

MODERATE MODAL METAPHYSICS

Mallory Webber

B.A. Philosophy, B.S. Neuroscience, University of Illinois at Chicago (2016)

Submitted to the Department of Linguistics & Philosophy in partial fulfillment of the requirements for  
the degree of

Doctor of Philosophy

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

September 2022

©Massachusetts Institute of Technology 2022. All rights reserved.

Author:

Mallory Webber  
Department of Linguistics & Philosophy  
August 29<sup>th</sup>, 2022

Certified by:

Stephen Yablo  
David W. Skinner Professor of Philosophy  
Thesis supervisor

Accepted by:

Brad Skow  
Laurance S. Rockefeller Professor of Philosophy  
Chair of the Committee on Graduate Students

# MODERATE MODAL METAPHYSICS

by

Mallory Webber

Submitted to the Department of Linguistics & Philosophy on August 29<sup>th</sup>, 2022 in partial fulfillment of the requirements for the degree of Doctor of Philosophy at the Massachusetts Institute of Technology

## **Abstract**

This dissertation is about metaphysical modality: *What* is possibly or necessarily true? And *how* do these truths get to be true? It is also about a vice of moderate answers to these questions.

Chapter 1 (‘Actualism, Modal Reductionism, and Contingentism’) concerns how modal truths get to be true. It’s metaphysically necessary that I’m human, even at worlds without me. But how do these worlds get to boast of this truth? Chapter 1 provides an answer: All truths of possible worlds owe their truth to actual individuals and how they are. It’s true of any possible world that, necessarily, I’m human because, actually, I’m essentially human.

Chapter 2 (‘Higher-Order Contingentism and the Problem of Impossible Indiscernibles’) concerns what is possibly or necessarily true. Specifically, it considers whether it’s possible that impossible individuals bear relations to one another. Whether impossibles can be related matters to *higher-order contingentism*, the view that it’s contingent which properties exist. Take two doppelganger knives that would have been constituted by the same handle, but different blades. According to higher-order contingentism, if neither knife exists, properties that would single either knife out also do not exist. The knives are indiscernible. If it is really true that, possibly, the knives are indiscernible, the higher-order contingentist denies *the being constraint*, the constraint that, necessarily, only existing individuals exemplify properties. Chapter 2 resolves this tension.

The emerging metaphysical picture is one in which actuality is *special*. This raises a powerful arbitrariness worry: If actual individuals are the sole determiner of modal truths, and if which individuals actually exist is arbitrary, then which modal truths there are will also be arbitrary.

Chapter 3 (‘Tolerating Arbitrariness’) explores arbitrariness as a theoretical vice. Arbitrary theories inexplicably distinguish between things “on a par.” But not all arbitrary theories are, themselves, on a par. Some arbitrary theories have relatively *shallow* inexplicability, and they ought to be tolerated. By focusing our attention on different levels of explanation, we open the door for arbitrariness in our metaphysics.

Thesis supervisor: Stephen Yablo

Title: David W. Skinner Professor of Philosophy

## Acknowledgments

I owe many thanks to my advisors: Steve Yablo, Brad Skow, and Michaela McSweeney. They have been supportive, trusting, and thoughtful, and their efforts in helping me along have been substantial. An individual thank you to Steve, for encouraging a rather timid first year to take an independent study with you; thanks, too, for regularly checking in. Also to Brad, for always generously making time. And to Michaela, for providing a bit of perspective, for welcoming rough ideas, and for encouraging me to speak up.

Although not officially an advisor, Maegan Fairchild provided extremely helpful, extremely detailed feedback on Chapters 1 and 2. And her own work helped to bring about Chapter 3. This dissertation is much better as a result, and I'm grateful for her.

Many thanks to the broader MIT community who provided me not just with feedback and insight, but community, too: Emma Atherton, Allison Bailin, Sam Berstler, Milo Phillips-Brown, Thomas Byrne, Shannon Doberneck, Kelly Gaus, Sally Haslanger, Samia Hesni, Justin Khoo, Ari Koslow, Katy Meadows, Anni Rätty, Haley Schilling, Nathaniel Schwartz, Kirsi Teppo, Brianna Toole, Eliza Wells, and Xinhe Wu. Also to those earlier believers in me, especially Mahrud Almotahari and Nina Emery, without whom I wouldn't have gone to graduate school in the first place.

My life looks very different than when I started at MIT five years ago. The animals that have found me along the way – Bowie, Kuma, Daryl, and Yukon – have taught me how to live a bit more in the moment. And I'm grateful for the way that my life looks now.

Kat, this dissertation certainly would not exist without you. But you taught me that things would have been okay if it didn't exist at all. And this made all the difference.

And, finally, to my family. To my sisters, Clara, Molly, Hannah, and Danna: Thank you for the breaks, the trips, the games, and the time away from work. And to my parents, who have been ever-enthusiastic and ever-supportive: The life that I have now is only because you somehow figured out a way to attend college with no support and no road map. I'm forever grateful for the sheer amount of effort you have put into making your children's lives easier than your own. A thank you isn't nearly enough, but thank you.

# Contents

<b>1</b>	<b>Actualism, Modal Reductionism, and Contingentism</b>	<b>6</b>
1.1	Introduction . . . . .	6
1.1.1	Historical background . . . . .	7
1.1.2	Looking forward . . . . .	9
1.2	Sourcing counterfactual modality in possible individuals . . . . .	11
1.2.1	The S4 argument against <i>Finean Reductionism</i> . . . . .	12
1.3	Sourcing counterfactual modality in actual individuals . . . . .	14
1.3.1	Actualist priority . . . . .	17
1.3.2	Motivating actualist priority . . . . .	18
1.3.3	A reframing: counterfactual vs. counteractual reasoning . . . . .	20
1.3.4	Mere possibilia . . . . .	20
1.4	Is this “reductionist enough”? . . . . .	23
1.5	Conclusion . . . . .	24
<b>2</b>	<b>Higher-Order Contingentism and the Problem of Impossible Indiscernibles</b>	<b>26</b>
2.1	Introduction . . . . .	26
2.2	Sharpening our problem case . . . . .	28
2.2.1	Superficial problems . . . . .	31
2.2.2	Deeper problems . . . . .	32
2.2.3	Our two problems . . . . .	33
2.3	Indiscernibility without <b>being indiscernible from</b> . . . . .	34
2.3.1	Legitimacy regained . . . . .	36
2.3.2	What’s literally true? . . . . .	38
2.3.3	Shouldn’t we be concerned with only literal truths? . . . . .	38
2.4	How bad is denying (something like) the being constraint anyways? . . . . .	40
<b>3</b>	<b>Tolerating Arbitrariness</b>	<b>45</b>
3.1	Introduction . . . . .	45
3.2	Arbitrariness dialogues in modal metaphysics . . . . .	48

3.3	Arbitrariness, more in depth . . . . .	53
3.3.1	What is arbitrariness? . . . . .	53
3.3.2	How “objective” is arbitrariness? . . . . .	57
3.3.3	Why is arbitrariness bad? . . . . .	58
3.4	Can arbitrariness be tolerable? . . . . .	59
3.4.1	Parity . . . . .	59
3.4.2	Explanation . . . . .	60
3.4.2.1	A restricted principle of recombination and weak arbitrariness	60
3.4.2.2	Is weak arbitrariness <i>worse</i> ? . . . . .	64
3.4.2.3	Mixed-persistence worlds . . . . .	65
3.4.2.4	Mind-body physicalism . . . . .	67
3.4.3	Contingency . . . . .	68
3.5	Sensitivity to background metaphysics . . . . .	70
3.6	Conclusion . . . . .	73

# I Actualism, Modal Reductionism, and Contingentism

**Abstract:** A certain kind of modal reductionism is in seeming tension with the conjunction of *contingentism* (the view that it's contingent what there is) and *S<sub>5</sub>-ism* (the view that metaphysical modality obeys the modal logic of S<sub>5</sub>). The tension between these views rests on a particularly strong reductionist commitment: The modal truths of *any* world are determined entirely by individuals of *that* world. The tension is this: If the modal truths of some world are determined by what there is in that world (as this kind of reductionist says), and if it's contingent what there is (as the contingentist says), then the modal truths could have been different. But S<sub>5</sub>-ism says that the modal truths couldn't have been different. This tension is quite general, seemingly affecting a wide variety of reductionist views. But there's a general solution that's antecedently motivated by a strand of actualist-friendly reductionism: Modal truths are determined by what there actually is. What would be necessary or possible had there existed different individuals are just more modal truths. They, too, are determined by what there actually is.

## I.1. Introduction

There's a question of where metaphysical modality comes from. It's necessary that I'm human. Why? It's natural to think that the answer has to do with me. Maybe, it's essential to me that I'm human. That seems okay for as far as it goes, but it doesn't go too far. I have exactly four sisters. But I could have had five sisters. And were my fifth sister to exist – call her *Jane* – it would be necessary that she's human, too. Why? Two camps diverge. One answers: Before we appealed to something about me, so now we should appeal to something about Jane; it is essential to Jane that she is human. The other answers: It would be necessary that *any* nonactual person is human because it is essential to *actual* people that they be human. The view, generalized, is that we can explain all modal truths using only actual individuals.

This latter kind of modal reductionism holds out the hope of being compatible with *actualism*. Actualism is roughly the view that everything is actual; there are no possible, but nonactual things. Actualism gets its dialectical bite in denying *possibilism*, the view that nonactual individuals exist. Actualists argue against possibilism's profligate ontology (“Jane exists?”) and under-explained way of identifying *specific* mere possibilia (“Of the candidates for being

my extra sister, *which* one was I talking about when saying ‘Jane’? The very introduction of the name ‘Jane’ is suspect.”).<sup>1</sup>

Here’s a preview of what’s to come: There’s a long history of the approach to modal reduction that makes appeal to mere possibilities, one marred by conflicts with other popular metaphysical theses (I gloss a bit of this history below). The earlier parts of this paper motivate a shift away from this view of modal reduction and towards an actualist-friendly view of modal reduction in order to solve these conflicts. A healthy desire for modal reductionism pushes one towards actualism. After all, if we’re aiming to reduce modality, then making appeal to mere *possibilia* does not reduce modality to something non-modal. We ought, instead, try to reduce metaphysical modality to only actual individuals. But, somewhat paradoxically, modal reductionism and actualism don’t seem to sit happily together: Modal truths seem to outstrip what actually exists. It’s only the faintness of actualist-heart, I argue in later parts of this paper, that causes this seeming conflict between modal reductionism and actualism.

### 1.1.1 *Historical background*

So the first part of this paper is concerned with a certain approach to modal reductionism, one that says that modal truths are true in virtue of all the individuals that there are and could have been. But, more specifically, the approaches I have in mind say that the modal truths of *any* world are determined entirely by individuals in *that* world. Call this *local reductionism*; local reductionism, I argue, is an undesirable theory of modality.

There are different ways to cash local reduction out, different features to point to in grounding modality. For example, the Armstrongian may reduce modal truths of some world to recombinations of states of affairs in that world. The Finean may reduce necessary truths of some world to essences of individuals in that world. For example, the proposition **that Mallory is a human** is necessarily true of our world in virtue of my essentially being human in our world. And the Vetterian may reduce possible truths of some world to potentialities of individuals in that world. For example, the proposition **that Mallory is 6 feet tall** is possibly true of our world in virtue of my potentially being 6 feet tall in our world. But regardless of the details, the first part of this paper is concerned with how the local approach to modal reductionism comes into conflict with the conjunction of two additional theses: contingentism and S<sub>5</sub>-ism.

*Contingentism* is the view that it’s contingent what exists. I could have failed to exist. It’s possible that more people exist than how many actually exist. Contingentism gets its dialectical

---

<sup>1</sup>Some actualists have an ontology that include proxies for mere possibilities: Plantingan essences or contingent concreta. For the former, see (Plantinga, 1974); for the latter, (Linsky & Zalta, 1994); for the term ‘proxy actualist’ see, e.g., (Fine, 2003) and (Bennett, 2006). But the actualist need not adopt such proxies. See (Fine, 2003) for a good summary on arguments against proxy actualism. Strict actualists deny the existence of such proxies; I’m concerned with how strict actualists (from now on, just ‘actualists’) can reduce modality.

bite from denying *necessitism*, the view that necessarily, everything necessarily exists. Both I and Jane, the necessitist says, necessarily exist.

Finally, *S<sub>5</sub>-ism* is the view that metaphysical modality obeys, or is best modelled by, modal logic S<sub>5</sub>. We don't need all of the details. What we need to know is this: According to modal logic S<sub>5</sub>, whatever modal status a truth has, it has necessarily. Propositions that are possible are necessarily possible; propositions that are necessary are necessarily necessary, and so on. Modal truths, according to S<sub>5</sub>-ism, couldn't have had a different modal status.

And, now, the conflict between local reductionism, contingentism, and S<sub>5</sub>-ism: If the modal truths of some world are determined by what there is in that world (as the local reductionist says), and if it's contingent what there is (as the contingentist says), then the modal truths could have been different. But S<sub>5</sub>-ism says that the modal truths couldn't have been different.

This kind of conflict has a storied history.<sup>2</sup>

Prior (1957), for example, argues for the view that *no* propositions concerning some individual would have been true (or false) had that individual not existed. (This is our local reductionist view that the modal truths of some world are determined entirely by that world's constituents, but generalized for any kind of truth – modal or otherwise.) The S<sub>5</sub> violation: Actually, I exist; so, possibly, I exist. But imagine a world in which I didn't exist. If I hadn't existed, on Prior's view, then it wouldn't be possible that I exist. The proposition **that Mallory exists** is actually possible, but not necessarily possible, in violation of S<sub>5</sub>.

Prior's view is one in which a world does not take a stand concerning some individual, *a*, if *a* does not exist that world. This even includes “negative” stands, for example, negative existentials. In effect, Prior's view considers truth *in* a world to be the only legitimate conception of ways in which propositions may be true with respect to some world (more on this immediately below).

Adams (1981) is less extreme than Prior: A world can *sometimes* take a stand concerning *a*, even if *a* does not exist in that world. And Adams allows himself this flexibility because he denies Prior's restriction: There's more than one way a proposition may be true when considering some world. Roughly, a proposition might be true *at* (or *of*) a world in the sense of being accurate with respect to that world, and a proposition may be true *in* a world in the sense of both existing in, or being about existing individuals in that world, and being accurate with respect to that world.<sup>3</sup> For Adams, negative existentials (e.g., **that it isn't the case that Mallory exists**) can be true *at* a world, despite not being true *in* a world.

Despite having recourse to this extra flexibility, Adams still denies S<sub>5</sub>. And that is because

---

<sup>2</sup>I'm following the historical framing of Menzel (2015) in what follows; I also thank him for further elaboration in personal communication.

<sup>3</sup>Contingentists often accept this distinction, understanding necessity as being truth at all possible worlds and possibility as being truth at one or more worlds; I follow suit.



Adams denies that *modal propositions* about *a* can be true at worlds without *a*. Which is just to say that Adams accepts the local reductionist view that the modal truths of some world are determined entirely by that world's constituents. So, according to Adams, the proposition **that, possibly, Mallory is 6 feet tall** is false at worlds without me. Despite it being actually possible that I be 6 feet tall, according to Adams, it isn't necessary that, possibly, I be 6 feet tall, in violation of S<sub>5</sub>.

Armstrong (1989) recognizes that his reductionist project faces this kind of argument; Armstrong simply denies S<sub>5</sub>. Fitch (1996) and Nelson (2009), both actualists, relinquish S<sub>5</sub> for similar reasons.<sup>4</sup> Finally, Menzel (2015) argues that Hale (2013) must, contra Hale, deny S<sub>5</sub> precisely because of this kind of conflict.

So there's quite a history of modal reductionist and contingentist projects denying S<sub>5</sub>, and this denial is often viewed as a cost given S<sub>5</sub>'s popularity among modal logicians. A new variant of this argument has recently surfaced: Teitel (2019) targets a Fine-inspired view, arguing that the conjunction of (1) a Finean reduction of modality to essence, (2) contingentism, and (3) S<sub>5</sub>-ism results in contradiction. More specifically, Teitel's arguments work by way of the local reductionist's commitment: the modal truths of any world are determined entirely by individuals in that world.

