, worlds within the pluriverse do *not* overlap, and thus individuals do not exist in more than one world. Rather, each possible individual has counterparts – qualitatively similar individuals – that exist in other worlds. More precisely, a counterpart of an entity x is one that exists in a distinct world w from x and resembles x more closely than anything else that exists in w . For Lewis (1986, 8–11), the counterpart relation – instead of the notion of *transworld identity* – is the specific resemblance relation that holds between distinct individuals that are inhabitants of distinct worlds, and thus it provides the grounds for an analysis of *de re* modality, which can be expressed through the following biconditionals:

- (6) (De Re-P) x is possibly F \leftrightarrow there is a possible world w and a counterpart x^* , such that in w x^* is F.
- (7) (De Re-N) x is necessarily F \leftrightarrow for every world, w , all counterparts of x are F.

Counterpart theory thus provides the truth conditions for the modal properties that are possessed by a certain entity – and as the notion of resemblance which underpins this theory is itself a non-modal notion – modal locutions are able to be explained without reference to modal notions. Counterpart theory thus allows modal statements and locutions (e.g. x is possibly F) to be reduced to the non-modal (i.e. counterpart of x is F). Within the framework of Concretism, one thus has a means of reducing the diversity of modal notions that have usually been taken as primitive – with this primitiveness in our structure being interpreted as that of the truth of these notions being ungrounded. At a general level, Concretism thus allows one to take the non-modal claims made by (this specific theory of) modality to be a *more fundamental* ground for the modal statements and locutions that feature in our ordinary speech. Hence, affirming the veracity of Concretism provides one with a more *economical philosophical system*, due to the fact that one has fewer (primitive) notions that are left unaccounted for within their system – namely, there are none. For illustrative purposes, we can (again) depict this dependence and fundamentality structure at the general and more specific level in Figure 3 as such (where all is as before, with ‘FM’ standing for ‘fully metaphysically explains’ and ‘G’ standing for ‘grounds’):

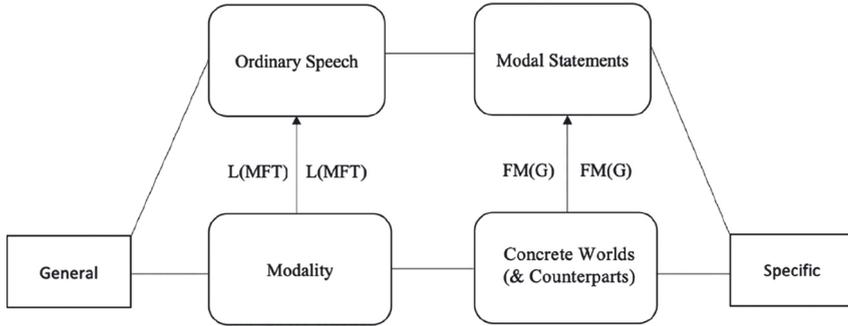


Figure 3: Modal structure (ii).

The modal structure – now identified as the infinite plurality of concrete possible worlds (and counterparts) that make up the pluriverse – provides a full metaphysical explanation for the truth of a given modal statement – namely, by this statement being dependent on the existence of these worlds (and counterparts) and the fact that these worlds (and counterparts) ground the truth of this statement. Hence, within the Concretist framework, the modal structure that determines the truth or falsity of modal statements is now identified as the infinite plurality of worlds that fill up logical space – which we can believe to be true, as Lewis (1986, 3) notes, ‘because the hypothesis is serviceable, and that is a reason to think that it is true’. That is, we should believe in the existence of the pluriverse – which includes within it an infinite plurality of worlds (and counterparts) – due to the fact that this supposition is pragmatically virtuous. In other words, the pragmatic virtue of Concretism provides sufficient justification for one accepting the extravagant ontology that is proposed by it.²¹ However, Lewis does not see this virtue as providing a *decisive* reason to favour Concretism over any other alternative theory of modality, as Lewis (1986, 4) writes,

²¹ In the case that one is not persuaded by Lewis concerning the importance of the pragmatic virtues of a theory in establishing truth value of Concretism (i.e. belief in concrete possible worlds), Bricker (2007, 120–122) has provided two interesting non-pragmatic arguments: a ‘truthmaker argument’ (i.e. given that *possibilia* require truthmakers, (concrete) worlds are the only entities that can fulfil that truthmaking role) and an ‘argument from intentionality’ (i.e. given that our intentional states about *possibilia* must stand in relation to *relata* that exist in reality, (concrete) worlds are the only entities that can be these *relata*). Bricker believes that these two arguments provide one with good reason to favour Concretism over its rivals and establish a foundation for belief in the existence of concrete possible worlds.

[Conceptual] space is a paradise for philosophers. We have only to believe in the vast realm of possibilia, and there we find what we need to advance our endeavours. We find the wherewithal to reduce the diversity of notions we must accept as primitive, and thereby to improve the unity and economy of the theory that is our professional concern – total theory, the whole of what we take to be true. What price paradise? If we want the theoretical benefits that talk of possibilia brings, the most straightforward way to gain honest title to them is to accept such talk as the literal truth. It is my view that the price is right, if less spectacularly so than in the mathematical parallel. The benefits are worth their ontological cost.

Lewis thus believes that in affirming the veracity of the framework that is provided by Concretism, one must perform a cost-benefit analysis. That is, affirming the truth of Concretism comes at a certain price. However, for those who have not been willing to pay this price (which is probably most people!),²² the alternative modal realist thesis of Abstractionism has provided a means to ground the truth of our modal locutions. It will be important to now further detail the nature of this metaphysical thesis.

3.3 Abstractionism

According to Plantinga (1974, 1980, 2003), Abstractionism is a metaphysical thesis that posits the existence of a ‘platonic realm’ that is made up of an infinite number of abstract possible worlds. More specifically, the central tenets of Abstractionism are as follows:

- (8) (Abstractionism)
- (a) *Platonism*: The totality of metaphysical reality that includes within it an infinite plurality of abstract objects.
 - (b) *Abstract Worlds*: A state of affairs s is an abstract possible world w if s is possible and maximal.
 - (c) *Actualism*: A possible world w has the special property of being absolutely actual if s is a maximal possible state of affairs that actually obtains.

²² One cost, among a number of others, is that of one having to face what has been called the Humphrey Objection – where modal statements concerning a certain entity are made true by counterparts of that entity, which seems to clash with our intuitions on the matter. For an influential statement of the Humphrey Objection, see (Kripke, 1980, 45).

- (d) *World-Properties*: An object o has a property p in a possible world w if w is actualized and includes o with p and o essentially has p if every world in which o exists, that would be actualised, includes o with p .
- (e) *Transworld Identity*: An object o exists in more than one possible world w , with an individual essence e functioning as a proxy for that entity in those worlds.

For (a), the notion of the ‘Platonism’ functions in the framework of Abstractionism – as with Concretism – as the metaphysical terrain of the totality of reality. However, unlike Concretism, in Plantinga’s (1980, 3–4) thought, this realm is one in which there exist innumerable many necessarily existing *abstract objects*. These abstract objects are identified as *Platonic universals, properties, kinds, propositions, numbers, sets, states of affairs* and *possible worlds* (Plantinga 1980, 3). The whole pantheon of abstract objects are conceived of as entities that are, firstly, *spatiotemporal* and *causally inert* – they are not denizens of space and time, and they are not the *relata* of causal relations. Secondly, they are *everlasting* – they have no beginning or end. Thus, as Plantinga (1980, 4) states, ‘there was a time before which there were no human beings, but no time before which there was not such a thing as the property of being human or the proposition there are human beings. That property and that proposition have always existed and have never begun to exist’. Secondly, abstract objects are also conceived of as *necessary features of reality* – their non-existence is impossible. Hence, as Plantinga (1980, 4) further writes, ‘Sets of contingent objects, perhaps, are as contingent as their members; but properties, propositions, numbers and states of affairs, it seems, are objects whose non-existence is quite impossible’. For illustrative purposes, we can depict the nature of the platonic realm in Figure 4 (where ‘ P ’ stands for ‘propositions’, ‘ U ’ stands for ‘universals’, ‘ K ’ stands for ‘kinds’, ‘ N ’ stands for ‘numbers’, ‘ S ’ stands for ‘sets’, ‘ SA ’ stands for ‘states of affairs’, ‘ MSA ’ stands for ‘maximal possible state of affairs’, ‘ PW ’ stands for ‘possible worlds’, ‘ PW_n ’ stands for a particular possible world, ‘Actual’ stands for ‘the actual world’, ‘ O ’ stands for a particular object (that is possibly transworld identical)).

Thus, within the platonic realm of reality, there are an infinite number of abstract objects that exist as everlasting and necessary beings. It will be important to now focus on two particular abstract objects that exist within this realm: states of affairs and possible worlds, which play a central role in (b)–(e) of (8), and its goal of providing a metaphysical basis for modality.

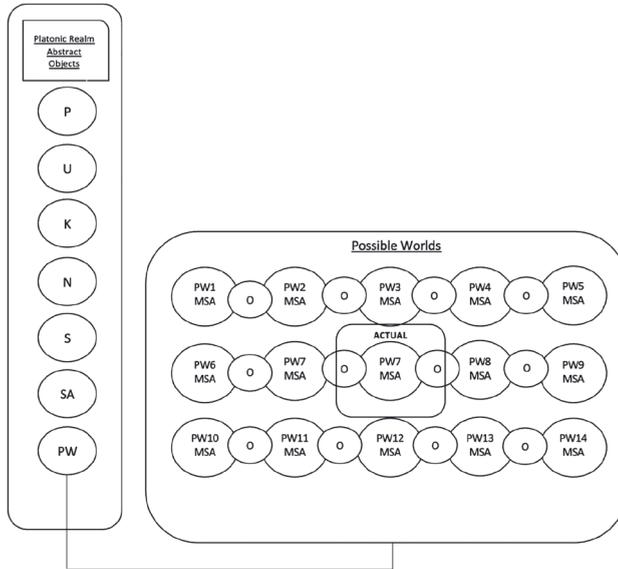


Figure 4: Nature of the platonic realm.

For (b), the notion of ‘Abstract Worlds’ expresses the fact that there exists an infinite plurality of abstract possible worlds. A possible world is an abstract object – it is conceived of as a non-spatiotemporal, causally inert entity that is grasped by abstraction – and thus, *contra* Lewis, it is not a concrete object; neither is it a mereological sum of concrete objects (Plantinga 1974). The nature of a possible world, according to Plantinga (2003), is to be conceived of simply as the way *the world could’ve been* – in other words, it involves the notion of a ‘state of affairs’. For example, *Boris Johnson being taller than eight feet* is a state of affairs, as is *Joe Biden Jr having become a married bachelor* – each of these examples is a state of affairs; however, the former is (broadly logically) possible, whereas the latter is (broadly logically) impossible. A possible world, according to Plantinga (1974, 44), ‘is a possible state of affairs – one that is possible in the broadly logical sense’. Yet, not every possible state of affairs is a possible world – as for a possible state of affairs to *be* a possible world, it must be *maximal* (Plantinga 1974). That is, for example, *Lionel Messi having brown hair* is a possible state of affairs; however, it is not a *maximal possible state of affairs* as it is not inclusive enough to be a possible world. The question now is: what are the conditions for a state of affairs to be inclusive? A state of affairs *S*, according to Plantinga, ‘includes’ a state *S** if it is not possible that *S* obtain and *S** fails to obtain. So, for example, *Neil Armstrong being the first human to walk on the moon* includes *Neil Armstrong being a human, the moon having been walked on,*

something's being walked on, and no human having walked on the moon before Neil Armstrong did (Plantinga 1974). In contrast to this, a state of affairs S 'precludes' a state of affairs S^* if it is not possible that both states of affairs obtain. Thus *Neil Armstrong being the first human to walk on the moon* precludes *Charles Conrad being the first human to walk on the moon*, as well as the state of affairs of *Neil Armstrong having never left the earth's atmosphere*. On the basis of this, one can thus conceive of the maximality of a state of affairs, as Plantinga (1974, 44) notes, as that of a state of affairs S being maximal 'if for every state of affairs S^* , S includes S^* or S precludes S^* '. Hence, a possible world is simply a possible state of affairs that is maximal. Moreover, Plantinga also takes it to be the case that a possible world is *not* to be identified with any concrete individual or set – and thus, they do not have any mereological or set-theoretic constituents (i.e. mereological parts or subsets/members). Rather, possible worlds are *metaphysically simple* – they are entities that are not composed of anything else (Divers 2007). For example, a possible world in which *Sophoniscus is the father of Socrates* is not partly constituted by the state of affairs of *Sophoniscus being the father of Socrates*, nor of the individuals Sophorniscus and Socrates or relational property of *being the father of*. In short, possible worlds do not have complex natures, but are metaphysically simple entities that are complex solely at the representational level (Divers 2007). Possible worlds are thus maximal possible states of affairs that are metaphysically simple entities. However, as there is a utilisation of the modal term 'possible' in this conception of a possible world, Abstractionism affirms a *non-reductive* conceptualisation of a possible world. In short, *contra* concretism, modality is not reduced within an Abstractionist framework, but is affirmed as a real feature of reality.²³

For (c), the notion of 'Actualism' expresses the fact that there are not (and there could not have been) *any entities that do not in fact exist*. For Plantinga, actuality is a special property (i.e. the property of *being absolutely actual*) that distinguishes exactly one possible world from all the other possible worlds – that is, amongst the plurality of possible worlds, just one of these possible worlds, is designated as the actual world – every state of affairs that it includes is actual, and thus the actual world is the maximal possible state of affairs that has the distinction

²³ Plantinga is not explicit in his written work on the metaphysical simplicity of states of affairs. However, this commitment to their simplicity is attributed to him by (Lewis, 1986, 183), (van Inwagen, 1986, 185–213) and (Divers, 2007, 82). Hence, given that this is the majority reading of Plantinga's position concerning this issue, this construal of states of affairs as metaphysically simple will be affirmed here. Interestingly, if one was to disaffirm this position – and thus affirm the complexity of states of affairs – the argument of this paper will be further supported/strengthened.

of actually obtaining.²⁴ Thus, all states of affairs are taken to exist necessarily; however, yet only some of them are actual or obtain. In Plantinga's (1974, 47) thought, the notion of obtaining for states of affairs is like truth for propositions: the proposition *Joe Biden Jr is a politician* is true; however, had things been different, it would have been a false (but existing) proposition.²⁵ In a similar way to this, a possible world *W* obtains; yet, had things been different, *W* would have been a merely possible state of affairs; there would have been such a state of affairs as *W*, although that state of affairs would not have been actual. Hence, according to Plantinga's Abstractionism, the term 'actual' is not an indexical term but instead picks out the one possible world that includes only actual states of affairs. Now, each of the other possible worlds could have been actual but are, in fact, not. However, according to Plantinga (1974, 45), it is quite clear that at least one possible world obtains, and it is equally obvious that at most *one* possible world obtains. As if one were to suppose that two worlds *W* and *W** were both to have obtained, then as *W* and *W** are distinct worlds, there will be some state of affairs *S* such that *W* includes *S* and *W** precludes *S*. Yet, if both *W* and *W** are taken to be actual, then *S* both obtains and does not obtain, which is clearly inconsistent (Plantinga 1974). Thus, within this specific framework, actualism expresses the fact that everything that there is, is actual – everything that exists in any possible world exists in the actual world. In addition to the notion of actualism, one can also adopt the further notion of *serious actualism*. Serious actualism is the view that everything whatever exists – which is the notion of actualism – in combination with the further view that no entity has properties in worlds in which it does not exist (Plantinga 1974). Stated more precisely, serious actualism is the view that necessarily, for any possible world *w*, entity *x* and property *P*, if *w* had been actual, then *x* would have had *P*, and thus if *w* had been actual, *x* would have existed (Plantinga 1974). Within the conceptual framework provided by the notion of serious actualism, one can, however, still provide truthmakers for certain modal statements concerning some non-existent objects and properties – without, however, one being committed to the existence of these non-existent objects and properties. Now, how this is so is through the use by Plantinga (2003, 13) of the notion of an *individual essence* that can serve as a 'proxy' for these

24 Plantinga does not term the property of actuality 'absolute actuality'. However, this terminology is employed here in order to emphasise the difference between having this property and the state of being relatively actual, which, as noted previously, is had by every possible world within a Concretist framework.

