

ISSUES ON THE (IM)POSSIBLE XII

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ABSTRACTS

KEYNOTE SPEAKERS

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Rules, Artworks, and Games

What kinds of entities are artworks? What kinds of entities are games? What is the relation between artworks and rules? And how does this compare to the relation between games and rules? Recently, such authors as Simon Evnine, Enrico Terrone, Sherri Irvin, and Elisa Caldarola have defended a hylomorphic account of certain kinds of artworks (e.g., memes or contemporary visual artworks). Moreover, hylomorphism has also gained traction among social ontologists, for example in the context of Asya Passinsky's approach to social objects (e.g., borders) and Katherine Ritchie's conception of structured social groups (e.g., committees). In this talk, I will examine different versions of artwork hylomorphism and ask whether rules or norms (e.g., governing the display, viewer participation, or conservation of artworks) can plausibly be taken to be either part of the matter or part of the form of an artwork. Since both hypotheses appear to give rise to difficulties, I end by briefly considering some alternative views concerning the relation between artworks and the rules or norms governing them.

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Abstract Modal Fictionalism

Modal fictionalism promises to be a low-cost alternative to modal theories that treat possible worlds as existing objects, whether they are conceived as abstract objects or concrete universes. Instead, the fictionalist treats possible worlds as elements of a useful fiction. The fiction most often employed for this purpose is David Lewis's "modal realism." However, a fiction according to which there are abstract possible and impossible worlds yields a fictionalism that secures the utility of impossible worlds (e.g., in counterfactual semantics) and which has several theoretical advantages over concrete-world theories, hybrid accounts, and concrete-world fictionalisms.

S P E A K E R S

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What is Relevant to Exclude? On Necessitation in Truthmaking

In this paper, I present four arguments against truthmaker necessitarianism, the thesis according to which if T makes ⟨P⟩ true, then it is impossible for T to exist and for ⟨P⟩ to be false. Truthmaker theorists (e. g., Armstrong (2004); Cameron (2008), Jago (2013, p. 462), Rodriguez-Pereyra (2006) Schaffer (2008, p. 10)) generally take it for granted that the truthmaker necessitates the truth, and few reject it (see, e. g., Heil (2000), Parsons (1999), Stenwall (2016; 2017)). I show that necessitarianism runs into four problems.

The first problem concerns exclusion. For a truthmaker to necessitate a proposition, it has to exclude relevant entities that would have made that proposition false. For instance, the counterfactual

⟨Had Jane dropped the mug, it would have broken⟩

could be false in another possible world where there is a pillow on the ground underneath the mug. The truthmaker for this counterfactual must necessitate that there is no pillow there. But the truthmaker does not have to exclude that there is a book on the ground underneath the mug, since even if there were a book, the mug would have broken had Jane dropped it. The truthmaker does not have to exclude that the floor is crooked either, since had Jane dropped the mug, it would still have broken. However, In another possible world, there is a book on the ground underneath the mug and the floor is crooked but had Jane dropped the mug, it would not have broken, since in this case, it would be the right conditions for the mug not to break. The necessitarianist has to explain what entities are relevant in every case.

The second problem is that the necessitarianist has to provide an infinite number of truthmakers for each counterfactual. She can take the truthmaker for the counterfactual above to consist in natural laws, the mugs fragility, an entity that excludes a book underneath the mug. But she could equally posit a truthmaker that instead excludes the floor's being crooked. Similarly, there are many relevant entities that together are sufficient but neither is necessary to make the counterfactual false and the necessitarianist can either posit a truthmaker to exclude one entity and not the other. Since it is an arbitrary choice, the necessitarianist has to posit that every counterfactual has an infinite number of truthmakers.

The third problem is an epistemic problem. Let us assume that there are entities that exclude things like pillows, books, etc. Still, what does the truthmaker for every counterfactual consist in? the question for the necessitarianist is to tells what entities each truthmaker for counterfactual consists in. Given that they have to include an infinite number of entities and given that deciding what relevant entities are is problematic, the necessitarianist cannot state what each truthmaker for each counterfactual is.

The fourth problem is an infinite regress that faces the necessitarianist. Since the necessitarianist has to exclude either the book (call is A) or the floor's being crooked (call is B), then, on her account, had A and B been the case then:

⟨Had A and B been the case, R would not have been the case⟩

(where $\langle R \rangle$ is $\langle \text{Had Jane dropped the mug, it would have broken} \rangle$). But this is a new counterfactual and the necessitarianist has to provide a necessitating truthmaker for it. We can repeat the same thing for the new counterfactual. This implies that every time the necessitarianist provides a truthmaker for a counterfactual, she has to provide truthmakers for an infinite number of counterfactuals.

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Towards a Theory of Being-Apt-To

The notion of being apt to plays a role in our ordinary talk:

- (1) John is apt to take the driving license in UK because he is 17yo.
- (2) Charles is apt to be the successor of the King of the Franks because he has some blood relationship, and he is male.

It plays a role in philosophical theorizing. De Rossett holds that grounding claims are apt to have a truth-value (*Fundamental Things*, 2023, OUP, Ch.3).

Apt-to also has explicative roles.

The Exterminator is an individual who exterminates everyone who is apt to be the successor of the King of Franks, no matter which condition settles how someone is apt to be the successor of the King. The role played by the property of *being apt-to-P* cannot be played by its basis alone.

A philosophical account of being apt to is still missing. The goal of this talk is to fill the gap.

The gloss

The expression “being apt to” is understood as a way of establishing a restriction on the candidates that may have property P on the basis of a given condition.

The account

The expression “being apt to” is a predicate modifier, such that given “apt-to” and a predicate “P”, one obtains the predicate “*apt-to-P*”.

There are several principles that constrain the meaning of this predicate, including:

- (Pr1) Necessarily, if an object x is P, x is *apt-to-be-P*.
- (Pr2) Possibly, if an object x is *apt-to-be-P*, it is possible that x is P.

(Pr3) For some property P, possibly, if an object x is *apt-to-be-P*, x is not P.

(Pr4) Necessarily, there is some Q and some y such that x is apt-to-be-P because y is Q, where Q is not an apt-to property and y needs not to be x, but e.g. one of its parts.

(Pr5) Necessarily, there is some R and some y such that x is P iff x is *apt-to-be-P* and y is R.

(Pr6) It possible that there is some Q such that some x is *apt-to-be-P* because y is Q and it is possible that there is some Q' (\neq Q) such that x is apt-to-be-P because y is Q'. E.g., in Italy, x is apt to have a driving license because x has more than 18yo. In UK, x is apt to have a driving license because x has more than 17yo.

Having justified these principles, the working hypothesis is that apt-to properties are constructed from grounding claims, where the notion of grounding is weak partial grounding. The fact that John is apt to take the driving license in UK is weakly partially grounded in the fact that John has more than 17yo. The notions of apt-to and disposition are structurally similar.

We argue that both are second-order properties that are determined by a certain base which plays a given role. However, they are different phenomena as their different glosses suggests. First, their bases are extensionally different, given dispositional essentialism. Second, given the grounding view of powers, a disposition is fully strictly grounded by some power. Instead, apt-to properties are generated in terms of weak partial ground. We argue that the different notions of ground justify the different glosses.

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Modal Distributional Properties

In this paper, I develop on Josh Parsons' distinction between distributional and non-distributional properties, and use my resultant extended taxonomy of properties to offer solutions to several longstanding problems in modal metaphysics. Parsons (2000, 2004) gives us good reason to think that spatio-temporally extended objects instantiate distributional properties, which can be contrasted with the non-distributional properties that are instantiated at points. To borrow Parsons' (2000, 410) example, we can assign a spatial non-distributional colour to every point on a chessboard, but it instantiates a pattern or distribution of colours over its whole surface. The black and white chequered pattern that is typical of chessboards is the chessboard's spatial distributional colour. The same can be said for objects that instantiate patterns of properties over time. A ripening tomato might have the temporal non-distributional colours of *green-at-some-early-time*, *orange-at-some-later-time* and *red-at-some-yet-later-time*. It also has the temporal distributional colour of being *green-then-orange-then-red*. However, objects don't always instantiate different properties over time. A blank piece of paper that is never written upon has a temporal distributional colour of uniform white. Noticing this, Parsons (2004, 178) defines change as the possession of some non-uniform temporal distributional property.

Though I believe Parsons' original setup to be *correct*, I don't believe it to be *complete*. To extend it, I first spell out what his distinction means within the modal context, advancing two further properties: the modal distributional and non-distributional subtypes. The jumper that I'm actually wearing is blue, but it might have been red or purple. In that case, the jumper exists at three possible worlds, and in each world, it has modal non-distributional colours: *blue-at-the-actual-world*, *red-at-some-merely-possible-world* and *purple-at-some-other-merely-possible-world*. I prefer purple to red, so it's a more distant possibility that I'd have a red jumper than a purple jumper, and so if my jumper is extended across the worlds that represent these aforementioned possibilities, then it instantiates a *blue-to-purple-to-red* modal distributional colour.

Second, I argue that much like in the case of temporal distributions, the difference between uniform and non-uniform modal distributional properties is metaphysically significant. Something that is necessarily red will have a uniformly red modal distributional colour, but the non-uniform modal distributional colour of my jumper implies that it has its colour contingently. The rest of the paper imagines how parsing necessary and contingent properties as uniform and non-uniform modal distributions solves problems for theories that posit modal extension. I'll consider two such theories. First, straightforward trans-world identity theories, which are committed to modally extended objects being both wholly and multiply located within various possible worlds, and second, modal parts theories, which advance the idea that objects extend through modal space in virtue of having proper parts within various possible worlds. I'll show that thinking of necessity and contingency in the way I've outlined offers benefits to both kinds of theory.

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A Puzzle of Relative Identity

The theory of relative identity is often formulated in terms of one or more of the following claims:

1. There are at least some true statements of the form, "x is the same F as y, but x and y are different Gs"
2. There are at least some true statements of the form "x is the same F as y, but x and y are different Gs" which are not grounded in statements of the form "x is identical to y".
3. Well-formed identity statements are of the form "x is the same F as y"; statements of the form "x is identical to y" are ill-formed.

One way in which (1)-(3) are put to philosophical work is in providing a distinctive and somewhat neglected solution to the problem of the many: how is it that a single ordinary object (e.g. a cat called Tibbles) relates to many candidates (e.g. multiple overlapping lumps of feline tissue, (L1, L2, L3, ... Ln) each seemingly equally viable referents of "Tibbles") located in its vicinity? The relative identity theorist is at liberty to say: For any two lumps L1 and L2, they are the same cat (namely , Tibbles) while being different lumps of feline tissue.

One puzzle for the relative identity theorist is how to deal with the apparent contradiction arising from predications about Tibbles. Given the appropriate assumptions about Tibbles' hair colour, it's possible for "Lump1 is black all over" and "Lump2 is not black all over" to be both uncontroversially true. Yet this seems to entail the problematic conclusion that "Tibbles is black all over" and "Tibbles is not black all over" are both true. Is that what the relative identity theorist is committed to? If not, why not?

I explore a strategy for responding to this objection that draws on suggestions from Peter Geach's account of shared names. In particular, I explore the hypothesis that "Tibbles" is a lexically ambiguous proper name, with distinct lexical entries associated with individual lumps of feline tissue (Lump1, Lump2, Lump3, ... Lumpn), only one of which will be at play in a given token utterance of "Tibbles".

I compare this hypothesis with two alternative ways of responding to the puzzle, arguing that the lexical ambiguity hypothesis is the best placed of the three, and that relative identity theorists thus have reason to endorse a lexical ambiguity theory for names like "Tibbles."

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Fictionalist Abstraction

Abstraction principles are biconditional axioms – necessary in the derivation of a given mathematical theory – which establish some relevant features of the abstraction correlation. They could also be regarded as definitions – they define an abstraction function by a corresponding equivalence relation and each instance of them implicitly defines a value of the function, namely an abstract object. Nothing, in their logical behaviour or in their definitional role, depends on (and then imply) the existence of such objects. They talk about abstract objects but, in themselves, without other existential assumptions of the theory, they are ontologically neutral about their existence.

Thus, in general, a Fictionalist interpretation, which allows us to talk about non-existing objects, fits more than a Platonist interpretation the proper working of the abstraction principles. More precisely, on one side, regarding their definitional role, Fictionalist position, refusing an ontologically committed notion of referent, is open to different readings of the contextual and implicit definitions, up to strong versions of reductionism (Cfr. [3]). For this reason, Fictionalist position complies with the indeterminacy of such aspect of Frege's original semantics. On the other side, regarding the logical role of abstraction principles, Fictionalist account provides a more accurate analysis of their working. Abstraction principles describe how to index equivalence classes of first or second-order terms (provided by a quotientation of the corresponding domain) by first-order terms and this task does not require the existence of the indices' denotation. In other words, abstraction principles are silent on what there is in the domain and in the world. The existential assumptions about the abstracts are provided by a theorem ($\forall X \exists x (x = \Sigma X)$) which presupposes logical assumptions

and rules (as Existential generalisation) and could be derived without the abstraction principles – then it should be considered a consequence of the logical part of the theory.