Now, Teitel doesn't acknowledge that his arguments are just one additional instance of this storied tension (of the works cited above, Teitel cites only (Adams, 1981)). And Teitel also doesn't apply his arguments to a natural alternative to a Finean view; an analogous argument can be raised against the view that reduces modality to potentialities rather than essences (see, e.g., (Vetter, 2018)). But it's important to note both the history and the further applications of Teitel's arguments because we don't want to identify the source of problem with the wrong level of granularity. Finean reductionism is not the problem (as Teitel (2019), p. 66 suggests). The problem, I'll suggest, is this local approach to modal reduction; it just isn't the case that the modal truths of a world are determined entirely by that world's constituents. Instead, we ought to be *actualist*-reductionists: The modal truths of any world are determined entirely by actual individuals.

We can leave the details for later; §1.2 presents a more detailed version of the tension. For now, I want to sketch the general solution for the actualist-reductionist to our general problem; §1.3 has more.

### 1.1.2 *Looking forward*

The solution requires distinguishing two different ways of reasoning about metaphysical modality: We can reason *counterfactually* or *counteractually*. Often our modal talk combines these

---

<sup>4</sup>But see (Mitchell-Yellin & Nelson, 2016) for a change in Nelson's views.

two ways of reasoning.

Counterfactual reasoning is familiar. When we reason purely counterfactually, we reason about what would happen in worlds different than our own, but, importantly, we don't lose sight of our world being actual. In other words, when reasoning purely counterfactually, we vary only the world of evaluation. It's true of the actual world that water is identical to H<sub>2</sub>O, but is this true of some other world (keeping fixed that our world is the actual world)?

But when we reason purely counterfactually, we don't keep actuality fixed; we vary which world we consider as actual. Sometimes this is called varying the "reference-fixing" world. For example, think of a world in which XYZ is found in lakes, consumed by humans, and otherwise "plays the water role." Thinking of that world as actual, then is it true of that world that water is identical to XYZ?

Sometimes, we combine the two ways of reasoning: we vary both the world of evaluation and which world we consider as actual. This is a different, more imaginative enterprise. We're asked not to describe modal space using our world's resources, but to imagine what resources we might have had to describe modal space had some other world been actual. For example, we might wonder if the XYZ world were actual, would it be the case that, necessarily, water is identical to XYZ?<sup>5</sup>

The actualist-reductionist can maintain S<sub>5</sub>-ism for purely counterfactual modality, dissolving our seeming tension. The actualist-reductionist says that the modal truths of any world are determined by what there actually is; what would be counterfactually necessary or possible had there existed different individuals just are more modal truths. They, too, are determined by what there actually is. As we "move across" modal space, changing only our world of evaluation, we shouldn't see variation in the modal status of modal truths – we've kept the actual world fixed. This amounts to maintaining S<sub>5</sub>-ism for counterfactual modality.

This solution, I argue, is motivated *solely* by the actualist-reductionist project. That's to say a couple of things: (1) Even if you have suspicions about actualism-reductionism, contingentism,

---

<sup>5</sup>Why include both the reference-fixing world and the world of evaluation as parameters in our index? Only including the world of evaluation is not enough to accurately formalize many of our modal sentences. Take a classic example from from (Hughes & Cresswell, 1996):

HAPPY: It might have been that everyone actually happy was sad (p. 350).

We can't regiment that sentence as, "Possibly, for all people, if they're happy, they're sad." Nor can we regiment HAPPY as, "For all people, if they're happy, then, possibly, they're sad." This doesn't require that everybody who is actually happy be sad *together* in some world. We need another parameter in our index, one tracking which world we consider as actual. We can do this by adding an 'actually' operator to our language and a reference-fixing parameter to our index which allows us to regiment HAPPY as, "Possibly, for all people, if, actually, they're happy, then they're sad" which is true if and only if all the people happy in the actual world are sad in some possible world.

Many others have made the case for this distinction between counterfactual and counterfactual reasoning and provided the logical tools to flesh this distinction out; see (Davies & Humberstone, 1980) as a foundational work.

or S<sub>5</sub>-ism, this storied style of argument ought not be the motivation for rejecting any of our core theses. (2) More importantly, the actualist-reductionist has *antecedent* reason to reject this style of argument.

But there is *something* that Prior, Adams, Armstrong, Teitel, etc. are on to. The actualist-reductionist can sometimes expect conflicts with S<sub>5</sub>, but only when we mix in counterfactual reasoning. Modal truths are determined by what there actually is. If we vary which world is actual, we ought to see variation in both the availability of and the modal status of modal truths. This amounts to denying S<sub>5</sub>-ism for counterfactual modality.

The real upshot of this paper could be seen as a bit of a compromise. In some sense, the actualist-reductionist can maintain both contingentism and S<sub>5</sub>-ism, and in another sense, she cannot. But this is the wrong framing. Counterfactual and counterfactual reasoning differ in which parameters we toggle (our world of evaluation or our reference-fixing world respectively); we shouldn't expect that the modal logic that governs the one kind of reasoning, governs the other.

§1.4 addresses one concern; the actualist-reductionist view is “reductionist enough.”

## 1.2. Sourcing counterfactual modality in possible individuals

So, to refresh: This section formally presents the tension between contingentism, S<sub>5</sub>-ism, and Teitel's version of local reductionism. Following sections resolve this tension.

And to start off, I want to clarify what I mean by ‘reductionism’. Modal reductionists try to fill in a grounding schema: For all propositions,  $p$ ,  $p$ 's being necessary/possible is in virtue of  $p$ 's being...to some individual(s). For example, the Finean fills in this schema as follows: For all propositions,  $p$ ,  $p$  is necessary in virtue of  $p$  being essential to some to some individual(s). The proposition **that Mallory is human** is necessary in virtue of the proposition **that Mallory is human** being essential to me.

I'll assume (very conservatively) that grounding statements like these imply material equivalence, and I'll regiment the reductionist's claim, then, as follows:

*Reductionism*: For all propositions,  $p$ ,  $p$  is necessary/possible if and only if there exists some individual(s) to which  $p$  is...

The general argument we're concerned with relies on a necessitation of *Reductionism*:

*Necessitated Reductionism*: Necessarily, for all propositions,  $p$ ,  $p$  is necessary/possible if and only if there exist(s) some individual(s) to which  $p$  is...

I'll have more to say about necessitations of reductionist theses; for now, I want to point out that the kind of reduction I'm concerned with is metaphysical, not semantic. The modal

reductionist aims to point out the grounds of metaphysical modality, but she needn't also aim for eliminating modal operators from our theory-expressing language. Were we to try and eliminate the necessity operators from *Necessitated Reductionism* in favor of quantification over actuality, we would never get off the ground – that is, out of the actual world – when trying to wonder about the grounds of counterfactual modality.<sup>6</sup>

One last note before we get going: *Reductionism* and its necessitation quantify over propositions; so will other theses we're concerned with. I accept along with Teitel and others (see, e.g., (Rayo & Yablo, 2001), (Wright, 2007), and (Williamson, 2013)), that not all kinds of quantification are ontologically committing in the way that nominal quantification is. In particular, I accept that higher-order quantification need not entail any further ontological commitments over and above those of our first-order quantificational claims.

Now, Teitel has two arguments against a version of *Reductionism*, one employing modal logic S<sub>4</sub> and the other, modal logic B. I informally sketch the S<sub>4</sub> argument below.

### 1.2.1 *The S<sub>4</sub> argument against Finean Reductionism*

Teitel's version of *Reductionism* is as follows:

*Finean Reductionism*: For all propositions,  $p$ ,  $p$  is necessary if and only if there exist(s) some individual(s) to which  $p$  is essential.<sup>7</sup>

But, we know, Teitel's argument relies on a necessitation of *Finean Reductionism*:

*Necessitated Finean Reductionism*: Necessarily, for all propositions,  $p$ ,  $p$  is necessary if and only if there exists some individual(s) to which  $p$  is essential.<sup>8</sup>

Why think that *Finean Reductionism* is necessarily true? Teitel gives us this motivation (p. 46): A Fine-inspired reduction is not meant to be a matter of luck. *Finean Reductionism* shouldn't apply merely contingently; it shouldn't be a matter of happenstance that the actual modal truths and actual individuals coincide. So, *Finean Reductionism* ought to apply both necessarily and to all the propositions there could be.

We can understand *Necessitated Finean Reductionism* as telling us that the necessary propositions of any world are determined by what exists in that world and how these individuals essentially are. And this just is a version of local reductionism.

---

<sup>6</sup>See (Stalnaker, 2012a), especially p. 30, for general defense of the point that semantic eliminativism is not necessary for genuine explanations. The Finean can genuinely explain metaphysical necessity in terms of essence without eliminating primitive necessity operators from her theory-expressing language.

<sup>7</sup>This is Teitel's regimentation, with the notation cleaned up a bit. See (Teitel, 2019), p. 45, for defense that this regimentation is necessarily coextensive with Fine's.

<sup>8</sup>This is the consequence of Teitel's *Robustness*, p. 46, taken together with *Finean Reductionism*.

Teitel's arguments require one additional premise. The actualists I'm concerned with don't admit of proxies in their ontology: If I failed to exist, there wouldn't still exist some kind of proxy of me. But if I failed to exist, what would there be to bear witness to essential propositions about me? Reductionists think that essential propositions about me are necessary – they're still true at worlds in which I fail to exist.

We don't always want to say that there's *something* to which necessary propositions are essential – given contingentism (and ignoring proxies) that something would sometimes look *irrelevant* to the proposition in question. More specifically, whenever we look to a possible world where some possible individual doesn't exist, essential propositions concerning that individual will be essential to an *irrelevant* individual, unless one were to allow that some essential propositions are possibly essential to nothing. And allowing this just is to adopt Teitel's additional premise *Standard Contingentism*:

*Standard Contingentism*: Some proposition  $p$  is possibly both essential to some individual(s) and possibly essential to nothing (p. 46).

We can think of *Standard Contingentism* as a way of generating counterexamples to *Necessitated Finean Reductionism*. From above:

*Necessitated Finean Reductionism*: Necessarily, for all propositions,  $p$ ,  $p$  is necessary if and only if there exists some individual(s) to which  $p$  is essential.

The high-level gloss is this: *Necessitated Finean Reductionism* tells us that necessary propositions of worlds are determined by what exists in those worlds. If some individual doesn't exist in some world, it can't determine necessities relevant to it. Contingentism tells us that in some worlds, the individual(s) relevant to some actual necessities won't exist. So, some essential propositions (that are actually necessary) won't be necessary at *those* worlds, in violation of S4.

In more detail: Let  $q$  be the proposition **that Mallory is human**. Suppose that  $q$  is necessary. *Finean Reductionism* tells us that if  $q$  is necessary, there is an individual to which  $q$  is essential: me. Given our reasoning motivating *Standard Contingentism*, if I failed to exist,  $q$  wouldn't be essential to anything. But now recall that *Necessitated Finean Reductionism* says that for all worlds,  $w$ , a proposition is necessary at  $w$  if and only if there exists some  $w$ -individual to which  $q$  is essential. Take a world,  $w^f$ , in which I don't exist.  $q$  isn't essential to any  $w^f$ -individual; I don't exist in  $w^f$ . So,  $q$  isn't necessary at  $w^f$ . That is,  $q$  is necessary at the actual world, but possibly not necessary because  $q$  isn't necessary at worlds without me. This contradicts the 4 schema of modal logic S4.<sup>9</sup>

---

<sup>9</sup>*Finean Reductionism* isn't the only kind of reductionist view that is vulnerable to this style of argument;

### 1.3. Sourcing counterfactual modality in actual individuals

So, we have our tension between a version of local reductionism, contingentism, and S<sub>5</sub>-ism. But we shouldn't be too worried – local reductionism starts off on the wrong foot, and there are alternative ways to be a modal reductionist.

Modal reductionists attempt to reduce metaphysical modality by way of pointing to non-modal, or pre-modal, features of individuals. And reductionism would be undermined if we needed to point to features of merely possible individuals. Without some non-modal way of picking out merely possible individuals, we would be “reducing” modality to something blatantly modal: mere *possibilia*.<sup>10</sup>

And *Necessitated Finean Reductionism* does “point to” mere *possibilia*. From above:

---

*Necessitated Finean Reductionism*: Necessarily, for all propositions,  $p$ ,  $p$  is necessary. *Vetterian Reductionism* is too.

*Vetterian Reductionism*: For all propositions,  $p$ ,  $p$  is possible if and only if there exists some individual(s) that has (have) the potentiality for  $p$  to be the case.

The argument against *Vetterian Reductionism* is directly analogous to Teitel's S<sub>4</sub> argument; we'll also need *Necessitated Vetterian Reductionism* and *Standard Contingentism\**:

*Necessitated Vetterian Reductionism*: Necessarily, for all propositions,  $p$ ,  $p$  is possible if and only if there exists some individual(s) that has (have) the potentiality for  $p$  to be the case.

*Standard Contingentism\**: Some proposition  $p$  is possibly such that both there exists some individual(s) that has (have) the potentiality for  $p$  to be the case and possibly there doesn't exist some individual(s) that has (have) the potentiality for  $p$  to be the case.

We can defend these premises analogously. *Vetterian Reductionism* tells us what it is for a proposition to be possible; as such, it ought to be necessary, giving us *Necessitated Vetterian Reductionism*. *Standard Contingentism\** is meant to accommodate cases like the following: Possibly, I am 6 feet tall. Given S<sub>5</sub>, it's necessary that, possibly, I am 6 feet tall. Think of a world where I don't exist; it's still true at that world that, possibly, I am 6 feet tall. In virtue of what in this world is this true? Plausibly nothing (ignoring actualist proxies). We ought to think that there needn't be any individual in that world that has the potentiality for me to be 6 feet tall. This gives us *Standard Contingentism\**.

And now the argument gloss. The high-level gloss is this: *Necessitated Vetterian Reductionism* tells us that possible truths of worlds are determined by what exists in those worlds; if some individual doesn't exist in some world, it can't determine possibilities relevant to it. Contingentism tells us that in some worlds the individual(s) relevant to some actual possibilities won't exist. So, some potential propositions (that are actually possible) won't be possible at *those* worlds, in violation of S<sub>5</sub>.

In more detail: let  $r$  be the proposition **that Mallory is 6 feet tall**.  $r$  is possible. *Vetterian Reductionism* tells us that if  $r$  is possible, then there exists some individual (me) that has the potentiality to be 6 feet tall. But, given our reasoning motivating *Standard Contingentism\**, if I failed to exist, there wouldn't be anything that has the potentiality for me to be 6 feet tall. *Necessitated Vetterian Reductionism* says that for all worlds,  $w$ , a proposition is possible at  $w$  if and only if there exists some  $w$ -individual that has the potentiality for  $r$  to be the case. In worlds where I don't exist, there is no individual that has the potentiality for  $r$  to be the case. So,  $r$  isn't possible at those worlds. So,  $r$  is possible at the actual world (which contains me) but not necessarily possible because  $r$  isn't possible at worlds without me. This contradicts the  $\mathfrak{S}_5$  schema of modal logic S<sub>5</sub>.

<sup>10</sup>Incidentally, Teitel (2019) agrees with this point; see p. 59

sary if and only if there exists some individual(s) to which  $p$  is essential.

In necessitating *Finean Reductionism*, Teitel has a necessity operator scoping over an existential quantifier; this is how *Necessitated Finean Reductionism* tries to extend *Finean Reductionism* past actual individuals. And without some non-modal way to pick out mere possibilities, *Necessitated Finean Reductionism* undermines its own reductionist ambitions.

We needn't have formulated *Necessitated Finean Reductionism* in this way. When I formulated *Finean Reductionism*, I chose to do it this way:

*Finean Reductionism*: For all propositions,  $p$ ,  $p$  is necessary if and only if there exists some individual(s) to which  $p$  is essential.

But I needn't have; I could have formalized it as follows with an explicit 'actually' operator:

*Actualized Finean Reductionism*: For all propositions,  $p$ ,  $p$  is necessary if and only if, *actually*, there exists some individual(s) to which  $p$  is essential.

*Finean Reductionism* and *Actualized Finean Reductionism*, un-embedded, behave identically; when we have an existential quantifier that is not scoping under modal operators, we take the domain of that quantifier to include only actual individuals. But these two principles behave differently when embedded under a necessity operator.