25 That is, given the necessity of abstract objects, this proposition would be false but not 'non-existent', as there would have been such a proposition, but it simply would not have been true.

non-existent objects and their properties. That is, if one were to suppose that it's possible that there exists an object and/or property that is distinct from any in the actual world, then what one is committed to within the framework under question, is that of an *unexemplified individual essence* being exemplified in some other possible world *W* – where an essence of an object *x* is exemplified in a possible world *W* just in case necessarily, were *W* actual, *x* would exist (Plantinga 2003, 13).²⁶ One can thus affirm the truth of a given modal statement, even within an actualist (and serious actualist) framework.

For (d), the notion of 'World-Properties' expresses the fact that objects have properties *in* worlds and essentially *across* worlds. Properties are taken here to be the type of entities that are exemplified by objects in possible worlds – where a given object has a property in a possible world if that world – if actualised – *includes* that entity having that property. More precisely, as Plantinga (1974, 47) notes, 'To say that Socrates has the property of being snub-nosed in a possible world *W*, is to say that Socrates would have had the property of being snubnosed, had *W* been actual; it is to say that the state of affairs *W*'s being actual and Socrates' not being snubnosed is impossible'. Thus, at a general level, an object exemplifies a specific property, if, and only if, in any possible world where that object has that property, if the world were to be actualised, there would be a state of affairs where the object has that specific property. In addition to concrete objects, abstract objects also have properties in worlds, such as the proposition 'Socrates is a philosopher' has the property *being true* in the actual world, which in some other possible world it lacks this property by being false. Furthermore, as Plantinga (2003, 110) notes, 'The number 9 has the property of numbering the planets in α [the actual world]; but in some other worlds 9 lacks that property, having its complement instead'. A property is thus *essential* to an object (concrete and abstract) if this object has this property in every world in which this entity exists. And, an object thus has a property *accidentally* if this object has this property but does not possess it essentially. Thus, for example, Socrates has the property of being a human essentially and the proposition 'all humans are animals' has the property of being true essentially – as both of these objects have these properties in every world in which they exist. Whereas Socrates has the property of being a philosopher accidentally, and the proposition 'Socrates is a philosopher' has the property of being true accidentally – as both of these objects have these properties in some worlds in which they exist but not all worlds. Now, among the properties that are essential to *all* objects – in addition to the properties that compose an object's individual essence – is the property of existence. Some

²⁶ More on the nature of an individual essence below.

philosophers, as Plantinga (2003, 110) notes, have ‘argued that existence is not a property; these arguments, however, even when they are coherent, seem to show at most that existence is a special kind of property’. The property of existence is thus taken to be essential to each object, for every object has existence in each world in which it exists (Plantinga 2003).²⁷

For (e), the notion of ‘Transworld Identity’ expresses the fact that one and the same object can exist in more than one world. In Plantinga’s (1974) thought, it is plausible and natural to suppose that identity can hold across possible worlds – such that the same object can exist in various different states of affairs – and thus it exists in various different possible worlds. For example, the state of affairs consisting in *Socrates being a good football player* – this state of affairs is indeed possible – and thus there will indeed be possible worlds that include this state of affairs – however, it is a state of affairs that does not, in fact, obtain – and thus it would not be a state of affairs that is included within the actual world. Thus, it is indeed plausible to suppose, if this state of affairs had obtained, then Socrates would have existed and would have been a good football player – in short, it is plausible to suppose that Socrates exists in this state of affairs. Yet, as Plantinga (2003, 73) notes, if Socrates – and other objects similar to him – exist in states of affairs, then Socrates exists in every possible world including this specific state of affairs – that is, every possible world including Socrates being a good football player is such that, had this state of affairs been actual, Socrates would have existed. Hence, Socrates exists in many possible worlds. A number of challenges have been raised against this notion of transworld identity. One important challenge is that of the *problem of transworld identification*, which goes as follows: If transworld identity is true, and thus the self-same object can exist in a number of different possible worlds, then what will be the means or criteria for one to identify that object across these different worlds? In short, how could one distinguish that object from other objects in those worlds? If a means or criteria is not forthcoming, then it seems implausible for one to posit the fact of an object existing and having certain properties across different possible worlds, as one cannot even be sure about which object one is discussing. Hence, transworld identity seems to be a non-starter. In Plantinga’s (2003, 58–62) view, however, this issue is a pseudo-problem, given the fact that one can indeed provide a criterion of identification, which centres on the notion of an individual essence. That is, in Plantinga’s mind, those things which are entitled to be called ‘individual essence’ can be conceived of as either certain *world-indexed* properties or *identity* properties – both of which an object has essentially, such that there is no world

²⁷ Importantly, however, this is not to say that every object is to be taken to be a necessary being – as a necessary being is one that exists in every possible world.

in which there exists an object distinct from the former object that has these properties (Plantinga, 2003). More fully, at a general level, an essence of an object is a property that is essentially exemplified by that object, and which entails all of that object's essential properties and isn't possibly exemplified by anything distinct from that object (Plantinga 2003, 5). Now, at a more specific level, under the first conception of an individual essence, an object x that exists in a possible world W , and has some property P , would have the world-indexed property of 'being P -in- W '. This property would be had by x alone in W – such that no other object has P in W – which renders this world-indexed property as an individual essence of x . For example, Socrates would have the world-indexed property of 'being an ancient Greek philosopher who was tried for impiety and sentenced to death for corrupting the youth in the actual world', which would thus serve as his individual essence. Under the second conception of an individual essence, x would have the primitive identity property of ' x -ness' or 'being identical to x ', which are two properties that cannot be instantiated by any other object, and as long as x exists, it will have these specific properties – which thus render these properties as an individual essence of this object. For example, Socrates has the property of *being Socrates* or *being identical with Socrates* – which we can term *Socraeity*. Socraeity is a property that is essential to Socrates, such that there is no possible world in which Socrates exists and has the complement of the property of Socraeity – that is, there is no possible world in which Socrates exists and is distinct from Socrates (Plantinga 1974). Moreover, Socraeity is such that, for any world W , any object that is distinct from Socrates would have the complement of Socraeity, as there is no possible world in which there exists an object that is distinct from Socrates but exemplifies the property of being identical with him (Plantinga 1974). Hence, *contra* the problem of transworld identification, one can distinguish Socrates from other objects on the basis of his individual essence, conceived of as world-indexed properties or identity properties.

Thus, on the basis of all of this, one can construe the notion of *de re* modality within an Abstractionist framework through the following biconditionals:²⁸

- (9) (De Re- P^*) x is possibly $F \leftrightarrow$ there is a possible world w and an object x , such that, in w , x is F .
- (10) (De Re- N^*) x is necessarily $F \leftrightarrow$ for every world, w , in which an object x exists, x is F .

²⁸ At a more fine-grained level, the objects featured in these biconditionals are to be identified as individual essences.

At the heart of this construal of *de re* modality are the notions of property possession at worlds and transworld identity – where, on the basis of these two notions, one does not have to utilise the notion of a counterpart to function as the truthmaker for these modal statements; rather, the self-same object (or, more specifically, the individual essence of that object) is the truthmaker for the modal statements made about it. Within the framework of Abstractionism, one thus has a means to ‘non-reductively’ explicate the nature of the modal structure that grounds the truth of our modal statements. At a general level, one thus can take the abstract objects of maximal possible states of affairs (i.e. possible worlds), and the individual essences of the concrete objects that exist within these states of affairs, to be *more fundamental* grounds for the modal statements and locutions that feature in our ordinary speech. This does not necessarily provide a more economical philosophical system – as with Concretism – due to the fact that the modal notions that feature in this metaphysical thesis are not being reduced to non-modal notions. Nevertheless, one is provided with a further explication of modal structure that grounds the statements that feature in our ordinary speech. For illustrative purposes, we can (again) depict this dependence and fundamentality structure at the general and more specific level in Figure 5.

Within Abstractionism, the modal structure – *now* identified as the infinite abstract possible worlds (and objects/individual essences that are (possibly) transworld identical) that are part of the platonic realm – provides a full metaphysical explanation for the truth of a given modal statement – namely, as within Concretism, by this specific statement being dependent on the existence of these possible worlds (and objects) and the fact that these worlds (and objects) ground the truth of this statement. Thus, within contemporary metaphysics, we have two alternative metaphysical theses that seek to provide a reduction or further

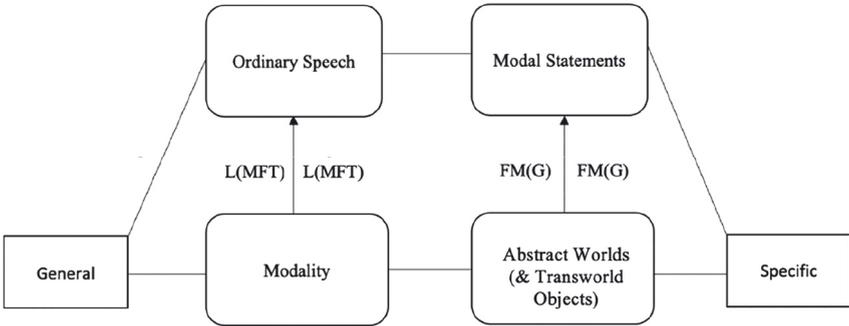


Figure 5: Modal structure (ii).

explication of the modal statements that feature in our everyday speech: Concretism and Abstractionism. Now, given our explication of these two metaphysical theses, we can also now further refine our explanatory target as follows:

- (11) (Explanatory Target*) There is an infinite number of possible worlds, identified either as relatively actual concrete objects, existing within the pluriverse, or absolutely actual abstract objects, existing within the platonic realm.

Finally, we now have before us a fine-tuned explanatory target – which we can state more succinctly as there existing an infinite plurality of ‘relatively actual’ concrete possible worlds or ‘absolutely actual’ abstract possible worlds.²⁹ However, one can now re-ask the important question of if these worlds *themselves* require a further explanation for their existence? That is, do the infinite plurality of (concrete or abstract) worlds require a fundamental explanation for their existence or are they, in fact, entities that exist without explanation – namely, they are fundamental entities, with their existence being a brute fact?³⁰ To answer these important questions, it will be helpful to now briefly explicate the *primitive* option that has been favoured by Lewis and Plantinga.

3.4 Primitivism

Focusing first on Abstractionism, it is quite clear that Plantinga affirms the primitive existence of the infinite plurality of abstract possible worlds, given that he takes a possible world to be an abstract object that has the features of existing everlastingly – which is that of them existing *without beginning and without end* – and necessarily – which is that of their *non-existence being impossible*. In further emphasising the latter feature of an abstract object, it is quite clear that possible worlds exist within the class of necessary beings that populate the platonic realm, based on the fact that an object exists in a possible world if, and only if, it is not possible that that world be actual and the object fails to exist. Therefore, it follows from this that *every possible world exists in every possible world* and hence also in itself. Hence, as Plantinga (2003, 195) notes, the vast plurality of worlds are complete and world invariant: *each of the worlds exists necessarily, and there could not have been a possible world that is distinct from each of the worlds that*

²⁹ For brevity, the terms ‘relatively actual’ and ‘absolutely actual’ will now be suppressed and included within ‘concrete possible world’ and ‘abstract possible world’.

³⁰ In the following sub-section, there will be an interchanging between the term ‘brute’ and ‘primitive’ without any change in meaning.

do in fact exist. Thus, these entities, as with other abstract objects, *seem* to lack a further explanation for their existence, as Plantinga (1980, 4–5) asks

did he [God] then create these things? Presumably not; they have no beginnings. Are they dependent on him? But how could a thing whose non-existence is impossible – the number 7, let's say, or the property of being a horse – depend upon anything for its existence?

Though Plantinga focuses here on properties and numbers, it is evident, in his thought, that the everlasting and necessary abstract objects exist without further explanation for their existence. In short, the existence of the infinite plurality of abstract possible worlds within the platonic realm is primitive.

Turning our attention now to Concretism, Lewis seems to also express the position that the existence of the infinite plurality of concrete possible worlds that make up the pluriverse lack an explanation. More specifically, Lewis seems to *implicitly* and *explicitly* affirm the primitive existence of the infinite plurality of worlds. There is an implicit affirmation of this position by Lewis, due to the fact that he limits the range of necessarily existing entities in the pluriverse to either that of sets – that exist from the standpoint of every world – or universals – that exist in a privileged sense as entities that can exist at more than one world, with it, therefore, being possible for these entities to exist at all worlds (Lewis 1983, 345, n.5). Yet, as sets and universals are (plausibly) abstract objects, they cannot ‘causally’ affect the worlds in which they exist at or at the standpoint of.³¹ Hence, these two types of entities cannot serve as the source of the existence of the infinite plurality of worlds, which is simply to say that these two entities cannot serve as candidate fundamental explanations for the existence of the infinite plurality of worlds that make up the pluriverse (nor can they account for one of these worlds being actual as well). Thus, there are no other entities that can, and do, exist

³¹ I use the term causal here in a ‘wide sense’ that includes within it relations of grounding (which are nevertheless identified as a form of causation: metaphysical causation). Furthermore, Almeida (2017a, n. 31), who is a prominent Theistic Modal Realist, has taken universals to be entities that can enter into causal relations, as he states that ‘since something’s being red or yellow, for instance, can cause someone to notice it’. However, this assumption needs to be argued for. Especially given the fact that philosophers across the board – such as individuals like Lowe (2006), who affirms the existence of universals, and individuals like Heil (2003) and Ehring (2011), who deny the existence of universals – each take tropes (or modes) – conceived of as ‘abstract particulars’ – to be the only entities that can fulfil the role of being the world’s basic causal *relata*. That is, causation is taken to be a relation between particular entities, and thus, given this, universals (if they are held to exist) are taken to be entities that cannot enter into causal relations – in short, they are causally inert entities. For an interesting argument for the need to posit the existence of tropes (or modes), in addition to that of universals, in order to account for the particularity of causation in the world, see (Lowe, 2006, 15).

across (or at the standpoint of) all worlds that can fulfil the role of being the source of the existence of the infinite plurality of worlds.

Furthermore, there is an explicit affirmation of this position by Lewis (i.e. that the existence of the infinite plurality of worlds is a brute fact) based on the fact of him taking the existence of these worlds to be a necessary truth. More specifically, as Lewis (1986, 73) writes, ‘there isn’t any world where there’s nothing at all. That makes it necessary that there is something. For it’s true at all worlds that there is something’. Within the pluriverse, it is a necessary fact that there is something. Yet, Concretism doesn’t permit the existence of *non-concrete possible worlds*; thus, it will be necessary truth that this ‘something’ is a concrete world. However, given the Principle of Plenitude (i.e. the Principle of Recombination) as expressed (again) by Lewis, absolutely every way that a given world could be is a way that some world is. Thus, there will be an infinite plurality of concrete possible worlds that correspond to a way that a given world could be. And the existence of this infinite plurality of worlds will thus be a necessary fact. Given their necessity, each of the infinite plurality of worlds will *not* have an explanation of their existence, as Lewis (1986, 73–74), in expressing a similar point, writes,

How bad is this? I think the worst of it is the fear that I might offer to explain why there is something rather than nothing, just by saying that this is a necessary truth. But don’t fear; I do not think that would be an explanation. For an explanation, I think, is an account of etiology: it tells us something about how an event was caused. Or it tells us something general about how some, or many, or all events of a certain kind are caused. Or it explains an existential fact by telling us something about how several events jointly make that fact true, and then perhaps something about how those truthmaker events were caused. So I think there is nothing I might say that could count as explaining why there is something rather than nothing; and that includes saying, truly, that there is no world where there is nothing.