I will argue that such description of the abstraction principles is compatible with Yablo's Hermeneutical Fictionalism (cfr. [10], [8]) and presupposes a distinction which is very close to that between "Real content" and "Literal content". About the abstraction principles, we can redefine the "Real content" as the *Proper content* and the "Literal content" as the *Logical content*, namely the logically informed and ontologically committed content. The *Proper content* of an abstraction principle is the content that a principle has in itself, ideally before to be added to a logical theory: it concerns the properties of the abstraction function and it is invariant, if considered in different logical frameworks; it is uncontroversial but it does not imply the existence of the abstract objects. On the contrary, the Logical content is the content that a principle has when inserted in the typical logical framework of the abstractionist programs, namely in the classical logic: such content is able to imply the existence of the abstract objects but it is not properly part of the (only) abstraction principles because it also and mainly depends on the logical part of the theory.

In the last part of the talk, I will suggest that the overlapping between the Proper and the Logical content of the abstraction principles arises from their interaction with first-order classical logic. I will test this hypothesis by substituting classical logic with logics that involve weaker identity and quantification theories, as (different version of) Free logics. Thus, by exploring different ways to formalise the Fictionalist interpretation of the abstraction principles, we add, to the mentioned philosophical advantages of Fictionalist account, new opportunities both to understand the inconsistency of the original Fregean logicism (involving Basic Law V) and to identify the most suitable logical framework for the abstractionist recapture of the mathematical theories which we are deriving.

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Against the Identity of Indiscernibles

The principle of the identity of indiscernibles (II for short) says that:

II: if a and b share all their qualitative properties, then $a = b$.

The principle is controversial as there are compelling reasons to think that it is possible for a world to contain indiscernible individuals. Such is the case with Max Black's famous example involving two uniform iron spheres, Castor and Pollox, in a symmetric world containing nothing else (Black, 1964). The scenario is certainly imaginable in an obvious

sense, but those who maintain II argue that whether it is possible involves a further illegitimate step. However, while rejecting such an intuitive possibility is a cost, I will argue for what I think is a much stronger argument against II, a version of which was introduced by Robert Adams (Adams, 1976). The argument has come to be known as *the argument from almost indiscernibles* (See e.g. (Rodriguez-Pereyra, 2017) and (Baber, 1992)). In brief, the argument runs as follows. It is possible that there is a world containing two balls that are indiscernible except for their color: one, call it a, is red and the other, call it b, is blue. By the indiscernibility of identicals, the two balls are distinct. However, someone could paint one of the balls and not the other. According to II, the two balls would become one. But how could one of the balls go out of existence simply by painting the other? And which of them goes out of existence and which remains? And if both stay in existence, it must be because the two balls become identical. But that contradicts the necessity of distinctness: if a and b are distinct then, necessarily, they are distinct. The argument can be summarized as follows:

1. a and is almost indiscernible from b in virtue of only a's having property P
2. a could have lacked P, all else remaining equal
3. Therefore, a could have been indiscernible from b

In a recent paper, Gonzalo Rodriguez-Pereyra gives an interesting argument in defense of II and against the argument from almost indiscernibles. I argue that that argument fails, and that other defenses of II also fail to respond to the argument from almost indiscernibles. I conclude that the argument from almost indiscernibles is one of the strong arguments against II, and that therefore there are very good reasons to reject II along with metaphysical views that entail certain versions of it.

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Imaginative Resistance and the Possibility of Moral Status

This presentation examines why we do not appear to encounter *imaginative resistance* when considering the possibility of Artificial Intelligence that deserves moral status. The puzzle arises from a tension between two claims: first, that Large Language Models are not, and plausibly could not become, sentient (see, e.g., Chalmers 2024), and second, that sentience, i.e., the capacity to experience pain and pleasure, is often regarded as a ground of moral status (see, e.g., Singer 1989). However, even if moral status–deserving LLMs are impossible, it nonetheless seems within our imaginative capacities to conceive of them.

The first part of the presentation outlines several influential accounts of imaginative resistance: (a) Nichols and Stich's (2003) cognitive model, which explains resistance in terms of cognitive mechanisms governing possible-world representations, and identifying explicit contradictions; (b) Gendler's (2006) "wontian" account, according to which resistance is explained in terms of unwillingness to imagine morally improper scenarios (rather than cognitive incapacity); and (c) Peter Kung's (2010; 2016) believability theory, which ties the limits of imagination to the limits of stipulation under conditions of epistemic certainty.

If an entity is assigned moral status, then that entity has moral rights and we allow that we have direct duties towards it. The second part of the presentation briefly surveys prominent grounds of moral status attribution, including (a) *non-relational* ones such as moral agency, sentience, genetic humanity, the possession of ‘a good of one’s life’, and (b) *relational* grounds such as responsiveness to care, and community membership (see Warren 1997; 2003)

The third part will be concerned with assessing which of the grounds are compatible with being able to imagine moral status-deserving LLMs and which are likely to generate imaginative resistance. It will be argued that imaginative resistance to scenarios in which an AI-based technology deserves moral status depends on both (a) the imaginer’s background knowledge regarding AI (e.g., knowledge of how a LLM works, distinguishing between narrow AI and AGI etc.), and (b) what the imaginer takes to be a ground of moral status.

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An Exegetic Theory of Location

This paper develops a permissive framework for theorising about location. Its motivation is a familiar problem in the philosophy of location: the optimal permissive system should allow both for objects to have multiple exact locations (i.e. allow for failures of ‘FUNCTIONALITY’) and for there to be objects without any exact location (i.e. allow for failures of ‘EXACTNESS’). Finding such a system has proven difficult, and this paper aims to remedy that.

I begin by briefly outlining what a minimal and acceptable system of location should provide. Such a system should specify a primitive location relation, articulate axioms governing its behaviour, and show how other location relations—such as exact, weak, entire, and filling location—are related. I then review two influential approaches. One: systems taking ‘weak location’ as primitive. Two: systems taking ‘exact location’ as primitive. The former can accommodate EXACTNESS failures but cannot deal with failures of FUNCTIONALITY; the latter have the opposite profile.

To overcome these limitations, I introduce an ‘exegetic theory of location’ that enriches the standard ‘weak-location system’ by (a) adding grounding relations and (b) playing on the idea that location relations can be one–many rather than one–one (such that an object is *distributively* weakly located at many regions, rather than weak location having to be one–one). My central proposal is to take one–many weak location as primitive and then incorporate grounding to explain how more familiar location facts arise.

A key distinction is drawn between *fundamental facts* and *exegetic facts*. Presumably, fundamental facts would only ever concern mereological simples, and composite objects would not appear in them; thus, there can be no fundamental facts about a composite object's location. Nevertheless, there may be an ordering of fundamentality, such that some facts about the location of a composite object are 'the most fundamental' compared to other such facts. Such a 'most fundamental' fact about an object's location is what I call an 'exegetic fact' (a name that applies regardless of whether the object in question is composite or mereological simple—thus, some exegetic facts may also be fundamental).

I then show how my system avoids both FUNCTIONALITY and EXACTNESS as theorems without abandoning a simple axiomatic structure. The former isn't true because cases of an object having multiple exegetic facts will be cases of multiple location. The latter isn't true because there are facts about an object's distributive plural weak location and it follows from the details of my system that, were such distributive facts exegetic, then the relevant object would be exactly located nowhere. This strategy accommodates familiar problem cases such as point-sized particles in gunky space, objects smaller than extended simple regions, perfectly blended stuffs, omnipresent beings in junky space, and a new worry that I consider: trope-like entities that are located but plausibly lack determinate shapes (and so, therefore, cannot be exactly located anywhere).

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A Hylomorphic Critique of Pure Potentialism

Barbara Vetter (2020) argues that potentiality, rather than essence, should be taken as the fundamental primitive in an account of modality, and that essentialism and potentialism ought to be regarded as competitors rather than allies. In response, Kathrin Koslicki (2022) has defended a form of "Combination," according to which essence and potentiality are mutually dependent. She argues that essence constrains potentiality, and essences themselves can even include potentialities. This paper develops and extends Koslicki's response by offering a fully hylomorphic and dispositional account of essence that explains *why* and *how* potentialities can be constitutive of essence without collapsing essence into modality.

Following Kit Fine (1993), the paper rejects the reduction of essence to modal profile and insists that essentialist facts are distinguished by their *source*, not by *which necessities they entail*. Fine asserts that essential truths are truths that hold in virtue of what an object is, not merely truths that hold of it across possible worlds. In this paper, I argue that this source-sensitivity is best captured by a form-matter ontology. On this view, form is a principle of organization that determines which lower-level dispositions within matter are activated or suppressed, and how the activated ones are coordinated, thereby grounding a distinctive higher-level dispositional profile. An object's essence, therefore, consists in this form-guided dispositional profile, rather than in a list of intrinsic categorical or modal features.

An important advantage of the dispositional hylomorphic account is that it allows essences to incorporate *joint dispositions*. More importantly, since dispositions are defined in terms of manifestations under appropriate conditions or stimuli, this account allows essential properties and dispositions to be partly constituted by relations to external entities without collapsing into relationalism or contextualism. The essences of many entities are not exhausted by what they can do in isolation, in case there is anything that can be done in isolation. Rather, essences consistently include patterns of interaction with external objects, environments, and agents.

The paper illustrates this framework across three domains. In physics, the characteristic behaviors of electrons—such as magnetic or electrical momenta—are intelligible only in terms of interactions with external magnetic and electrical fields, yet remain central to their identity. In biology, the functions and capacities of organisms are essentially tied to ecological, developmental, and cooperative relations, without thereby undermining the reality of biological essences. Finally, the paper extends the account to social ontology, arguing that structured social groups, such as states and corporations, can possess genuine essences grounded in structured patterns of selected dispositions of members, institutions, artifacts, and non-human resources. Such essences, in all three domains, are irreducibly interconnected to some *other*, yet no less real or explanatory.

The resulting view preserves the metaphysical strength of essentialism as grounded in objects themselves while avoiding reductive, isolationist, or exclusionary formulations. By reconceiving essence as a form-structured dispositional profile, the paper offers a framework inspired by ancient philosophy and engaging with contemporary metaphysical debates and concerns, but also capable of accommodating natural kinds, living systems, and social entities within a single, dynamic notion of essence.

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Modal Status of Semantic Rules in Modal Normativism

Contemporary approaches to metaphysical modality continue to face many challenges. Traditional theories of modality often postulate the existence of "modal facts" or "possible worlds." In consequence, they tend to carry significant ontological burdens and generate difficulties regarding epistemic access to modal truths. Amie Thomasson argues that the core mistake of traditional theories lies in treating modal language as a tool for description of reality's features. Instead, she claims that modal discourse serves a normative function. It is used for expressing semantic rules that govern our use of language. Modal normativism is a way of demystifying modality as a part of Thomasson's broader proposal for a better, clearer, more acceptable approach to metaphysics.

One of the main objections raised against modal normativism concerns whether it genuinely constitutes a new account of modality, or whether it is just a new version of the conventionalist approach. If all semantic rules—supposedly the basis of modality—are to be understood as contingent, the two views appear really similar. If there are some necessary semantic rules, it must be clarified what it means and why they have that status.

In my talk, I aim to discuss this particular topic. First, I'd like to present said problem in detail. Importantly, I plan to outline and discuss possible answers. Although the solutions proposed by Thomasson in "Norms and Necessity" (2020) may appear intuitive and consistent with the popular Chomskyan picture of the nature of human language, I find them ultimately unsatisfactory. Accordingly, I will explore alternative options and suggest directions for further research.

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Modal Transcendentalism without Transcendental Idealism?

Jessica Leech's modal transcendentalism offers a novel Kant-inspired account of metaphysical modality. According to this view, metaphysical necessity is objective necessity: a proposition is metaphysically necessary if and only if it follows with logical necessity from the conditions of objectivity, understood as the conditions under which objective thought and representation are possible. Metaphysical necessity is thus identified with the strictest form of real necessity, albeit one that is relative to such conditions.

Leech introduces the notion of conditions of objectivity as a response to what Sebastian Gardner has called the "problem of reality": how can our mental states be about a mind-independent world at all? Following Kant, modal transcendentalism rejects the assumption that objects are absolutely independent of the mind, and instead holds that objects must conform to certain conditions that make objective thought possible. However, Leech remains non-committal both about the exact list of these conditions and about the Kantian explanation of their source, namely transcendental idealism.

The central thesis defended here is that modal transcendentalism is incompatible with transcendental idealism. This result is significant because modal transcendentalism appears to require some account of the source of the conditions of objectivity if metaphysical necessity is to qualify as the strictest form of real necessity. If modal transcendentalism entails transcendental idealism, then Leech's view inherits commitments she explicitly seeks to avoid. If it does not, then modal transcendentalism owes us a non-Kantian explanation of the source of the conditions of objectivity.

The argument proceeds by developing an objection that Leech herself considers: objective necessity cannot be the strictest form of real necessity, since it applies only to the domain of objectively thinkable reality (the domain of appearances). There seems to be a stronger form of necessity that applies to reality independently of our cognitive capacities. I argue that transcendental idealism cannot adequately respond to this objection.

Methodologically, the paper adopts a minimal and ecumenical characterization of transcendental idealism, following Lucy Allais, according to which it consists of three core commitments: (i) the distinction between appearances and things in themselves, (ii) the mind-independence of appearances in some respect, and (iii) epistemic humility concerning things in themselves. I then examine the three dominant interpretative frameworks in the literature—the two-object view, the metaphysical two-aspect view, and the epistemological two-aspect view—and argue that none of them can vindicate the claim that objective necessity is the strictest form of real necessity.

The upshot is a dilemma for modal transcendentalism. Either it collapses into transcendental idealism and thereby fails to secure objective necessity as metaphysical necessity, or it must abandon transcendental idealism and develop an alternative account of the source of the conditions of objectivity.