*Finean Reductionism* embedded under a necessity operator just is *Necessitated Finean Reductionism*. But necessitating *Actualized Finean Reductionism* results in this:

*Actualized, Necessitated Finean Reductionism*: Necessarily, for all propositions,  $p$ ,  $p$  is necessary if and only if, *actually*, there exists some individual(s) to which  $p$  is essential.

*Necessitated Finean Reductionism*, we know, tells us that at all worlds,  $w$ , all necessities of  $w$  are sourced in  $w$ -individuals. But *Actualized, Necessitated Finean Reductionism* tells us that necessities of any world are sourced in actual individuals.<sup>11</sup>

Take the actually-existing individual: me. *This* is the individual to which the proposition **that Mallory is human** – true at all other possible worlds – is essential. We need not be concerned with the goings-on of any possible me's (or the absence of any such me's) in order to guarantee necessary truths about me. Which is just to say that modal propositions can be true

---

<sup>11</sup>If you're concerned about seeming-necessities that are irrelevant to actual individuals – necessities about mere possibilities – I address that concern in §1.3.4.

at worlds without the relevant individuals existing in those worlds, and this amounts to a denial of local reductionism.<sup>12</sup>

This move to *Actualized, Necessitated Finean Reductionism* blocks Teitel’s argument in the following way: From the fact that there might be some world,  $w^i$ , without me, it doesn’t follow that there is no actual individual to which the proposition **that Mallory is human** is essential. In fact, I do exist. Given, *Actualized, Necessitated Finean Reductionism*, the proposition **that Mallory is human** is necessary even at worlds without me. S<sub>5</sub> is preserved.

To summarize this section so far, the general argument we’re concerned with relies on the thought that necessities and possibilities of possible worlds are sourced in possible individuals. But because of contingentism, these modal truths will be different than the modal truths sourced in actual individuals, in violation of S<sub>5</sub>. The actualist-reductionist ought to reject the first step: The modal truths of possible worlds have their source in actual individuals.

I haven’t said anything about whether modal propositions concerning me are true *in* worlds without me. That is, I haven’t said anything about whether  $p$  “exists” in worlds where the individual(s)  $p$  is about fail to exist. I haven’t yet taken a stand on *higher-order contingentism*, the view that it’s contingent which higher-order entities (e.g., properties or propositions) exist.

I’m sympathetic to higher-order contingentism, which will be important when thinking about modal propositions concerning specific mere possibilia.<sup>13</sup> So, higher-order contingentism will eventually be important for the actualist-reductionist. But the adoption of higher-order contingentism, itself, isn’t *enough* to solve our tension, which I discuss below. We need some other story that involves *Actualized, Necessitated Finean Reductionism*, too. And the following portions of this section motivate *Actualized, Necessitated Finean Reductionism*.

---

<sup>12</sup>The Vetterian can respond analogously. The Vetterian version of *Actualized, Necessitated Finean Reductionism* is this:

*Actualized, Necessitated Vetterian Reductionism*: Necessarily, for all possible propositions,  $p$ ,  $p$  is possible if and only if, actually, there exists some individual(s) that has (have) a potentiality for  $p$  to be the case.

*Actualized, Necessitated Vetterian Reductionism* tells us that even at other worlds, possibilities are sourced in actual potentialities. For example, take the actually-existing individual: me. *This* is the individual to which the proposition **that Mallory is 6 feet tall** – possible at all possible worlds – is potential. We need not be concerned with the goings-on of any possible me’s (or the absence of any such individuals) in order to guarantee possible truths about me.

<sup>13</sup>Teitel is open to higher-order contingentism being a viable view because he considers a reply to his argument that requires adopting higher-order necessitism (see §4.3 of (Teitel, 2019)). But regardless of whether Teitel finds higher-order contingentism viable, others have (see, e.g., (Fine, 1977a) and (Stalnaker, 2012a)).

Higher-order contingentism has recently been used in response to Teitel. Werner (2021) argues that the adoption of higher-order contingentism allows one to reject a *de re* reading of *Necessitated Finean Reductionism*, blocking the substitution of ‘ $p$  is necessary’ for ‘there exists some individual(s) to which  $p$  is essential’ in modal contexts. Werner and I agree on several points, the most important point is that one can respond to Teitel’s argument without being concessive. But there are substantive differences between Werner and myself, which I briefly mention in note 16.



### 1.3.1 Actualist priority

I've already gestured at one motivation for *Actualized Finean Reductionism*: Unembedded, it is extensionally equivalent to *Finean Reductionism*. But *Actualized Finean Reductionism* better captures the actualist spirit of reductionist views. So, we ought to take *Actualized Finean Reductionism* as the correct formulation of the Finean view. And now we can borrow Teitel's own reasoning: *Actualized Finean Reductionism* tells us what it is for a proposition to be necessary, and such principles ought to be necessary. This gives us *Actualized, Necessitated Finean Reductionism*.

But we can do better. This paper is a response to a coherency challenge: Reductionism, contingentism, and S<sub>5</sub>-ism seem to be incoherent together. Or, at least, specific ways of spelling out the commitments of reductionism and contingentism are in tension with S<sub>5</sub>-ism. And an adequate response to such a challenge should do a couple of things: (1) point out that the specific formulations of the views that lead to the incoherency are not required (I've just done this) and (2) motivate alternative formulations that don't lead to the incoherency. With respect to (2), the actualist-reductionist-contingentist is free to draw on tools already available to her. That's to say, the coherency challenge is an internal challenge to the view: The view, by its own lights, is unsuccessful. And the actualist-reductionist-contingentist is allowed to defend why her view, by its own lights, is coherent. So I'd like suggest another motivation for *Actualized, Necessitated Finean Reductionism*, one that that ought already be in the toolbox.

The motivation uses a thesis about metaphysical priority that is meant to replace local reductionism. When paired with *Actualized, Necessitated Finean Reductionism*, it will give us the story of modality that we've been after: Modal truths of possible worlds have their source in actual individuals.

This is the priority thesis: Propositions that are true at possible worlds are "downstream" from the true modal propositions in our world. Take  $p$  again, the proposition **that Mallory is human**. According to this priority thesis,  $p$ 's being necessary in our world is prior to  $p$ 's being true at all other possible worlds.  $p$  is true at all possible worlds in virtue of  $p$  being necessary in our world.

The priority thesis is broad. *All* truths at possible worlds are downstream from the modal truths of our world. This includes modal truths of possible worlds. Assuming S<sub>5</sub>, necessity in the actual world guarantees necessity at all possible worlds. So, modal truths of possible worlds, too, have their source in the actual world.

Now, the defense of *Actualized, Necessitated Finean Reductionism* runs as follows.  $p$  is necessary in the actual world. Because of this priority thesis,  $p$  is necessary at all other possible worlds. We can ground  $p$ 's necessity at all possible worlds by way of  $p$ 's necessity in the actual

world. What we're concerned about grounding is  $p$ 's necessity in the actual world. And we ought to look to an actual individual to serve that function:  $p$  is necessary in the actual world; to what in the actual world could  $p$  be essential?

### 1.3.2 *Motivating actualist priority*

The actualist priority thesis removes the temptation to think that counterfactual truths are sourced in possible individuals. Why be antecedently committed to this thesis?

Actualism isn't just about ontology. I presented it as such, saying it's the thesis that denies the existence of merely possible individuals. But there's more to the actualist's story than just her ontological commitments. The combination of (strict) actualism and contingentism raises questions that the priority thesis answers; so, there's some internal pressure for it to already be in the toolbox.

Here's one kind of case in which the priority thesis does some explanatory work. Take my dog, Bowie. Bowie is self-identical. The proposition **that Bowie is self-identical** is true at a world even if Bowie didn't exist in said world to bear witness to such a truth. After all, identity is necessary. But how is it that Bowie is self-identical even at worlds without her?

We want to be able to explain the necessity of identity while allowing for contingentism. The actualist priority thesis is up for this task, and it's unclear what else is. In the actual world, it's necessary that Bowie is self-identical. But if we reject the actualist's priority relation then the contingentist-actualist is faced with a very tricky question:

If it isn't the case that modal truths of the actual world give rise to truths at possible worlds, then it ought to be the case that truths at possible worlds give rise to modal truths of the actual world. Such a view says the following: The proposition **that Bowie is self-identical** is true at all possible worlds, and this makes the proposition **that, necessarily, Bowie is self-identical** true at the actual world. But, and here's the tricky question for this kind of view, *how* is it true that Bowie is self-identical at worlds without her? It's natural to think that Bowie-less worlds don't take a stand on Bowie-matters. The truth of **that Bowie is self-identical** at such worlds goes unexplained if we reject the actualist priority thesis.<sup>14</sup>

The adoption of higher-order contingentism doesn't automatically help with this puzzle. The higher-order contingentist, as I've been doing throughout this paper, understands necessity as truth at all possible worlds. The higher-order contingentist isn't on the hook for

---

<sup>14</sup>Note that it isn't the actualist-possibilist distinction that's doing a lot of work. Possibilist-contingentists also need a story as to why it is that Bowie is self-identical at worlds without Bowie. It's really the non-proxy-contingentism combination that calls out for some kind of priority thesis.

explaining why **that Bowie is self-identical** is true in Bowie-less worlds; in general, she don't think such propositions exist in Bowie-less worlds. But she *is* on the hook for explaining why **that Bowie is self-identical** is true at Bowie-less worlds. How is it that such propositions are true at, are accurate with respect to, Bowie-less worlds? Such worlds don't obviously take a stand on Bowie matters. That's all to say that higher-order contingentists who allow for actual necessities concerning contingent individuals owe us a story as to *how* these necessities are true. The actualist priority thesis provides one such explanation.

To summarize so far, the actualist priority thesis does some work in solving our tension. It encourages us to look to only actual individuals when trying to reduce modal truths of other worlds. This provides motivation for *Actualized, Necessitated Finean Reductionism*. From above:

*Actualized, Necessitated Finean Reductionism*: Necessarily, for all propositions,  $p$ ,  $p$  is necessary if and only if, actually, there exists some individual(s) to which  $p$  is essential.

Moreover, the actualist priority thesis is motivated independently of our tension. Set aside whether we can reduce modal truths of other worlds. How can we explain necessary truths of the actual world that concern contingent individuals? By using the actualist priority thesis.

Now, *Actualized, Necessitated Finean Reductionism* can sound a bit weird – how can the modal propositions of another world be essential to individuals in the actual world? It's similar, I propose, to how truths at another world are true in virtue of actual individuals.

Recall from Adams (1981) that we have two different standpoints we might adopt when evaluating the truth of some proposition,  $p$ , with respect to some possible world,  $w$ . We might adopt the vantage point of a constituent of  $w$ , asking whether  $p$  is true in  $w$ . And in answering that question, we must look to whether the individuals  $p$  is about exist in  $w$ ; if they do not,  $p$  cannot be true in  $w$ . But, and this is the real contribution of Adams, we might adopt an outside perspective on  $w$ , asking whether  $p$  is true at  $w$ . For example, we might ask whether **that it isn't the case that Mallory exists** is true at  $w$ . Or we might ask whether **that Bowie is self-identical** is true at  $w$ . And in answering these questions we need not be concerned with the issue of whether the relevant individuals exist in  $w$ .

We can adapt this distinction to modal reduction. We might adopt the vantage point of some  $w$ -constituent and ask whether some modal proposition,  $p$ , – true at  $w$  – reduces to some  $w$ -individual. But, and this is the real contribution of this paper, we might adopt an outside perspective on  $w$ , asking whether  $p$  – true at  $w$  – reduces to some actual individual.

Finally, if  $p$ 's truth at  $w$  is due to  $\Box p$ 's truth in the actual world, as I've suggested via the actualist priority thesis, then we shouldn't be looking to  $w$ -individuals in order to reduce  $p$ .

### 1.3.3 *A reframing: counterfactual vs. counteractual reasoning*

The arguments put forth by Prior, Adams, Armstrong, Teitel, etc. sound enticing, and it would be good to diagnose why. The diagnosis requires distinguishing between two kinds of modal reasoning we engage in when doing metaphysics: counterfactual and counteractual reasoning. I glossed the distinction in the introduction. When reasoning counterfactually, we imagine what is true of some other world, but we don't forget that our world is actual. But when reasoning counteractually, we allow ourselves to imagine that some other world is actual.

I've defended a particular kind of view: Had I failed to exist, necessary truths about me would still be true. This is because modal truths are determined by what there actually is, not by what there possibly is, and I actually exist. This is what allows the actualist-reductionist to maintain S<sub>5</sub>-ism for counterfactual modality.

But if we consider the worlds without me – not counterfactually, but *counteractually* – then we shouldn't think that propositions about me would still be true at worlds without me. Counteractually, I do not exist. And what propositions there are depends on what actually exists. So, when reasoning counteractually, and using some world without me as the actual world, necessary propositions about me wouldn't be true. This amounts to denying S<sub>5</sub>-ism for counteractual modality.

When Prior, Adams, Armstrong, Teitel, etc. argue that had some individual failed to exist, then there would fail to be modal truths about that individual, they confuse – which is all too easy to do! – a counterfactual valuation with a counteractual valuation at the relevant possible world.

### 1.3.4 *Mere possibilia*

Teitel took a necessary proposition about an actual individual and thought about the reductive prospects for this proposition in some possible world without this individual. For the inverse, take some individual that doesn't actually exist: Jane, my fifth sister. Necessarily, were Jane to exist, she would be human. *Actualized, Necessitated Finean Reductionism* says that *any* necessities are sourced in the essences of actual individuals. But no actual individuals are up to

the task of reducing necessities about Jane.<sup>15,16</sup>

Our problem cases are *particular* propositions of the form **that, necessarily, Jane is human**. But, the higher-order contingentist should say, there's no fact of the matter *which* of my merely possible sisters I'm talking about when saying that, necessarily, Jane is human. Our actualist resources run out when we try to pick a specific sister out.<sup>17</sup> Given these limitations, there just are no particular propositions of this type. And, since there are not particular propositions of this type, we aren't grasping at straws trying to reduce these propositions.

Put in different terms: I said above that necessary propositions about me are still true at worlds without me. This is because modal truths are determined by what there actually is, and I actually exist. Now, in direct response to this problem of mere possibilities, I'm suggesting the inverse: Modal truths about "Jane" aren't true at worlds we might describe as including Jane (if we temporarily spot ourselves reference to her). This is because modal truths are determined by what there actually is, and Jane does not actually exist.

Although this goes some part of the way, it isn't enough to avoid the problem of mere possibilities. Although the higher-order contingentist denies the existence of propositions about particular mere possibilities, the higher-order contingentist can accept that there actually are general propositions "about" nonactual people. For example, she can accept that it's necessary that, possibly, there exists some nonactual human that is necessarily human:  $\Box \Diamond \exists y (\neg \text{actually } \exists y \wedge Hy \wedge \Box Hy)$ .

The problem of mere possibilities reemerges. *Actualized, Necessitated Finean Reductionism*, recall, says that necessarily, necessities are sourced in actual individuals. But even the higher-order contingentist makes room for necessities that seemingly reach past actual individuals. To what actual individual(s) ought these truths reduce?

A revision is in order. We have a necessity that isn't grounded in the essence of actual things. But it *is* partially grounded in the *necessities* grounded in the essence of actual things. That, nec-

---

<sup>15</sup>In what follows, I sketch a more general strategy the actualist-reductionist can use in reducing modal propositions "of" mere possibilities. In sketching this strategy, I try to maintain some amount of compositional reductionism, showing how a proposition's *p* being essential to some individual(s) is explained by *p*'s logical constituents. To be clear, I'm not providing a logic of essence. Doing so requires formalizing higher-order contingentist commitments in a free logic framework – for which there is already a need; see (Fritz & Goodman, 2016) and (Fritz & Goodman, 2017). So, although it is a worthy project to formalize the view I'm presenting, this paper is meant to provide the philosophical basis for this kind of actualism-reductionism in the first place. A large thank you to Chris Menzel for many helpful comments on this section.

<sup>16</sup>It's unclear exactly how Werner (2021) proposes to deal with this problem. Werner writes "My proposal is compatible with the assumption that we sometimes have to add objects to arrive at iterated essentiality" but doesn't elaborate (note 13, p. 1292). Werner also doesn't defend how adding objects coheres with the ambitions of a reductionist program. Since this problem of mere possibilities seems to be but one further iteration of Teitel's argument, we ought not postpone discussion of it.