The infinite plurality of concrete possible worlds that make up the pluriverse will thus lack an explanation of their existence. That is, with the abstract possible worlds of Abstractionism, the concrete possible worlds exist as ungrounded entities – which *must* indeed be the case, or these worlds will have an explanation of their existence. Hence, as ungrounded entities, the infinite plurality of abstract or concrete possible worlds are thus *fundamental* entities whose existence is a *primitive* or *brute* fact. We can bring both of the metaphysical theses of Lewis and Plantinga together and call it the ‘Primitivism Thesis’ (hereafter, Primitivism), which we can state succinctly as follows:³²

³² Though Plantinga is taken here to be an individual who defends the Primitivism thesis in his (1980) and (2011) work, he does identify the abstract objects within the Platonic realm to be divine thoughts. This identification is not made in any other major work on modal metaphysics, such

- (12) (Primitivism) There is nothing in virtue of which the infinite plurality of concrete or abstract possible worlds exist.

According to Primitivism, the entities that feature in our explanatory target *lack* an explanation of their existence – that is, in other words, they are themselves absolutely fundamental, and thus facts about their existence are primitive and/or brute facts. Theism will thus be construed as an ‘anti-primitive’ candidate fundamental explanation – where an explanation is anti-primitive in this context if it takes there to be a further, deeper explanation for the existence of the concrete and abstract possible worlds – and will be assessed for its veracity in light of this alternative option of there not being an explanation of our explanatory target.

Now, as noted above, our assessment will be performed by assessing Theism and Primitivism according to the abductive criteria that were introduced in the previous section. Importantly, however, when one is considering explanations (or explanatory stopping points) of the existence of *all of* the entities within the pluriverse or (parts of the) platonic realm, each of these hypotheses will be of enormous scope.³³ Therefore, unless we are to dismiss these and all other potential fundamental explanations, Criterion (iii) will need to be left out of our assessment. Thus, Theism and Primitivism will both need to be assessed by Criterion (i), (ii) and (iv), which boils down to one of our candidates for a fundamental explanation (or explanatory stopping point) of our explanatory target: Theism and Primitivism, being most likely the true explanation (or stopping point), if it is the simplest explanation, fitting with our background knowledge, which predicts the existence of the infinite plurality of concrete and abstract possible worlds that make up the pluriverse and platonic realm, when we would not otherwise expect to find them. Given this framework, the exposition of our explanatory target that has been made, and the brief unpacking of the nature of Primitivism, it will be important to

as his (2003) collection of papers and his metaphysical *magnum opus* (1974) work. Thus, I will continue to take him to be a defender of the Primitivism thesis, though nothing relevant to our analysis hinges on this assumption. Furthermore, in selecting Lewis & Plantinga’s Primitivism as one alternative way for one to account for our explanatory target, it does not mean that one is also committed to there not being any other potential alternative Concretist and Abstractionist explanations that can explain our explanatory target – as there surely can be. Rather, this selection is made here because, at the current moment, there are not any other *viable* explanations available. Thus, till the time comes when these explanations are available, we can view Lewis and Plantinga’s Primitivism as being the only viable alternative to Theism that is currently on offer. For an alternative version of Concretism, see (McDaniel 2004) and (McDaniel 2006). And for an alternative version of Abstractionism, see (Adams 1974).

33 I add the clause ‘(or explanatory stopping points)’ to allow Primitivism, which is not an explanation, to be included within our framework.

now turn our attention to detailing the nature of Theism, and then assessing both candidates for a fundamental explanation (or stopping point) for our explanatory target, according to our abductive criteria.

4 Explanatory Analysis

4.1 Nature of Theism

The theistic explanation centres around the simple claim that ‘there is a God’. This claim is a personal metaphysical explanation – it seeks to provide an explanation that invokes the powers, beliefs and intentions of a personal agent – and it is a claim that is at the heart of the major theistic world religions such as Judaism, Christianity, Islam and Sikhism. Now, there are various ways to construe this particular claim; however, the specific way that it will be construed here is as follows:³⁴

- (13) (Theism) There is a God, identified as a metaphysically simple, omnipotence-trope.

This specific rendering of Theism centres around the notion of a ‘powerful trope’ – a *powerful abstract particular nature of a modifier or modular kind* – which has been introduced and defended by various ‘trope theorists’ such as Williams (1953), Campbell (1990), Maurin (2002), Fisher (2018, 2020) and Molnar (2003), among others. In breaking this concept down in a stepwise manner, we can understand that: first, a trope is *abstract*, not in the sense that it lacks spatio-temporality, but in the sense that it is ‘less than its content’ and does not ‘exhaust its plime’ – in short, multiple tropes can be co-located together to form a compresent bundle. For example, a shape-trope that a table possesses is abstract because it does not

³⁴ In Swinburne’s (2004, 93–96) conception of Theism, God is, amongst other things, an essentially, everlastingly omnipotent, bodiless spirit. This conception of God has been challenged by individuals such as Philipse (2012, 205), who argues that the notion of a bodiless spirit fails to fit with our background knowledge concerning the type of entities that are taken to exist in neighbouring fields. Given this issue, Criterion (ii) is not met by Swinburne’s conception of Theism. However, as explained previously, Swinburne (2004, 66) does not see Criterion (ii) as being overly important for explanations of a wide explanatory scope, and thus does not see this to be a problem. Nonetheless, the present construal of God does not succumb to this issue, given the widely held assumption amongst philosophers concerning the existence of tropes, and thus Criterion (ii) can be met by Theism so construed. This widely held assumption will be further explained below.

exhaust its content, as other tropes, such as a colour-trope and a mass-trope, are also collocated with the shape-trope by occupying the same content (i.e. the table). However, in contrast, the table would be *concrete* by itself *exhausting its content* and thus not allowing another table (or object) to also occupy this content (Williams 1953). Second, a trope is particular in the sense that it can have a distinct duplicate – in other words, Leibniz’s Law (i.e. the identity of indiscernibles) fails to hold for it.³⁵ That is, for properties as universals, the Law holds, in that exactly similar entities (i.e. universals) are identical (i.e. if universal x and universal y are indiscernible, then $x = y$). Whereas for particulars (e.g. tropes), the principle does not hold, as exactly similar entities can be distinct (i.e. if trope x and trope y are indiscernible, then $x \neq y$). For example, a shape-trope is particular because it is possible that there is a duplicate of this shape, that is, an entity that is exactly similar, but also distinct from this shape. In short, a trope is particular if it can have a duplicate. Third, a trope is its *intrinsic (qualitative) nature*, in that it does not have, or possess, a nature of its own; rather, it is combinatorially intrinsic in the sense that the nature of a trope is invariant under the scenarios in which the given trope is alone or accompanied (Alvarado 2019, 554). However, the modal invariance of a trope, unlike other entities, is not grounded upon the possession of an intrinsic nature, but that of it *being* its intrinsic nature – it is numerically identical to it. There is nothing more to a trope than its nature, and thus, as noted by Maurin (2018, §2.2), tropes, at a general level, ‘have no constituents, in the sense that they are not ‘made up’ or ‘built’ from entities belonging to some other category’. Tropes are thus primitively qualitative and irreducible entities – they lack proper parts,³⁶ and thus are metaphysically simple entities.³⁷ Fourth, a trope can come in two forms: as a modifier or as a module trope. The central difference between a modifier trope and a module trope is that of the former being a singly (or minimally) *characterising property*, whilst the latter is a singly (or minimally) *charactered* property in a ‘stretched’ (or analogical) sense – it is a ‘propertied thing or object’, where an object is a countable, property-bearing particular that has determinate existence and identity conditions and is not borne or possessed by anything else.³⁸ In other words, a modifier trope is a *property* that does not *exemplify* this character, but simply bestows it upon (i.e. ‘makes’) something else to be charactered in that specific way. Thus, for example,

35 Leibniz’s Law, which is often conceptualised as the principle of the indiscernibility of identicals, is conceived of here as its converse – the principle of the identity of indiscernibles, which can be stated formally as such: $\forall \varphi(\varphi(x) \leftrightarrow \varphi(y) \rightarrow x = y)$.

36 More on the nature of a proper part below.

37 More on the nature of metaphysical simplicity below.

38 I leave the account of analogy here undefined.

a particular object is spherical in virtue of its modifier trope, which ‘spherises’ that object by simply making *it* spherical without it sharing in that character as well. The character grounding provided by a modifier trope is thus *de novo* (or *sui generis*) (Garcia 2015a). Whilst, a module trope is an object that *exemplifies* the character that it grounds (i.e. is self-exemplifying). Thus, for example, a particular (thickly-charactered) object is spherical and red in virtue of its module tropes, which are themselves spherical and red (i.e. exemplify sphericity and redness), and together (compresently) are *parts* (or constituents) of that object. A module tropes’ character grounding, rather than being *de novo*, can thus be taken to be some type of parthood (or constitution) relation (Garcia 2016). Furthermore, an additional distinction between modifier and module tropes is the role played by these types of tropes in causation. At a more specific level, it is solely module tropes, rather than modifier tropes, that can play any direct role in causation. As, for example, a modifier hotness trope cannot fulfil the role of being the direct cause of a burn mark that an individual has, as it is not itself hot; something else must thus be the direct cause of the burn mark (Garcia 2015a, 643). Modifier tropes, in a similar manner to universals, are thus *causally inert*. However, the modular view does not have this issue, given that module tropes are self-exemplifying entities, resulting, in our example above, in a modular hotness trope being able to be the direct cause of the burn mark. Therefore, it is module tropes, and not modifier tropes, that are uniquely suited to be the basic terms of causation (Garcia 2015b). Lastly, a trope, following Molnar (2003), is powerful in at least five ways: it is, first, *directed* – in that a powerful trope is directed towards some characteristic and distinctive manifestation. Second, it is *independent* – in that, a powerful trope is ontologically independent of its manifestations; that is, it can exist when it is not being manifested. Third, it is *actual* – in that a powerful trope is an occurrent feature of the object that possesses it. Fourth, it is *intrinsic* – in that, a powerful trope is intrinsic to its bearer.³⁹ Fifth, it is *objective* – in that the existence of a powerful trope is not dependent on the existence of any conscious, observing minds.

In addition to these five characteristics of the powerfulness of a trope, one can also conceive of a trope as ‘multi-track’ – which is that of it being capable of bringing about distinct ‘manifestation types’ (i.e. different types of effects), and it often does this in conjunction with other powerful tropes. One way to understand the outworking of this is through the notion of a *threshold* that has been introduced by Mumford and Anjum (2010) – where a given effect occurs

³⁹ We can assume the notion of intrinsicity noted above.

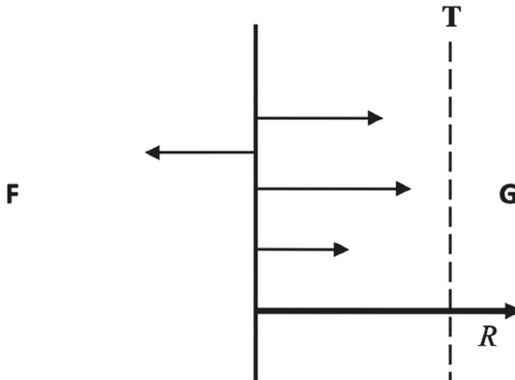


Figure 6: Powers modelled as vectors.

when certain powers have accumulated to reach the requisite threshold.⁴⁰ This accumulation can then be plotted as vectors which, according to Mumford and Anjum (2010, 145), ‘is a useful way of modelling powers because, like powers, they have a direction – the possible manifestation the power is for – and they have a strength or intensity, indicated by the length of the vector’. This would thus be depicted on a one-dimensional quality space with F and G representing two possible manifestation types of some accumulated powers. For example, F could be the property of being cold and G could be the property of being hot, as illustrated by Mumford and Anjum (2010, 146) in Figure 6 (where ‘T’ is the threshold and ‘R’ is the resultant effect).

In this illustration, for one to calculate the final effect, one has to take into account the strength and direction of each individual vector with the resultant vector R, representing the fact that an effect is caused when the powers under question have accumulated to reach a certain point in which that effect is triggered (Mumford and Anjum 2010). In sum, a trope, of a modifier or modular kind, is thus powerful in that it fulfils the roles of *directedness*, *independence*, *actuality*, *intrinsicity* and *objectivity*. And one can understand the effects of a multi-track powerful trope, in a ‘fine-grained’ manner, through the utilisation of the notion of a *threshold* and plotting *vectors*.

Taking this concept of a powerful module trope into account, and applying it within a theistic context, we can posit that God is, first, abstract in the sense of him having the trait of being ‘less than the including whole’ – God does not

⁴⁰ In contradistinction to this, one could hold (as some philosophers do) to the conception of the powerfulness of a trope as ‘single-track’ – which is that of a given trope only having one manifestation type.

exhaust his ‘content’ or ‘plime’ (or is less than his ‘content’ or ‘plime’) – where, in assuming Christian Theism, we take this content or plime to be the Trinity as a whole and its location – as its content or plime also includes the possibility of other tropes being collocated with him (i.e. the Son and the Spirit), which results in him not exhausting either of these things – in short, wherever God is located there are other tropes that are located there with him. Second, God is *particular* by him failing to abide by Leibniz’s Law – as, in assuming Christian Theism again – there is the possibility of the existence of entities – duplicates, identified as the Son and the Spirit – that are exactly similar in their intrinsic properties (i.e. their nature) to him, yet are numerically distinct from him. Third, God is identical to his qualitative nature – he is the specific character that he has, which is that of him *being omnipotent*. God’s nature is thus intrinsic to him, not in the sense of him possessing a further intrinsic ‘property’, but simply that of him being numerically identical to this nature. Fourth, God is a *module trope*, rather than a modifier trope, which is that of him being a maximally-thinly characterized object – a property in an analogous sense (i.e. a property*) – that is self-exemplifying and, in assuming Christian Theism again, serves the role of bestowing this characteristic upon the Trinity which he constitutes. Moreover, since God is a trope of a modular kind, he plays a direct role in causation and is thus a basic term of a causal relation. God is thus identical to a single module trope, which can be illustrated in Figure 7 as follows:

Moreover, as a module trope, God is powerful in five ways: he is, first, *directed* – in that God (or his action) is directed towards some characteristic and distinctive manifestations, such as that of creating or sustaining the universe. Second, he is *independent* – in that God is ontologically independent of his manifestations;

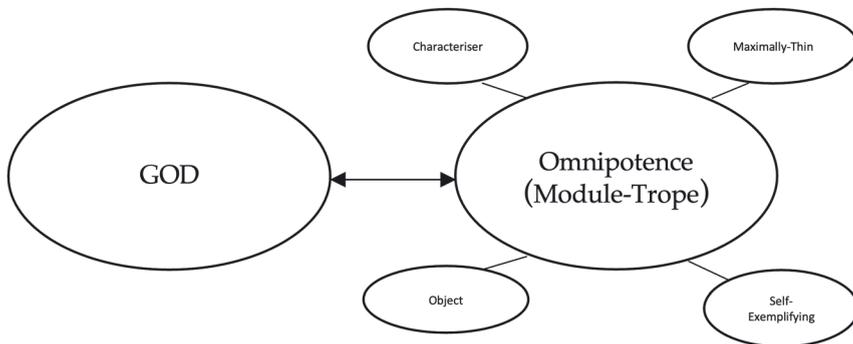


Figure 7: God and module trope identity.

that is, he exists when his power is not manifested.⁴¹ Third, he is *actual* – in that God is an occurrent feature of the object that possesses him: the Trinity. Fourth, he is *intrinsic* – God is intrinsic to his bearer, which is, again, the Trinity.⁴² Fifth, he is *objective* – in that the existence of God is not dependent upon the existence of any conscious, observing minds. God, as a module trope, is thus powerful in that he fulfils the roles of *directedness, independence, actuality, intrinsicity* and *objectivity*. However, he does this without any of the limitations that certain other powerful module tropes may have. In other words, God is an *unlimited* powerful trope, in that he is *multi-track* – he is cable of producing distinct manifestation types – yet he can do this *without any limitation except for logic*. One way in which one can further understand the limitlessness of the powerfulness of God is through the utilisation of the notion of a threshold and a vector depicted on a one-dimensional quality space with F and G representing two possible manifestation types stemming from God’s action. For example, F could be the property of resting on the ground and G could be the property of being suspended in the air, which can be illustrated in Figure 8 (where ‘T’ is the threshold and ‘R’ is the resultant effect).