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A Riddle about the Middle

The “question of fundamental mereology” (QFM) – “the question of what is the ground of the mereological hierarchy of whole and part” (Schaffer 2010, p. 38) – is a central issue in contemporary metaphysics. Two theses dominate the debate: Mereological Bottomism (MB) and Mereological Topism (MT). MB holds that fundamental concrete objects are mereological atoms, while MT maintains that they are mereological coatoms. However, Bernstein (2021, p. 1069) suggested that Mereological Middleism (MM) – the view that fundamental concrete objects are mereological intermediates – is a valuable, though largely overlooked, alternative.

A standard objection to MM is the arbitrariness objection (Schaffer 2008, § 3.2.3; 2010, p. 63; Tallant 2013, pp. 435–436; Brzozowski 2016, p. 62; Trogdon 2017, p. 3; Bernstein 2021, p. 1075; Saucedo 2022, fn. 28). It proceeds in two steps. First, critics note an asymmetry between MB and MT, on the one hand, and MM, on the other. Whereas the former claim that objects are fundamental in virtue of being atoms or coatoms, MM is not committed to an analogous claim. Thus, while every atom or coatom is fundamental according to MB or MT, only some intermediates are fundamental on MM. Second, it is claimed that there is no principled way to distinguish derivative and fundamental intermediates. This objection has both an epistemic and a metaphysical version: there is neither evidential reason nor metaphysical explanation for the fundamentality of any given subclass of intermediates (Bernstein 2021, p. 1075).

In this paper, we argue that the metaphysical objection is unwarranted. We work assuming perdurantism, understood as the view that persisting objects have temporal parts and are singly exactly located. This allows us to distinguish nine fine-grained answers to the QFM, depending on whether fundamental objects are spatially and temporally atomic, coatomic, or intermediate. Seven of these are forms of MM. We focus on two that provide principled candidates for fundamental intermediates:

1. World-stages: spatially coatomic and temporally atomic objects;
2. Atomic-worms: temporally coatomic and spatially atomic objects.

These entities occupy “natural joints in the [temporal and spatial] mereological structure” (Schaffer 2010, p. 63) and, under plausible mereological conditions, are intermediate. They also satisfy key desiderata for fundamentality. First, they comply with Schaffer’s Tiling Constraint (2010, pp. 38–42). Second, they can be singled out by appealing to a condition that is non-parochial, yet not too broad, as it only features properties relevant to concrete objects, namely their being spatiotemporal and mereologically structured. Hence, the middleist can resist the arbitrariness objection.

We also address an objection stemming from the possibility of spatial and temporal gunk and junk. We argue that all nine answers to the QFM face analogous difficulties; MM is no worse off than MB or MT. We also consider bunko worlds, i.e. worlds where composition occurs and every object is either an atom or a coatom. We suggest that world-stage and atomic-worm theorists can coherently hold that fundamentalia are intermediates in most, though not all, worlds.

We conclude by speculating on some responses to the epistemic arbitrariness objection by presenting some evidence for the two middleist views that we discuss in the paper.

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Flexible Counterparts

I discuss and reject the worry that counterpart theories (CTs) are too flexible. The introduction of modal or temporal counterpart relations (CRs) resolves conflicting claims about modality or persistence as well as about rival possible, future, or past selves. This helps tackle some metaphysical puzzles. Take a statue made of clay. It looks like one object, but it seems that it may resist squashing when seen as a block of clay, not when seen as a statue; it seems that it has existed for longer when seen as a block of clay than when seen as a statue (Lewis, 1986; Sider, 2001). Defenders of CTs will say that there is no contradiction here. Instead, the situation is the result of applying two distinct CRs to the same object. This also means that CTs can also easily deal with objects with vague temporal boundaries or modal properties by postulating a multiplicity of CRs. Similarly, when an object undergoes fission, CTs can allow one object to have two distinct counterparts after the fission. These solutions use the fact that CRs have radically different features than we usually assume that numerical identity has: for example, CRs need not be transitive or symmetric.

This form of flexibility, then, is what makes counterpart theories powerful: give counterpart theorists any set of competing intuitions about modality or persistence, and they will spit out a corresponding set of counterpart relations and dissolve the problem. As even favorable discussions of CTs note (Sider, 1996, pp. 206–207; Varzi, 2003, pp. 409–410), however, this flexibility runs the risk of being suspicious: if there is no definite answer to questions about modality or persistence, then these phenomena are not profound or turn out to be fictional projections of our minds. While the extant literature discusses this worry only briefly before dismissing it, I offer novel ways to construe why this is a problem. In particular, counterpart theories undermine metaphysical presuppositions in other important discussions, including debates about responsibility or the moral status of embryos.

I argue that the counterpart theorist has two avenues to resist this conclusion. The first is to bite the bullet: when CTs resolve complicated puzzles for which other theories have no good, coherent explanation, this indeed proves that the notions under scrutiny are not as profound as common sense suggests. If one chooses this avenue, the flexibility of counterpart theories

is indeed a strength, and the debates that are undermined should be reframed in other terms to capture what really matters. The other possibility is to deny that there is a real difference on this point between CTs and their competitors (see, e.g., Varzi, 2020). For example, one may impose strict conditions on what constitutes a counterpart relation (for example, one may stipulate that no counterpart relation is such that an entity has two counterparts at the same time or world) or on what counterpart relation applies to each object.

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Two Kinds of Necessitarianism

Necessitarianism is the view that the actual world is the only possible world, or rather, that the set of actual states of affairs exhausts the set of possible states of affairs. Necessitarianism is commonly dismissed as implausible and unworthy of serious consideration. The most obvious reason for rejecting the view is its apparent conflict with our modal intuitions: most philosophers take it to be obvious that the world could have been otherwise, and thus that the actual does not exhaust the possible. This operative intuition is reinforced by arguments from conceivability, according to which our ability to conceive of alternative ways the world might have been provides evidence that such alternatives are possible.

This paper expounds an ambiguity in popular formulations of necessitarianism that has gone entirely unexplored. Recognition of this ambiguity gives rise to two distinct forms of necessitarianism. Spelling out this distinction is important because these two kinds of necessitarianism commit their hypothetical proponents to ontologies of vastly different scopes. While both are likely unintuitive, they are unintuitive for mutually distinct (and perhaps incompatible) reasons, and familiar objections do not apply to both with equal force.

In everyday thinking, we generally understand the set of possible states of affairs to be "bigger" than the set of actual states of affairs (or rather, we understand the latter to be a proper subset of the former). The shocking thing that the necessitarian does is assert that these sets are coextensive. Thus, the necessitarian thinks that states of affairs belonging to *possibilia* but not to *actualia* do not exist. For those states of affairs that we ordinarily take to belong to *possibilia* but not to *actualia*, the necessitarian has two options: they must either be impossible or actual.

Necessitarianism thus comes in two kinds.

Restrictive necessitarianism: all possible states of affairs are actual, insofar as those states of affairs we generally take to be possible but non-actual are, in fact, impossible.

Expansive necessitarianism: all possible states of affairs are actual, insofar as the full range of states of affairs we generally take to be possible are actual.

The restrictive necessitarian understands the set of possible states of affairs to be much "smaller" than we ordinarily think, while the expansive necessitarian understands the set of actual states of affairs to be much "bigger" than we ordinarily think.

The distinction has important consequences: conceivability-based arguments are effective against the restrictive necessitarian, who must thereby deny that conceivability is a good guide to possibility. The expansive necessitarian, by contrast, is under no such pressure and will indeed hold that conceivability is a good guide to *actuality*. I do not defend necessitarianism, restrictive or expansive. Rather, my aims are clarificatory (to show that rejecting necessitarianism requires more careful argumentation than is typically afforded) and exploratory (to outline points of contact between expansive necessitarianism and other positions in modal metaphysics, particularly modal realism and actualism).

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Impossible Worlds, Counterpossibles, and Impossible Object

In this paper, I aim to argue that to account for counterpossibles, counterfactuals whose antecedents are true in no possible worlds, impossible worlds are more fine-grained than merely open worlds. According to the standard semantics suggested by Stalnaker (1968) and Lewis (1973), a counterfactual ‘ $A \Box \rightarrow B$ ’ is true in w iff in the A -closest worlds from w , B is true. However, this view implies that every counterpossible is vacuously true. This is a counterintuitive conclusion (For philosophers consider this conclusion to be unacceptable, see Nolan (1997), Mares (1997), Vander Lann (1997, 2004), Zalta (1997), Brogaard and Salerno (2013), Kment (2014), Bernstein (2016), and Berto and Jago (2019)).

First, to account for non-vacuous truth or falsity of counterpossibles, there must be impossible worlds where its antecedent is true for every counterpossible. However, this is not enough. Consider a frame where there is only one impossible world, and everything is true in that world. In this frame, although counterpossibles are not vacuously true, every counterpossible is automatically true.

To account for counterpossibles, impossible worlds must not be closed under any consequence relation, except $A \models A$. To see why, assume that worlds are open to a consequence relation, for example, $A \& \sim A \models B$.

(1) Had *ex falso quodlibet* been an incorrect inference while Taylor Swift had been a singer and not been a singer, it would have been the case that $1+1=3$.

Although our intuition considers (1) false, if worlds are open to $A \& \sim A \models B$, (1) is true. If $A \& \sim A \models B$ is held in every world, in every world where there is a contradiction, any other thing is true. So, in every world where the antecedent of (2) is true, the consequent is also true. A similar counterexample can be made for any consequence relation.

However, open worlds are not enough. Imagine in every impossible world, every proposition is true, but only one proposition is not, and for any proposition, there is a world where it is not true. These worlds are open since for any consequence relation, there is a counterexample: a world where everything is true, but the right flank of double turnstile is not.

In this frame, for any counterpossibles sharing antecedent, only one counterpossible is true. Assume that ‘ $A \Box \rightarrow B$ ’ is false. Then, in all the A -closest worlds, B is not true. However, by the assumption, there is a unique world where B is not true, a world where everything is true, but B . So, if the counterpossible is false, any other counterpossibles sharing the antecedent with it become true.

For the sufficiently fine-grained worlds, I propose that, for any set of propositions, there is a world where exactly those propositions are true.

Comprehension Principle for Impossible Worlds (CI): (1) If it is impossible that $A_1, A_2 \dots A_n$ are true but $B_1, B_2 \dots B_n$ are not true, and (2) if no instance of A_i is an instance of B_j , then there is an impossible world where $A_1, A_2 \dots A_n$ are true but $B_1, B_2 \dots B_n$ are not true. (For other comprehension principles for impossible worlds, see Nolan (1997), Berto (2008, 2012 chapter 6), Berto and Jago (2019 chapter 8 and 11), and Priest (2016a, 2016b). However, all their comprehension principles are not sufficiently fine-grained enough to account for counterpossibles).

Once CI is accepted, the truth values for any counterpossible can be intuitively accounted for. For a counterpossible ' $A \Box \rightarrow B$ ', consider the sets of propositions consisting of those propositions that would have been true if A were true. According to CI, there are worlds where exactly each of these sets of propositions are true, and B is a member of each such set. Likewise, its falsity is well accounted for.

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Generative Parsimony as Reverse Metaphysics

Metaphysicians face competing intuitions and competing theoretical virtues, each seeming to authorize a different epistemic stance. Push hard against intuition, and you risk quietism, where nothing can be said; push hard against virtues, and you risk paralysis, where nothing decides between theories. Since intuitions have repeatedly been overturned, the problem is to let the virtues guide choice without letting them merely label whichever theory your temperament prefers. Parsimony is often treated as a master virtue, and Lewis's distinction between qualitative and quantitative parsimony, together with Cowling's appeal to ideological parsimony, forces the question of what parsimony should measure.

The remedy is a reconstrual of parsimony as *generative parsimony*, the preference for theories that minimize the quantity of independent, information-bearing brute commitments required for explanation. Here, a brute commitment is an underived axiom or primitive term, and an explanation is a finite, checkable proof in a fixed deductive system that makes the phenomenon to be explained a necessary consequence of the system. This metric captures the spirit of the virtues as maximizing intelligibility, subsuming them into a single ratio of informational efficiency. In practice, this approach treats metaphysics as reverse metaphysics, akin to reverse mathematics: We take the phenomenon to be explained as the target theorem and seek the minimal axiomatic base capable of generating it. The guiding analogy is not

“fewest things” but “smallest basis”: Pay for an axiom once and count its deductive closure as dividends.

Distinguishing this view from Sam Cowling’s “ideological parsimony” clarifies its mechanics. Generative parsimony departs from counting primitives (NI-parsimony) or kinds of primitives (KI-parsimony) because lexical minimalism can coexist with maximal brute commitment. A brute list can use only “particle” and “location” yet accept a distinct axiom for every particle-position fact; it thereby refuses explanatory compression. Two objections then matter. First, “God-number” compression: A single constant could encode the entire world. In response, generative parsimony tracks information-bearing commitments, so an arbitrary, highly specific constant is costly even if it is only one symbol; moreover, axioms have internal size, so packing many predicates into one conjunctive axiom does not buy cheapness. Second, the map/territory worry: Reality might be a mosaic with no necessary connections. The view answers modestly that it assumes (as a precondition of inquiry and explanation) that some compression is available overall.