<sup>17</sup>See, as just a couple of examples, (Fritz & Goodman, 2017), especially p. 1081-2, (Stalnaker, 2012a), p. 31-2, and (Hawthorne, 2006) for reasons to doubt that we can individuate Jane in the first place.

essarily, it's possible that there be some nonactual human who is necessarily human is partially grounded in the necessity that, necessarily, if someone is a human, then they're necessarily so. Which is grounded in the essence of actual things (actual humans or, maybe, actual humanhood). What is it to be necessary? To have its *ultimate* source in the essence of actual things.

Formalized, the view that I'm suggesting is this:

*Ultimate Finean Reductionism*: For all propositions,  $p$ ,  $p$  is necessary if and only if there is some proposition,  $q$ , and there is some proposition,  $r$ , such that:  $q$  and, actually, there exists some individual(s) to which  $r$  is essential, and  $((q$  and  $\Box r)$  entails  $\Box p$ ).

The view is unfortunately clunky to write down, but I'll go through it using the above example.  $\Box p$ , in our case, is  $\Box \Diamond \exists y (\neg \text{actually } \exists y \wedge Hy \wedge \Box Hy)$ . Why is it that, necessarily, it's possible that there be some nonactual human who is necessarily human? In virtue of what is this so?  $q$ , in our case, is  $\Diamond \exists y (\neg \text{actually } \exists y \wedge Hy)$ . And  $\Box r$ , in our case, is  $\Box \forall x (Hx \rightarrow \Box Hx)$ .

*Ultimate Finean Reductionism* says that  $\Box \Diamond \exists y (\neg \text{actually } \exists y \wedge Hy \wedge \Box Hy)$  is entailed by the conjunction of  $\Diamond \exists y (\neg \text{actually } \exists y \wedge Hy)$  and  $\Box \forall x (Hx \rightarrow \Box Hx)$ . But  $\Box \forall x (Hx \rightarrow \Box Hx)$  is in need of reduction; *Ultimate Finean Reductionism* also says that there actually exists some individual(s) to which this is essential: actual humans or actual humanhood. We have a necessity following from, in part, a necessity, which is grounded in actualia.<sup>18</sup>

To be sure, *Ultimate Finean Reductionism* looks a bit different than *Actualized, Necessitated Finean Reductionism*. But an actualist spirit runs through both. When combined with the actualist's priority thesis, we're able to reduce modal propositions to features of actual individuals.

The model for this revision has its roots in (Kripke, 1980). The too-crude *a priori* reductionist about modality says that a proposition is necessary if and only if it is *a priori*. But this is false because it's necessary that Hesperus is identical to Phosphorus, but it isn't *a priori* that Hesperus is identical to Phosphorus. Better, instead, to say that necessities *ultimately* reduce to *a priori* truths:

*Ultimate a priori reductionism*: For all propositions,  $p$ ,  $p$  is necessary if and only if there is some proposition,  $q$ , such that:  $p$  and  $(q$  is *a priori*) and  $((p$  and  $q)$  entails  $\Box p$ ).

For example, say  $q$  is the proposition **that if things are identical, they're necessarily identical**.  $q$  is *a priori* and conjoins with **that Hesperus is identical to Phosphorus** to entail **that, necessarily, Hesperus is identical to Phosphorus**.<sup>19</sup>

<sup>18</sup>What about  $q$ , which is itself modal? **That, possibly, there exists some nonactual human** is also in need of reduction. The normal Finean story is as follows: possibilities are "left open" or "not ruled out" by the essences of all things. Take all of actualia; the essences of all things fail to rule out there being some additional human.

<sup>19</sup>Teitel considers an alternative view that avoids his arguments, and now that I've finished presenting my view,

#### 1.4. Is this “reductionist enough”?

I’ve tried to show how keeping good on the actualist spirit of different reductionist programs introduces some slack between modal reductionism, contingentism, and S5-ism for counterfactual modality. In doing so, I’ve denied *Necessitated Finean Reductionism*, which purported to tell us that necessities of possible worlds are sourced in possible individuals. If *Necessitated Finean Reductionism* is false, then it’s possible that there are necessities of a world that aren’t ultimately guaranteed by individuals of that world. *Ultimate Finean Reductionism* tells us that this misalignment couldn’t happen in the actual world, but is it just some accident that the world we’re in is the world in which necessities and essences align?

Put in more general terms: By denying that modal truths of possible worlds are sourced in possible individuals, I’m leaving room for worlds whose modal truths are not guaranteed by their own constituents. Are we lucky to live in a world where the modal truths are ultimately guaranteed by its constituents? Perhaps we don’t want our reductionism to be so lucky.

The actualist-reductionist doesn’t have to think that *Ultimate Finean Reductionism* is some accident; she can think that it’s precisely because we’re in the actual world that necessities ultimately reduce to essences. She can also give voice to the thought that no matter which world might have been actual, it still would have been the case that necessities ultimately reduce to actual essences.<sup>20</sup>

---

it’s worth taking a moment to compare the two views. Teitel calls his alternative “cumulative essences” (see §4.4 of (Teitel, 2019) for discussion). Here’s the rough picture: As we move across modal space, we track which individuals we’ve already come across; if we come to a world in which some individual fails to exist, we can still point to that individual’s essence in some other world to serve as a reductive prospect for necessary propositions about that individual. For our purposes, what we need to know is that this “tracking” is achieved by treating modally embedded operators (e.g., the second necessity operator of ‘ $\Box\Box p$ ’) differently than non-modally embedded operators (e.g., the necessity operator of ‘ $\Box p$ ’).

Teitel focuses on two problems with this view: (1) the view is highly contextual and (2) the view requires distinguishing between modal propositions commonly taken to be equivalent. The second problem is a consequence of the first. So in what follows, I briefly explain Teitel’s first problem, that the cumulative essence view is highly contextual, and then explain how it is that my view doesn’t face this problem.

This cumulative essence view is a highly contextualist picture of metaphysical necessity. Before we can answer “To what individual(s) ought some necessity reduce?”, we must first know the modal journey we’ve been on through modal space. We cannot reduce necessities to individuals we haven’t yet seen.

One consequence of this contextualism is that we seemingly lack a story about what it is to be necessary. At best, the cumulative essentialist has only offered a procedure for determining which individuals we’re allowed to look to in carrying out our reductionist project depending on how modally embedded a modal operator is. Another consequence of this contextualism is that this view, too, gives up its reductionist ambitions by making use of mere possibilia.

My proposed view doesn’t face these issues because we only track individuals of the actual world as we move across modal space. This allows the actualist-reductionist to provide a univocal answer to the question “What is it to be necessary?”; to be necessary is to ultimately reduce to actual essence(s). And this also allows the actualist-reductionist to be true to her reductionist ambitions: She doesn’t point to mere possibilia in carrying out her modal reduction.

<sup>20</sup>Likewise, the Vetterian reductionist can also think that no matter which world might have been actual, it still

Here's one way to formulate the thought. The formulation requires a 'fixedly' operator. A proposition is true fixedly if and only if it is true no matter which world is designated as actual (I take this fixedly operator from (Davies & Humberstone, 1980)). Now we get this:

*Counteractual, Ultimate Finean Reductionism*: Fixedly, for all actual propositions,  $p$ ,  $p$  is necessary if and only if there is an actual proposition,  $q$ , and there is an actual proposition,  $r$ , such that:  $q$  and, actually, there exists some individual(s) to which  $r$  is essential, and  $((q \text{ and } \Box r) \text{ entails } \Box p)$ .

*Counteractual, Ultimate Finean Reductionism* tells us that had some other world,  $w^*$ , been actual, for all propositions, a proposition is necessary if and only if it is ultimately grounded in the essence of some existing  $w^*$ -individual, and that this holds no matter which world we consider as actual.<sup>21</sup>

## 1.5. Conclusion

We've seen that the local reductionist approach to reducing modality faces a number of issues. First is our historical conflict: The local reductionist who thinks that the modal truths of some world are determined entirely by that world's constituents can't consistently maintain both contingentism and S5-ism. Second is a motivational tension: Modal reductionists who make use of mere possibilia don't look like reductionists. Merely adopting higher-order contingentism goes some of the way towards addressing the first conflict, but it leaves open an explanatory gap. Why are modal truths true at worlds without the relevant individuals? Shifting to an actualist-friendly modal reductionism which reduces the modal truths of any world to the constituents of the actual world plugs this explanatory gap. Modal truths are true at worlds without the relevant individuals because they're true in the actual world. This shift also dissolves the motivational tension. Actualia is a non-modal reductive base for modal truths. Moreover, as long as we keep the actual world fixed, actualism-reductionism can consistently maintain both contingentism and S5-ism.

---

would have been the case that possibilities ultimately reduce to actual potentialities.

<sup>21</sup>The view I'm proposing is that what is metaphysically necessary ultimately depends on what there actually is. One upshot of this view is that there's a metaphysical necessity operator for any candidate collection of actual objects, and "metaphysical necessity" expresses a different operator in different *counteractual* contexts. Some have argued that if there's this kind of required indexing, then the relevant piece of language does not pick out something fundamental; see (McDaniel, 2017) for defense and applications of this kind of argument. Since on my view we must index "metaphysical necessity" to what there actually is, then metaphysical necessity is not fundamental. I'm suspicious of this kind of argument in general, but I'm fine with taking metaphysical necessity to be non-fundamental because I have a replacement for something that is reasonably fundamental: metaphysical counteractual necessity. Counteractual necessities do not require to be indexed to what is actual and are also about what metaphysically could or could not have been.



Despite the problems of local reductionism, it might still entice you. Shouldn't whatever reductionism that holds for our world hold for any world? But the actualist-reductionist can affirm this intuition. In our world, modal truths reduce to actualia; so too of other worlds. The modal truths of other worlds, too, reduce to actualia. Finally, the actualist-reductionist needn't think that had we actually ended up being the inhabitants of some other world, unluckily, the modal truths would not reduce to actualia. She can think that had some other world been actual, the modal truths would reduce to actualia, and that this is so no matter which other world had been actual.

## 2 Higher-Order Contingentism and the Problem of Impossible Indiscernibles

**Abstract:** *Higher-order contingentism* is the view that it's contingent which higher-order entities, e.g., propositions and properties, exist. A key tenet of higher-order contingentism is that what distinctions there are to be drawn is a contingent matter. For example, we're unable to distinguish between certain pairs of nonactual doppelgangers. Take a pair of nonactual knife doppelgangers. There just is no property that distinguishes one knife from the other – our resources run out. As a special case of this, we're unable to distinguish between two nonactual, *impossible* doppelgangers, i.e., doppelganger knives that cannot coexist in a world. But, the higher-order contingentist says further, had either of these knives existed, there would have been a property that distinguished one knife from the other – more resources would have existed, too. Higher-order contingentists are sometimes told that their view is self-defeating. They want to account for the possibility that impossibles be indiscernible. But, in presenting it as literally true that, possibly, impossibles are indiscernible, the higher-order contingentist denies *the being constraint*, roughly the constraint that, necessarily, only existing individuals are propertied. Is it *really* true that, possibly, impossibles are indiscernible, despite their failure to possibly coexist? If not, the higher-order contingentist fails to take how she states her own view seriously. The higher-order contingentist must rescue enough legitimacy for sentences like, “There could have been impossible indiscernibles” in order to avoid self-defeat. But rescue too much legitimacy (i.e., literal truth), and she denies the being constraint. This paper follows others (see especially (Yablo, 2000a), (Fine, 2016), and (Sider, 1999)) in looking for a middle ground: “accounting for” discourse needn't require consenting to its literal truth.

### 2.1. Introduction

I could have failed to exist. I could have had more siblings than I actually have. *First-order contingentism* is the view that it's contingent which first-order individuals (like humans or knives or particles) exist.

If I needn't exist, then maybe the proposition **that Mallory is left-handed** needn't either. Similarly, for the property **being identical to Mallory**. Higher-order contingentism is the

view that it's contingent which higher-order entities, e.g., propositions and properties, exist. And the most obvious choices of higher-order entities to serve as examples of higher-order contingentism are those which single out a particular individual as its one and only subject or instantiator. For example, the proposition **that Mallory is left-handed** is about one particular individual: me. And the property **being identical to Mallory** has a particular instantiator as its one and only instance: me. Since it's contingent that I exist, both plausibly bear out the higher-order contingentist's claims. (I'll use the phrase "singularly involve" as in "higher-order entities that singularly involve first-order individuals" as a bit of a cheat to talk about either propositions or properties which single out a particular individual as its one and only subject or instantiator.)<sup>1</sup>

*First-order necessitism* and *higher-order necessitism* are the negations of first-order contingentism and higher-order contingentism, respectively. First-order necessitism is the view that, necessarily, first-order individuals necessarily exist. So, I exist in all possible worlds, as do any possible siblings of mine (although, we don't exist concretely in every possible world). And higher-order necessitism is the view that, necessarily, higher-order entities necessarily exist. The property **being identical to Mallory**, for example, exists in every possible world.

Like others that try to make do with less – that prefer a moderate ontological landscape – the higher-order contingentist faces a problem: When she isn't taking herself too seriously, she commits herself to higher-order entities that ought not exist by her own lights. But she faces a less familiar problem, too: She oversteps her ontological bounds *even when trying to state her own view*. And this is a different kind of complaint than what is traditionally raised against the higher-order contingentist; set aside whether she can make sense of sentences the necessitist believes to be true, can the higher-order contingentist make sense of sentences *she*, herself, believes to be true? There's a worry that higher-order contingentism doesn't make sense by its own lights, and *this* is the worry that this paper concerns itself with.<sup>2</sup>

The higher-order contingentist needs a way to state her view when feeling sober, lest she betray her ontological scruples. She can meet these challenges, I suggest, borrowing familiar tools from other ontological moderates.

---

<sup>1</sup>First-order contingentism doesn't entail higher-order contingentism, but first-order contingentists have found it plausible that contingency at the level of first-order individuals leads to contingency at the level of higher-order entities (see, for example, (Fine, 1977b) and (Stalnaker, 2012b), and even Williamson (2013) thinks that first-order contingentism ought to be combined with higher-order contingentism).

<sup>2</sup>Fritz & Goodman (2016) present a version of this worry; see especially p. 655.

## 2.2. Sharpening our problem case

Sometimes higher-order contingentists gloss their view as follows: What distinctions there are to be drawn is a contingent matter.

For example, here's Fine (2003), writing of two merely possible particles:

And it is plausible to suppose that there is no actualistically acceptable means by which they [the particles] might be *distinguished* (p. 164; emphasis added).

So, higher-order contingentism is supposed, on the one hand, to be the view that it's contingent which higher-order entities exist. It's supposed, on the other hand, to be the view that what distinctions there are to be drawn is a contingent matter. How are we to bridge the gap between the two ways of stating higher-order contingentism?

The usual story goes something like this: Higher-order entities owe their existence to first-order individuals; if I don't exist, then higher-order entities singularly involving me don't either.<sup>3</sup> Moreover, higher-order entities are tools for drawing distinctions. The proposition **that Mallory is left-handed** is true at some worlds, but false at others. I instantiate the property **being identical to Mallory**, but other individuals do not instantiate this property. Being true at some worlds but false at others and being instantiated by some individuals but not others are ways of drawing distinctions between worlds and individuals.<sup>4</sup> Put these two pieces together – higher-order entities both owe their existence to contingent first-order individuals and are tools for drawing distinctions – and we get the intended result: If which higher-order entities exist is a contingent matter, then which distinctions we're able to draw is a contingent matter, too.

If you're a higher-order contingentist, you should think that there could be indiscernibles – merely possible doppelgangers that are indistinguishable. Or, put a bit more accurately, if you're a higher-order contingentist, you should think that there could be two things such that *we're* unable to distinguish them. Borrowing Fine's example again, imagine two doppelganger particles. Neither particle exists, but each could have. Since each could have existed, higher-order entities that would singularly involve them could exist; for example, haecceitistic

---

<sup>3</sup>Here's an example of this route to motivate propositional higher-order contingentism from Stalnaker (2012b), although I don't want to suggest that this is Stalnaker's only motivation:

It seems plausible to assume, first, that there are some propositions – singular propositions – that are object-dependent in the sense that the proposition would not exist if the individual did not. It also seems plausible to assume that there are some objects that exist only contingently and that there are singular propositions about those objects. These assumptions obviously imply that there are propositions that exist only contingently...(p. 22)

<sup>4</sup>See (Fritz & Goodman, 2016), p. 646, for a particularly clear statement of higher-order entities as distinction drawing tools.

properties of each particle (**being identical to...**) could have existed too. But since neither particle exists, higher-order entities that would singularly involve them don't exist either – there actually are no distinctions of the sort that might be drawn had either particle existed.