In this illustration, for one to understand the effect brought about by God – which, is in this case, is to cause something to be suspended in the air – it is important to understand that this is *not* produced by an aggregation of operative powers that have reached a certain threshold for the effect. Rather, God, in all cases when he exercises his power, is *unopposed* and does not require other powers to reach a threshold. In short, God can bring about *any* effect – and thus reach the needed threshold for the occurrence of a given manifestation type –

⁴¹ Though in the grounding of the non-fundamental entities that fill up the layered structure of reality, God’s power will not move from inactivity to activity but, instead, would always be manifested, given that this grounding act will be a necessary action that stems from God’s perfect goodness. More on this below.

⁴² As Christian Theism is being assumed here, God is taken to be a ‘part’ of the Trinity and thus is borne *by*, and works *through*, the Trinity (i.e. in cooperation with the Son and the Spirit). This conception of the Trinity assumes the notion of the ‘monarchy of the Father’ – the teaching that God is numerically identical to the Father alone – which is contrary to the common position that holds to God being numerically identical to the Trinity. The difference between these positions is more than a linguistic issue as proponents of the monarchy of the Father will take the existence of the Father to be the basis for Christian Theism being monotheistic – as there is ‘one Father’ there is ‘one God’ – whereas proponents of the common position would take the existence of the Trinity to be the basis for Christian Theism being monotheistic – the ‘unified collective’ (i.e. the Trinity) is the ‘one God’. For a further philosophical explication of the notion of the monarchy of the Father and its application to the Trinity, see (Sijuwade 2021b).

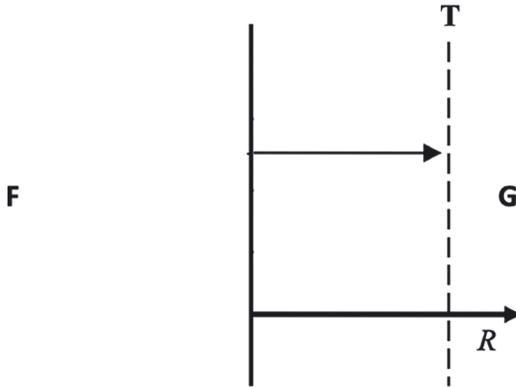


Figure 8: God's powerfulness modelled as a vector.

without limitations from anything – aside from logic. God is thus a single omnipotence (module) trope – which we can term an ‘omnipotence-trope’ for short.

Now, as an omnipotence-trope, God is a personal entity – a *personal* module trope – due to the fact that for him to exercise his omnipotence, he must be an entity that has a rich form of consciousness that enables him to perform a range of actions that are solely limited by logic. Thus, to ward off a potential objection that can be raised here, conceiving of God as a trope does not rob him of this personhood, given that he is a trope of a modular nature (i.e. a property*). Furthermore, given his omnipotence, God would be an entity that is unlimited in knowledge, presence, freedom and goodness. That is, it follows from his omnipotence that God would, firstly, be *omniscient* – he would know of all true propositions (concerning the past and present), that they are true – as, if he is to be able to exercise his omnipotence, he would need to know the nature of the alternative actions that are dependent upon what occurred in the past and what is presently occurring. Secondly, being omnipotent and also omniscient, God would be *omnipresent* – he would be cognizant of, and causally active at, every point of space – and thus would be present to all existing things through his knowledge concerning them and his power to act upon them. Thirdly, being an omnipotence-trope, he would also be *perfectly free* – he would be free from any non-rational influence determining the choices that he makes – as if he is to be able to exercise his power in any logically possible way, then his power must operate without any causal limitation or hindrance. Fourthly, being omniscient and perfectly free, God would also be *perfectly good* – he will always perform the best action (or kind of action) if there is one, many good actions and no bad actions. That is, given God's omniscience, he would know the nature of each available action that he can choose from and thus would possess knowledge of whether each action is

good or bad, or is better than some incompatible action. Moreover, in recognising an action as good, God would have some motivation to perform that action, and in recognising an action as being better than another action, God would have an even greater motivation to perform it (Swinburne 2016). Hence, given his perfect freedom, if God is situated in a scenario in which there is a best possible action (or best kind of action) for him to perform, then God will always perform that action (or kind of action), and if there is no best action (or kind of action), then God will perform a good action and no bad actions.⁴³

These are the attributes – omniscience, omnipresence, perfect freedom and perfect goodness – that are derivable from the supposition that God is an omnipotence-trope. However, in construing God as a module-trope, we can also take him to be *metaphysically simple*, given the non-composite and irreducibility of a trope. And so, in conceptualising God in this particular way, we can see that the derivable attributes of God – unlike Swinburne, who takes these attributes to be related to God (and each other) by an ‘entailment relation’ – are in fact related to God (and each other) by a relation of ‘numerical identity’.⁴⁴ More specifically, according to the notion of metaphysical simplicity, God is non-composite and irreducible in the sense of him lacking *proper parts* – where a proper part is a portion of an entity that is numerically distinct from it. Thus, by taking God to be metaphysically simple, there is no portion of God that is numerically distinct from him. God is a being who intrinsically within himself does not have any division or ontological composition – be it spatial, temporal or metaphysical composition – God must be such that he does not have any sort of complexity involving composition. So, the denial of metaphysical complexity in God is thus also a denial of him possessing *any* properties as well. More specifically, God does not exemplify any numerically distinct properties (i.e. proper metaphysical parts). Since

43 Whereas in recognising an action as bad, God would have no motivation to perform it

44 As God has ‘attributes’ (or ‘characteristics’), but these attributes (or ‘characteristics’) are not to be conceived of as ‘properties’, one can ask what the nature of these entities is? One way is to conceive of these attributes as ‘aspects’ – qualitative differing, yet numerically identical particular ways that an entity is. Construing these entities in this way enables the primary objections against the cogency of the notion of metaphysical simplicity to be put to rest – as God is taken to bear (qualitatively differing) ‘divine aspects’, rather than ‘divine properties’, which enables God’s power, knowledge, goodness, etc., to be numerically identical to him and each other – as aspects are numerically identical to their bearers and one another – whilst still maintaining a qualitative distinction between them – as aspects qualitatively differ from their bearers and one another. God thus has multiple, qualitatively differing aspects that are ‘improper parts’ of him (i.e. numerically identical to God) rather than ‘proper parts’ of him (i.e. numerically distinct from God). For reasons of space, this account will not be further detailed. However, for a further explanation of this account, see (Sijuwade 2021a).

if God were to exemplify these properties, he would be dependent upon them in order to be what he is. Yet, as God cannot be dependent in specific this way – given that he is omnipotent – he thus must not be the bearer of any properties. Rather, any intrinsic property ‘attributable’ to God must be *numerically identical* to him. For example, if the intrinsic property of goodness is attributed to God, then one is not properly attributing to him an ontologically distinct property that he exemplifies. Rather, God is instead taken to be identical with his goodness (and all the other properties that are attributed to him as well). Moreover, given that God is identical to each of his attributes, one must also infer that his attributes are identical to each other due to the transitivity of identity. Thus, God’s identity with his goodness *and* his power entails the fact of his goodness being identical *to* his power (and, again, for all of the other properties that are attributed to him). Therefore, on the basis of God’s metaphysical simplicity, there is, firstly, no numerical distinction between God and his attributes and, secondly, there is no numerical distinction between each of God’s attributes as well, as can be seen in Figure 9 (where the double-headed arrows represent a numerical identity relation).

Theism thus postulates the existence of one, metaphysically simple (and personal) module trope: God, who has the single character of omnipotence and is numerically identical to each of the attributes of divinity that are rightly predicated of him. So construed, God is a *fundamental entity*, by his metaphysical simplicity and omnipotence rendering him as an explanatory stopping point – his non-compositeness and irreducibility would thus not require him to be an output of a grounding relation, and by him possessing the ability to perform any logically possible action, anything that exists will be by him willing, or permitting, it to exist. Therefore, *if* God exists, he is rightly understood as a metaphysically simple, omnipotence trope that exists fundamentally.

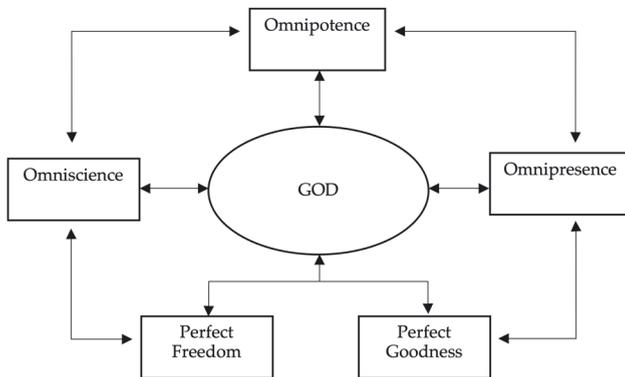


Figure 9: God and attributes identity.

This is the nature of Theism. However, one may ask the important question of how this entity that we call God fits within the metaphysical frameworks that have been detailed above? In other words, and in a more direct manner, where is God located in the pluriverse and the platonic realm? Well, for the latter issue – God’s existence within the platonic realm – as God is a concrete object within the Abstractionist framework – as he is not causally inert – he is not located within the platonic realm, but can simply be taken to be an entity that exists outside of it – yet, as will be noted below, he stands in a certain ‘causal’ (or ‘grounding’) relation to the entities within the platonic realm. Thus, in short, God exists outside of the platonic realm but is related (in some manner) to the entities within the platonic realm. Now, for the former issue (i.e. God’s existence within the pluriverse), one can conceive of God as existing in the non-individual category: God exists within the domain of abstract entities – that is, God’s mode of being is him existing with the *status* of an abstract entity. More specifically, within the pluriverse, the domain of abstract entities includes the category of non-individuals, with the instances of this category each existing at *the standpoint of a possible world* – where an entity exists from the standpoint of a possible world if, as noted previously, it ‘belongs to the least restricted domain that is normally. . . appropriate in evaluating the truth at that world of quantifications’.⁴⁵ God does not exist wholly or partly *at any world* – and thus is not conceived of within this mode of existence as a possible or impossible individual. Rather, as with other necessary abstract entities (i.e. pure sets), God exists from the standpoint of *every world*. One can thus take God to be *among* the objects that exist from the standpoint of each world. In other words, God has the *same ontological status* as abstract entities – without, however, being like these objects in all respects.⁴⁶ Thus, in short, in locating God within the

45 Cameron (2009) was the first individual to identify God as a non-individual that exists from the standpoint of every world, with Almeida (2017a, 2017b) further developing Cameron’s position. The following proposal, however, is not subject to the criticisms that have been raised against this identification by Sheehy (2009) and Collier (2019, 2021), as, first, the notion of Isolation is not present in this version of modal realism, and, second, God is not taken to be causally related to creation *from* this standpoint (or way of being) – both of which they believe leads to modal collapse. Rather, in this version of modal realism, worlds are indeed causally related, and it is in God’s other way of being: as a possible individual that exists *at* a possible world, that God is ‘causally related’ to created reality, and thus there is no possibility of modal collapse. However, in a recent article Sijuwade (2021c) has provided a way for God to be located at the standpoint of every world and within every world – as a multilocalized entity. This way utilises a modification of Lewis’ Concretism. However, as this modification is not employed in this article, we will simply take God to be solely located at the standpoint of every world.

46 This is important as God is not identified in this framework *as* an abstract entity, but simply as an entity that has the *same status* as an abstract entity – namely, existing from the standpoint of a possible world. Collier (2021, 59) has helpfully shown that it is not necessary (or sufficient)

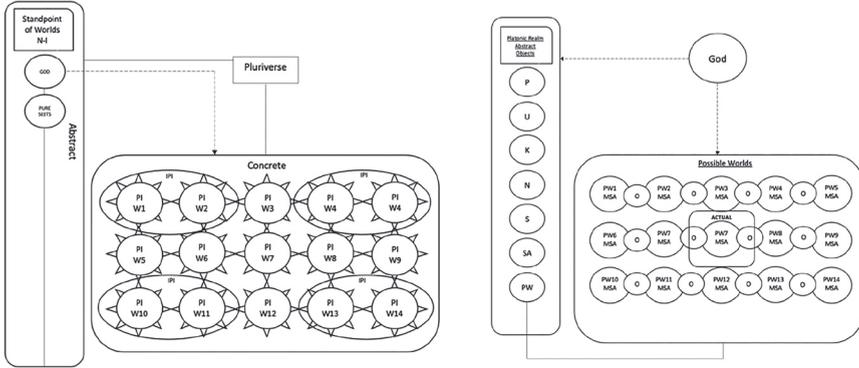


Figure 10: Nature of the pluriverse and platonic realm (i).

pluriverse, one can thus take God to be a non-individual and thus exist, and be active from, the standpoint of every world. From this standpoint, God has the same *status* as an abstract entity, yet can serve the role of grounding each and every world.⁴⁷ It will be helpful to now illustrate these two options in Figure 10 (where, again, for the left image, all is as before with solely the ‘dashed arrowed line’ now representing a grounding relation between God and the concrete possible worlds, and, for the right image, again all is as before, with solely the ‘dashed double-arrowed line’ now representing a grounding relation between God and all the abstract objects (which would include the abstract possible worlds).

So, we have detailed the nature of Theism and found a place for God within the pluriverse and (outside of) the platonic realm; it will thus be helpful to now turn our attention to assessing Theism and Primitivism according to our abductive criteria and in light of our explanatory target. That is, *if* Theism (or Primitivism) is to be deemed *the* fundamental explanation (and terminus in explanation) for the existence of the infinite plurality of concrete or abstract possible worlds within the pluriverse and platonic realm, we must assess the manner in which this explanation fulfils our abductive criteria. To this task, we now turn.

for an entity *to be* an abstract entity (with all the features of it), simply because it exists from the standpoint of a given world, as Lewis (1986, 83) himself allows *impure sets* to exist *at* a possible world – and not from the standpoint of a possible world – yet, these entities are abstract rather than concrete entities.

⁴⁷ This position here is cogent, given that grounding is synchronic, rather than diachronic.

4.2 Assessment of Theism & Primitivism

For Criterion (i), Theism has predictive power, in respect to our explanatory target, to the extent to which we can attribute to God an intention to bring about the existence of the infinite plurality of worlds. Plausibly it is the *best kind of action* for God to bring about this wide variety of entities, given the unique goodness of this action. Specifically, the performance of this action is a unique good due to the holding of two principles: the *Diffusiveness Principle* and the *Principle of Plenitude*, which, brought together, we can call the ‘Goodness Principle’ and state it as follows:

- (14) (Goodness) (a) *Diffusiveness*: Goodness is necessarily diffusive of itself.
 (b) *Plenitude*: No genuine potentiality can remain unfulfilled.