In application, the metric both rescues and criticizes Lewis’s modal realism. It rescues it by dissolving the quantitative objection: An infinity of worlds is not expensive if produced by a compact recombination principle, so, Cowling’s focus on the irreducibility of terms like “essence” and “actuality” misses the relevant source of compression. Yet the same test exposes where Lewis’s theory comes up short: Humean supervenience treats the within-world mosaic as radically contingent, so, axiomatizing the actual world threatens to require point-by-point brute commitments, and the Best System account of laws arrives too late to generate structure. Ultimately, generative parsimony vindicates Lewis’s infinite worlds but condemns his disconnected atoms, suggesting that a tenable metaphysics must abandon Humean independence to save explanation.

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Between Independence and Inherence: An Aristotelian–Neo-Aristotelian Inquiry into Substances and Modes

This study undertakes a rigorous ontological analysis of the distinction and interrelation between particular substances and particular non-substances, synthesizing Aristotle’s classical *hylomorphic* metaphysics with Jonathan Lowe’s contemporary *neo-Aristotelian* framework. Within Aristotle’s ontology, particular substances (*prōtai ousiai*) are understood as fundamentally independent, concrete entities constituted by the composite unity of matter (*hylē*) and substantial form (*morphē*), thus serving as the primary bearers of being (*to on kath’ hauto*). Conversely, non-substances individualized *accidents* such as specific qualities, quantities, or relations are ontologically dependent entities that exist solely *in* substances, their individuation and persistence parasitic on the underlying substance. These non-substances correspond to accidental forms whose matter is identified with the whole substance itself, positioning them as derivative composites in the ontological hierarchy.

The Aristotelian *hylomorphic* analysis foregrounds a hierarchical metaphysical dependency, where accidental forms inhere in and modify the substance without altering its substantial identity. Nevertheless, this classical account engenders persistent metaphysical problems, notably concerning the ontological status of accidents, the criteria for individuation of particular non-substances, and the problem of substance persistence through accidental change. In particular, the status of accidents vacillates between being regarded as real entities

and being dismissed as conceptual or epistemic constructs, thus provoking enduring debate regarding their metaphysical reality.

Jonathan Lowe's neo-Aristotelian ontology offers a sophisticated reformulation that addresses these classical dilemmas via his four-category ontology: substantial particulars (*objects*), substantial universals (*kinds*), non-substantial universals (*attributes*), and non-substantial particulars (*modes*). Crucially, Lowe identifies particular non-substances with modes, which are ontologically dependent yet ontologically real features that characterize objects but are not mere constituents or ontological parts of substances. This distinction enables a more precise metaphysical account that preserves the ontological independence and primacy of substances while accounting for the dependent status of their features.

Furthermore, Lowe's metaphysics significantly de-emphasizes matter as a fundamental ontological constituent, proposing instead that substances are best understood as particularized forms, thus reconfiguring traditional hylomorphism into a streamlined metaphysical schema that privileges categorical relations such as instantiation and exemplification over matter–form composition. This reframing reinforces the view that substances possess identity conditions autonomous from their accidents or modes, thereby fortifying the classical Aristotelian notion of substance independence with modern metaphysical rigor.

The central argument of this study is that an integrated approach, combining Aristotle's hylomorphic conception of substances as matter–form composites with Lowe's categorical ontology that situates particular non-substances as modes distinct from constituents, offers the most coherent and ontologically parsimonious account of the metaphysical relationship between substances and accidents. This synthesis elucidates the ontological dependence of particular non-substances on substances, while affirming their reality as necessary for explicating change and diversity in the natural world. Ultimately, this combined framework advances contemporary metaphysical discourse by resolving classical tensions concerning individuation, persistence, and ontological categorization.

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Amodalism and Abstracta

According to amodalism, there are truths that are neither necessarily true, nor contingently true. This position is highly controversial as it constitutes a rejection of modal generalism, often considered part of the pre-theoretical data that a theory of modality should accommodate, rather than discard. However, for those sympathetic to the framework of Lewisian modal realism amodalism provides a solution to the problem regarding advanced modalizing, i.e. modalizing about 'extraordinary' objects (worlds, sets, numbers, properties, etc.) that are not world-bound individuals. As pointed out by John Divers (1999) the Lewisian analysis of modal claims run into trouble when one is faced with the task of analyzing statements like 'It is possible that there are many worlds' or 'It is necessary that there are at least two worlds'. Sam Cowling (2011) proposes that cases of advanced modalizing should be treated as only seemingly involving modal profiles, while in fact advanced modalizing results only in amodal claims, which lack any modal profile at all. Bradford Skow (2019) builds an explicitly amodal moodless theory of modality in strict analogy with the tenseless theory of time. An amodalist undertone is also present in Josh Parsons' (2012) discussion of an eliminativist solution to the problem of advanced modalizing. Indeed, as noted by Alastair Wilson (2022) and Samuel KimptonNye (2025) modal eliminativism straightforwardly

involves amodalism. The first objective of this presentation is to establish the extent to which amodalism is tenable and attractive when considered within frameworks other than eliminativism or Lewisian modal realism. Cowling (2011) argues for amodalism as a solution to difficulties pertaining to other variants of modal reductionism. It is then important to assess the exact relationship between amodalism and modal reductionism, and whether there is a place for amodalism with a non-reductionist framework.

Interestingly, Wilson (2022) defines the amodal view as claiming that the necessity of necessary facts is grounded and the contingency of contingent facts is grounded. This suggests that if modal reductionism is conceived as a position proposing a metaphysical explanation of modal profiles, it entails the amodal view of fundamental reality. The second objective of this presentation is to examine the exact relationship between Wilson's formulation of the amodal view and the standard definition of amodalism as the claim that there are truths that are neither necessary nor contingent. The third objective of this presentation is to develop and assess Cowling's remarks (Cowling 2011; 2017) that mathematical entities, or more broadly abstracta, may be thought of as amodal. On one hand, these remarks seem to be rooted, once again, in the Lewisian framework, within which modalizing about abstracta is a case of advanced modalizing. This fits well with Cowling's own conception of the abstract-concrete distinction as an indexical distinction based on the Lewisian notion of actuality (Cowling 2014). On the other hand, Cowling suggests that abstracta could transcend modal space similarly to their transcendence of spacetime. The presentation will explore exactly how the supposed amodality of abstracta is to be understood, and whether the notion of amodal abstracta could be of interest outside the Lewisian framework. This second issue is of special importance, as the abstract-concrete distinction might be thought of as a metametaphysical distinction that should possess a high degree of neutrality towards first-order metaphysical views.

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No Easy Road to Truthmakers: Towards Substantive Metametaphysics of Truthmaking

Two approaches to truthmaking, which advocate for metaontological deflationism, according to which the air of substantiveness of the age-old first-order debates aiming to establish whether some entities exist or not is merely apparent, were recently proposed by Asay (2020) and Cameron (2020, 2021). Asay holds that the first-order truthmaking discourse should aim to arrive at “overall harmony between our alethic and ontological commitments” (2020: 80), i.e. fulfil the task of ontological accounting, rather than uncover any substantive, explanatorily potent structure of reality by identifying particular truthmakers for particular

claims (2020: 80). Cameron (2020, 2021), on the other hand, despite following in Thomasson's footsteps and advocating for a metaontological stance in line with the project of easy ontology (Thomasson 2008, 2015), recognises that the easy job of ontology must be accompanied by a harder one, that is the first-order job of the "metaphysical project of ontology" (2021: 44) preoccupied with establishing in virtue of what claims to the effect that some entities exist are true (2021: 44), thus combining metaontological deflationism with firstorder substantivism.

In our presentation, we wish to examine and identify some key limitations of metaontological deflationism regarding truthmaking, which, as we will argue, also beset some first-order substantive accounts (notably Mulligan et al. 1984). We will show that besides a specific challenge formulated by Amie Thomasson (2020) with regards to Cameron's proposal, both his view and Asay's, as well as some substantive solely first-order approaches to truthmaking, also face a challenge implicit in Hornby's (2005) criticism of Rodriguez Pereyra's (2005).

(Hornsby-inspired challenge) In order to mitigate the need to reify all supposed referents of nominalisations, one must provide a criterion for when such reification does not take place.

(Thomasson's challenge) In order to mitigate the real commitments to truthmakers, one needs to provide a criterion for when the commitments of sentences of one's theory are fundamentally binding and when they are not.

We will argue that a crucial flaw of the aforementioned metaontological and first-order strategies lies in the fact that their advocates largely forgo answering these two challenges (for a discussion of related problems in the context of non-maximalism see Mzyk 2023), precisely because they fail to provide metaphysically motivated answers to hard metaphysical questions which Cameron (2020) alludes to. We will suggest a strategy which reverses the order of questions proposed by Cameron, so that hard, metaphysical questions, which pertain to the nature of the investigated domain and means by which our propositions and sentences link up with said domains, come before (possibly) easy ontological questions. We will further argue that this approach enables us to answer both challenges presented above. We will then show how this strategy, which we call reference-making, encompasses both a top-down and a bottom-up approach. The bottom-up strategy is needed for determining which linguistic terms are genuinely referential (though not necessarily joint-carving (Sider 2011)), i.e. which have corresponding reference-makers – a task that depends on decisions regarding the metaphysical constitution of the explored domain of entities – whereas the top-down strategy allows us to determine the truth-makers of our truths. We will show that this approach features implicitly in some truthmaking theories (e.g. Armstrong (1997, 2004), Schaffer (2008, 2009, 2010)).

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The Integration Requirement in Metaphysical Realism and Anti-Realism

Analytic philosophers increasingly explore the relationship between the metaphysics of a domain and the ways we come to know truths in that domain. Paul Benacerraf (1973) famously raised this issue in the context of mathematical platonism, and Christopher Peacocke (1999) later framed it more generally as the integration challenge. According to Peacocke, the challenge is to reconcile "a plausible account of what is involved in the truth of statements of a given kind with a credible account of how we can know those statements, when we do know them" (Peacocke 1999, 1). While early discussions focused on mathematics, the integration challenge has also been applied to other areas – most prominently, modality, where claims about possibilities and necessities raise similar questions about how we can access relevant truths.

As Sònia Roca-Royes (2020) notes, an integration challenge assumes an integration requirement: a credible metaphysics of a domain should be matched by an equally credible epistemology. This requirement is normative rather than descriptive, and so it calls for justification. Given our limited cognitive capacities, why should metaphysical truths – however we conceive them – be expected to be epistemically accessible at all?

This paper explores why the integration requirement arises and what role it plays in metaphysical theorising. I argue that it does not depend on a commitment to metaphysical realism. Rather, it arises whenever discourse about a domain is treated as both truth-apt and knowledge-apt, whether on realist or anti-realist grounds. Any theory that treats truths as candidates for knowledge inherits a demand to explain how our epistemic practices relate to those truths. Views that reject truth-aptness or meaningfulness altogether – such as eliminativist or error-theoretic positions – avoid the requirement, but only by denying its underlying assumptions.

The paper also clarifies why the integration requirement affects realist and anti-realist views differently. Realist commitments to mind-independent truth generate distinctive pressure to explain how our epistemic methods can track facts that exist independently of our cognitive practices, making the requirement a substantive challenge. Anti-realist views often ease this pressure by building epistemic constraints into their account of truth, making integration easier to achieve. But this may involve reconceiving the domain – for example, interpreting modal truths in terms of conceivability, convention, or inferential roles – raising the familiar worry that integration could come at the cost of departing from the pre-theoretical phenomenon the theory aims to capture (Roca-Royes 2020).

These contrasts help explain why the integration challenge is especially pressing in certain domains and under certain metaphysical assumptions. By clarifying the source, scope, and

function of the integration requirement, this paper offers a diagnostic and programmatic perspective: the integration challenge is a general methodological concern in metaphysics, not a problem tied to any single metaphysical stance. In doing so, it highlights both the normative expectations guiding metaphysical theorising and the ways epistemic considerations bear on it.

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Can Essence Non-Vacuously Explain Counterpossibles?

Non-modalists about essence maintain that metaphysical modality does not explain, but is explained in terms of essence. For instance, Socrates is necessarily human because it is part of Socrates' essence—what it is to be Socrates—to be human. Following that, a different set of essential properties have to be postulated for existing objects (or alien entities have to be introduced) in order to account for any novel metaphysical modality in a counterpossible circumstance. This aligns with non-vacuism about counterpossibles. According to its proponents, many philosophical debates take it for granted that counterfactuals with metaphysically impossible antecedents are not trivially true. In debating over a non-contingent thesis (e.g., mind-body dualism), philosophers often proceed with hypothesis about the nature of things presupposed by the rival theory (e.g., "if mental states had not been physical states...")—which is necessarily false, if false—in an attempt to develop a *reductio ad absurdum* (Brogaard & Salerno 2013; Kim & Maslen 2006; Kocurek 2021).

I shall argue that, despite the apparent affinity, the non-modalist's program of explaining metaphysical modality in terms of essence comes into conflict with non-vacuism about counterpossibles. I shall present two cases. First, consider this pair of counterpossibles from Williamson (2007):

- (1) If Hesperus had not been Phosphorus, Phosphorus would not have been Phosphorus.
- (2) If Hesperus had not been Phosphorus, Hesperus would not have been Phosphorus.

Given the necessity of identity, their antecedent depicts a metaphysically impossible circumstance. A non-modalist following Fine (1994, 9) in identifying metaphysically necessary truths with "propositions which are true in virtue of the nature of all objects whatever" would not be able to explain why, non-vacuously, (1) is false and (2) is true. For how could one and the same celestial object both remain and fail to remain one and the same celestial object, if all there is to account for its identity is "the nature of all objects whatever", which is the same for these two counterpossibles?