The particles can still be indiscernible in our sense even if there is a world,  $w$ , where one has properties that the other lacks – provided that there is a switcheroo world,  $w'$ , indiscernible with our resources, where the particles switch places. And that condition appears to be met in this case. Granted that we can imagine a world in which the particles are, say, moving along different trajectories, we can just as easily imagine a world in which the particles have their trajectories swapped. And we have no way of discerning the worlds from one another.

The upshot is this: The particles, were they to exist, would differ only in ways that are inexpressible in terms of actually-existing higher-order entities. There actually is no property, not even a modal property, distinguishing one of the particles from the other. The properties **swerving left in  $w$**  or **swerving right in  $w'$**  would allow us to distinguish the particles from one another, but they aren't actually expressible –  $w$  is indiscernible from  $w'$ . The properties **possibly swerving left** and **possibly swerving right** are actually expressible, but these are properties that the two particles have in common. This is what I mean when I say that the particles are, from our perspective, indiscernible.

Since the particles are indiscernible, the higher-order contingentist says, any talk that purports to singularly involve either of the particles doesn't ultimately make sense. This isn't to say that *any* talk that is seemingly concerned with mere possibilia is senseless by higher-order contingentist lights. *De dicto* predications are still allowed. We can say, "Possibly, there exist particles that are not identical to any actual particles that are colored/sized/shaped...thus and so", filling the template in with our favorite particle predicates. What we can't do, according to the higher-order contingentist, is uniquely pick out any one such particle.<sup>5</sup>

So far, no problems for the higher-order contingentist. But there is a problem coming. If you're a higher-order contingentist, you should also think that there could be *impossible* indiscernibles, indiscernibles which cannot exist in the same world. This is just a special case of the above. And this is important because, to anticipate a bit, *impossible* indiscernibles put the higher-order contingentist at odds with a popular metaphysical thesis that constrains property instantiation.

Since it's hard to imagine a case of two impossible particles, we'll switch to a different sort of object, borrowing an example from Williamson (2013). Imagine two distinct blades and one handle. Neither the blades nor the handle exist. But they could have existed. And were they

---

<sup>5</sup>Particles clearly aren't doing any essential work, here. We could make the same points with Black (1952)'s Castor and Pollux or Kripke (1980)'s and Stalnaker (2012b)'s pair of dice – any collection of merely possible doppelgangers. But see §2.4 for an attempt to walk this point back a bit.

to exist, they could have been combined to form either of two doppelganger knives.

The knives are impossible. There could have been two knives made of these materials, yes, but not in the same possible world: Distinct knives cannot share handles. So, the blades and the handle could have existed, and if they did, there could have been one knife made of one blade and the handle and, also, there could have been a distinct knife made of the other blade and the handle. But not both together; if one blade is combined with the handle, the other blade is not combined with the handle.<sup>6</sup>

The knives are indiscernible. Since neither knife exists, and since neither the blades nor the handle exist, higher-order entities singularly involving the knives, or the blades and handle, don't exist either. There is, for example, no actually existing property, **P**, such that one knife, were it to exist, would be **P**, while the other, were it to exist, would not be **P**. Other properties would allow us to distinguish the doppelganger knives, were they to exist: properties such that one knife would necessarily exemplify it and the other would necessarily not exemplify it, properties such that one knife would necessarily exemplify it and the other would possibly not exemplify it, and so on. My point is that no property that distinguishes between the doppelgangers is available in our world.

So the higher-order contingentist ought to think that there could be impossibles that are actually indiscernible. But it's hard to express even this *de dicto* truth without violating *the being constraint*. The being constraint (sometimes called "serious actualism") is a metaphysical thesis that constrains property instantiation: Necessarily, only existing things exemplify properties or relations.<sup>7</sup>

Is it really possible that two non-coexistents be indiscernible from one another – be in that respect *related* to one another – in violation of the being constraint?<sup>8</sup> As others have pointed out, higher-order contingentism and the being constraint are a natural pair. Williamson (2013) suggests that maintaining commitment to the being constraint makes one's contingentism

---

<sup>6</sup>I'm assuming throughout that knives have their parts essentially. I'm also ignoring the possibility of the knives coexisting in a world by virtue of existing only at different times.

<sup>7</sup>Just as we may distinguish between different levels of contingentism, we may distinguish different levels of the being constraint. One version applies *only* to first-order individuals. This is a kind of hybrid view sometimes suggested for cleaner logics (e.g., to reconcile propositional contingentism with negation); see, for example, note 14 of (Fritz & Goodman, 2016). Or, we could be committed to a more thorough-going version of the being constraint: The being constraint applies to both first-order and higher-order entities. Partly for ease of exposition and partly because first-order being constraint violations are viewed as more repugnant than higher-order being constraint violations, this paper will focus on whether the higher-order contingentist must violate the first-order being constraint in order to do justice to her intuition that there could be impossible indiscernibles.

<sup>8</sup>It's worth emphasizing, again, this seeming tension between the being constraint and higher-order contingentism only arises when it's seemingly possible that *impossibles* bear relations to one another. Our earlier example of *compossible* particles raises no immediate trouble for the being constraint. It's possible that there be individuals that are indiscernible, as judged by the actual world, can be translated into: POSSIBLY(There are two indiscernible particles). And since the particles are indiscernible only at worlds in which they both exist, there is no threat to the being constraint.

“more wholehearted” (p. 156). And Fritz & Goodman (2017) worry that denying the being constraint isn’t clearly compatible with, “the aboutness-theoretic ideas which are usually used to motivate contingency regarding what properties [or propositions] there are” (note 41, p. 1089). After all, if the being constraint is false, then higher-order entities cannot *owe* their existence to (relevant) first-order individuals. Sometimes, there are no (relevant) first-order individuals to pay off the existential debt. So, the higher-order contingentist ought to see whether she can accommodate the being constraint.

### 2.2.1 *Superficial problems*

Now, there are some superficial conflicts between higher-order contingentism and the being constraint that are well known.<sup>9</sup> Take, for example, the following sentence:

(MARTIANS<sub>1</sub>): A martian could have moved to Earth.

MARTIANS<sub>1</sub> is true if and only if there is a martian such that it could have moved to Earth. And this can’t be right since there are no martians. But there’s a nearby sentence, a paraphrase of MARTIANS<sub>1</sub>, that (we’ll assume) is true:

(MARTIANS<sub>2</sub>): POSSIBLY(There is a martian and it moved to Earth).

MARTIANS<sub>2</sub> has no ontological commitments regarding martians because the existential quantifier is embedded within the scope of the modal operator. Confusing MARTIANS<sub>1</sub> and MARTIANS<sub>2</sub> is a natural mistake; in our unserious moments, we don’t spend too much time worrying about the order of quantifiers and modal operators.

We can paraphrase many sentences in this way, by modally subordinating away our would-be violations of the being constraint. But this strategy doesn’t always work. Remember our impossible knives. Set aside whether they are indiscernible (I return to this in §2.2.2), and focus on impossibility. Above, I rather unscrupulously wrote:

(INCOMPOSSIBLE<sub>1</sub>): The knives are impossible.

Of course, the knives don’t exist; they don’t bear any relation to each other. INCOMPOSSIBLE<sub>1</sub> is false, but I was writing under the assumption that the knives were merely possible anyway. I can try to be a bit more careful:

---

<sup>9</sup>This and following examples are inspired by analogous examples that pose trouble for *presentism*, the view that only presently-existing things exist. The analogous examples are from (Sider, 1999), to which the current paper owes much inspirational debt.

(INCOMPOSSIBLE<sub>2</sub>): POSSIBLY(There are two nonactual knives which are impossible).

INCOMPOSSIBLE<sub>2</sub>, like MARTIANS<sub>2</sub>, doesn't incur any ontological commitments regarding knives because the existential quantifier is embedded within the scope of the modal operator. But INCOMPOSSIBLE<sub>2</sub> is true if and only if in some possible world, there exist knives that are impossible. This doesn't work either since impossibles cannot coexist. INCOMPOSSIBLE<sub>2</sub> is false.

The higher-order contingentist is on the hunt for something like this:

(INCOMPOSSIBLE<sub>3</sub>): POSSIBLY(There are two nonactual blades and a nonactual handle and NECESSARILY(if the knife obtained by combining one blade with the handle exists, then no knife exists that's constructed of the other blade and the handle)).

Even though the merely possible knives cannot coexist, "their" would-be constituting handles and blades can. And we can paraphrase impossible-knife talk using handles and blades. This saves us from having to posit cross-world relations between impossible knives, which would violate the being constraint.<sup>10</sup>

The project of paraphrase involves more than coming up with statements that the higher-order contingentist can accept. It also involves giving a story as to why, in our less reflective moments, we're liable to confuse a paraphrase for its unreflective cousin. We're liable to confuse MARTIANS<sub>1</sub> and MARTIANS<sub>2</sub> because when we're less than reflective, we don't worry about the order of quantifiers and modal operators. But INCOMPOSSIBLE<sub>2</sub> and INCOMPOSSIBLE<sub>3</sub> are about different things: INCOMPOSSIBLE<sub>2</sub> is about merely possible knives and INCOMPOSSIBLE<sub>3</sub> is about merely possible blades and a merely possible handle. It can start to feel strained to think that we confuse INCOMPOSSIBLE<sub>2</sub> and INCOMPOSSIBLE<sub>3</sub> in the same sort of way as MARTIANS<sub>1</sub> and MARTIANS<sub>2</sub> get confused. The project of paraphrase is off to a rough start. But set this point aside for a moment; there are deeper worries for the higher-order contingentist.

### 2.2.2 *Deeper problems*

The higher-order contingentist has more to worry about than making sense of random talk of impossibles. It seems that the higher-order contingentist can't even make sense of the sentences *she* uses to state her own view – sentences to the effect that there could be impossible *indiscernibles*. Take, for example:

---

<sup>10</sup>I set aside so-called "proxies" of mere possibilia since they aren't contingentist in spirit.



(INDISCERNIBLES<sub>1</sub>): POSSIBLY(There is a nonactual  $x$  and there is a nonactual  $y$  such that  $x$  and  $y$  are indiscernible and NECESSARILY(if  $x$  exists,  $y$  does not exist)).

Where, importantly, by “are indiscernible” I mean “share all non-haecceitistic modal properties.” Any non-haecceitistic modal property that one would exemplify, the other would too. These properties include, e.g., kind membership properties: If one would necessarily be a knife, the other would necessarily be a knife. But this category of properties extends past kind membership properties. If one would possibly become dull, the other would possibly become dull too. And so on. The modal properties that I’m excluding are those that the higher-order contingentist denies exist anyway, properties of the form: **necessarily being made of such and such (specific) materials, necessarily being identical to some (specific) individual**, etc. These excluded properties are such that were they to exist, they would allow us to distinguish either of the impossibles.

So, I haven’t given a full account of non-haecceitistic modal properties; I’ve just given a couple of examples of some properties that fall in this category and some that do not. What follows is a schematized strategy that the higher-order contingentist can pursue in fending off seeming being constraint violations, if she can make good on what a non-haecceitistic modal property amounts to.

INDISCERNIBLES<sub>1</sub> is true if and only if there is a possible world containing impossible indiscernibles. And, we know, impossibles cannot coexist.

Just like before, we can concoct a false start for paraphrasing INDISCERNIBLES<sub>1</sub>:

(INDISCERNIBLES<sub>2</sub>): POSSIBLY(There is a nonactual  $x$  and POSSIBLY(there is a nonactual  $y$  such that  $y$  is indiscernible from  $x$  and NECESSARILY(if  $x$  exists,  $y$  does not exist))).

If INDISCERNIBLES<sub>2</sub> were true, it would be true that there could be an  $x$  and there could be a  $y$  that stand in the indiscernibility relation despite their inability to coexist within a world. But, according to the being constraint, necessarily, non-coexistents cannot stand in relations. So, if INDISCERNIBLES<sub>2</sub> were true, the being constraint would be false.

### 2.2.3 *Our two problems*

The problem for the higher-order contingentist is becoming clear. There really are two problems. First, how ought the higher-order contingentist express her belief that there could be impossible indiscernibles without denying the being constraint? She needs *something* in the vicinity of the INDISCERNIBLE sentences to be literally true. If she can’t find it, she

seems to lose the ability to give voice to a key tenet of her view: What distinctions there are to be drawn is a contingent matter. This is the expression problem. Second, how can she make sense of denying the literal truth of the INDISCERNIBLE sentences given how she describes her view? The higher-order contingentist shouldn't state her view using literal falsehoods without anything else to say about her awkward position. She needs a way to legitimize her use of the INDISCERNIBLE sentences, lest she undermine her own view. This is the self-defeat problem.

Looking forward, I now propose to abandon the paraphrase project for the higher-order contingentist – I suspect that there just are no literally true paraphrases of our INDISCERNIBLE sentences that both allow the higher-order contingentist to hold on to the being constraint and is easily mistaken for our INDISCERNIBLE sentences. And that's because our INDISCERNIBLE sentences are about relations between impossibles. If the being constraint is true, impossibles cannot bear relations to one another. And if we modify our INDISCERNIBLE sentences to be about something other than relations between impossibles, it's unlikely that we've come up with paraphrases that are easily mistaken for our INDISCERNIBLE sentences.<sup>11</sup>

If the higher-order contingentist gives up the hunt for literally true paraphrases, where does this leave her? She needs, it seems, to take up a new hunt for some other way to legitimize her use of the INDISCERNIBLE sentences. In §2.3, I suggest a way to understand some of the INDISCERNIBLE sentences as being “approximately true” – they would be true if we momentarily ignored the higher-order contingentist's limited ontology.

### **2.3. Indiscernibility without being indiscernible from**

What the higher-order contingentist is looking for is (1) something that is close enough in meaning to the INDISCERNIBLE sentences above, that is literally true, and that isn't a counterexample to the being constraint and (2) a way to rescue some legitimacy for (but not literal truth of) the INDISCERNIBLE sentences.

The two projects can be related. If the higher-order contingentist can show that something in the vicinity of the INDISCERNIBLE sentences above is literally true, without predicating relations between impossibles, she solves the expression problem. And if the literal truth of this something can confer “approximate truth” on one of our INDISCERNIBLE sentences, she's also solved the self-defeat problem.

Others have provided helpful tools for fleshing out approximate truth. Yablo (2000a) gives

---

<sup>11</sup>See (Fritz & Goodman, 2017) for a rather bleak outlook on the higher-order contingentist's paraphrase options for other sentences. And see (Sider, 1999) for explicit defense of abandoning the paraphrase project for moderate ontological views.

us *metaphorical quantifiers* and the important observation that the ostensible truthmakers for some kinds of statement don't line up with what those statements are intuitively about. The existence of these so-called "platonic objects" (e.g., countermodels, worlds, functions, numbers, events, sets, properties, or – I'll add – mere possibilia) can be bracketed via metaphorical quantifiers so long as the role we would have those objects play is performed just as well by objects we only assume to exist. Fine (2016), on behalf of the actualist (but also the contingentist), gives us a *suppositional calculus*, which involves supposing, *de dicto*, that for all mere possibilia,  $x$ , actually,  $x$  is necessarily something. Put a different way, the actualist supposes that the world is as the possibilist assumes it to be, gifting herself quantification over a single domain under a suppositional pretense. Sider (1999) gives us *quasi-truth*, where a sentence,  $S$ , is quasi true if and only if it is entailed by a certain ontologically abundant theory that is not itself represented as true.<sup>12</sup>

Metaphorical truth, suppositional truth, and quasi-truth all are tools for regaining legitimacy. It's legitimate to speak in metaphorical truths, suppositional truths, and quasi-truths, especially when it is clear how to "separate" these approximate truths from the literal truths they approximate (more on this below).

The important thing for our purposes is that the being constraint is *not* concerned with metaphorical truths, suppositional truths, or quasi-truths. The being constraint does not constrain, for example, metaphorical property instantiation. It's concerned, instead, with literal, full truth. When speaking literally, it cannot be the case that some non-existent be propertyed. So long as the higher-order contingentist is speaking in approximate truths, she needn't be worried about being constraint "violations."