For (a) of the Goodness Principle,⁴⁸ at a general level, goodness requires something other than itself as a manifestation of itself. Hence, a good being will inevitably bring about other good things. Thus, as it is better to exist than not to exist – existence is a good thing – God, as Kretzmann (1991, 223) writes, ‘necessarily (though with the freedom associated with counterfactual choice) wills the being of something other than himself’. In other words, as perfect goodness is an essential attribute of God *and* self-diffusiveness is essential to goodness itself, the existence of other entities outside of God will be an inevitable consequence of God’s nature. Restating this within our metaphysical context, God – who is perfectly good – must diffuse his goodness by ‘grounding’ the existence of all things outside of himself.⁴⁹ The existence of other entities will be the necessary

48 Though the Diffusiveness Principle and the Principle of Plenitude are not currently guiding principles within contemporary metaphysics, they have a storied history – as shown by Kretzmann (1991) and Lovejoy (1936) that, for the former principle, we have them stemming from the work of Plato, through Augustine and Aquinas, and culminating in the work of Bonaventure, and, for the latter principle, we have it stemming from the work of Epicurus and Augustine, through Aquinas, Spinoza and Kant, and culminating in the work of Leibniz – and so, given the weight of tradition, they should not be dismissed without argument. Furthermore, unlike some other prominent principles within the field of contemporary metaphysics (such as that of the principle of unrestricted composition), these principles do not clash with our intuitions and do not entail some further problematic metaphysical theses. Hence, one should adopt these principles unless there are good reasons not to – note, the lack of interest in these principles is not a successful rebutting or undercutting defeater of them!

49 By saying here that God ‘grounds’ the existence of things outside of himself, which, as noted below, would be primarily that of the infinite plurality of worlds that make up the pluriverse and

result of God's intention to produce good things. Thus, God's action of 'grounding' the existence of other entities is a product of his nature that stems from him necessarily, yet wilfully, spreading his goodness in this creative act.⁵⁰ However, with (b) of the Goodness Principle, we see that this diffusion of God's goodness will not be achieved by him simply grounding a limited range of possible entities; rather, Diffusiveness requires *that* God ground other entities outside of himself, and Plenitude tells us *what* (number and variety of) entities God would ground, as this principle requires that no possible entity can remain as a potentiality, as Lovejoy (1936) notes in expressing this principle:

not only the thesis that the universe is a *plenum formarum* in which the range of conceivable diversity of *kinds* of living things is exhaustively exemplified, but also any other deductions from the assumption that no genuine potentiality of being can remain unfulfilled, that the extent and the abundance of the creation must be as great as the possibility of existence and commensurate with the productive capacity of a 'perfect' and inexhaustible Source, and that the world is the better the more things it contains... the existence of all possible beings at all times is... an implicate of the divine nature

In line with Lovejoy, and in restating this within our modal framework, there is a specific metaphysical relationship between value and plenitude – namely, whatever exists (i.e. the number, variety and diversity of kinds of worlds, states of affairs and *possibilia*) must be proportionate to the value of the source of their existence – with a *maximally valuable* source leading to a *maximisation* of the number, variety and diversity of kinds of *possibilia* or *states of affairs*. Hence, as God is the perfect (and maximal) source of whatever exists, God's existence entails the fact that no potentiality (in logical space) will be left unfulfilled. That is, as Almeida (2017c, 8) writes, it is the case that, given God's existence (and perfection) 'every possible object, kind of object, event, kind of event, state of affairs and so on exists at some time or other'. For reasons of plenitude, if one assumes a Concretist viewpoint, then one can conceive of God as having

platonic realm, this grounding action performed by God is a creative act of *causation*, given that grounding has been identified above as a form of causation: metaphysical causation. Importantly, however, as grounding is metaphysical causation – rather than nomological causation – this creative act of causation would be synchronic and necessitating – instead of diachronic and contingent – which enable it to take in necessarily existing entities (such as the infinite plurality of worlds that make up the pluriverse) as its *relata* (with a relation of nomological causation *not* being able to do that).

50 That is, this diffusive act is not an 'impersonal emanation' of God but a personal act that includes, firstly, his powers – that enable him to ground the existence of all entities, secondly, his beliefs – that grounding the existence of other entities will diffuse his goodness – and, thirdly, his purposes – to diffuse his goodness by grounding the existence of all other entities.

reason to ground every possibility that is consistent with his nature. Or, if one assumes an Abstractionist viewpoint, then one can conceive of God as having reason to ground every possible states of affairs (property, universal, proposition etc.) that is consistent with his nature. Every concrete or abstract world and all the possible entities and/or individual essences that exist in those worlds exist by being grounded by God – in other words, God grounds the entire pluriverse and platonic realm: all the worlds and all the *possibilia* and individual essences that are either occupants of those concrete possible worlds or the entities that are included within the maximal possible states of affairs that make up those abstract possible worlds. Yet, the goodness that is inherent within the pluriverse and platonic realm does not depend only on the number of entities that occupy a given world, but also the variety and number of distinct kinds of entities that exist in that world. Thus, God's perfection (i.e. his goodness for Diffusiveness and his general perfection for Plenitude) necessarily requires him to perform the specific creative act of grounding the existence of an infinite plurality of concrete or abstract possible worlds, which will include an infinite variety and diversity of kinds of individuals and states of affairs. Now, if one conceives of God as grounding the existence of concrete possible worlds, there is a certain advantage and a certain drawback. And also, if one conceives of God as grounding the existence of abstract possible worlds, there is also a certain advantage and a certain drawback. The advantage of the former is that of there not being any potential problem for God to ground the concrete possible worlds, as these entities are concrete objects that can easily stand in causal relations – despite their necessity. Thus, the drawback of the latter is that of there being a potential conceptual problem in understanding how God can, in fact, ground the abstract possible worlds, as abstract objects are usually conceived of as not being able to stand in causal relations. However, one can overcome this drawback by emphasising the fact that a grounding relation, which is indeed conceived of as a metaphysical causation relation, allows entities *from any ontological category* to be the input or out of the relation (Schaffer 2009). Hence, abstract objects should indeed be allowed to be the *relata* of a relation of grounding – unless additional argumentation is provided against this position. Thus, what one can affirm – which is in line with the traditional conception of an abstract object – is that an abstract object is causally inert in the sense of it not being able to be the *input* of a grounding relation – it can never be the ground (i.e. metaphysical cause) of any entity – but it can be the *output* of a grounding relation – it can be grounded (i.e. metaphysically caused) by another entity. Thus, God can indeed serve as the ground of the abstract possible worlds that make up the platonic realm.

Focusing now on the drawback of Concretism, the issue to be faced here is that of God lacking the freedom to actualise the worlds that he desires to actualise,

as, given that actuality is conceived of as an indexical notion, each of the concrete possible worlds is necessarily actual. All the concrete possible worlds, with the potential gratuitous evil that plagues them, are necessarily grounded by God. This is indeed a drawback, as God's perfect freedom and goodness will seem to require him to not necessarily ground (and actualise) all of these worlds. However, one can lessen the impact of this issue by following Swinburne (2010, 7–8) and conceiving of God's omnipotence as the *ability to do anything logically possible* and his perfect freedom and goodness as that of them requiring him to *do the best, or equal best action, if there is one*. Thus, as God stands *necessarily* in a grounding relation with these (actualised) concrete possible worlds (given the holding of the Goodness Principle), it is not logically possible for God *not* to ground these worlds, and neither is it a mark against his perfect freedom or goodness for him to stand in this relation, as the diffusing of his goodness in a plenitudinous way would indeed be the best act or an equally best act. Now, one might struggle to stomach this result and thus be pushed (amongst other reasons) to adopt an Abstractionist perspective, which has the advantage of maintaining God's perfect freedom and goodness, given that, as noted previously, he will (in some sense) have the power of *counterfactual choice*. More specifically, as with Concretism, God is necessarily related to the merely possible entities and states of affairs by *grounding* their existence. Nonetheless, despite the necessary existence of the merely possible worlds, God has counterfactual choice in the form of God's *actualisation* of one of the maximal possible states of affairs. That is, God freely chose to actualise a certain world by conferring a special property on a specific maximal possible state of affairs, which *transformed* this possible world into the actual world – specifically, by bestowing on it a special ontological status and making it into a different kind from the merely possible states of affairs – which we take to be one that *added* further value to that world. Thus, prior to this actualisation, God existed alongside the merely possible abstract possible worlds, yet there were no states of affairs that were actual. God then surveyed all of the maximal possible states of affairs in the platonic realm and elected to actualise a specific possible world. Once God had elected and actualised a specific world, a new *type* of entity came into existence – the actual world. We can illustrate the manner in which God is related, in Abstractionism, to the infinite plurality of abstract possible worlds within the platonic realm, and, in Concretism, to the infinite plurality of concrete possible worlds within the pluriverse in Figure 11 as follows (where all terms are as before, with the addition of a red arrow, in the left image, to represent the necessary actualisation of all concrete possible worlds by God, and the addition of a red arrow, in the left image, to represent the contingent actualisation by God of a single abstract possible world):

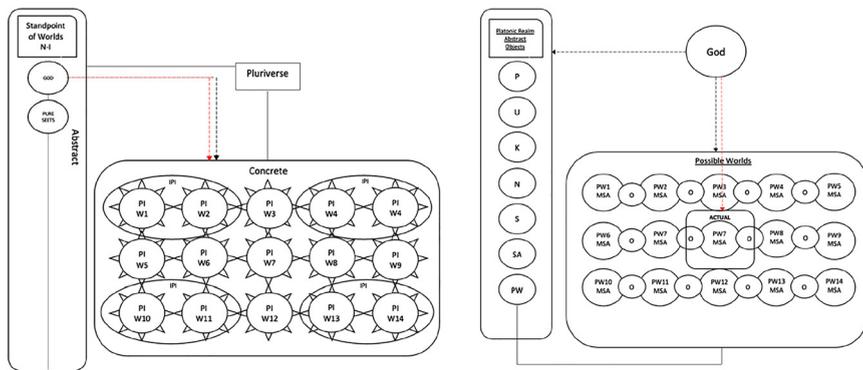


Figure 11: Nature of the pluriverse and platonic realm (ii).

In Concretism, there is an absolute necessity associated with created reality – existence and actuality are necessary. Whereas, in Abstractionism, there is a contingency associated with created reality – a contingency of actuality, rather than existence – as plausibly there will be a near-infinite variety of candidate possible worlds within the platonic realm – whose value exceeds some threshold value τ – that God would have good reason to actualise. The actualisation of a *specific* world is *not* necessary; rather, what is necessary is solely that of God grounding the existence of an infinite plurality of abstract possible worlds *and* the actualisation of (at least) one world within that plurality (due to the value that is added by performing that actualisation). Hence, God’s freedom to create is thus not that of the creating of a new possible world – as each of the merely possible worlds necessarily exists as an entity that is grounded by God – but is instead the creation of a new *kind* of world – a change in kind of a possible world from being a merely possible world to being the actual world – with the specific world that experiences this kind-change being freely chosen by God. Thus, what is at hand is that of God, given his overall perfection (maximality), goodness *and* the holding of the Goodness Principle, having the intention, if Concretism is assumed, to ground an infinite plurality of spatiotemporally independent worlds, with all of these worlds being actual. Or, if Abstractionism is assumed, it is the fact of God having the intention to ground an infinite plurality of maximal possible states of affairs, with (at least) one of which will be separately actualised by God at some time or other. As God’s (perfectly good) intentions are always realised, *if* there is a God, we can thus expect – with a level of certainty – that there will also be an infinite plurality of concrete or abstract possible worlds, with all being actual or (at most) one of these possible worlds being actualised. Theism thus fulfils Criterion (i) to a very high level.

For Primitivism, there is a postulation made concerning the existence of either an infinite plurality of concrete possible worlds, with each of these possible worlds being actual, or an infinite plurality of abstract possible worlds, with one of these possible worlds being actual – with each of these sets of entities being fundamental, due to the fact these entities exist without any further explanation for their existence. One can ask, however, if we are indeed led to expect this data – that is, should we expect to find these concrete or abstract entities, without, however, these entities existing in virtue of any deeper, more fundamental entity? I believe not. And we can understand why on the basis of three sets of problems that plague both iterations of Primitivism: *the problem of concrete/abstract representation*, *the problem of plenitude/insufficiency* and *the problem of relative/absolute actuality*.

Focusing first on the Concretist conception of Primitivism, we have the *problem of concrete representation*,⁵¹ which has been put forward by Plantinga (2003, 211–212), and goes as follows: at a general level, possible worlds possess an *intentional property*—things are the way that they are according to it – or, more specifically, a possible world represents reality as being a certain way. Yet, no concrete object (or set-theoretic construction) can exemplify this type of intentional property and thus represent things in that way. Hence, as the exemplification of this intentional property – which enables an entity to represent things in the way that they are – is essential for an object being a possible world, then there are no possible worlds within the Concretist framework (as within this framework, and the ontology of Lewis that is grounded upon, concrete entities (and set-theoretic formulations) are the only entities that exist). Thus, on the basis of this issue, Plantinga (2003, 212) is led to write, ‘The just conclusion, I think, is that Lewis is about as much a modal realist as is W. V. Quine’. Within our analysis, we thus do not have any reason to expect there to exist any concrete objects that fulfil the function of a possible world. That is, on the basis of the inability for a concrete object to fulfil the function of representing how things are – as possible worlds are supposed to do – we should not expect, with any high level of likelihood, that there will, in fact, be an infinite plurality of concrete possible worlds (which just happen to perform this representative function), rather than none at all.

Moreover, even if we were to assume that the problem of concrete representation can (somehow) be successfully warded off within a Concretist framework, Primitivism will still face a further problem in accounting for the fact of the existence of the infinite number and variety of concrete possible worlds – let’s term this the *problem of plenitude*. As, certainly, in reiterating (again) a point raised by

51 The naming of this problem is original to this article.

Lewis, absolutely every way that a given world could be is a way that some world. Hence, the Principle of Plenitude is one that is affirmed by a proponent of Primitivism. However, where the problem lies is concerning the *lack of a source for this plenitude*. That is, Primitivism faces a problem in accounting for the working of the Principle of Plenitude (or the ‘Principle of Recombination’ as conceived of by Lewis), as there is a key relationship, as noted previously, between the value of the source and the number, variety and diversity of kinds of worlds and *possibilia* – with a *maximally valuable* source leading to a *maximisation* of the number, variety and diversity of kinds of worlds and *possibilia*. However, according to Primitivism, there is no source of the existence of the entities that make up the pluriverse, and thus one does not have good reason to believe that there should be ‘no gaps’ in logical space through there being an infinite plurality of worlds. Rather, as there is no source, there should instead be gaps throughout logical space (and even logical space should, in fact, be empty), given that the maximisation of plenitude would *not* take place. Thus, again, we should not expect, with any high level of likelihood, that there will be an infinite plurality of concrete possible worlds, rather than none at all.

Furthermore, even if we were to assume that the problem of concrete representation and the problem of plenitude can also be successfully warded off within a Concretist framework, Primitivism will still face a further problem in accounting for the actuality of the infinite number and variety of concrete possible worlds – let’s term this the *problem of actuality*.⁵² This problem focuses on highlighting the incompatibility between the possible existence of island universes that are actual – actual individuals that do not stand in any spatiotemporal relation to one another – and some of the central tenets of the Concretist framework. That is, the possible existence of island universes is problematic, under Concretism, as the combination of the Isolation and Relative Actuality tenets imply that spatiotemporally disconnected island universes are impossible – in that there is no actual world that is not spatiotemporally united. As Bricker (2001, 28), in clearly expressing this issue, writes,

According to Lewis, possible individuals are part of one and the same possible world if, and only if, they are spatiotemporally related. It follows immediately that no possible world is composed of island universes of spatiotemporally isolated parts. Given the standard analysis of possibility as truth at some possible world, island universes, then, are impossible.

⁵² In the literature, this issue has been termed the *problem of island universes*. However, for ease of writing, I will continue to refer to it as the problem of relative actuality.