One may reject this "cosmic strategy" of explaining metaphysical modality by "the nature of all objects whatever" for being guilty of overloading the explanatory basis with irrelevant details (Koslicki 2024, 329). Nevertheless, putting aside how it is to be worked out, a more fine-grained approach faces another problem. Consider:

- (3) If Cartesian dualism had been true, I might have this toothache without my body.

Assuming that Cartesian dualism is false and physicalism is the case, (3) thus depicts a metaphysically impossible circumstance where mental states are completely independent of physical states. And (3) seems to be non-vacuously true. Since physical states play no part in the essence of mental states, it is possible for me to have a toothache without a body. Yet, such non-physical toothache I might have (toothached) is not the same toothache that I am concerned with in (3), namely the toothache (toothachep) that I am suffering from, one that will cease to exist if my body perishes. In postulating an alternate nature of things to account for novel modality in a counterpossible circumstance, non-modalists lose hold of the phenomenon they try to explain.

With reference to these two cases, I shall also explore the possible ways out for non-modalists about essence. Should they give up nonvacuism and accept that all counterpossibles are trivially true/false? Should they confine their explanatory program to metaphysically possible circumstances? Or should they develop a counterpart theory in response to the issue of identity, along the lines of Hicks (2022) in dealing with counterfactual reasoning?

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Assessing Essentialist Claims within an Essentialist Perspective on Metaphysical Modality

The essentialist perspective on metaphysical modality (EPOMM) holds that metaphysical modality is grounded in essence (Fine 1994; Lowe 2008; Hale 2013). On this view, whether a proposition is metaphysically necessary, possible, contingent, or impossible depends on the essences of the relevant things. EPOMM is attractive, among other reasons, because it promises to account for our knowledge of metaphysically necessary truths, thereby offering a route for progress in the epistemology of modality (e.g., Mallozzi, 2021; Jago, 2023). If metaphysical necessity is grounded in essence, then to justify the claim that P is metaphysically necessary one need only show that P expresses an essential property of the thing in question.

This talk presents a problem that arises within EPOMM when one attempts to refute an alleged essentialist claim P. Since Kripke (1980), a common strategy for doing so has been to argue that P is not metaphysically necessary. The underlying reasoning is that, if a claim expresses the essence or identity of a thing, then it is metaphysically necessary; conversely, if a claim was not metaphysically necessary, it could not express the essence of the thing in question (Wright 2002; 2018). In turn, providing evidence that P (for example, "Pain is C-fiber stimulation") is not metaphysically necessary requires providing evidence that $\neg P$ (for example, that it is not the case that pain is C-fiber stimulation) is metaphysically possible (ibid.). If $\neg P$ were metaphysically possible, then P would be metaphysically contingent and, therefore, could not be taken to express the essence at issue (The popular conceivability

arguments rely on this strategy (e.g., Kripke 1980; Chalmers 2003). They aim to show that the negation of a given essentialist claim is conceivable and, therefore, metaphysically possible, from which it would follow that the essentialist claim in question is false).

If EPOMM is correct—so that the essence of a thing determines what is metaphysically possible for it—then providing evidence that $\neg P$ is metaphysically possible requires appealing to the essence of the thing in question. Insofar as $\neg P$ is shown to be permitted by that essence, the claim that $\neg P$ is metaphysically possible would be justified; otherwise, it would not, at least according to EPOMM. The problem is that, on this basis, the attempt to show that P fails to express the essence of that thing by appealing to the metaphysical possibility of its negation ($\neg P$)—the Kripkean strategy—requires an appeal to the essence of the thing in question, which exactly what is at stake. The result is that the proposed refutation either fails to get off the ground or becomes circular.

My contention is that EPOMM, in virtue of the epistemology of metaphysical modality it entails, does not accommodate the dominant strategy for refuting alleged essentialist claims. This is to say that, on this view an essentialist claim cannot be refuted by arguing for the metaphysical possibility of its negation. Along these lines, I suggest that EPOMM may not leave sufficient room for substantive disagreement about essentialist claims. Apart from obvious or trivial cases, it would not be possible both to endorse EPOMM and to show that a given essentialist claim is false. This result may pose a serious challenge for proponents of the view.

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Title Nonexistent Objects and Unspoken Words

Nonexistent objects and Unspoken words The metaphysics of words is a complex field, with connections to traditional debates concerning universals (see Wetzel, 2009), as well as more recent accounts that explore the nature of words as such (see, e.g., Miller, 2021b; Nefdt, 2019; Tasker, 2022). Where much of the discussion has centered on familiar expressions and issues of individuation, relatively little has been said about merely possible words, or words that have not been instantiated, or that could never be instantiated. The notion of a merely possible or impossible word presents an interesting and potentially very rich foil for discussions of existence and objecthood, particularly given the fluid nature of the lexes of natural languages.

The aim of this talk is to outline an account of words in terms of an abstract object theory that allows an extension to nonexistent words, including both contingently nonexistent words and necessarily nonexistent words (i.e., impossible words, in the sense of (Fodor & Lepore, 1992)). The idea is to treat words as abstracta independent of existence, such that the coining

of an expression is a concrete instantiation that corresponds to an abstract object which subsisted prior to its production. This draws words parallel to phenomena like mathematical objects, resembling numbers.

Addressing words in the context of nonexistent objects presents a contrast to the Platonism that has stood as the preferred view of words in the past (see Hawthorne & Lepore, 2011; Wetzel, 2009), and contributes to the recent introduction of a variety of novel positions in the debate, including artifactualist, originalist, bundle, and trope-oriented accounts (see, e.g., Irmak, 2019; Miller, 2021a; Hughes, 2023; Stojnić, 2022). The emerging position is an interesting application of object theoretic work, promising novel cases and potential for future research.

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Why Essentialism Does Not Require Plenitude

Roughly, essentialist plenitude holds that for every permissible recombination of an object's properties, there exists a distinct individual that exemplifies that combination. This allows for multiple overlapping individuals that differ only in which properties are essential to them. By proliferating such coincident individuals, plenitude essentialists aim to dissolve Chisholm-style puzzles concerning tolerant essences—such as the Adam–Noah case and the Ship of Theseus— while preserving a robust essentialist framework.

In this presentation, I argue that this view rests on a cluster of controversial assumptions about essence. My central claim is that plenitude becomes attractive only if one accepts a demanding notion of individual essence. On this view, each individual is associated with a distinct essence that provides necessary and sufficient conditions for being that very individual. Essence, so understood, is closely tied to material constitution and is taken to determine an object's existence conditions both across possible worlds and through time. Once individual essences are treated in this way, plenitude follows naturally: recombining constitution-related properties (such as having particular planks) yields distinct individual essences, and hence a proliferation of individuals. I argue that this conception of essence is both metaphysically and epistemically problematic.

I contrast this with a more familiar alternative in the essentialist literature, on which essences are generic rather than individual. On this view, essences provide necessary but not sufficient conditions for being a given individual. They characterize what it is to be an individual of a certain kind, but they do not describe unique, unshareable necessary and sufficient conditions

for being a particular individual of a given kind. While generic essences may still determine the existence conditions of individuals, they do so only generically, not specifically. Once this distinction is drawn, essences no longer stand in a one-to-one relation with individuals, and plenitude does not follow (or is at least significantly constrained): distinct objects may share many essential properties, and qualitatively indiscernible objects may even share the same essence, understood as the set of all of their essential properties.

The appeal to individual essences rules the latter possibility—despite the widespread acceptance of the possibility of indiscernibles—unless such essences are taken to be primitive thisnesses. But plenitude essentialists cannot avail themselves of primitive thisness in this way, since the generation of plenitude requires essences to be tied to material constitution and other qualitative features of individuals. Primitive thisness, by contrast, is independent of such features and therefore cannot ground plenitude without collapsing into radical anti-essentialism.

This generic, non-individuating approach to essence also undercuts the standard diagnosis of Chisholm's puzzles. These puzzles arise from systematic conflation: between transworld identity and transtemporal persistence, and between necessary and necessary-and-sufficient conditions for existence. Once these distinctions are kept in view, the Ship of Theseus poses no threat to essentialism: a ship can preserve its identity in the essentialist (non-temporal) sense even if all its planks differ, provided it continues to satisfy its definitional, generic essence— for example, by preserving its functional role or structural organization.

The upshot is that plenitude is neither required to resolve Chisholm-style puzzles nor motivated by essentialism properly understood.

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Are There More Ways Things Could not Be than Impossible Worlds?

A standard way of characterizing the intensional picture of semantic content is by taking propositions to be sets of possible worlds. This induces an elegant model theory that conceptualizes the basic connectives as set-theoretic operations on the corresponding powerset algebra of propositions (conjunction as intersection, disjunction as union, and so on), and entailment as subset inclusion. In other words, the standard picture gives rise to a Boolean algebra. However, by assuming infinitely many possible worlds, the standard picture faces the non-principal ultrafilter problem.

Given a set of worlds W and its Boolean algebra of propositions $\langle P(W), \setminus, \cup, \cap, W, \emptyset \rangle$, a subset U of the algebra is an ultrafilter if and only if:

- (i) it is closed under (finite) intersection, i.e. any conjunction of two propositions in U is also in U ;
- (ii) (ii) it is upwards closed, i.e. any proposition entailed by a proposition in U is also in U ;
- (iii) (iii) it is maximal, i.e. for any proposition p , either p or its negation is in U .

Therefore, an ultrafilter just is a maximally consistent set of propositions, and it is natural to think that this should represent a way things could be, thereby pinning down a possible world.

An interesting class of ultrafilters is that of principal ultrafilters: ultrafilters whose bases (i.e., the sets generating the ultrafilter) are singletons. One then immediately witnesses a one-to-one correspondence between the atoms of the algebra (the singletons of possible worlds) and its principal ultrafilters. For finite algebras, every ultrafilter is principal. But if the algebra is infinite, we can use the Axiom of Choice to prove that there exists at least one non-principal ultrafilter: an ultrafilter with no finite base (i.e., not containing any finite set). This means that there is a way things could be which does not correspond to any possible world in our model. In other words, there seems to be more ways things could be than possible worlds.

Our aim is to prove that analogous and equally counterintuitive results can be achieved when adding impossible worlds to the background set of worlds, in order to accommodate hyperintensional semantic distinctions. We focus on algebras such as the one induced by taking propositions as sets of FDE-worlds (worlds that are closed under First Degree Entailment), and in which an impossible world is pinned down by the dual of a principal ultrafilter, namely, by a principal prime ideal. This leads us into the dual of the above-mentioned problem: the nonprincipal prime ideal problem. That is, by the same trick described above, there seems to be more ways things could not be than impossible worlds (at least with respect to a variety of popular hyperintensional frameworks).

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Structuralism and the Question of Existence

Leibniz's question of existence (Henceforth, "The Question") asks why there is something rather than nothing. The Question is sometimes regarded as one of the central questions in metaphysics, yet it is less examined in contemporary metaphysics than other traditional problems such as the mind-body problem or the problem of free will. Recent literature witnesses an overdue revival of this topic (notably following the discussions of Brenner (2016; 2022)). The main goal of this paper is to motivate a particular form of ontic structural realism as a solution to The Question. The central point in this paper is inspired by Bergson's discussion of *The Question in his Creative Evolution*.

I will focus on van Inwagen's (1996) interpretation of The Question, which interprets The Question as asking why there are concrete things exist rather than no concrete things. I argue that any attempt to solve The Question faces a dilemma: Either a solution to the Question explains the existence of concrete things in terms of non-concrete things, which seems counterintuitive, since why any non-concrete things can generate concrete things demands further explanation (henceforth "the homogeneity problem"), or it explains the existence of concrete things in terms of non-existential facts, yet why any non-existential facts could explain existential facts demands further explanation (henceforth "the exnihilo problem").

I favor an eliminativist form of OSR as a solution to the Question because it enjoys the advantage of addressing both horns of the dilemma. Call this view radical ontic structural realism, or ROSR (ROSR is explicitly defended by Quine (1976) and Tegmark (2008); it is also attributed to Ladyman and Ross (2007)). I characterize ROSR as the following view:

Fundamentally, there are only structures. Facts about concrete entities are explained by facts about structures.

I accept an identity reading of explanation. It follows from this reading that a fact like [there are trees] is identical to a fact about some structures. And similarly, the fact that asserts the minimal existence of something concrete is identical to, and guaranteed by, the existence of some structure.

ROSR avoids the homogeneity problem because it denies a categorical distinction between abstract entities and concrete entities. Therefore, how a certain abstract entity can give rise to the existence of a concrete entity is thereby answered. One might suggest (Brenner (2016)) that if we identify existential facts about concrete things with facts about structures, then the question why any concrete things exist would be the same question as why certain facts about structures hold; therefore, we might face the ex-nihilo problem again, since the existence of structures seems to be ex nihilo. But I argue this is less of a worry for ROSR than for conventional answers to the Question: First, the fundamental existence of structures may be less troubling, since structures exist necessarily, and one could argue that necessary facts do not call for explanation. Second, one could follow Hellman (1989; 1996) and explain the existence of structures in non-existential modal facts, and there is a clear sense in which how non-existential facts explain non-existential ones in this case: existential facts about structures are identical to non-existential, modal facts.