The higher-order contingentist can be flexible on the issue of which tool is best for her purposes; for ease of exposition, I focus on quasi-truth. A sentence,  $S$ , is quasi true just in case there would be a supervenience base or truthmaker for  $S$  if (put opinionatedly) a certain ontologically unscrupulous theory were true.<sup>13</sup> Since we're concerned with contingentism, a sentence,  $S$ , is quasi true just in case there would be a supervenience base or truthmaker for  $S$  if necessitism were true.

Recall INDISCERNIBLES<sub>2</sub>:

(INDISCERNIBLES<sub>2</sub>): POSSIBLY(There is a nonactual  $x$  and POSSIBLY(there is a nonactual  $y$  such that  $y$  is indiscernible from  $x$  and NECESSARILY(if  $x$  exists,  $y$  does not exist))).

If necessitism were true, would INDISCERNIBLES<sub>2</sub> be true? Three tricky points to note.

<sup>12</sup>Also see (Fine, 2003) and (Sider, 2002) for related strategies.

<sup>13</sup>See (Sider, 1999), p. 332-3.

First, according to necessitism, there are no nonactual individuals – necessarily, everything necessarily exists. Relatedly, second, there can be no impossibles. What there can be, however, are two individuals such that, necessarily, if one is concrete, the other is not concrete. Williamson’s knives are like this; despite existing in every world, if one is concrete, the other is not. And, third, I’ve been understanding indiscernibility as exemplifying the same non-haecceitistic modal properties, e.g., if one would necessarily be a knife, the other would necessarily be a knife too. Some of the modal properties, especially the necessary properties, might have to be tweaked a bit to get the necessitist on board. Necessitists, for example, might not think that some non-concreta are still knives. We transform the property **necessarily being a knife** to **necessarily being a knife if concrete**.<sup>14</sup> Keeping these points in mind, let’s try:

(INDISCERNIBLES<sub>2</sub>-CONCRETE): POSSIBLY(There is a concrete  $x$  (that isn’t actually concrete) and POSSIBLY(there is a concrete  $y$  (that isn’t actually concrete) such that  $y$  is indiscernible from  $x$  and NECESSARILY(if  $x$  exists concretely,  $y$  does not exist concretely))),

where we understand indiscernibility as exemplifying the same non-haecceitistic modal properties (tweaked to make the necessary properties necessitist-friendly). For the contingentist, knives either exist concretely or they don’t exist at all. So, the modified nonactual clauses, the modified impossibility clause, and the tweaked understanding of which properties are non-haecceitistic modal properties in INDISCERNIBLES<sub>2</sub>-CONCRETE changes nothing for the contingentist.

### 2.3.1 *Legitimacy regained*

INDISCERNIBLES<sub>2</sub>-CONCRETE is quasi true. Why? Because the contingentist and necessitist can agree that the following is literally true:

(NON-HAECCEITISTIC MODAL WAYS): There is a non-haecceitistic modal character **Q** such that POSSIBLY(there is a concrete  $x$  (that isn’t actually concrete) such that  $x$  has **Q** and POSSIBLY(there is a concrete  $y$  (that isn’t actually concrete) such that  $y$  has **Q** and NECESSARILY(if  $x$  exists concretely,  $y$  does not exist concretely))).

The importance of NON-HAECCEITISTIC MODAL WAYS is that, when we assume a necessitist ontology, it entails INDISCERNIBLES<sub>2</sub>-CONCRETE. Recall, from above:

---

<sup>14</sup>See (Menzel, 2020) for related points.

(INDISCERNIBLES<sub>2</sub>-CONCRETE): POSSIBLY(There is a concrete  $x$  (that isn't actually concrete) and POSSIBLY(there is a concrete  $y$  (that isn't actually concrete) such that  $y$  is indiscernible from  $x$  and NECESSARILY(if  $x$  exists concretely,  $y$  does not exist concretely))).

Here's why NON-HAECCEITISTIC MODAL WAYS, with a necessitist ontology, entails INDISCERNIBLES<sub>2</sub>-CONCRETE, informally. NON-HAECCEITISTIC MODAL WAYS tells us that it's possible for one individual to have a certain non-haecceitistic modal character and that it's further possible for another individual to have the same certain non-haecceitistic modal character. If we assume that it's possible for both individuals to exist in the same world (as the necessitist would have us believe), then those two individuals can stand in a relation to each other: They can *share* their non-haecceitistic modal character.<sup>15</sup> That is, they can be indiscernible from one another. And this is what INDISCERNIBLES<sub>2</sub>-CONCRETE tells us.

Take a less complicated example, inspired by (Fritz & Goodman, 2017), p. 1081-2. Imagine an impossible "sibling" of mine; had an impossible sibling of mine existed, it would have originated from the same egg that I originate from, but a different sperm. If I exist, any impossible sibling of mine cannot, and vice versa. Now, certainly it's possible that I be 6 feet tall. And certainly it's possible that any impossible sibling of mine be 6 feet tall. There is a modal property that each of us would exemplify were we to exist (**possibly being 6 feet tall**), despite our being unable to coexist. This is our analog to NON-HAECCEITISTIC MODAL WAYS. We can speak a bit loosely and say that we share this modal property; this is our analog to INDISCERNIBLES<sub>2</sub>-CONCRETE. And it would be true if the impossibility facts could just get out of the way. If we could just assume necessitism for the time being, I and all of my same-egg siblings coexist in every world – but only one of us can be concrete in a world. Since we all have the property **possibly being 6 feet tall** whenever we exist, we all *share* the property **possibly being 6 feet tall**.<sup>16</sup>

So, INDISCERNIBLES<sub>2</sub>-CONCRETE is quasi true because NON-HAECCEITISTIC MODAL WAYS is literally true. And the literal truth of NON-HAECCEITISTIC MODAL WAYS allows the higher-order contingentist to solve the expression problem and the self-defeat problem in one fell swoop.

---

<sup>15</sup>We also have to assume that individuals have their non-haecceitistic modal character necessarily. Or, we have to assume something weaker: That something about one individual having character **Q** in one world doesn't preclude the other individual having character **Q** in that very world, and vice versa. Both assumptions strike me as reasonable.

<sup>16</sup>Sider (1999) makes a similar point concerning *internal relations*: Internal relations are those relations that supervene on the intrinsic properties of the related individuals. And sentences that predicate internal relations of individuals that do not exist at the same time can be easily made to be quasi true if we assume an eternalist ontology; see p. 335.

### 2.3.2 *What's literally true?*

First, the expression problem. NON-HAECCEITISTIC MODAL WAYS is obviously about different things compared to any of the INDISCERNIBLE sentences: NON-HAECCEITISTIC MODAL WAYS is about a non-haecceitistic modal character and the possibility that some individuals are *each* modally thus and so (analogous to the possibility that I and an impossible sibling are *each* possibly 6 feet tall). And the INDISCERNIBLE sentences are about the possibility that some individuals be *related* in a certain way (analogous to the possibility that I and an impossible sibling *share* the modal property **possibly being 6 feet tall** with the other). Because of this, NON-HAECCEITISTIC MODAL WAYS probably does not make a convincing paraphrase of any of the INDISCERNIBLE sentences. But, no matter, the higher-order contingentist isn't looking for a convincing paraphrase anyway.

Nevertheless, NON-HAECCEITISTIC MODAL WAYS is "close enough" to our INDISCERNIBLE sentences. We're unable to discern Williamson's knives because it's possible that each knife has exactly the same non-haecceitistic modal character, as NON-HAECCEITISTIC MODAL WAYS, adapted to be about impossible knives, would say. And these modal characters are all that we have in trying to distinguish the knives – since the knives don't exist, properties that would singularly involve either knife don't exist either.

Finally, the literal truth of NON-HAECCEITISTIC MODAL WAYS is compatible with the being constraint. NON-HAECCEITISTIC MODAL WAYS is true if and only if in some possible world, there exists a concrete individual with a certain cluster of modal properties, and in some possible world (it needn't be the same possible world), there exists another concrete individual with the same certain cluster of modal properties, and in all possible worlds, if the former individual is concrete, the latter is not. The truth of NON-HAECCEITISTIC MODAL WAYS does not depend on there possibly being impossible individuals that bear relations to one another.

So, the higher-order contingentist has found something that is close enough to our INDISCERNIBLE sentences, literally true, and compatible with the being constraint; that something is NON-HAECCEITISTIC MODAL WAYS.

### 2.3.3 *Shouldn't we be concerned with only literal truths?*

Now, the self-defeat problem. NON-HAECCEITISTIC MODAL WAYS's virtue is also its vice: NON-HAECCEITISTIC MODAL WAYS isn't synonymous with INDISCERNIBLES<sub>2</sub>-CONCRETE; so, upholding the literal truth of NON-HAECCEITISTIC MODAL WAYS has not rescued the literal truth of INDISCERNIBLES<sub>2</sub>-CONCRETE. How can the higher-order contingentist make sense of denying the literal truth of INDISCERNIBLES<sub>2</sub>-CONCRETE

given how she states her view? Shouldn't her statement of the view make use only of literal truths?

To answer the first question first. The higher-order contingentist can make sense of denying the literal truth of INDISCERNIBLES<sub>2</sub>-CONCRETE because she is allowed to think that INDISCERNIBLES<sub>2</sub>-CONCRETE is quasi true. If necessitism were true, then there could exist, in one world, two individuals such that they share all of their non-haecceitistic modal properties and they cannot coexist concretely.<sup>17</sup>

And now the second question. Shouldn't her view be stated using only statements that the higher-order contingentist takes to be literally true? No.

There's obvious value in stating higher-order contingentism in a way that uses only literal truths. It's valuable to show that higher-order contingentism isn't self-defeating, that is, revealed as false in the very attempt to make sense of it. I've tried to make good on stating the higher-order contingentist's commitment that there could be impossible indiscernibles, in a literally true and non-self-undermining way, via NON-HAECCEITISTIC MODAL WAYS.

But there's also value in stating contingentism in a way that uses quasi-truth. For one thing, it's convenient to posit possible relations that would exist if impossibility facts would just get out of the way. And convenience is useful in helping people understand your theory. But the value of quasi-truth comes from more than just its convenience. Using quasi-truth also allows the contingentist to more effectively communicate with the necessitist. Higher-order contingentists are existence-deniers; they deny the existence of certain higher-order entities that the necessitist allows in her ontology. It's notoriously difficult to single out entities that you think don't exist. Quasi-truth can help with this project. The contingentist can make use of quasi-truths in order to communicate with the necessitist while appealing to higher-order entities the contingentist denies the existence of.

So we ought to make room for quasi-truths when stating our theories. Now, theories that make appeal *only* to quasi-truths without gesturing at the entailing literal truths are worrisome – they give the appearance that ontological abundance might be required in order to make sense of desired theoretical commitments. But the higher-order contingentist is in no such position, at least not when it comes to indiscernibility. So long as she has reason to believe in the literal truth of NON-HAECCEITISTIC MODAL WAYS, she has obtained license to the quasi-truths it entails.

---

<sup>17</sup>Of course, if necessitism were true, the necessitist likely wouldn't call such individuals "indiscernible" – if necessitism were true, there would also exist higher-order entities that would singularly involve each individual. But I'm using "indiscernible" in a special sense: the sharing of all non-haecceitistic modal properties. And even the necessitist ought to think that were we looking at *only* these properties of individuals, we would be unable to distinguish some pairs of individuals.

## 2.4. How bad is denying (something like) the being constraint anyways?

So much for the expression and self-defeat problems for the higher-order contingentist. The quasi-truth that, possibly, there is an individual and, possibly, there is an “impossibly” concrete, indiscernible individual is entailed by temporarily supposing a necessitist ontology and the literal truth that, possibly, there is an individual with a certain non-haecceitistic modal character and, possibly, there is an impossibly concrete individual with the same certain non-haecceitistic modal character. This literal truth poses no threat to the being constraint. And, finally, the quasi-truth regains legitimacy via the literal truth.

I’ve been concerned with a “middle ground truther” contingentist – one who makes play with both quasi-truths and literal truths in stating her view and one who never denies the being constraint when stating the literal truths of her view. I’d like to conclude with some highly speculative thoughts in answer to questions that concern a *different* kind of higher-order contingentist: What if a higher-order contingentist just doesn’t care for the being constraint? Is there some special obstacle facing the higher-order contingentist, in particular, that makes denying the being constraint difficult?<sup>18</sup>

Denying the being constraint certainly comes with a general problem that would threaten anybody: How can we even make sense of a non-existent possessing properties?<sup>19</sup> But denying the being constraint comes with a problem that threatens the higher-order contingentist specifically: Higher-order entities cannot straightforwardly owe their existence to the relevant first-order individuals if there can exist higher-order entities without the relevant first-order individuals also existing. It is unclear how the higher-order contingentist can motivate her view once she allows for failures of the being constraint.

Start with the problem that threatens the higher-order contingentist specifically. The higher-order contingentist has traditionally used one of two general strategies for motivating her view, given first-order contingentism: **ontological dependence** and, something like, **distinctual dependence**. The ontological dependence strategy relies on the idea that the existence of higher-order entities depends on the existence of relevant first-order individuals. But, more importantly, the ontological dependence strategy relies on strong commitments concerning the

---

<sup>18</sup>And even though this a bit of a digression, it’s worth pursuing. Jacinto (2019) notes that the being constraint is presupposed in some of Williamson (2013)’s arguments for first-order and higher-order necessitism. Jacinto (2019) goes on to argue for higher-order necessitism assuming the being constraint. If there’s any open territory for the higher-order contingentist to explore in which she denies the being constraint, it’s worth doing: denying the being constraint neutralizes, at least in her eyes, arguments for various necessitist views. But just to be clear, nothing that I say in section is meant to suggest that the higher-order contingentist ought or needs to deny the being constraint.

<sup>19</sup>There are other general problems, too. For example, how can we even make sense of the semantic contribution of names that do not refer? See (Williamson, 2013), especially p. 151-2, for a version of this concern. And see (Bacon, 2013) for an optimistic answer to this general concern.



structure of higher-order entities. The distinctual dependence strategy relies on the idea that what distinctions that are available to be drawn depends on the existence of relevant first-order individuals. I've been running the strategies together since I've been treating "the availability of distinctions" as shorthand for "the existence of higher-order entities", but it pays to be a bit more careful.

Ontological dependence, first. On certain structural views of propositions, propositions are essentially structured abstract entities that have individuals as constituents. The proposition **that Mallory is left-handed**, for example, has me and the property **being left-handed** as constituents. And just like other entities that have parts (like my coffeemaker), if a proposition loses crucial parts, it ceases to exist. On this view of propositions, then, there's an ontological dependence between a proposition and its principal constituents. Add first-order contingentism and we get that in worlds in which a key constituent fails to exist, so does the relevant proposition.<sup>20</sup> I only contingently exist. Then, in worlds in which I fail to exist, so, too, does the proposition **that Mallory is left-handed**. And the story for singular properties, like **being identical to Mallory**, is analogous.

According to the ontological dependence strategy, it's impossible for a non-existent first-order individual to be the subject of a (literally true) singular proposition. There's nothing in virtue of which (or, at least, not enough parts in virtue of which) those propositions would exist. And that's just to say that it's impossible for a non-existent to possess properties. But if the being constraint is false, it *is* possible for a non-existent to possess properties. So, the higher-order contingentist cannot endorse the ontological dependence strategy, as written, if she wants to deny the being constraint.

Now, the distinctual dependence strategy. Unlike the ontological dependence strategy, the distinctual dependence strategy does not make appeal to the structure of higher-order entities in order to explain why higher-order entities owe their existence to the existence of first-order individuals. According to the distinctual dependence strategy, what distinctions there are to be drawn depends (in some yet-to-be-specified way) on what first-order individuals there are.

In fact, the distinctual dependence strategy doesn't make direct appeal to higher-order entities at all. The distinctual dependence strategy is friendly to nominalist views concerning higher-order entities than the ontological dependence strategy. And, really, when using the distinctual dependence strategy, higher-order entities can drop out of the picture entirely. Here's a kind of speech<sup>21</sup> that the distinctual dependence strategist who's drawn towards nominalism might make:

Higher-order entities, were they to exist, would draw distinctions by, for exam-

---

<sup>20</sup>Sometimes this is called "Existentialism"; see, e.g., Turner (2005), p. 191.