Thus, it intuitively seems to be the case that it is possible that there could be more than one actual physical universe that is spatiotemporally unrelated to another. For example, it is quite clear that there could be two symmetrical physical universes that are exactly similar to one another, yet they are spatio-temporally unconnected from one another – and thus, each fulfils the requirement of being an actual concrete possible world (Menzel 2013). This, however, leads to a contradiction as, within the Concretist framework, anything that is spatio-temporally related to a possible world is a part of it. Yet if there are multiple spatio-temporally unrelated physical universes – that is, there is a possible world that has multiple possible worlds within it, then this would entail that there is an object – a concrete possible world – all of whose parts are spatio-temporally related, yet there are two parts that are not spatio-temporally related – hence, contradiction (Menzel 2013). Thus, on the basis of this issue, one is provided with good reason to not expect there to be an infinite plurality of concrete possible worlds, *that are all relatively actual*. Given these three issues, our explanatory target is thus not accounted for by Primitivism, within its Concretist iteration.

Turning our attention now onto the Abstractionism conception of Primitivism, what we have here is that of the *problem of abstract representation*,⁵³ which has been put forward by Lewis (1986, 174–190), and runs as follows: the infinite plurality of maximal possible states of affairs, as with the concrete possible worlds of Concretism, are taken to function as possible worlds that represent reality in the many ways that it can be. One of these maximal possible states of affairs obtains and thus is the actual world. One can ask, however, why any specific possible world represents our ‘concrete cosmos’ (hereafter, cosmos) in the way that it does, rather than another possible world fulfilling this role instead? Within the framework of Abstractionism, there is no informative explanation for this – that is, a certain possible world – the actual world – represents in the way that it does simply because it is *of its nature to do so*. Yet, if that is so, then one can indeed ask the further question of what is the relation between this specific possible world and our cosmos, which enables it to represent it in the way that it does? Is it an external relation or an internal relation? If it is external, then the cosmos might have borne this relation to a different maximal possible state of affairs, even if the cosmos had had exactly the same intrinsic properties, which Lewis (1986, 179) says is ‘especially repugnant’. That is, it seems to be clear that the relation between the cosmos (in the condition that it actually is) and the actual world must be a necessary one. In other words, if the cosmos exists, then a *specific* possible world is actualised. Yet, if the ‘actualises’ relation is an external relation,

53 The naming of this problem is also original to this article.

then one is not provided with any explanation of what this necessary connection is. One is instead left with a mystery. However, on the other hand, if the relation is internal, then it is unintelligible. The reason for this is that an internal relation is one that necessarily holds between the *relata*, based on their intrinsic natures – for example, if David is 6ft and Paul is 5ft 8, then Paul necessarily stands in the *shorter than* relation to David. Yet, if the relation under question is internal, then it would be equally mysterious why the relation somehow holds between the cosmos and the specific possible world that is actualised, given that this possible world (and all other possible worlds) are mereologically simple, and thus devoid of any intrinsic structure. That is, if a possible world lacks internal structure, then one can ask the question of what specific internal structure does it have, which allows it to be the case that if the cosmos exists, then this possible world bears this actualisation relation? (In the same way that if David is the height that he is and Paul is the height that he is, then Paul must bear the *shorter than* relation to David). Within the Abstractionist framework, one is not given an explanation of this, and thus it seems to be a case, as Lewis (1986, 182) notes, of the representative role of a possible world being one of ‘magic’. However, as plausibly one should not affirm the veracity of a magical explanation, we do not – as in the case of Concretism – have any good reason to expect there to be an infinite plurality of abstract objects that fulfil the essential role of representing reality in the way that it is (i.e. the cosmos). That is, on the basis of the inability for an abstract object to fulfil the function of representing how things are, as possible worlds are supposed to do, we should (again) not expect, with any high level of likelihood, that there will, in fact, be an infinite plurality of abstract possible worlds (which just happen to bear the necessary relation that allows them to perform their representative function), rather than none at all.

Furthermore, even if we were to assume that the problem of abstract representation can (somehow) be successfully warded off within an Abstractionist framework, Primitivism will still face a further problem in accounting for the fact of the existence of the infinite number and variety of abstract possible worlds – let’s term this the *problem of insufficiency*. Unlike Concretism, Abstractionism does not assume a principle that can account for the infinite number and variety of abstract possible worlds that exist within the platonic realm. One can thus ask why there should be any number of entities more than a few or none at all. And one can also ask why there should be a variety of individual essences that feature within these states of affairs, rather than a few or none at all? One could assume the Principle of Plenitude adopted by Concretism, but the same issue concerning the source of the plenitude would also spring up as well. Thus, as it stands, there is no good reason that one should hold to there being a wide variety in numbers and kinds of abstract possible worlds – let alone there be an infinite number

that corresponds to the range of possible ways that reality could be like. As with the case of Concretism, it appears as there should indeed be gaps throughout 'platonic' logical space (and even the platonic logical space should, in fact, again be empty), given that there is not a sufficient principle in place to underwrite the (necessary) production of the plurality of abstract possible worlds. Thus, again, we should not expect, with any high level of likelihood, that there will be an infinite plurality of abstract possible worlds, rather than none at all.

In addition to this, even if we were to assume that the problem of abstract representation and the problem of insufficiency can be successfully warded off within an Abstractionist framework, Primitivism will still face a further problem in accounting for the fact that, amongst the infinite plurality of abstract possible worlds, any one of these worlds is indeed actual – let's term this the *problem of absolute actuality*. That is, it is indeed problematic that any maximal possible state of affairs is of a different ontological kind from another maximal possible state of affairs – by it being 'actual' rather than 'merely possible'. As the actuality of a given possible world, plausibly, is not based on the features of the existent maximal possible states of affairs; rather, one possible world is simply taken to obtain over the others, and that is it. However, as the actualisation of one world over another is not grounded on an ontological distinction between the non-actual worlds – as for a state of affairs to be a possible world is only for it to be maximal and possible, and for a possible world to be actual is only for it to obtain – there is not any basis for the assumption that is made that a certain possible world is indeed actual. That is, outside of our *experience* of the actual world – which is indeed open to infamous global scepticism challenges – one does not have any independent reason in support of the fact that any given world should be actual, rather than being non-actual. Again, as noted before, one could assume Lewis' Principle of Plenitude within an Abstractionist framework and say that the added value that a given maximal possible state of affairs incurs by being actualised should be 'picked up' by the principle and thus, we can expect there to be an actual world amongst the infinite plurality of possible worlds? Maybe so; however, a more serious problem is presented to an individual who takes this path – namely, that of them needing to assert the fact of *all* of the infinite plurality of worlds being actual. That is, as a possible world would be more valuable if it is actualised, and Plenitude will, in some manner, generate the existence of an infinite plurality of possible worlds, given the value that is maximised by this, then each of these possible worlds should be actual, which, as previously noted, Plantinga took to be an impossibility. So, either one affirms the fact of there potentially not being any actual worlds, or one affirms the impossible case of all of the possible worlds being actual. Either way, our explanatory target is, again, not accounted for by Primitivism, as it is inbuilt into the thesis of Abstractionism

(i.e. it is a central tenet of it) that as a minimum, and as a maximum, at most one possible world is actual. Thus, *if* there is no God (and the existence of the infinite plurality of worlds is a brute fact), we should not expect there to exist an infinite plurality of abstract possible worlds, *with one of these worlds being actualised*. Hence, given these three issues, our explanatory target is also not accounted for by Primitivism within its Abstractionist iteration. Thus, in all, Primitivism thus does not fulfil Criterion (i).

For Criterion (ii): fit with background knowledge – where this background knowledge includes other areas of metaphysics (outside of the field of modal metaphysics), philosophy in general and the natural sciences – we can see that Theism fits very well with our background knowledge, whereas, on the one hand, Primitivism does fit with our background knowledge, and, on the one hand, it doesn't. In the case of Theism, a claim is made concerning the existence of solely one entity that exists within the pluriverse (i.e. from the standpoint of every world or at each of the worlds within the pluriverse). This specific entity: God, is a metaphysically simple, omnipotence-trope. In assessing this claim's fit with our background knowledge, we see that it fits very well with this knowledge, as it posits the existence of certain a type of entity – a trope – that is at the foundation of contemporary metaphysics. Specifically, tropes are a standard feature of most current day ontologies – where influential metaphysicians such as Williams (1953, 1986), Campbell (1990), Schaffer (2001), Simons (1994), Maurin (2002, 2018), Ehring (2011), McDaniel (2001) and Loux (2015), all have utilised the concept of a trope within their ontological system. Moreover, tropes do not only feature in the ontological systems of various metaphysicians, but are also plausible options for dealing with various issues within contemporary philosophy. That is, tropes, amongst other things, find their place in wide ranging contexts such as that of the metaphysics of persistence and identity, where they provide a basis for the notions of endurance and perdurance (Benovsky 2013), and the philosophy of physics, where they provide a philosophical basis for quantum theory and the Standard Model of elementary particles (Morganti 2009). However, where these types of entities find their primary use is in the metaphysics of properties, where they provide a means for one to affirm a form of realism (Keinänen, Hakkarainen, and Keskinen 2016). And one of the reasons why tropes are utilised in this specific context is due to the fact that these types of entities – unlike those of platonic universals – are ones that are *epistemically accessible* – that is, one can easily possess a justified (or warranted) belief in the existence of them (primarily because of these entities being able to stand in causal relations to us). Now, the importance of this specific role will be further illuminated when we turn to assess Primitivism. Nevertheless, what we can see here is that the belief in the existence of tropes is widespread in contemporary metaphysics – given their *explanatory value* in

further illuminating various areas of reality – and thus the postulation of the existence of God, identified as a (module) trope, meshes well with other theories from the neighbouring fields within contemporary metaphysics.⁵⁴ Theism thus fulfils Criterion (ii) to a significant level as well.

For Primitivism, where there is a certain fit with our background knowledge is, first, by Concretism positing the existence of concrete possible worlds, identified as maximal mereological sums of spatio-temporal objects. These types of entities correspond well with the contemporary mereological concept of the Universe (U), which, as Simons (1987, 15) notes, is ‘the sum of all objects whatever, a unique individual of which all individuals are part’. A concrete world is simply a spatio-temporally and causally isolated (U). Furthermore, it also fits with the notion of *substantivalism*, which has been defended by individuals such as Sider (2001) and Schaffer (2009) within the wider field of philosophy of space and time. This specific view, according to the proponents of substantivalism, is one that conceives of the cosmos as a substance that is a ‘container’ for other material objects. A concrete world can thus also be conceived of as a large spatio-temporal substance that contains other material objects as parts. Thus, the entities posited by Concretism fit well with other theses held within the wider field of philosophy. Second, there is also a certain fit had by Abstractionism positing the existence of abstract possible worlds that are identified as maximally possible states of affairs – as, firstly, the language of states of affairs is widely used throughout various fields of philosophy, and, secondly, the notion of a state of affairs is one that has deep roots in philosophy through it playing an explanatory role in the influential philosophical theories of Brentano (1870), Husserl (1901), Reinach (1921),

54 One could raise the objection here that the notion of a ‘personal’ trope is not widespread in contemporary metaphysics, and thus Theism does not mesh well with our background knowledge. In response to this issue, one can emphasise the importance of the type/token distinction for the Criterion of Background Knowledge. That is, for the postulation of the existence of an entity to be such as to fit within our background knowledge, this entity simply needs to be of a class (i.e. a type) of entities that are taken to exist within other fields; rather than it being a particular instance of this class (i.e. a token) that is regularly seen to be duplicated (as if this were, in fact, the case, then one would not be able to make discoveries of new instances of a given class, which one clearly can). Thus, even though God is a personal module trope – that is, he is able to be ‘picked out’ from the class of tropes by being personal (amongst other things) – as tropes are a class of entities that are widely taken to exist in other fields within contemporary metaphysics (outside of the field of analytic theology), the postulation of the existence of God is a postulation of a *type* of entity that does, in fact, fit within our background knowledge – even if he is a unique instance of this kind. Whereas, for example, if one were to assume Swinburne’s (2016, 103–126) construal of God as an omnipresent spirit, God would indeed be a type of entity that does not fit within our background knowledge, as spirits are *not* widely taken to exist in other fields within contemporary metaphysics (outside of the field of analytic theology).

Russell (1918), Wittgenstein (1918), Pollock (1984) and Armstrong (1997) – each of whom utilise the language and the notion of a ‘state of affairs’ in different ways and within different philosophical contexts – such as that of a logic context (with Brentano), a phenomenological context (with Husserl and Reinach), a logical atomistic context (with Russell), a Tractarian context (with Wittgenstein and Armstrong) and a linguistic context (with Pollock).⁵⁵ Thus, the type of entity that an abstract possible world is conceived of as (i.e. as a state of affairs) is grounded historically in areas outside of the field of modal metaphysics – with this historical grounding being based on the great explanatory value that the concept has had in these areas. However, despite the correspondence with our background knowledge that is had here – that is Concretism and Abstractionism both positing the existence of entities that feature in other areas of philosophy and have some explanatory value – where we can identify an important potential clash with our background knowledge concerns the fit between Primitivism and the central philosophical field of epistemology. More specifically, Concretism and Abstractionism face two epistemological challenges: the *Integration Challenge* and the *Reliability Challenge*, which both highlight the problem of how one can come to possess knowledge about metaphysical modal truths – and provide a challenge for those who aim to provide an account of these truths. The Integration Challenge, proposed by Peacocke (1999) as a generalisation of Benacerraf’s (1973) *problem for Platonism in the philosophy of mathematics*, raises the challenge of one reconciling a credible account of what is involved in the truth of a metaphysical statement with a plausible account of how one can come to know them. Thus, in the context of the metaphysics of modality, the Integration Challenge is conceived of as that of reconciling an account of what is involved in the truth of a modal statement with a credible account of how one can come to know them (Thomasson 2021). This specific challenge arises quite clearly for Concretism and Abstractionism as follows: for Concretists, possible worlds are concrete, spatio-temporally and causally isolated entities. And, for Abstractionism, possible worlds are abstract entities that are outside of space and time and are causally inert. Within both theories of modality, possible worlds are conceived of as entities that are *epistemically inaccessible* to us. That is, unlike ordinary objects that we are able to be perceived – and which have a causal connection to us – it is unclear how one can use our particular methods of acquiring knowledge to gain knowledge about them. More fully, Concretism and Abstractionism require one – in order to ground *de dicto* and *de re* modality – to know what is true at another world

55 For a detailed explanation of the notion of a state of affairs within the works of these philosophers and the employment within a linguistic context, see (Smith 1989) and (Textor 2018).

than the actual world, yet as these possible worlds are either causally isolated from ours, within Concretism, or are causally inert, within Abstractionism, there is no connection by which one can be informed about the truth or falsity of modal statements about these entities – in short, we do not have any reason to believe that one can know what is going on within these maximal mereological sums of concrete individuals or within these maximal possible states of affairs. In short, how one can have epistemic access to these entities is mysterious. And thus, if modal knowledge involves knowledge of concrete or abstract possible worlds that causally disconnected from us, then given the epistemic inaccessibility of these worlds, the theses of Concretism and Abstractionism, as Peacocke (1999, 3) notes in a related context, ‘arguably makes modal truth radically inaccessible’.