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Three Skeptical Challenges for the Kalam Cosmological Argument

The Kalam Cosmological Argument (KCA) infers the existence of God using the premise that the universe began to exist. Here, I show that this premise faces three interrelated skeptical challenges. The first challenge concerns the conceptual connection between temporal finitude and having a beginning: even if the past is finite, that alone does not entail that the universe began to exist. Existing proposals for specifying what it means for something to begin either fail to distinguish beginninged from beginningless entities or they fail to provide a non-arbitrary reason for applying the criterion to the universe but not to God. The second challenge arises from the epistemology of scientific realism. While General Relativistic cosmological models may suggest a finite past, the universe's earliest moments are beyond the domain of current physics and are, for that reason, epistemically unwarranted. Thus, our best scientific theories cannot support a positive case for the beginning of the universe. According to the third challenge, our best scientific theories cannot support a negative case for the beginning of the universe, either. Even if each known past-eternal cosmological model is improbable, the disjunction of all past-eternal models (including those yet unimagined) may still have a high epistemic probability. Given the three skeptical challenges, the question of whether the universe began remains epistemically inaccessible.

Though this may change in future scientific or philosophical inquiry, our current epistemic vantage point does not warrant us to say that we know the KCA is sound.

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Beyond Propositional Belief: Embodied Hyperintension

I argue that there are functional complexities of cognition, with a hyperintensional flavour, which cannot be accounted for in a logical-propositional model of belief, because they require far finer-grained engagement with behavioural propensities. A promising, non-propositional, alternative is available in the form of Embodied Sensorimotor (Hyper)intensionality (ESH) [MCGREGOR, Simon. Embodied Sensorimotor (Hyper)intensionality. *Logic and Logical Philosophy*. Online. 27 August 2025. 1-26. DOI 10.12775/LLP.2025.013.].

To illustrate: the very notion of propositional belief encounters some problems when an agent's beliefs are differentially elicited by different contexts. Suppose Alice can correctly answer the question, "Is Addis Ababa the capital of Ethiopia?", but cannot normally answer the question "What is the capital of Ethiopia?" What, under these circumstances, should we take Alice to believe? A logically omniscient agent would not display such inconsistency, which suggests that hyperintensionality is at play here. Proposals such as epistemic fragmentation [ELGA, Adam. and RAYO, Agustín. Fragmentation and logical omniscience. *Noûs*. 56.3 (2022): 716-741. DOI 10.1111/nous.12381] attempt to model such inconsistency within the propositional paradigm. But they omit any formal characterisation of the actual details of differential elicitation; this is an essential part of the picture, and does not seem amenable to a propositional treatment.

For instance, suppose that Alice cannot normally name Addis as the capital of Ethiopia, but that she can do so when primed with a logically unrelated clue like a picture of an adder. This need for priming is a relevant aspect of Alice's representational state, and one that a logically omniscient agent would not possess. Since an ideal reasoner would not be susceptible to priming effects, there is some sort of inconsistency involved – but does it make sense to try and model this as a logical inconsistency in a set of propositional beliefs? As priming effects can be dependent on almost arbitrary psychological variables such as an agent's own bodily behaviour, the propositional-belief advocate will have their work cut out for them.

ESH, in contrast, avoids this problem by linking hyperintensionality to information flow in the physical dynamics of a cognitive agent. The ESH account emphasises that an agent's internal state is correlated with relevant sensory stimuli, allowing environmentally-sensitive behaviour. However, functionally different internal states can encode the same (statistical) information about the environment. ESH locates intensionality in the statistical information, and hyperintensionality in the functional differences.

For instance, consider a mental arithmetic task that involves Alice being given a value N and multiplying it by 317. Alice can name N faster than she can name $317N$. As she performs the computation, her internal state does not accumulate additional statistical information about $317N$. So the intensional content of her state (with respect to this task) does not change during the computation. However, her state changes functionally, in that sensory information is being pumped closer and closer to appropriate actuator variation. The framework thereby

distinguishes between *what* is represented (intension), and *how* it is represented (hyperintension).

By using a non-propositional vocabulary grounded in physical behaviour, ESH offers a promise of unifying both priming effects and mental arithmetic under a single, functionally grounded model of cognitive state.

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Bringing Universals Down to Earth

This paper investigates the question of how a naturalist metaphysics can best be reconciled with realism about universals, that is, how universals are naturalist—how they are ‘brought down to earth’ from ‘Plato’s heaven’. It argues that Armstrongian state of affairs ontology offers a solution to this issue. Roughly, naturalism is understood as the view that every entity is concrete, in the sense of being located in space and/or time. Given this, naturalism requires that universals—if they exist—be concrete. It requires that universals be ‘brought down to earth’. Traditionally, Platonic realism about universals maintains that universals are both abstract and independent of their instances. Immanent realism, in contrast, usually denies that universals are abstract and claims that they are ‘in’ their instances. However, some non-traditional variants of immanent realism maintain that universals are abstract. Hence, to hold that universals are ‘in’ their instances does not suffice to bring them down to earth. In contrast, what I call *hosting* of universals does. The question of how universals are brought down to earth—the hosting question—is the question of how they are concrete. Alternatively put, the hosting question is the question of in virtue of what universals are concrete.

Answering this question requires, at the outset, distinguishing hosting and instantiation. Hosting is the relation between a host and the universal it hosts; instantiation is the relation between a particular and the universal it instantiates. I clarify the difference between these two relations by applying a standard classification of universals: the former is external, while the latter is (strongly) internal.

According to Armstrongian state of affairs ontology, states of affairs are concrete (non-mereological) complexes. It follows that if states of affairs are hosts, universals are constituents of concrete complexes, and hosting is ontologically equivalent to being a constituent of a concrete complex. Given some plausible assumptions—which I briefly motivate independently—if one relatum of the internal relation of *being a constituent of* is concrete, the other relatum is also concrete. Hence, if universals are hosted by Armstrongian states of affairs, they are concrete. In a framework of Armstrongian state of affairs ontology, the hosting question is thus answered. This can be taken to explain the concreteness of universals.

This account also sheds light on the longstanding problem of the so-called multiple location of universals. If universals are concrete and their instances are in different places at the same time, they are wholly located in different places. This phenomenon has prompted objections from many philosophers, from Plato to contemporary metaphysicians. It has been used as evidence that concrete universals are untenable. One earlier suggestion of mine, that these worries rest on confusion of the locations of particulars and universals, might be unconvincing. However, I now suggest that it is a kind of category mistake to construe universals as independently located entities at all. Rather, universals are constituents of states

of affairs and, following Armstrong's speculative suggestion, spacetime itself is constituted by a vast conjunction of such states of affairs. As a result, questions about the 'location' or 'multiple location' of universals are ultimately misguided. Universals are not located in spacetime as items placed within a container; instead, they help constitute spacetime through their role in states of affairs. This clarifies the sense in which universals are concrete and brought down to earth.

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A Positionalist Alternative to the Notion of a Variable Embodiment

Fine (1999) introduced the influential notion of a variable embodiment in order to account for (i) the possibility of the replacement of parts or matter in certain types of objects (structured objects or 'the water in the container') and (ii) the ontology of roles such as 'the president of the US', which can be manifested by different individuals at different times. A variable embodiment is defined as an object associated with a 'form', which is simply a function from times (or circumstances) to concrete realizations. A common critique of the notion of a variable embodiment, however, is that it is entirely unconstrained: simply positing a function from times (or circumstances) to realizations fails to account for the fact that it is generally structure that enables replacement of parts or matter, a critique that equally applies to slot mereology (Bennett 2013) if that is taken as the basis of a theory of replacement.

In a different work, Fine (2000) argues for relations being neutral, not involving an order among their arguments. Fine discusses an alternative to ordered arguments, namely positionalism, on which relations come with distinct, but unordered positions. While Fine himself rejects positionalism, there seem to now be viable versions of positionalism that avoid the problems Fine pointed out for symmetric relations, such as Dixon's (2018) plural slot theory. In this talk I will argue that a positionalist view of relations (and properties) renders the notion of a variable embodiment redundant and avoids its shortcomings when combined with a view on which the structure of objects is built from (conjunctions of) neutral relations and partial specifications of their positions with entities or types of entities. In addition, I show that there is significant support for an ontology of positions from natural language.

I will outline a view on which the structure of objects consists in relations and properties being conjoined for particular positions and on which positions may be specified for particular entities (or matter), be left open, or be partially specified (e.g. an open plural agent position for events like demonstrations). Slots in such structures may be specified for particular entities, which amounts to rigid parts, and they may be left open or only partially specified, which amounts to variable parts (variable embodiments that are parts). Slots on that view arise from the composition of structure in terms of relations or properties that are conjoined relative to particular positions.

A structure as a whole has a realization at a particular circumstance, which involves filling open slots at that circumstance. The overall structure then needs to be preserved for different circumstances or at least is subject to relative continuity for subsequent times.

A structure that permits replacement may involve different variable parts or a single slot. 'The water in the container' comes with a single slot individuated in terms of boundarydefining relations involving the parts of the container.

There is significant linguistic evidence for positions and slots. First, the noun *place* when not referring to spatial regions makes reference to slots: in complex predicates such as *replace*, and expressions like *in place of*, *instead of* (stead originally meant ‘place’), in *several places*. Second, part in predicates of participation (*take part in*, *be part of*) refers to slots in plans of events, with *take part in* relating to open slots and *be part of* to specified slots:

- (1) a. I took part in / ???? was part of the mass.
- b. The priest was part of / took part in the mass.

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Is There Grounding Indeterminacy? Yes

This paper argues that there is grounding indeterminacy: it is sometimes indeterminate what grounds what. I develop several cases of grounding indeterminacy with different structures. In such cases, once all the relevant facts of the scenario are settled, it remains unsettled whether particular grounding relations obtain. I argue that this is a kind of worldly indeterminacy, i.e. its source does not lie in our ignorance or semantic indecision, but in reality itself, which may be indeterminate in some respects (see Barnes & Williams 2011; Wilson 2013; Wilson 2017).

In saying that there is grounding indeterminacy, we may be making distinct claims that do not necessarily depend on one another. One thing we might mean is that full grounds do not metaphysically necessitate what they ground (see Bader 2021 for a defence of probabilistic grounding, and Leuenberger 2014; Skiles 2015 for a defence of non-probabilistic contingent grounding). Another thing we might mean by grounding indeterminacy is that there are grounding relations that obtain between entities at least one of which is vague. For example, consider the following claim: “S is a member of group G by virtue of participation in the G-culture” (Richardson 2024: 40), where participation in the G-culture typically yields borderline cases.

Yet another idea is that it can be indeterminate what grounds what, or whether a grounding relation holds between two facts. In recent work in the metaphysics of causation, it has been argued that sometimes it is indeterminate what causes what, or whether a causal relation obtains between two determinate relata (Bernstein 2016a; Hoffmann-Kolss 2024; Swanson 2017). Grounding is widely thought to share many similarities with causation (Baron-Schmitt & Vogt, forthcoming; Bennett 2017; Schaffer 2016; Wilson 2018; for general criticism, see Bernstein 2016b). Building on this line of research, I argue that grounding is sometimes indeterminate in the same sense as causation is and, moreover, that grounding indeterminacy does not face some of the problems that causal indeterminacy does.

I present cases of grounding indeterminacy with different structures: first, cases in which all the relata determinately obtain, but the direction of grounding is indeterminate – that is, it is indeterminate what does the grounding and what is grounded. Second, cases in which it is indeterminate which of a plurality of possible grounds obtains, and therefore which particular

grounding relation obtains. Among these latter cases, some are based on Sorites paradoxes for grounding that leave it indeterminate what grounds what, while others involve no vagueness.

I then argue that introducing grounding indeterminacy into our metaphysical toolkit is theoretically fruitful. I do so by showing how the existence of grounding indeterminacy can best explain several relevant metaphysical scenarios and how it is compatible with well-entrenched principles of grounding.

I end by offering some remarks in defence of the view that grounding indeterminacy, like causal indeterminacy, is sometimes worldly or metaphysical – i.e. neither semantic nor epistemic – and by pointing to further research on related parallels between indeterminacy in the laws of nature and the laws of metaphysics, as well as between future indeterminacy and indeterminacy as to what the non-fundamental facts are.

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Metaphysical Grounds of Kripkean Rigidity: The Case of Proper Names

Central to Kripke's (1980) proposal of a causal-historical theory of reference is the idea that reference of proper names requires fixing in an act of naming, as a result of which, names come to possess the property of *being rigid*, that is of referring to the same entity in all possible worlds in which said entity exists (Kripke 1980: 48-49). In my presentation, I wish to draw attention to some key problems connected with a purely modal account of rigidity in the case of proper names. I will argue that the crucial link between rigidity and identity is taken for granted and left largely obscure by Kripke. This is because when it comes to *de jure* rigid designators "reference of a designator is stipulated to be a single object" (Kripke 1980: 21 n. 21) regardless of whether reference is fixed by ostension or description. Particularity of an object is therefore not merely stipulated when counterfactual situations are under consideration, but rather the entire Kripkean account depends upon such suppositions.

I will then pose the following metaphysical question – *in virtue of what are entities nameable?* – and argue that it should be answered by a theoretician of rigidity who aims to provide an explanatorily potent account. I will suggest that we should view nameability as closely related to ontological independence enjoyed by some entities. In line with the

contemporary revival of Aristotelian and neo-Aristotelian approaches in substantial metaphysics (e.g. Loux 1978; Fine 1994; Wiggins 2001; Lowe 2006; Hoffman 2012), I will explore some prominent criteria of ontological independence based upon Aristotle's *Categories* (Ackrill 1963; for a discussion of Aristotelian inspired dependence see e.g. Corkum 2008, 2013; Peramatzis 2011; Koslicki 2013; Sirkel 2024), from which there seems to emerge a view according to which the class of nameable entities is restricted to primary substances.