<sup>21</sup>Inspired by (Yablo, 2000a).

ple, being true in some worlds, but not others or by being exemplified by some individuals, but not others. And the role that higher-order entities would play is all we need. Whether or not higher-order contingentism is true shouldn't be held hostage to whether or not higher-order entities really exist. We can bracket the question of whether or not higher-order entities really exist and transform our understanding of higher-order contingentism accordingly.

Higher-order contingentism becomes the view that it's contingent which distinctions there are to be drawn. As we "move across" modal space, the higher-order contingentist says, we should expect to see some variation in the availability of distinctions between worlds. Higher-order necessitism denies this: Necessarily, it's necessary which distinctions are available. Even as we move across modal space, the higher-order necessitist says, we expect to see consistency in the availability of distinctions.<sup>22</sup>

Our understanding of the being constraint can feel shaken once we've bracketed the question of whether higher-order entities exist. I said above that the being constraint constrains which individuals are propertyed: necessarily, only existing individuals. But, if higher-order entities don't exist, then what is the being constraint constraining? Not property instantiation. We can rewrite the being constraint, too: Necessarily, an individual-centered distinction is there to be drawn only if it can be drawn with existing individuals. For example, an individual-centered distinction – like that of all of the actual individuals, only I am identical to Mallory – is there to be drawn only if I exist. In other words, we cannot draw distinctions using specific mere possibilia.

This combined package of the distinctual dependence strategy and these new understandings of higher-order contingentism and the being constraint, although admittedly still quite unrefined, holds promise for the higher-order contingentist to deny the being constraint.

Here's the start of such a story. Recall Fine's particles. We cannot pick either particle out. We cannot, for example, legitimately name each of Fine's particles and use these names to uniquely refer. Unique reference requires our being able to draw a distinction. And since Fine's particles are indiscernible from our perspective, we cannot draw any distinctions where Fine's particles are concerned.

But there seem to be cases in which we can uniquely refer to a merely possible individual.

---

<sup>22</sup>So I'm setting aside outlier higher-order contingentist views in which although it's contingent which higher-order entities exist, it isn't contingent which distinctions are available. Such views achieve this mismatch by positing a many-one relationship between higher-order entities and distinctions via accepting a hyperintensional theory of properties and propositions. See (Fritz & Goodman, 2017) for discussion of such an oddball contingentist theory. And I set aside such views because they don't strike me as "contingentist enough." Regardless of one's views about hyperintensionalism or nominalism, any higher-order contingentist view ought to be one in which it's contingent which distinctions there are to be drawn.

For example, suppose that there are a handle and a blade before you; they could be, although they never actually are, combined to form a knife.<sup>23</sup> Further suppose that there is a unique knife that would have been constituted by the existing handle and blade. (This is certainly something that the higher-order contingentist could push back on, but let's keep going for imagination's sake.) It seems we can uniquely refer to *the* knife – call it *Choppy* – that would have been made of the handle and blade. And, as a result, it seems we can make distinctions using Choppy: no actually existing knife is identical to Choppy, for example.

The being constraint is sometimes glossed as the constraint that, necessarily, all properties and relations are existence entailing. Our version of the being constraint can be glossed similarly: Necessarily, all individual-centered distinctions are existence entailing. But the Choppy-centered distinction above (that no actually existing knife is identical to Choppy) is a counterexample to this; Choppy does not exist.<sup>24</sup>

Choppy is not indiscernible from other merely possible knives; we can (we've supposed) uniquely refer to it. This example isn't meant to threaten the higher-order contingentist's *general* mantra that merely possible doppelgangers are indiscernible; the contingentist still ought to think that it's contingent which individual-centered distinctions are available. In general, the actual world's resources run out, and we cannot uniquely pick out merely possible individuals, preventing us from drawing distinctions making use of "these" individuals. But, sometimes, the actual world provides just enough resources, e.g., genuine would-be parts of some merely possible individual, and we secure thereby reference to that individual. And it's only then that we just manage to draw distinctions using mere possibilia, in violation of the dictum that, necessarily, what individual-centered distinctions there are to be drawn use only existing individuals.

Obviously, this isn't a full account of the allowed failures of this version of the being constraint when using the distinctual dependence strategy. I haven't given a general story as to when we can secure unique reference to mere possibilia or what amounts to an individual-centered distinction. But this example is still important in showing that there's open territory for the higher-order contingentist to explore in which she allows *some* distinctions that use specific mere possibilia; how expansive this territory is, is a further issue.

One final point on this example. The ontological dependence strategy doesn't leave room

---

<sup>23</sup>I'm borrowing this example from (Fritz & Goodman, 2016), p. 648.

<sup>24</sup>Again, I'm not saying that we *need* to think that distinctions involving Choppy, as opposed to the knife that would have been constituted by the handle and blade before you, are available. Depending on how fine-grained you want distinctions to be, you can admit of the latter distinctions without the former. And this presents no worries for the ontological dependence strategist. But if you're particularly coarse-grained about distinctions, and you treat distinctions that involve Choppy as identical to distinctions that involve the knife that would have been constituted by the handle and blade before you, then cases such as these suggest that not all individual-centered distinctions are existence entailing.

for the higher-order contingentist to deny the being constraint because the relevant higher-order entities, according to this strategy, have first-order individuals as essential parts. The distinctual dependence offers less guidance as to which distinctions are available to us. But this loss of predictive power gives the higher-order contingentist a gift if she wants it; the distinctual dependence strategy gives her room to make play with distinctions normally thought to be available only to the necessitist. And once we go nominalist about higher-order entities, it feels much less strange to think that non-existents are capable of “being propertied” – all we’re saying with this talk is that sometimes we’re able to make literally true distinctions using mere possibilia, so long as we have enough resources at our disposal to pick out a unique merely possible individual.

### 3 Tolerating Arbitrariness

**Abstract:** Concerns over arbitrariness are taken seriously in metaphysics. If snowballs (lumps of snow that are essentially spherical) exist, do snowdiscalls (lumps of snow that are essentially disc-shaped) also exist? If snowballs, but not snowdiscalls, existed, that would be arbitrary. Or, if statues exist, do coincident lumps of clay also exist? If statues, but not coincident lumps, existed, that would be arbitrary. On pains of arbitrariness, either both exist or neither do. Arbitrariness concerns often motivate revisionary ontologies (either quite large or quite small), the motivating idea being that we need to either proliferate or decrease the number of things in order to avoid arbitrary distinctions. We ought to avoid arbitrary distinctions, the thought goes, because they're intolerably weird. And metaphysics has no place for weirdness. This general case against arbitrariness is overstated; sometimes, we ought to tolerate arbitrary distinctions in our metaphysical theories. And discerning when an arbitrary distinction is tolerable requires a better understanding of just what makes a distinction arbitrary. So, this paper offers an account of arbitrariness with the aim of explaining why metaphysicians have been too hasty in turning their backs on arbitrariness.

#### 3.1. Introduction

Arbitrariness is often given a special place in metaphysical theorizing. For example, concerns over arbitrariness are often used to motivate either quite large or quite sparse ontologies concerning, most famously, composite objects (in debates over mereological composition) and coincident objects (in debates over material coincidence)<sup>1</sup>. But arbitrariness concerns are also used to motivate revisionary ontologies concerning sets, propositions, properties, possibilia, concrete possible worlds, and persisting objects.<sup>2</sup> On pain of allowing arbitrariness, metaphysicians would *rather* adopt a highly revisionary theory. Put a different way, metaphysicians often disvalue arbitrariness *more* than they disvalue other theoretical vices. And I want to suggest that

---

<sup>1</sup>See (Cartwright, 1975), p. 158, (Van Cleve, 1986), p. 145, (Yablo, 1987), p. 307, (Sosa, 1987), p. 178, (Sider, 2001), p. 124, (Bennett, 2004), (Hawthorne & Uzquiano, 2011), p. 56, (Leslie, 2011), p. 281, (Thomasson, 2014), p. 214-5, and (Fairchild & Hawthorne, 2018) for but a few examples.

<sup>2</sup>See especially (Builes, 2021), but also (Linnebo, 2010), p. 152-3, and (Yablo, 2006a), p. 155, regarding sets, (Sider, 2009), p. 251, regarding possibilia, (Forrest & Armstrong, 1984) and (Lewis, 1986), especially p. 102-3, regarding the possible spacetime dimensions of possible worlds, and (Kurtsal, 2021) concerning persisting objects.

we've given arbitrariness too much weight, too much disvalue in our metaphysical theorizing.

In whatever ontological landscape we're concerned with, we can divide up the territory of views into three different camps: (1) The *permissivist* tries to have an ontology that is as large as possible. For example, permissive mereologists (sometimes called *universalists*) think that *any* collection of atoms composes a further object, no matter how unusual according to our ordinary sensibilities. In slogan form, the permissive mereologist thinks that composition always occurs. (2) The *eliminativist* tries to have an ontology that is as small as possible. For example, eliminative mereologists (sometimes called *nihilists*) think that *no* collections of atoms compose a further object, no matter how welcome that object would be according to our ordinary sensibilities. In slogan form, the eliminative mereologist thinks that composition never occurs. Now, an "extreme" eliminativist might go even further. All talk about composition is nonsensical, she says; we shouldn't even be trying to talk about whether composition ever occurs. But the eliminativist needn't go so far; it's stable for her to accept both that composition-talk is in good standing and that composition never occurs. (3) Finally, the *moderate* falls in between the permissivist and eliminativist, often (but not always) trying to track "common-sense." In slogan form, the moderate mereologist thinks that composition sometimes, but not always, occurs. And it's moderates that often face the charge of allowing arbitrariness.

Part of my interest in arbitrariness is because I sometimes have moderate intuitions. But I almost always have strong anti-eliminativist intuitions about a variety of ontological debates. And, recently, arbitrariness arguments have been raised not just against moderate ontological views, but against permissive ontological views, too. David Builes (2021) argues – on the basis of arbitrariness considerations *alone* – that we ought to be eliminativists about sets, propositions, properties, mere possibilia, coincident objects, and concrete possible worlds. In other words, the assumption that metaphysics shouldn't be arbitrary doesn't force us to become *either* permissivists or eliminativists; it forces us to eliminate. So, if we don't want to eliminate, we need to accept (some kind of) arbitrariness in our metaphysics, and we can think of this as being a team project that both moderates and permissivists ought to be concerned with.

Another reason to be concerned with arbitrariness is that it is notoriously difficult to *combine* permissivist views. For example, Uzquiano (2006) shows that conjoining a permissive view of sets and a permissive view of mereology results in contradiction under the assumption that quantification is absolutely general.

Finally, even when no contradiction threatens, permissivism is *still* sometimes charged with arbitrariness. For example, in response to the problem of the many, the mereological permissivist may distinguish between mereological fusions that are persons and very, very similar mereological fusions that are not. Such distinctions look arbitrary.<sup>3</sup> And one gets the

---

<sup>3</sup>See note 22 of (Fairchild, 2021) and §2 of (Kleinschmidt, 2014); Kleinschmidt is specifically concerned with

sinking feeling that arbitrariness is quite difficult to avoid, lest we retreat to eliminativism in many of our metaphysical views.

So moderates *and* permissivists have a vested interest in thinking more carefully about arbitrariness. And in the spirit of moderates and permissivists teaming up, I draw on some recent work of Maegan Fairchild.<sup>4</sup> Fairchild (2021) argues that using arbitrariness concerns to motivate permissive ontologies is actually more complicated than permissivists have made it out to be. In her words, the road to permissivism, via arbitrariness, is *long*. I agree. And this paper is an attempt to find some hospitable stops along the way, for both moderates and more cautious permissivists alike.

Just to be clear, my goal in this paper isn't to take up any one specific arbitrariness argument. I want to, instead, zoom out a bit and think about what arbitrariness amounts to and whether we ought to be so general in our assumption that metaphysics broadly (as opposed to specific metaphysical positions) shouldn't be arbitrary.

Here's the plan. I'm going to focus on arbitrariness dialogues in our *modal* metaphysics, the area of metaphysics concerned with metaphysical possibility and necessity, because this ontological landscape is under-explored and is helpful in illustrating the general methodological issues at play. So, §3.2 presents a couple of examples of arbitrariness dialogues in modal metaphysics. §3.3 diagnoses the badness of arbitrariness. Arbitrary distinctions are inexplicable and parity-violating (they distinguish between things "on a par"). Roughly, arbitrariness is bad because parity-violations call out for explanation. But since arbitrariness is inexplicable, any explanation is out of reach. So, arbitrariness calls out for something it cannot get: explanation.

The parity-violating dimension of arbitrariness has recently received some attention. A common way to argue *against* arbitrariness charges is to deny that your preferred theory is parity-violating.<sup>5</sup> And Fairchild (2021) argues that the permissivist has quite a bit of work to do in defending her claim that moderate views are parity-violating. I'm interested in a project slightly different than either arguing against an arbitrariness charge on behalf of the moderate or clarifying what work the permissivist has to do in order to successfully charge moderatism with arbitrariness. I'm interested, instead, in whether valuable, interesting, and viable metaphysical theories can *also* be arbitrary. Put a different way, what if we didn't want to (or we couldn't, given some of our other theoretical commitments) argue against an arbitrariness charge? Can we find a way to make peace with arbitrariness all the same?

And in order to begin answering these questions, we need to look more seriously at the

---

using this kind of example in an inductive argument against the principle of sufficient reason.

<sup>4</sup>Fairchild has her own permissive leanings; see, as an example, (Fairchild, 2017) and (Fairchild & Hawthorne, 2018).

<sup>5</sup>Daniel Korman (2015) is a good example of a moderate in debates over mereological composition and material constitution who responds to arbitrariness arguments in this vein (see especially chapter 8).

other dimension of arbitrariness: the inexplicability of arbitrariness. §3.4 tries to rehabilitate (a kind of) arbitrariness: Once we focus our attention on different levels of explanation, we can open the door for a softer, more gentle variety of arbitrariness. §3.5 does a bit of clean up where I address questions about how sensitive our judgments of arbitrariness are with respect to our background metaphysics.

Ultimately, where I'd like to end up is here: You might have thought that arbitrariness arguments were a way to bypass first-order debates in metaphysics – forget about digging into the dirty, first-order details and evaluate the theory's second-order virtues and vices, instead. But the emerging picture of arbitrariness suggests that this is wrong. Whether and to what extent a theory is arbitrary is deeply entangled with our background metaphysical assumptions. So, assessing whether a theory is arbitrary, and whether it is tolerably arbitrary, requires doing first-order metaphysics, too.

### 3.2. Arbitrariness dialogues in modal metaphysics

The word “arbitrariness” is a bit ill-behaved; people sometimes use it to mean different things, and even if people seem to share a common meaning, rarely do they spend much time explaining just what this common meaning is. So, in this section I present two examples of arbitrariness dialogues in our modal metaphysics. Primarily, these examples are meant to get us to dip our toes into some complicated waters, so that we *start* to understand how metaphysicians think about arbitrariness. §3.3 clarifies what I mean by “arbitrariness.” I return to the examples in §3.4 and §3.5, arguing that the moderate positions in these examples can be defended on the basis that they're tolerably arbitrary.

For our first example, David Lewis (1986) *wants* to be a modal permissivist. He wants, in other words, to defend *modal plenitude*: a maximally abundant array of possible worlds, in a map of modal space, which meets the following requirements:

**No gaps:** Imagine if it were metaphysically impossible that my two dogs exist separately. In no possible world does only one of my dogs exist. If one exists, the other must too. What an arbitrary rule, necessarily connecting my two dogs together when it seems that other individuals (you or I) could have failed to co-exist. (My dogs aren't clones.) The “no gaps” requirement of modal plenitude rules out that my dogs necessarily co-exist: If my dogs did necessarily co-exist, then there would be gaps in modal space, missing worlds with only one of my dogs.

**No gerrymandered edges:** Imagine if it were possible that only ten concrete individuals existed. Then nine. Eight.....two. One. But not zero. Why stop at only one concrete individual? Or imagine that there could have been no dogs, but there



must be at least one tree in any possible world. What an arbitrary edge to modal space! The “no gerrymandered edges” requirement of modal plenitude rules out that there must be at least one concrete individual or that there must be at least one tree despite the failure of a corresponding requirement on dogs.

Lewis tries to be a permissivist, and to uphold modal plenitude, by way of an unrestricted principle of recombination. Roughly put, this is the idea that anything can co-exist with anything (so long as they occupy different non-overlapping regions of space-time), and anything can fail to exist with anything.