Now, the Reliability Challenge, proposed by Nozick (2001), raises the challenge of how one can have a justified belief concerning modal statements – in a manner that fits with contemporary evolutionary theory. More precisely, if one is to have a justified belief concerning the truth value of various modal statements, then we should have evolved with a reliable faculty that enables us to come to know these modal truths. However, as Nozick (2001, 122) notes, ‘we do not appear to have such a faculty, and it is implausible that evolutionary processes would instill that within us’. However, as we do not have a cogent explanation for why one should have developed a reliable faculty for detecting possibilities and necessity, Nozick (2001, 125) forwards the position that we should be sceptical about claims that we have such knowledge about modal matters. Now, this issue is further heightened within the framework posited by Concretism and Abstractionism, given the fact that the concrete possible worlds, posited by Concretism, and the abstract possible worlds, posited by Abstractionism, are not able to have any causal impact on our beliefs (Thomasson 2021). However, as it is plausibly the case that the holding of causal relation in the belief-forming process is one of the primary factors that ensure reliability, then the lack of a causal relation between us and the concrete and abstract possible worlds that fulfil the role of ‘modal truthmakers’ undermine one’s claim to having reliable knowledge about modality (Thomasson 2021).⁵⁶ Hence, given the lack of causal impact on our beliefs by these isolated or inert entities, one can indeed see the plausibility of Nozick’s (2001, 122) when he writes that since ‘our ancestors evolved in the actual world, there were no selective pressures to reward accuracy about all possible

⁵⁶ Importantly, however, as Fischer (2017, 270) makes it clear, the Reliability Challenge as just stated, remains for those who reject a causal theory of knowledge, as he writes ‘the critic can reframe the problem in terms of a demand for an explanation of our reliability about modal matters, and abandoning the causal theory of knowledge won’t help with this version of the problem’.

worlds, and there was no handicap to being right only about the actual world'. Thus, it seems to be the case that it is implausible that one should have evolved with the faculty to reliably detect (non-actual) possible worlds. Therefore, given the plausibility of these two challenges: the Integration Challenge and the Reliability Challenge, it seems to be the case that Primitivism does not allow one to affirm an integrated and reliable epistemology – both of which fit with the truth-seeking goals of epistemology – but rather, unlike the affirmation of the existence of tropes, it leaves us in a state of radical scepticism. Hence, on the basis of this, Primitivism – despite the positing of entities that fit with, or feature in, other theories within philosophy – does not fit well with the field of epistemology – which is a staple of contemporary philosophy – and thus Criterion (ii) not sufficiently met by Primitivism.

For Criterion (iv): parsimony, Theism requires one to *minimise* (ontological and ideological) commitments at the fundamental level – whilst also maximising explanation (i.e. the explanatory power) of the data at hand – that is, in other words, it is a very parsimonious explanation, or, in fact, the simplest possible personal fundamental explanation. As it explains the various phenomena of reality in terms of the powerful action of one fundamental personal entity: God – rather than many fundamental personal entities – and thus it is an explanation that is *quantitatively ontologically parsimonious* – it is more parsimonious than any other polytheistic based personal explanation by postulating the fewest number of fundamental entities: *one*. Moreover, as God is metaphysically simple, and thus lacks proper parts, God has the fewest number of fundamental properties possible: *zero*. As, instead of possessing properties, each attribution made of God is numerically identical to him – God's attributes are God himself. There is thus no further explanation that is needed to be provided for why God has the properties that he does – as he does not have any properties. Furthermore, Theism is also *qualitatively ideologically parsimonious* as it includes the fewest number of theoretical primitives. That is, in fact, it does not have *any* primitives, as each of God's attributes are explicitly defined (without needing to use any form of analogy),⁵⁷ and thus it includes the fewest number of fundamental ideological primitives: *zero*. However, Theism is not only quantitatively ontologically/ideologically parsimonious, but it is also *qualitatively ontologically/ideologically parsimonious*, in the sense that it postulates the existence of the simplest kind of personal fundamental entity – without one needing to utilise different kinds of fundamental theoretical primitives to conceptualise his nature. More precisely, as Theism identifies God as a trope (of a modular kind), it posits the existence of an entity of

⁵⁷ For an example of these definitions, see above (pg. 28), and for more precise, formal definition see: (Sijuwade, 2021a, 7, 29–30).

the fewest number of fundamental kinds: *zero*, due to the fact that, in following Lowe (2006), kinds are correctly conceived of as *universals* that are *instantiated* by particular objects – which is in line with Aristotle who introduced the distinction between two types of universals, i.e. kinds and attributes. Yet, in assuming ‘Classical Trope Theory’ – which is the metaphysical theory that grounds this conception of God – one will disaffirm the existence of universals and the (problematic) instantiation relation that ties particular objects to these universals – in a manner that one actually reduces the category of universals to tropes fulfilling certain roles. Hence, as Lowe (2006, 11) writes, trope-theorists are motivated ‘by a strong desire for ontological economy and a radically empiricist stance in epistemology, inspiring frequent appeals to Occam’s razor and a nominalistic hostility to belief in the existence of universals’. Thus, because of this, one will then be able deny the existence of kinds (at the fundamental level) – as tropes are not instances of any kind (and do not instantiate anything but are instead simply identical to their nature).⁵⁸ Therefore, by Theism positing the existence of God, one is not required to be committed to the existence of any kinds that he instantiates (at the fundamental level) – that is, God is of *zero* kinds.⁵⁹ Furthermore, as there are no theoretical primitives used in conceptualising God, one can eschew any kind of theoretical primitives – and thus this type of fundamental explanation allows one to continue to have a very ideologically parsimonious ontology. Theism is thus quantitatively and qualitatively (ontologically/ideologically) the simplest possible explanation, due to the fact that it postulates the fewest number of fundamental entities: one object and zero properties, the fewest fundamental kinds: zero kinds, with the fewest number and kind of theoretical primitives: zero for both. Theism thus fulfils Criterion (iv) as well.

Yet, for the proponent of Primitivism, the same cannot be said for their position, as Primitivism requires one to *maximise* (ontological and ideological) commitments at the fundamental level – whilst also failing to maximise explanation (i.e. the explanatory power) of the data at hand (as was noted previously) – that is, in other words, it fails to be a quantitatively *and* qualitatively ontologically/ideologically parsimonious explanation. That is, for the former

58 This is due to the fact of a trope being able to play the role of a substance – through forming a compresent bundle with other tropes – and universal – through the process of abstraction enabling one to fictionally treat a class of trope as universal-like entities. Furthermore, it is left open here whether there are, in fact, kinds at the non-fundamental level.

59 In previous work: (Sijuwade 2021c) and (Sijuwade 2021d), I took God to be of one kind: trope. However, on the basis that a kind is to be correctly conceived of as a universal, I now take it to be the case that tropes *cannot* be of any kind. Nonetheless, if this supposition is incorrect, one can simply re-affirm God being of the kind trope, which still enables him to be a (quantitatively and qualitatively) ontologically parsimonious entity (i.e. he is one entity of one kind).

(i.e. quantitative ontological/ideological parsimony), Primitivism, as conceived of through Concretism or Abstractionism, does not posit the fewest *number* of fundamental entities (i.e. objects or properties), as it commits one to posit the existence of an *infinite* number of fundamental entities – namely, the infinite plurality of concrete or abstract possible worlds that are each fundamental by being ungrounded. And it also commits one to a *countless* number of properties that are either, within Concretism, instantiated by the objects at the possible world in which they inhabit, or, within Abstractionism, exemplified by the objects at the possible worlds in which they are included within.⁶⁰ Thus, counting by entity and property tokens, there is an infinite number of entity and property tokens – as there is a multiplication of tokens in indefinitely many combinations to form the infinite number of possible worlds, and propertied entities, that fill up the pluriverse and platonic realm. Furthermore, specifically for Abstractionism, one is also saddled with a vast number of theoretical primitives, as modality is *not* reduced within this framework but is taken as an undefined notion (i.e. theoretical primitive). Hence, this all reveals that Primitivism is a position that posits the existence of *many* fundamental entities (i.e. objects and properties), rather than the fewest – and, for Abstractionism, it includes *many* theoretical primitives within its ideological framework. Given this, one could say that Primitivism is, in fact, a maximally quantitatively complex position – as for every possible entity and property that there could be, one is committed to that entity and property, each of which, from the position of Primitivism, will be fundamental (with a commitment to a vast number of theoretical primitives also needing to be made for Abstractionism as well). In addition to this, for the latter form of parsimony (i.e. qualitative ontological/ideological parsimony), and *contra* Lewis' (1986) own position on the matter,⁶¹ one can also see that Primitivism, within Concretism and Abstractionism, does not posit the fewest number of *fundamental kinds* (of entities), as it commits one to an infinite number of kinds of objects (or individual essences) and a countless number of kinds of properties. Focusing on Concretism – though with this issue applying to Abstractionism as well – this issue is expressed clearly by Melia (1992, 192) when he writes, 'For example, Lewis is committed to the unicorns, to the gods, to the ghosts, to the qualia which occur in other possible worlds. Indeed, Lewis is committed to every possible kind of thing. And since Lewis is committed to every possible kind of thing, Lewis's theory is as qualitatively unparsimonious as any consistent theory could be'. One thus seems to be

⁶⁰ For Concretism, these properties would not be infinite in number, given that there will be certain worlds within the pluriverse that are empty, and thus would not have any objects that instantiate properties at those worlds.

⁶¹ Plantinga does not take a position on this in his written work.

committed to the existence of an entity (i.e. an object (or individual essence)), and property of that entity, for any kind of entity, or property of an entity, that there could be. This, again, reveals that Primitivism is a position that posits the existence of *many* kinds of fundamental entities and properties, rather than the fewest – and, ideologically, there will be a requirement (at least in Abstractionism) to invoke a vast number of kinds of theoretical primitives in order for this metaphysical thesis to do its explanatory work in the modal sphere. One can, again, say that Primitivism is, in fact, a *maximally* qualitatively complex position – as for every possible kind of entity and property that there could be, one is committed to that kind of entity (i.e. object and property), each of which, from the position of Primitivism, will be fundamental (with a commitment to a vast number of kinds of theoretical primitives also needing to be made for Abstractionism as well).⁶² Primitivism thus provides an explanation that fails to fulfil Criterion (iv).

Therefore, within our context of analysis, Theism provides an explanation that enables one to minimise (ontological and ideological) commitments at the fundamental level, while maximising explanation of the data at hand (i.e. our explanatory target). More precisely, Theism is the simplest kind of personal fundamental explanation that fits with our background knowledge and leads us to expect (with a level of certainty) the existence of an infinite plurality of concrete or abstract possible worlds. Theism thus fulfils all of the relevant components of our abductive criteria. However, what we find with Primitivism, is that of there being a position does not, first, yield (or predict the data) – as we do not have good reason to expect an infinite plurality of concrete or abstract possible worlds to exist – whereas *if* God exists, we do have good reason to expect these entities to exist, based on the fact of God being perfect and the holding of the Goodness Principle. Second, Primitivism proposes a position that does not fit with our background knowledge – specifically that of it not corresponding well with the truth-seeking goals of the important field of epistemology – whereas Theism posits the existence of an entity that fits well with our background knowledge – without any sceptical implications for our knowledge. Thirdly, Primitivism posits the existence of a vast array of fundamental entities that render the position as maximally quantitatively

⁶² Divers (2002, 154–155) comes to the defense of Lewis on this point by highlighting the fact that Lewis is only committed to the existence of sets and individuals and thus the numerous possibilities that inhabit the pluriverse are simply different instances of individuals or sets. Hence, the number of the kind of entities postulated within the proposed ontology is only two, which seems to show that Lewis does not propose a qualitatively complex theory. Assuming that one takes Divers (and Lewis) to be correct on this point, the conclusion reached here will still stand, given the fact that Lewis postulates the existence of two kinds of entities; whereas Theism postulates the existence of solely one, Theism is thus still more qualitatively simple than Primitivism, even if the latter is indeed not maximally qualitatively complex.

and qualitatively complex, and thus is less simple (ontologically and ideologically) than the postulation made by Theism, which postulates the existence of one fundamental entity: God. This single fundamental entity is a metaphysically simple omnipotence trope (who is identical to each of the attributes ascribed to him) and thus instantiates *zero* properties. Theism thus postulates the fewest number of entities – one module trope, rather than many – and the fewest kind of entities – *zero* kinds, rather than (at least) two kinds: substance and attributes – and the fewest number and kind of properties – *zero* properties, rather than many. Thus, in comparison to Primitivism, Theism is a simpler explanation, that fits with our background knowledge, and leads us to expect the occurrence of our explanatory target, when otherwise we would not expect this to occur. In other words, Theism fulfils our abductive criteria to a greater extent than the alternative option that is available. And thus, given this, we have a good reason to take Theism to be *the* fundamental explanation (i.e. the metaphysical explanations that fully explains the data and does not have a further synchronic explanation for it) that can serve as a terminus in explanation for the existence of the infinite plurality of concrete or abstract possible worlds. More specifically, as noted previously, if one can formulate an explanation that allows us to have a metaphysical explanation with a greater fulfilment of our abductive criteria – in this case, a simpler explanation, that fits with our background knowledge, and predicts the data to a greater extent than the existing options, without there also being a corresponding loss in the fulfilment of any other of the components of the criteria – then we have good reason to adopt *that* explanation as being the fundamental explanation for our explanatory target. Theism, in comparison to Primitivism, is the simplest explanation, fitting with our background knowledge, that leads us to expect the existence of the infinite plurality of concrete or abstract possible worlds, when otherwise they would not be expected to exist.

Importantly, however, taking Theism to be the fundamental explanation of our explanatory target does not mean that we need to do away with the theoretical benefits that are provided by modal realism, as the infinite plurality of worlds still serve as the ‘truthmaker’ for these modal statements – that is, the entities that provide a full explanation of the truth of our modal statements and locutions. Hence, what we now have is solely that of a further (metaphysical (or synchronic)) explanation being available that can now be provided for the existence of these truthmakers – namely, God. The central advantages of Concretism and Abstractionism – namely, the provision of an analysis of modality – is preserved here as the existence of the infinite plurality of concrete or abstract possible worlds still provides a full metaphysical explanation for the truth of the modal statements under question. Thus, what is now added to this explanatory chain is that of the existence of these truthmakers – the infinite plurality of worlds that make up

the pluriverse and platonic realm – being now accounted for as well. Thus, we have a further reductive explanation being available – if Concretism is favoured – or, at least, a further elucidated metaphysical position – if Abstractionism is favoured – that enables us to not take the existence of the infinite plurality of concrete or abstract possible worlds as brute facts, which, as with the primitivism of modality, provides an even more economical, serviceable and pragmatically virtuous philosophical system, due to the fact that one has less (brute) facts that are left unaccounted for within their system – namely, from an infinite number (i.e. the plurality of possible worlds) now to one (i.e. God). Hence, at a general level, we now have Theism playing a vital role in the explanatory framework that is provided by the modal metaphysical theories that have been under study, which allows us to take Theism to be a *more fundamental* claim that underpins these metaphysical theories, in the same manner, that the claims concerning possible worlds that are made by these specific metaphysical theories are *more fundamental* than the modal statements that feature in our ordinary speech. Thus, we can illustrate this structure at the general and more specific level in Figure 12 (where everything is as before and with ‘CM’ standing for ‘completely (fundamentally) metaphysically explains’ and ‘G’ standing for ‘grounds’).