Whereas Kripke's stipulatory account is committed to dependence of that which is stipulated on the act of stipulation, my proposal views the status of an ontologically independent entity as said entity's locus of individuation and identity. Thus, on my view, identity conditions of a named object are not merely stipulated; rather, the self-identity of that object is "a metaphysically necessary condition" (Lowe 2006: 49) of its existence, while its independence is what turns this entity into a suitable ground on which rigidity of a given proper name depends as a result of exploiting the objects' nameability in an act of naming. What will emerge is an account of rigidity according to which it is not a mere semantic characteristic of proper names, but rather one which shall be explained metaphysically as a feature that is dependent upon the nature of the object being named. I will finish my presentation by exploring whether we can construe rigidity of proper names analogously to Lowe's (2006: 202-204) treatment of truth of propositions, i.e. as a *metaphysically dependent feature of names which depends on named ontologically independent entities*, and assess whether any contemporarily available notion of essential dependence is capable of capturing this relation.

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Beyond Equivalence: Identity Criteria as Because-Claims Authors

If a and b are Ks, what makes it the case that a is identical with b? A natural way to read the above question is to consider it as a because-question: it asks why the identity claim holds, or what counts as a reason for it. Read in this way, the question concerns the specificaton of a relation: we need something that renders the identity claim acceptable or intelligible, rather than merely coextensive with it. Similar intuitions seem have already guided work on grounding and identity criteria, where the right part of an identity criterion is often treated as an answer of why an identity obtains (e.g. Fine 2016; Carrara and Florio 2020).

Much of the literature on identity criteria has focused on identifying the right candidate for being a criterion of identity and its formal features, usually specifying an equivalence relation between identity and a condition for identity. Classic and contemporary debates concern whether identity should be analysed in terms of indiscernibility, similarity, continuity, or functionality. By contrast, we shift the focus to a different step: instead of asking which equivalence relation correctly captures identity, we ask what, if there is something, explains identity. If the identity condition R is supposed to tell us something about the identity claim $a = b$, the relation R should provide or being a source of information or explanation. The explanatory force of identity criteria should be inherently directional (Schnieder 2011; Poggiolesi and Genco 2021).

Orthodox approaches typically encode identity criteria in biconditional form, treating R as providing necessary and sufficient conditions for identity. This encourages the assumption that informativeness requires R to mirror the formal profile of identity, i.e., to be an equivalence relation (Williamson 1990; Clercq and Horsten 2005). Yet in many familiar domains — for example artifacts, perceptual qualities, and physical systems — R s fail to be characterized in terms of an equivalence relation, often due to failures of transitivity. Still, there are reasons to think that these relations do the explanatory and justificatory work. So, the source of informativeness does not lie in biconditional adequacy but in its directionality. An identity criterion is informative when the one-way contribution from R makes $a = b$ more intelligible or supported. At the semantic level, this directionality can be understood in terms of content-because explanation. Drawing on the Bar-Hillel-Carnap framework (Bar-Hillel and Carnap 1953), we model semantic contribution as probability-raising over a background space of admissible interpretations: R is informative about $a = b$ just insofar R reduces counter-identity possibilities and makes the identity claim more intelligible, where intelligibility is understood in terms of raising of admissible interpretations.

This content-because acquires justificatory force (see Crupi and Iacona 2022): identity criteria supply usable reasons for accepting identity claims. In this way, semantic directionality is also an epistemic justification: $a = b$ is accepted because R is satisfied, according to evidential support.

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Compositional Synonymies via Linguistic Ersatz Worlds

Despite being the orthodoxy, Possible Worlds Semantics (PWS) faces the limit of not being able to distinguish between necessarily equivalent propositions. To address these limitations, a natural hyperintensional refinement of PWS has been proposed: Impossible Worlds Semantics (IWS).

Despite solving the hyperintensional issue, IWS seems to undermine the connection between semantic content and compositional truth conditions. Unlike PWS, IWS no longer guarantees that the content of a complex expression is a function of the contents of its constituents. Thus, while gaining a tool that can handle hyperintensional contexts, the trade-off is the loss of compositionality.

The only solution to this problem available in the literature is presented by Berto and Jago 2019 (B&J). Although their approach succeeds in restoring compositionality within an impossible worlds framework, this result comes at the cost of an extremely fine-grained individuation of contents. That is, the model they present does not distinguish even between obvious synonyms, such as simple permutations of conjuncts. The result is that the framework lacks the resources to capture any intuitively adequate notion of same-saying in natural language.

Since this limitation is a direct consequence of employing the full set of open worlds (i.e., worlds that are not required to satisfy any logical principle other than $A \models A$), one might think that the most natural choice for overcoming this limitation is to restrict the world space in some way.

Two candidate strategies stand out:

1) Either one keeps the B&J strategy at the base, but restricts the original world space W to a smaller space $W^- \subset W$ (adjusting the B&J machinery accordingly). Concretely, this amounts to excluding worlds that conflict with our intuitions about same-saying, so that W^- contains all and only the worlds that respect the notion of synonymy we are interested in.

2) Or one abandons the B&J framework in favour of a semantics that already delivers compositionality together with a notion of synonymy. This is possible, for instance, by restricting the world space to worlds closed under the consequence relation of FDE.

We show that both options are problematic. The first leads to loss of compositionality; the second, validity on the absorption laws, operates with a too coarse-grained notion of synonymy, collapsing disconnections that are intuitively meaningful in natural language. In short, neither approach, on its own, offers a satisfactory account of synonymy within an impossible worlds framework.

We argue that there is indeed a way to preserve compositionality in a restricted open-world framework. To prove the point, we develop a new canonical translation method; a general strategy to modify the basic linguistic picture, that eventually allows us to get both compositionality and to accommodate different intuitions about the same-saying. We achieve this result by imposing the required coarse-graining not at the level of worlds themselves, but at a more fundamental level, namely that of worldmaking translations.

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On Counterfactual Conditions for Knowledge from Virtual Reality

This talk will discuss whether familiar externalist conditions, i.e., sensitivity and safety, can underwrite knowledge when beliefs are formed in virtual environments but aim at the non-virtual world. Four candidates will be examined: two sensitivity-based conditions drawn from Wheeler (2020), including his favored Virtual Sensitivity+, and two new safety conditions tailored to VR-formed beliefs. The sensitivity-based conditions are inspired by Nozick's (1981) influential account of (ordinary) knowledge, whereas the safety conditions adapt Sosa's (1999) proposal. Both Nozick's and Sosa's accounts are seminal contributions to general epistemology, therefore it is quite common knowledge in the field that both sensitivity and safety are formulated in these accounts in terms of counterfactuals (and counterfactual logic). McBain (2017) and Wheeler (2020) have attempted to adapt the sensitivity account to the question of knowledge about the real world derived from beliefs formed in the virtual world. Wheeler's condition is stated as follows:

(Virtual Sensitivity+) If P were false about the real world, then S would not believe that P were true about the virtual world,

or formally:

$\sim \text{Pr} \square \rightarrow \sim \text{Bs}(\text{Pv})$.

However, Wheeler's adapted principle is seen to be problematic. A case analogous to Sosa's Chute Case can be put forward, wherein Virtual Sensitivity+ fails because it is too strict. Two alternative safety conditions are examined; they survive our scenario but do not pass one or more of Wheeler's own tests for sensitivity. The more interesting and complex condition appears to be (Virtual Safety+) which is tailored on Wheeler's (Virtual Sensitivity+):

(Virtual Safety+): S would not have believed that P is true in VR without it being true in the real world.

Formally:

$\text{Bs}(\text{Pv}) \square \rightarrow \text{Pr}$.

The exam of (Virtual Safety+) shows that this condition is too permissive, leaving room for cases in which, intuitively, there is no knowledge present. The main upshot is negative: none of the four modal conditions is adequate, i.e. none provides the intuitive answer for all the relevant test cases. The + principles appear to be the most promising ones, so one may ponder

if an appropriately qualified combination of these conditions would not be able to deliver the expected results. This possible fix will not work for very simple reasons: a conjunctive approach will exclude knowledge where it should not, whereas a disjunction of the conditions will allow for knowledge in cases where knowledge should be excluded. Other more context-based approaches lack substantial independent support. This global failure may lend credence to a *prima facie* skepticism about the prospects of externalist modal conditions for knowledge of the real world based on beliefs formed in virtual reality, but this is an issue which needs further investigation.

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How is Truthmaker Semantics a Kind of Impossible Worlds Semantics

Recently, Berto (forthcoming) has argued that truthmaker semantics, at least in its application to characterizing the logic of Analytic Containment (AC) is a version of impossible worlds semantics. His argument is similar as one made beforehand in the Stanford Encyclopedia of Philosophy entry on Impossible Worlds written by him and Mark Jago (Berto and Jago, 2023). In both places it is claimed that truthmaker semantics' appeal to impossible states, and impossible worlds' semantics more liberal understanding of what counts as a world (i.e. such that non-maximal states are also worlds), make it so that that the two accounts are 'ontologically on a par'. One way to understand this claim is that they make the same ontological demands and are therefore equivalent with respect to what needs to exist for them to be true descriptions of the world. Indeed, in the 2023 entry, Berto and Jago go as far as considering that apart from the introduction of the notion of exact truthmaking, the two ways of doing semantics are really just notational variants. Silva (2025) has since given further support to this claim by showing how one may construct the states of truthmaker semantics using the same ontological resources as the ones employed to construct the double worlds of Berto and Jago (2019).

In spite of such progress, we do not have yet a sense of exactly in what way exact truthmaker semantics might be equivalent to impossible worlds semantics. The paper on which this talk is based aims to fix that by exploring two main issues: (i) what notion of theoretical equivalence best characterizes the way in which truthmaker semantics is equivalent to impossible worlds semantics, especially when characterized as in Silva (2025); and (ii) whether it is possible to relax the conditions imposed on truthmaker semantics so as to yield as many distinct semantics as impossible worlds semantics allows for, notably including open worlds semantics. In relation to the first issue, different accounts of theoretical equivalence, both in terms of formal properties, like definitional equivalence and Morita equivalence, will be considered, as well as accounts based on content-equivalence or metaphysical-equivalence. It will be seen that different versions of truthmaker semantics are equivalent to versions of impossible worlds semantics in various different senses.

In relation to the second issue, it will be seen that it is indeed possible to relax the conditions imposed on truthmaking and falsitymaking to yield even open worlds semantics: it's just the case where not only atoms but all formulae are assigned arbitrary sets of states as their sets of truthmakers and falsitymakers.

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The Trope Co-extension Problem: the Identity-Affirming Response Revisited

Trope-class nominalism is the view that property types are natural classes of tropes, where the concept of naturalness is taken either as primitive or analyzable. It is often assumed that trope-class nominalism avoids the co-extension problem: the problem of distinguishing between intuitively distinct but co-extensional property types.

This is no small virtue. Indeed, it marks an important advantage of trope-class nominalism over rival versions of nominalism, most notably object-class nominalism. Objectclass nominalism is the view that property types are natural classes of objects, with the concept of naturalness again being taken either as primitive or analyzable. The advantage of trope-class nominalism here stems from the following observation: object-class nominalism appears able to resolve the co-extension problem only by appealing to the existence of objects in other possible worlds, and hence by accepting modal realism. Tropeclass nominalism seemingly involves no such controversial appeal, and in that respect is widely regarded as better off than object-class nominalism.

But doubts have emerged in recent years about whether trope-class nominalism really does avoid the co-extension problem. Such doubts have been voiced not only by critics of trope-class nominalism but even by trope-class nominalists themselves; among the latter is Douglas Ehring, and Ehring's red-crimson case is a prominent example of the way in which the co-extension problem arises for trope-class nominalism. The red-crimson case goes like this: suppose that the determinate property type crimsonness is a superdeterminate of the determinable property type redness, and suppose further that every actual red object is also crimson. Then the class of actual red tropes is identical to the class of actual crimson tropes. Given trope-class nominalism, redness and crimsonness are identical to the same class of actual tropes. It then follows that redness is identical to crimsonness. But of course, redness is not identical to crimsonness. So trope-class nominalism gives the wrong result in the red-crimson case and thus faces a co-extension problem, the trope co-extension problem.

But Ehring doesn't stop at raising the trope co-extension problem. He goes on to defend a rather piquant solution. His solution is the identity-affirming response, according to which redness is in fact identical to crimsonness. This solution, to be sure, may initially seem outright implausible. Ehring nonetheless defends it against a range of objections, and a key part of his strategy for defending this solution is to combine trope-class nominalism with property counterpart theory. Combine the two together, Ehring argues, the identity-affirming response is able to resolve the trope co-extension problem. What is more, Ehring further argues, this can all be done without modal realism. If Ehring is right, then trope-class nominalism keeps its advantage over object-class nominalism.

In this talk, I want to present a new objection to the identity-affirming response. It is, as I see it, an objection that the property counterpart strategy does not defuse. I will call this objection the determination objection. The determination objection charges that the identity-affirming response fails to preserve a central feature of the determinable-determinate relation: namely,

asymmetry. The determinable-determinate relation (hereafter, 'determination') is standardly characterized as an asymmetric relation: a relation R is asymmetric if and only if, for every x and y , if x stands in R to y , then y does not stand in R to x . For example, since crimsonness determines redness, redness does not determine crimsonness. The identity-affirming response, however, commits the trope-class nominalist to denying that determination is asymmetric.