The existence of the infinite plurality of concrete or abstract possible worlds has a sufficient fundamental explanation, in the sense that they are themselves fully explained by the existence of God, who serves as their ground, but is, himself,

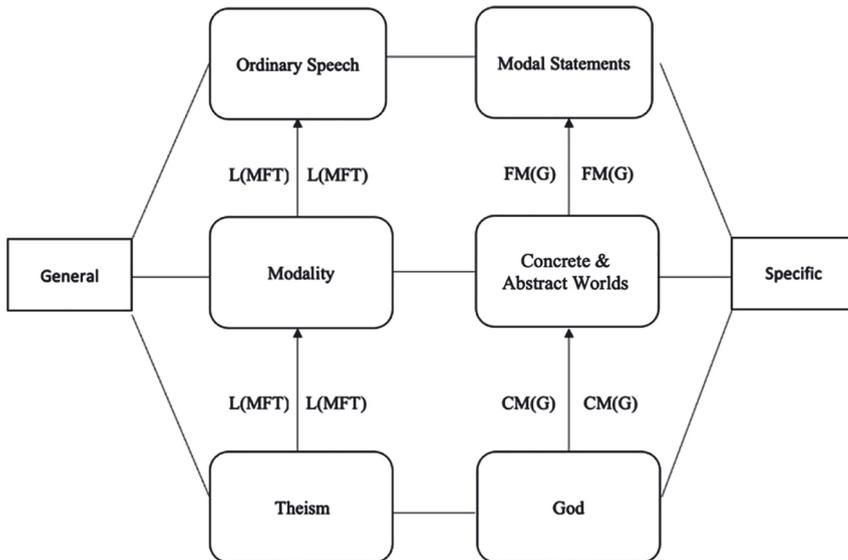


Figure 12: Modal structure (iii).

ungrounded – and thus does not synchronically depend upon any other at any given time. In short, God is a fundamental entity that provides a fundamental explanation for these entities, when they would not otherwise be expected to exist. The pluriverse and platonic realm centre on, and terminate in, God and God alone. That is, given this, we have a successful *abductive* argument for the existence of God, by the postulation of his existence providing us with the best, or more specifically, the *only* true fundamental explanation for the existence of the infinite plurality of concrete or abstract possible worlds that make up the pluriverse and the platonic realm. We thus have another good reason to believe in the existence of God. Importantly, in addition to this, we thus also have good reason to now favour a weaker version of methodological naturalism within our metaphysical investigations, which can be stated as follows:

- (15) (Methodological Naturalism*) An individual should not appeal to supernatural entities when they explain certain data that is in the explanatory scope of a metaphysical theory, *unless this postulation makes the theory more economical and/or increases its theoretical (explanatory) virtues.*

As Theism provides a fundamental explanation for the entities that are at the heart of the two most influential metaphysical theories of modality on offer: Concretism and Abstractionism, an appeal that is made to God is indeed one that – in adopting the language of Lewis – *increases the theoretical (or explanatory) virtues of this theory and also renders it more economical* – where the theoretical (or explanatory) virtues of the theory are that of it meeting the abductive criteria of (i)–(iv) noted previously (and thus minimising theoretical commitments (at the fundamental level) and maximising explanation) and the provision of a more economical philosophical theory (or system) is that of it, as also noted previously, reducing the number of entities that are left unaccounted for. Thus, in line with tradition, Theism, the claim that there is a God, does indeed fulfil an important role in explaining a certain facet of the fundamental structure of reality – namely, that of its modal structure. And it can do this without transgressing the boundaries set by (a weaker, but indeed plausible) methodological naturalism.

5 Conclusion

In conclusion, in Section 2, an explanatory framework was established, which provided us with the needed tools: abductive criteria to assess the potential worth of a given metaphysical explanation. In Section 3, our explanatory target was detailed: that of the existence of the infinite plurality of concrete or abstract possible worlds that make up the pluriverse and the platonic realm. In Section 4, candidates for a fundamental explanation (or terminus in explanation) of our

explanatory target were detailed and assessed for their fulfilment of our abductive criteria. These candidates were: Theism and Primitivism. In this assessment, Theism was shown to be an explanation that fulfils the abductive criteria to a greater level than the alternative position of Primitivism. Thus, Theism provides the simplest explanation, fitting with our background knowledge, that leads us to expect the existence of the infinite plurality of concrete or abstract possible worlds that make up the pluriverse and the platonic realm. Theism is the sole, true fundamental explanation of our explanatory target. And, therefore, given the existence of the pluriverse or the platonic realm, we thus have one additional (abductive) reason to believe that God exists and good grounds for God to reclaim his place at the centre of metaphysics – well, at least in the modal sphere.

References

- Adams, R. 1974. "Theories of Actuality." *Noûs* 8: 211–31.
- Almeida, M. J. 2017a. "Theistic Modal Realism I: The Challenge of Theistic Actualism." *Philosophy Compass* 12 (7): 1–13.
- Almeida, M. J. 2017b. "Theistic Modal Realism II: Theoretical Benefits." *Philosophy Compass* 12 (7): 1–14.
- Almeida, M. J. 2017c. "The Multiverse and Divine Creation." *Religions* 8 (258): 1–10.
- Alvarado, J. 2019. "Are Tropes Simple?" *Teorema* 38: 51–72.
- Armstrong, D. 1997. *A World of States of Affairs*. Cambridge: Cambridge University Press.
- Benacerraf, P. 1973. "Mathematical Truth." *Journal of Philosophy* 70: 661–79.
- Bennett, K. 2011. "By Our Bootstraps." *Philosophical Perspectives* 25: 27–41.
- Bennett, K. 2017. *Making Things Up*. Oxford: Oxford University Press.
- Benovsky, J. 2013. "New Reasons to Motivate Trope Theory: Endurantism and Perdurantism." *Acta Anal* 28: 223–7.
- Brentano, F. 1870. Logik (EL 80), online. Also available at <http://gams.uni-graz.at/archive/objects/o:bag.el.80-html-norm/methods/sdef:HTML/get>.
- Bricker, P. 2001. "Island Universes and the Analysis of Modality." In *Reality and Humean Supervenience: Essays on the Philosophy of David Lewis*, vol. 27–56, edited by G. Preyer, and F. Siebelt. Maryland: Rowman & Littlefield.
- Bricker, P. 2007. "Concrete Possible Worlds." In *Contemporary Debates in Metaphysics*, edited by T. Sider, J. Hawthorne, and D. W. Zimmerman, 111–34. Oxford: Blackwell.
- Cameron, R. 2009. "God Exists at Every (Modal Realist) World: Response to Sheehy." *Religious Studies* 45: 95–100.
- Cameron, R. 2010. "How to have a Radically Minimal Ontology." *Philosophical Studies* 151: 249–64.
- Campbell, K. 1990. *Abstract Particulars*. Oxford: Blackwell.
- Collier, M. J. 2019. "God's Necessity on Anselmian Theistic Concretism." *Sophia* 58: 331–48.
- Collier, M. J. 2021. "God's Place in the World." *International Journal for Philosophy of Religion* 89: 43–65.
- Divers, J. 2002. *Possible Worlds*. New York: Routledge.

- Divers, J. 2007. "The Modal Metaphysics of Alvin Plantinga." In *Alvin Plantinga*, edited by D.-P. Baker, 71–92. Cambridge: Cambridge University Press.
- Douven, I. 2021. "Abduction." In *Stanford Encyclopedia of Philosophy*. Also available at <https://plato.stanford.edu/archives/sum2021/entries/abduction/>.
- Draper, P. 2005. "God, Science and Naturalism." In *The Oxford Handbook of Philosophy of Religion*, edited by W. J. Wainwright, 272–303. Oxford: Oxford University Press.
- Ehring, D. 2011. *Tropes: Properties, Objects and Mental Causation*. Oxford: Oxford University Press.
- Finocchiaro, P. 2021. "High-Fidelity Metaphysics: Ideological Parsimony in Theory Choice." *Pacific Philosophical Quarterly* 102 (4): 613–32.
- Fischer, B. 2017. "Modal Empiricism: Objection, Proposal." In *Modal Epistemology After Rationalism*, edited by B. Fischer, and F. Leon, 263–80. Switzerland: Springer.
- Fisher, A. R. J. 2018. "Instantiation in Trope Theory." *American Philosophical Quarterly* 55 (2): 153–64.
- Fisher, A. R. J. 2020. "Abstracta and Abstraction in Trope Theory." *Philosophical Papers* 49 (1): 41–67.
- Garcia, R. 2015a. "Two Ways to Particularize a Property." *Journal of the American Philosophical Association* 1: 635–52.
- Garcia, R. 2015b. "Is Trope Theory a Divided House?." In *The Problem of Universals in Contemporary Philosophy*, edited by G. Galluzzo, and M. Loux, 133–55. Cambridge: Cambridge University Press.
- Garcia, R. 2016. "Tropes as Character-Grounders." *Australasian Journal of Philosophy* 94: 499–515.
- Heil, J. 2003. *From an Ontological Point of View*. Oxford: Oxford University Press.
- Husserl, E. 1901. *Logische Untersuchungen. Zweiter Band I: Untersuchungen zur Phänomenologie und Theorie der Erkenntnis*. Tübingen: Max Niemeyer Verlag.
- Inwagen, P. V. 1986. "Two Concepts of Possible Worlds." *Midwest Studies In Philosophy* 11: 185–213.
- Keinänen, M., J. Hakkarainen, and A. Keskinen. 2016. "Why Realists Need Tropes." *Metaphysica* 17: 69–85.
- Kretzmann, N. 1991. "A General Problem of Creation: Why Would God Create Anything at All?" In *Being and Goodness: The Concept of the Good in Metaphysics and Philosophical Theology*, edited by M. Scott, 208–28. New York: Cornell University Press.
- Kripke, S. 1980. *Naming and Necessity*. Oxford: Blackwell.
- Korman, D. 2015. *Objects: Nothing Out of the Ordinary*. Oxford: Oxford University Press.
- Lewis, D. K. 1983. "Postscripts to "Counterpart Theory and Quantified Modal Logic"." *Philosophical Papers*: 40–6.
- Lewis, D. K. 1986. *On the Plurality of Worlds*. Oxford: Blackwell.
- Lewis, D. K. 1999. "Anselm and Actuality." In *Particulars, Actuality, and Identity over Time*, Vol. 4, edited by M. Tooley, 283–97. New York: Routledge.
- Lovejoy, A. 1936. *The Great Chain of Being*. Cambridge: Harvard University Press.
- Lowe, E. J. 2006. *The Four Category Ontology*. Oxford: Oxford University Press.
- Loux, M. 2015. "An exercise in Constituent Ontology." In *The Problem of Universals in Contemporary Philosophy*, edited by G. Galluzzo, and M. Loux, 9–45. Cambridge: Cambridge University Press.
- Maurin, A.-S. 2002. *If Tropes*. Dordrecht: Kluwer Academic Publishers.

- Maurin, A.-S. 2018. "Tropes." In *Stanford Encyclopedia of Philosophy*. Also available at <https://plato.stanford.edu/entries/tropes/>.
- Maurin, A.-S. 2019. "Grounding and Metaphysical explanation: It's Complicated." *Philosophical Studies* 176: 1573–94.
- McDaniel, K. 2001. "Tropes and Ordinary Physical Objects." *Philosophical Studies* 104: 269–90.
- McDaniel, K. 2004. "Modal Realism with Overlap." *Australasian Journal of Philosophy* 82: 137–52.
- McDaniel, K. 2006. "Modal Realisms." *Philosophical Perspectives* 20: 303–31.
- Melia, J. 1992. "A Note on Lewis' Ontology." *Analysis* 52 (3): 191–2.
- Menzel, C. 2013. "Possible Worlds." *Stanford Encyclopedia of Philosophy*. Also available at <https://plato.stanford.edu/entries/possible-worlds/>.
- Molnar, G. 2003. *Powers: A Study in Metaphysics*. Oxford: Oxford University Press.
- Morganti, M. 2009. "Tropes and Physics." *Grazer Philosophische Studien* 78: 185–205.
- Mumford, S., and R. L. Anjum. 2010. "A Powerful Theory of Causation." In *The Metaphysics of Powers: Their Grounding and Their Manifestations*, edited by A. Marmodoro, 143–59. London: Routledge.
- Nozick, R. 2001. *Invariances*. Cambridge: Harvard University Press.
- Oppy, G. 2019. *Atheism: The Basics*. New York: Routledge.
- Peacocke, C. 1999. *Being Known*. Oxford: Oxford University Press.
- Phillipse, H. 2012. *God in the Age of Science? A Critique of Religious Reason*. Oxford: Oxford University Press.
- Plantinga, A. 1974. *The Nature of Necessity*. Oxford: Oxford University Press.
- Plantinga, A. 1980. *Does God Have a Nature? (The Aquinas Lecture: 1980)*. Milwaukee: Marquette University Press.
- Plantinga, A. 2003. *Essays in the Metaphysics of Modality*. Oxford University Press.
- Plantinga, A. 2011. *Where the Conflict Really Lies: Science, Religion, and Naturalism*. Oxford: Oxford University Press.
- Pollock, J. 1984. *The Foundations of Philosophical Semantics*. Princeton: Princeton University Press.
- Reinach, A. 1921. *Gesammelte Schriften*. Halle: Max Niemeyer.
- Rouse, J. 2008. "How Successful Is Naturalism?" In *Notre Dame Philosophical Reviews*. Also available at <https://ndpr.nd.edu/reviews/how-successful-is-naturalism/>.
- Russell, B. 1918. "The Philosophy of Logical Atomism." In *Logic and Knowledge*. London: George Allen & Unwin.
- Schaffer, J. 2001. "The Individuation of Tropes." *Australasian Journal of Philosophy* 79: 247–59.
- Schaffer, J. 2009. "Spacetime the One Substance." *Philosophical Studies* 145: 131–48.
- Schaffer, J. 2015. "What Not to Multiply without Necessity." *Australasian Journal of Philosophy* 93: 644–64.
- Schaffer, J. 2016. "Grounding in the Image of Causation." *Philosophical Studies* 173: 49–100.
- Schaffer, J. 2017. "Laws for Metaphysical Explanation." *Philosophical Issues* 27: 302–21.
- Schaffer, J. 2021. "Ground Functionalism." In *Oxford Studies in Philosophy of Mind 1*, edited by U. Kriegel, 171–207. Oxford: Oxford University Press.
- Sheehy, P. 2009. "Reply to Cameron." *Religious Studies* 45: 101–4.
- Sider, T. 2001. *Four-Dimensionalism: An Ontology of Persistence and Time*. Oxford: Oxford University Press.

- Sider, T. 2013. "Against Parthood." *Oxford Studies in Metaphysics* 8: 237–93.
- Sijuwade, J. 2021a. "Divine Simplicity: The Aspectual Account." *European Journal for Philosophy of Religion*: 1–37. <https://doi.org/10.24204/ejpr.2021.3306>.
- Sijuwade, J. 2021b. "Building the Monarchy of the Father." *Religious Studies*: 1–20. <https://doi.org/10.1017/S0034412521000020>.
- Sijuwade, J. 2021c. "Fundamentality and the Existence of God." *Manuscrito*: 1–76. <https://doi.org/10.1590/0100-6045.2021.V44N4.JS>.
- Sijuwade, J. 2021d. "Grounding and the Existence of God." *Metaphysica*: 1–53. <https://doi.org/10.1515/mp-2021-0029>.
- Simons, P. 1987. *Parts: A Study in Ontology*. Oxford: Oxford University Press.
- Simons, P. 1994. "Particulars in Particular Clothing: Three Trope Theories of Substance." *Philosophy and Phenomenological Research* 54: 553–75.
- Smith, B. 1989. "Logic and the Sachverhalt." *The Monist* 72: 52–69.
- Swinburne, R. 2001. *Epistemic Justification*. Oxford: Oxford University Press.
- Swinburne, R. 2004. *The Existence of God*. Oxford: Oxford University Press.
- Swinburne, R. 2010. *Is There a God?*. Oxford: Oxford University Press.
- Swinburne, R. 2016. *The Coherence of Theism*, 2nd ed. Oxford: Oxford University Press.
- Textor, M. 2018. "States of Affairs." In *Stanford Encyclopedia of Philosophy*. Also available at <https://plato.stanford.edu/archives/spr2018/entries/spacetime-theories/>.
- Thomasson, A. L. 2021. "How Can We Come to Know Metaphysical Modal Truths?" *Synthese* 198: 2077–106.
- Williams, D. C. 1953. "On the Elements of Being II." *Review of Metaphysics* 7: 171–92.
- Williams, D. C. 1986. "Universals and Existents." *Australasian Journal of Philosophy* 64: 1–14.
- Wilson, A. 2018. "Metaphysical Causation." *Noûs* 52: 723–51.
- Wittgenstein, L. 1918. *Tractatus Logico-Philosophicus*. London: Routledge.