This is an unsavory cost for the trope-class nominalist who buys the identity-affirming response. For, the identity-affirming response comes at the price of an implausible account of determination, and that leaves us with no good reason to regard the response as a plausible solution to the trope co-extension problem. Whether trope-class nominalism combined with property counterpart theory can avoid modal realism is an interesting question; but a solution to the trope co-extension problem that requires us to commit to an implausible account of determination is no better merely for avoiding modal realism.

Here is a roadmap for the talk. I begin by setting out the property counterpart strategy. Then I present the determination objection and argue that the property counterpart strategy fails to defuse this objection. Then I consider three alternative strategies for defusing the determination objection and argue that each runs into trouble of its own. I conclude by drawing out what the foregoing discussion of the trope co-extension problem suggests about the relative merits of trope-class nominalism and object-class nominalism.

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Could Logic Be Empirical? The Stairs-Humberstone Argument

In this paper, I consider a recent argument, due to A. Stairs and L. Humberstone, to the effect that classical logic (CL) may be considered incorrect on metaphysically possible empirical grounds. This follows a long line of critical reactions to Putnam's early arguments that CL must be considered incorrect on metaphysically actual empirical grounds, furnished by quantum mechanics (QM), and must thus be replaced by quantum logic (QL).

Indeed, Putnam claimed that QM & QL, as opposed to QM & CL, would not commit us to what he took to be some intolerable metaphysical hypotheses, like the existence of worldly elements that are hidden, in the sense that they are not described by any terms in QM. Later, he seems to have realized that such hypotheses are not that intolerable, and acknowledged extensions of QM, like Bohmian mechanics (BM), which he thought would ultimately justify the preservation of CL.

The argument by Stairs and Humberstone, as I reconstruct it, is as follows. Let's suppose that BM turns out to be correct. This implies, in agreement with the later Putnam, that there are no metaphysically actual empirical grounds for replacing CL by QL. Nevertheless, we may also suppose that QM is correct in a non-actual possible world, where physical facts are just like the early Putnam thought they were. This would furnish us metaphysically possible empirical grounds for replacing CL by QL.

In the paper, assuming Humberstone's own possibility frames semantics, I first provide a formalization of this argument in order to capture the distinction between metaphysically actual and metaphysically possible empirical grounds. Then I focus on the question whether possibility frames are sufficient to verify the argument, or one needs a different notion of metaphysical modality that goes beyond this semantics.

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Logical and Metaphysical Impossibility in Genuine Impossible Worlds

Despite being subject to several criticisms (e.g. in [4] and [2]), realist treatments of impossible worlds ([5]) still play a central role in contemporary philosophy. In this abstract, we bring forth a comparatively unexplored route against such a realist perspective. More precisely, we maintain that, under a genuine realist construal, metaphysical impossibility collapses into logical impossibility, thus undermining one key explanatory role assigned to impossible worlds.

Making use of the framework delineated in [2], we focus on a version of "realism" where impossible worlds are taken as genuine, in the sense that they represent impossibilities by having them as parts (rather than representing them as an ersatz world would). Against this background, we distinguish logical impossibility — understood as the violation of the laws of classical logic — from metaphysical impossibility, understood as the violation of the nature or essence of things ("ways things could not have been"). Standard examples of the latter are cases that appear metaphysically, but not logically, impossible, such as "Water is not H₂O". [3]

Our central claim, then, is that a genuine treatment of impossible worlds delivers the following thesis:

Logical Thesis (LT). Metaphysical impossibility entails Logical impossibility.

The argument proceeds by considering how a genuine realist must account for metaphysical impossibility at an impossible world. Take "Water is not H₂O" as a paradigmatic metaphysical impossibility. Under a genuine view, an impossible world w_i represents this impossibility by having it as part. Thus, for an object a denoting water, w_i must include $\neg H_2O(a)$ as part of its content, since being H₂O belongs to the nature of water.

At this point, we ask what makes $\neg H_2O(a)$ metaphysically impossible, rather than a mere misdescription. For the impossibility to be metaphysical — that is, to involve the violation of a nature — a must strictly refer to water simpliciter. If this constraint is relaxed, no essence is violated, reducing the example to an attribution of a negative property to an arbitrary object. However, if the impossibility is to be bona fide, the genuine realist is committed to the claim that, at w_i , water both is and is not H₂O. Consequently, $w_i \Vdash H_2O(a) \wedge \neg H_2O(a)$, and the situation constitutes a logical impossibility after all, thus delivering LT.

One might object — appealing, for instance, to Counterpart Theory or other indirect strategies — that $w_i \Vdash H_2O(a)$ need not literally hold, and that metaphysical impossibility is delivered by global or indirect features of worlds. We argue, however, that such strategies are unavailable to a genuine realist: once impossibilities are no longer had as part of a world's content, the view collapses into a non-genuine account.

If this argument goes through, genuine impossible worlds cannot adequately preserve the distinction between logical and metaphysical impossibility that they are meant to explain. Given the central instrumental role that impossible worlds are supposed to play in analyzing these distinctions, we conclude that genuine realist views should be rejected. For those sympathetic to realism about possible worlds, the argument also provides reasons to reject the parity thesis and to prefer a hybrid approach ([1]).

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Formal Semantics for Noneist Five-Dimensionalism

Theories of modal persistence attempt to capture what it is for an object to exist, or to have properties, at other possible worlds. However, the task is delicate: we wish to explain how modal predication can be both intelligible and compatible with our ordinary understanding of identity.

Five-dimensionalism (5D) was originally proposed to combine the virtues Transworld Identity (TI) and Counterpart Theory (CT). In this framework, objects are not confined to the Actual World (A) but are extended in modal space, just as they are extended in space and time. Possible worlds contain modal

parts of objects, and the mereological sums of these parts constitute five-dimensional entities. The framework offers an appealing analogy with Four-dimensionalism in the temporal case: persistence through modal space is modelled on persistence through time. However, Five-dimensionalism faces two well-known challenges. First, it appears to be metaphysically extravagant: if each world contains existent parts of ordinary objects, the theory commits us to a vast and inflated ontology. Second, it risks unintelligibility: the notion of a five-dimensional object whose modal parts are spread across worlds requires clarification if it is to be more than a mere metaphor.

The central aim of this paper is to develop a version of Five-dimensionalism that is both intelligible and ontologically modest. I call this view Noneist Five-dimensionalism (N5D). The theory builds upon Modal Noneism (MN), a metaphysical theory according to which possible worlds and non-actual entities are nonexistent yet perfectly legitimate items of quantification. On this approach, existence is not what the quantifier expresses but rather a property that only some things possess. This idea, together with Five-dimensionalism, yields a novel picture: ordinary objects are five-dimensional sums of modal parts, but only their actual modal parts exist. Non-actual parts, as well as the worlds they inhabit, are nonexistent entities – semantically tractable but ontologically innocent. In this way, Noneist Five-dimensionalism retains the explanatory power of Five-dimensionalism while dispensing with its metaphysical excess.

The proposal also has formal import. It allows for a precise semantic treatment of modal quantification that respects noneist commitments, but it does not sacrifice classicality. In particular, its originality lies in the fact that it reverses the traditional Meinongian approach by defining unrestricted quantifiers in terms of restricted ones and modal operators. The resulting framework, I argue, offers a unified and rigorous account of modal persistence.

NMP is based on an actualist five-dimensionalist semantics, whose structure is a tuple of the form:

$\langle D, W, A, O, M, I \rangle$

where:

- D is a domain of objects;
- W the set of possible worlds;
- A is the Actual World;
- O is a subset of D: the set of all ordinary objects, which are trans-world entities; $D - O$ is the set of world-bounded modal parts of ordinary objects.
- M is a partial function, that assigns to each ordinary object its worldbounded modal parts. It is a partial function because some ordinary objects may not have a modal part at some world.
- I is an interpretation function.

While this abstract provides only a preliminary overview of the formal semantics, the paper presents truth conditions for formulas, provides formal definitions for quantifiers and modal operators, and offers a comprehensive development of the theory, with particular emphasis on its underlying philosophical assumptions.

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Modality, Sparsity, and Essence, Redux

Rather infamously, Kit Fine (1994) provided a series of cases which purport to show that attempts to characterize essence in terms of metaphysical necessity are ‘fundamentally misguided’. Slightly less infamously, Wildman (2013) attempts to save modalism by offering a new modalist account incorporating a sparseness restriction, such that an object's essential properties are those sparse properties it has in every world in which it exists. While Wildman's sparse modalism seems to handle Fine's original cases, the view has faced a series of criticisms; for example, sparse modalism seemingly delivers counter-intuitive essentialist results, since it entails that Terry the table is not essentially a table, or that the Eiffel Tower is not essentially a tower. Similarly, it isn't clear whether sparse modalism can deliver asymmetric essentialist claims in the Socrates- $\{Socrates\}$ case. For there is nothing inherent to sparse modalism that ensures it is essential to $\{Socrates\}$ that it has Socrates as a member, but not essential to Socrates that he is a member of $\{Socrates\}$.

The aim of this paper is to refine sparse modalism, thereby saving it from these threats. To do so, I begin by discussing Brown's (2016) conception of natural objects, according to which objects come in various 'metaphysical grades', ranging from the perfectly natural objects to the 'maximally gerrymandered, perfectly non-natural objects'. After articulating and motivating Brown's view, I argue that we've good reason to think that property sparseness and object naturalness levels stand in a tight relationship. Directly building on this, I contend that sparse modalist should modify their account to spotlight this connection:

NO-SPM A property Φ is essential to an object x iff (i) necessarily, if x exists, then x has Φ ; and (ii) Φ is at most as sparse as x

This modified account ensures that sparse modalism can still maintain that e.g., Terry is essentially a table after all. Moreover, this “levels” clause also gives sparse modalists the tools

to capture the seeming essentialist asymmetry concerning Socrates and {Socrates}: the former is a more natural than set-theoretic properties and relations are sparse, while the latter is not.

Having thereby defended sparse modalism, I conclude by considering and rejecting various other objections made against the view. The overall upshot is that sparse modalism, suitably revised, remains a viable modal account of essence after all.

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Evaluative Disagreement: Intensional Content or Hyperintensional Difference?

A persistent challenge in value theory concerns the apparent possibility of genuine disagreement between evaluative judgments that nonetheless both seem correct. Such cases are commonly taken to motivate relativist, contextualist, or expressivist accounts of value (Stevenson 1963; Blackburn 1993; MacFarlane 2014), or else to force realist and cognitivist theories to deny that the disagreement is genuinely faultless (Ross 1930/2002; Dancy 1993, 2004). This paper defends a realist and cognitivist alternative: there are cases in which two evaluative sentences genuinely disagree and are both true, without contradiction, relativism, or semantic ambiguity in value terms. The central claim is that the disagreement concerns the implicit content of what is evaluated rather than the meaning or application conditions of the evaluative predicate itself.

The paper focuses on disagreements of the following form: two agents (or the same agent at different times) assert “E is V” and “E is not V,” where V is a value predicate (e.g. *right*, *wrong*, *healthy*) and E is an apparently shared evaluatee (e.g. *providing food*, *swimming*). While such disagreements are often assumed to involve incompatible propositions, the paper argues that this assumption conflates sentences with the propositions they express. Drawing on possible-worlds semantics and a broadly Kaplanian framework (Kaplan 1989; Heim and Kratzer 1998), the paper distinguishes sentences from propositions and treats context as a function from sentences to propositions. On this view, propositions are truth-apt and do not vary across contexts, whereas sentences may express different propositions in different contexts.

Crucially, the relevant context sensitivity does not attach to the evaluative predicate. Value terms are treated as univocal and context-independent. Instead, context fixes the intensional content of the evaluatee. Because the full content of many evaluatees—especially action descriptions—is implicit, non-transparent, and resistant to complete articulation, different agents may associate the same sentence with different intensional contents while remaining confident about its truth value. This is compatible with a knowledge-first epistemology, according to which agents may be causally guided by content-determining conditions without possessing explicit knowledge of them (Williamson 2000).

Against this background, evaluative disagreement without error is explained as higher-order disagreement: agents disagree not about the truth value of a single proposition, but about which proposition a shared sentence expresses. Applying the same value predicate to different intensional contents can therefore yield opposing but equally true evaluations. This preserves genuine disagreement while avoiding relativism or assessor-dependent truth.

At this point, a methodological contrast becomes salient. One option is to treat the relevant differences in evaluatee content as ordinary intensional differences, fully captured at the level of possible-worlds semantics once context is sufficiently enriched. This approach is theoretically conservative and preserves a truth-conditional semantics, but it faces a

challenge: some evaluative disagreements appear to persist even when agents agree on all relevant non-evaluative facts and modal profiles. This raises the concern that intensional content alone may be too coarse-grained.

A competing strategy appeals to hyperintensional differences, grounding disagreement in imperatives, salience structures, or systematic cognitive biases that shape practical representation. Hyperintensional accounts promise finer-grained individuation of content, but at the cost of semantic and metaphysical complexity, and with a risk of collapsing semantic explanation into moral psychology or reintroducing subject-dependence (MacFarlane 2014).

The position defended here occupies a middle ground. Differences in evaluatee content are intensional in the semantic sense, but the contexts that fix intensional content are themselves constituted by practical profiles, patterns of salience, and agent–world interaction. These profiles are represented through practical representation rather than explicit concepts (Pavese 2020; Fridland and Pavese 2020). This allows the account to capture much of the explanatory force associated with hyperintensional approaches while retaining a disciplined, truthconditional semantics. The result is a realist and cognitivist account of genuine, faultless evaluative disagreement grounded in implicit content rather than relativized value.

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