Unfortunately, this principle runs into a well-known problem:<sup>6</sup> Suppose that this unrestricted principle of recombination is true; then, there couldn't be a set of all possible individuals.<sup>7</sup>

Lewis – a paragon of extravagant, ontologically-abundant metaphysics – surprisingly responds by becoming a bit more *moderate*. He restricts his principle of recombination, adding on a proviso “size and shape permitting.” In other words, Lewis posits an upper bound to the size of possible worlds in order to limit the number of compossible individuals. But Lewis is worried about arbitrariness:

My thesis is existential: there is *some* break, and the correct break is sufficiently salient within the mathematical universe not to be *ad hoc*. If study of the mathematical generalisations of ordinary spacetime manifold revealed one salient break, and one only, I would dare to say that it was the right break – that there were worlds with all the shapes and sizes of spacetime below it, and no worlds with any other shapes and sizes. **If study revealed no suitable breaks, I would regard that as serious trouble.** If study revealed more than one suitable break, I would be content to profess ignorance – incurable ignorance, most likely...**the restriction had better be some extremely natural break, so that (if we could know what it was) it would not strike us as arbitrary** (bold emphasis added; p. 103).

Here's a *true permissivist* way out of this puzzle, one that isn't satisfied with holding out hope for a non-arbitrary cut-off like Lewis: There is no unrestricted set of all possible worlds (or possible individuals).<sup>8</sup>

So we've seen an example of a moderate modal view (Lewis's) and a permissive modal view (the no-unrestricted-set view). Remember that the eliminativist in the mereological case denies

---

<sup>6</sup>See (Forrest & Armstrong, 1984) and (Nolan, 1996) for refinements.

<sup>7</sup>It's not just the Lewisian that faces this problem. Williamsonian necessitists – also normally thought to be permissivists in some sense because of their expansive ontology – face an analogous problem, too (Sider, 2009).

<sup>8</sup>Rayo (2020), for example, advocates for an “open-ended” view of metaphysical possibility partly in response to the argument from (Forrest & Armstrong, 1984) and the analogous problem for the Williamsonian necessitist.

that there are any composite objects, although she allows mereological simples. The eliminativist in the modal case could deny that there are any possible worlds other than the actual world.<sup>9</sup> There's an "extreme" modal eliminativist view, too: All modal talk is nonsensical. "We shouldn't even be trying to understand what is meant by 'metaphysical necessity' and 'metaphysical possibility' anyways", the extreme modal eliminativist says.

One reason to be interested in arbitrariness dialogues in modal metaphysics, specifically, is that the kinds of revisions modal metaphysicians are willing to adopt in order to avoid arbitrariness can feel a bit more extreme than the kinds of revisions adopted in other ontological landscapes. In the mereological case, the two (non-extreme) revisionary views *go along with* moderate views by allowing for a consistent meaning of "composition"; the permissivist simply thinks any collection composes under that meaning of "composition", and the eliminativist simply thinks that no collection composes under that meaning of "composition." But in this modal example, the revisionary views (the permissivist, the eliminativist, and the extreme eliminativist) *disagree with* moderate views about what we mean by 'metaphysical necessity' and 'metaphysical possibility'.

The moderate (like Lewis) treats modal operators as disguised quantifiers over some absolute domain of modal individuals (be they Lewisian concrete possible worlds, ersatz possible worlds (propositions, properties, or sentences) in departure from Lewis, etc.): 'Necessarily,  $\phi$ ' means *For all possible worlds,  $\phi$*  and 'Possibly,  $\phi$ ' means *For some possible world,  $\phi$* . And when we're doing metaphysics, there is a privileged *set* of modal individuals that exhausts all modal individuals there might be; *this* is the domain we quantify over when doing metaphysics.

The permissivist *denies* that there is an absolute domain of modal individuals. Characterizing her view beyond that is notoriously difficult.<sup>10</sup> For the permissivist's disagreement with the moderate has ramifications for her semantics and logic. If there is no absolute domain of possible worlds, then modeling our modal operators as disguised quantifiers becomes more complicated. For example, the permissivist must answer whether we're still able to quantify unrestrictedly despite there being no all-inclusive modal domain.<sup>11</sup> If yes, she has to provide truth-conditions for these kinds of utterances.<sup>12</sup> If not, all modal talk is relativized to restricted domains.<sup>13</sup> Additionally, it's natural to think that certain positions in modal metaphysics pre-

---

<sup>9</sup>Rosen (1990)'s modal fictionalist view is a good example of this kind of eliminativist view. Rosen specifically discusses Lewis's restriction: Lewis is silent on which specific size is the maximum size of possible worlds, so the fictionalist who treats the realist's theory as a fiction can also be silent on which specific size is the maximum size of a possible world. But this silence, Rosen discusses, raises the "incompleteness problem" for the fictionalist, which is roughly the problem of how to treat the truth values of propositions whose truth value isn't settled by the modal fiction (see, especially, p. 341-5).

<sup>10</sup>See (Rayo & Uzquiano, 2006) for a nice gloss.

<sup>11</sup>For relevant discussion, see (Fine, 2006).

<sup>12</sup>For relevant discussion, see (Lavine, 2006).

<sup>13</sup>See (Fine, 2006) for reasons to dislike this view.

suppose that there is some absolute domain of modal individuals.<sup>14</sup> For example, the necessitist thinks that (roughly) necessarily, everything necessarily exists. And the contingentist denies this: It's not the case that necessarily, everything necessarily exists. The domain of these necessity operators is meant to include *all* possibilities; if it doesn't, necessitism loses its bite. So there's work to be done in re-framing our understanding of these views.<sup>15</sup> All of that is just to say that the modal permissivist disagrees on quite a lot with the modal moderate, in contrast to the mereological case.

The modal eliminativist thinks that the only possible world is the actual world. Accordingly, she gives up using possible worlds as a way to model our modal discourse. And the extreme eliminativist thinks that modal talk is somehow nonsensical.

Arbitrariness concerns – why are worlds of *this* size possible, but not worlds of *that* size? – transform the modal debate by forcing us to back up: what do we mean by 'necessity' or 'possibility' anyways? Put a different way, the revisionary modal theories don't just force us to add or subtract possibilities in modal space – the analog of revisionary mereological theories which had us add or subtract out composite objects in our ontology. They force us to revise the nature of our modal concepts: Are modal operators nonsensical? If not, are they quantificational in nature? If so, what is the domain of modal discourse? Are modal operators necessarily relativized to a restricted domain? And so on.

Another reason to be interested in these dialogues in modal metaphysics is that two modal metaphysicians might have strong anti-arbitrariness commitments yet be committed to drastically different modal maps; an aversion to arbitrariness doesn't always tell us which views we ought to accept. This is illustrated by our second example.

Think of the debate between *endurantists* and *perdurantists*. Endurantists believe that objects persist by being wholly present at each moment of their existence. Perdurantists believe that objects are only partly present at each moment of their existence; they are spatiotemporally *extended* "worms." For the endurantist, objects endure; for the perdurantist, objects perdure.

One kind of an anti-arbitrariness metaphysician might be attracted to the following idea: No matter whether all concrete objects endure or perdure in our world, necessarily, if one kind of concrete object endures in a world, then every kind of concrete object endures in that world. Likewise, necessarily, if one kind of concrete object perdures in a world, then every kind of concrete object perdures in that world.

---

<sup>14</sup>See (Rayo & Uzquiano, 2006) for relevant discussion.

<sup>15</sup>This isn't to say that the permissivist doesn't have anything to say in response. She could respond that since she's now separated (1) there being some things which are all and only the modal individuals and (2) there being a set of modal individuals, she's able to more perspicuously frame the necessitist-contingentist debate compared to the moderate. Rather, this is just to point out that the modal permissivist is doing quite a bit more than just adding extra possible worlds in her modal map.

What does this idea rule out? It prevents “mixed” possible worlds with both enduring and perduring concrete objects side by side. For example, it rules out worlds in which dogs endure, but humans perdure.

Why be attracted to this restriction on modal space? Because it rules out worlds in our modal map with an arbitrary temporal ontology. Rationalists about temporal ontology think there would have to be a reason why a world distinguished between dog persistence and human persistence, and there could be no such reason. What would it look like? So, if we don’t want our temporal ontology to be arbitrary, we ought to accept as metaphysically necessary the “homogeneity” conditionals above.

But a different kind of anti-arbitrariness metaphysician – one who wants to minimize arbitrariness not of worlds, but of our modal map itself – might disagree. Maybe, we can conceive of enduring-dogs-yet-perduring-humans worlds. Shouldn’t we then include these mixed worlds in our modal map? To deny that (suitably idealized) conceivability entails metaphysical possibility would be to introduce arbitrary restrictions on the space of worlds (see p. 136-8 of (Chalmers, 1996)). If we want a non-arbitrary modal space, we seemingly must allow arbitrariness in individual worlds. In other words, rationalists about modal ontology think there would have to be a reason why our modal map distinguished between mixed and non-mixed worlds, and there could be no such reason. So, if we don’t want our modal ontology to be arbitrary, we ought to deny that the conditionals above hold necessarily.<sup>16,17</sup>

These examples are illustrative of how seriously arbitrariness charges are taken in metaphysics, especially modal metaphysics. To be clear, I haven’t yet said whether either of the above moderate positions (Lewis’s restricted principle of recombination and the metaphysician who denies the possibility of mixed endurantist-perdurantist worlds) can be defended on the basis that it is tolerably arbitrary; I return to these examples in §3.4 and §3.5. But the second example is especially worrisome because it brings out how arbitrariness concerns do not always point in the same direction; you and I might both say that we don’t want our modal metaphysics to be arbitrary, but disagree over what morals to draw for our modal map. §3.3 starts to think more carefully about just what arbitrariness amounts to and why arbitrariness is a theoretical vice.

---

<sup>16</sup>See section 4.2 of (Builes & Teitel, n.d.) for the same worry about conflict between “temporal rationalists” and “modal rationalists” concerning a slightly different principle in our philosophy of time.

<sup>17</sup>Balaguer (2016) argues similarly. Arbitrariness-avoidance pushes one to be a contingentist about either eternalism or presentism. No matter whether you’re an eternalist or presentist about the actual world, you ought to be a contingentist about your preferred view: Some possible worlds are eternalist worlds; others are presentist. But contingentism, Balaguer argues, is not an attractive view; he ends up suggesting a *non-factualist* view: there’s no fact of the matter whether presentism or eternalism is true.

This is a good example of the power of arbitrariness-avoidance in our modal metaphysics: Balaguer is willing to be a non-factualist in this case rather than allow any arbitrariness in modal space. But this kind of argument strikes me as flawed for other reasons, so I set it aside.

### 3.3. Arbitrariness, more in depth

#### 3.3.1 *What is arbitrariness?*

I want to start by clarifying what I *don't* mean by “arbitrariness.” I’m not referring to a property of our beliefs. In deciding between theories that strike us as equally revisionary, we have no good reason to believe one theory over the other, absent other theoretical vices or virtues. If we prefer one theory nevertheless, such a belief would be arbitrary. But that is not the issue under discussion here. When the modal permissivist, who wants to uphold the unrestricted principle of recombination, charges Lewis with arbitrariness, she isn’t complaining that Lewis’s belief in modal realism is arbitrary; she isn’t saying that Lewis has no good reason to believe modal realism over some other theory. She’s, instead, charging the theory itself with positing a peculiar distinction: Some cardinalities are possible, while others are not. This distinction is meant to reflect a peculiar difference in the world: Why are *these* the possible worlds, and not *those*? The modal permissivist is concerned with something like *in-the-world* arbitrariness, where peculiar differences are said to obtain “out there,” as opposed to “in” our theoretical choices. But, ultimately, this gloss isn’t quite right. So, in this section I try to break down just what the arbitrariness that metaphysicians are interested in amounts to. And, immediately following, I think a bit more carefully about how “objective” arbitrariness is.

A couple of terminological notes. I understand arbitrariness as attaching to distinctions. And I’m understanding distinctions as just a special kind of conjunctive fact: for example, an  $x$ -sized world is possible, but a  $y$ -sized world is not possible. Distinctions can be arbitrary, and theories that are committed to arbitrary distinctions can, in a bit of loose talk, be called “arbitrary theories” if this is just short for “theories committed to arbitrary distinctions.” But what makes a distinction arbitrary?

Arbitrary distinctions share two features. Lewis cannot explain why worlds with spacetime size  $x$  are possible, but worlds with spacetime size  $y$  are not possible. He is distinguishing between  $x$ -sized worlds and  $y$ -sized worlds, but cannot explain why. His distinction is *brute*; this is the first mark of an arbitrary distinction. The second is that arbitrary distinctions are parity-violating. They distinguish between things that ought to be seen on a par. For example, spacetime sizes  $x$  and  $y$  are on a par. And this is so no matter what values we plug in – any cardinality seems as good as any for being the size of a possible world.<sup>18</sup>

---

<sup>18</sup>If talk of distinctions is unhelpful for you, there are other glosses we could give. For example, we could say, instead, that Lewis postulates a modal universe with a parity-violating property, and the fact that this property obtains is brute. But this distinction talk is widely adopted among arbitrariness-concerned metaphysicians. See, for example, Sider (2001) writing of “cut-offs” in his argument from vagueness regarding composition:

...there would seem to be something ‘metaphysically arbitrary’ about a sharp cut-off in a continuous series of cases of composition. Why is the cut-off here, rather than there? Granted, everyone

A brute fact is an inexplicable fact. Whether a fact is inexplicable depends on our theory of explanation. Say, for example, that you believe that all explanation proceeds by way of causation or grounding. You'll expect, then, that facts regarding states of the world that are uncaused or ungrounded (if there are any) are inexplicable. Or say, for a different example, that you believe that explanation proceeds by way of causation or grounding *in a way that satisfies a certain kind of curiosity* – in a way that unifies or simplifies the relevant facts *for us*. This isn't a reductive account of explanation, but that's okay. We can still see that with this account of explanation you would expect that facts that do not admit of unified or simplified causal or grounding explanations for us (if there are any) are inexplicable. Which facts are inexplicable in this way is relative to your theory of explanation.<sup>19</sup>

Why think of arbitrariness as involving bruteness? An important part of a distinction appearing arbitrary is that it distinguishes between seemingly-similar things. 3-dimensional worlds and 4-dimensional worlds are seemingly-similar (and so are 4-dimensional worlds and 5-dimensional worlds, and so on); why think that one is possible and the other not? But explanations for disparate treatment try to get rid of this seeming-similarity. If the Lewis apologist could explain why she treats some spacetimes differently than others, the feeling of similarity might fade. And the moderate's distinction might no longer feel problematic. Now, the moderate's explanation might not be convincing. But, at the very least, her distinction no longer looks arbitrary. Explanation chases arbitrariness away. So, I understand arbitrariness as involving

---

must admit of some metaphysically 'brute' facts...Nevertheless, this brute fact seems particularly hard to stomach (p. 124).

Also see note 21 for Hawthorne and Uzquiano employing talk of "upper bounds" in discussing arbitrariness. In addition, Fairchild (2021) explicitly uses talk of distinctions as one way to understand arbitrariness:

A theory is said to be 'arbitrary' in this sense insofar as it commits us to distinctions for which we can offer no explanations...(p. 8)

It's worth noting that Fairchild doesn't explicitly endorse this understanding of arbitrariness in part because it is often a substantive debate whether moderate views are committed to brute distinctions. After all, Markosian (1998)'s brutal compositionalist view – that composition facts are brute – is *notorious* for so openly accepting brute facts into a moderate framework.

To put my cards on the table again, I don't think that all moderate views are arbitrary; I don't think that all moderate views are committed to brute distinctions. So, I'm not bothered by assuming that arbitrariness is a special kind of bruteness. I do, however, think that there's more to arbitrariness than just bruteness: arbitrary distinctions are brute and parity-violating. And I agree with Fairchild that the best way to motivate eliminative or permissive views is by focusing our attention on parity violations.

<sup>19</sup>For the purposes of this paper, I'm not taking a stand on what the "correct" theory of explanation is (or, what the "correct" theories of explanation are). I'm assuming that any theory of explanation I discuss is a good candidate for being "correct." And, of course, there's a gap between thinking that a fact is brute given some theory of explanation and that fact really being brute given that theory of explanation. Someone could be wrong about what their theory of explanation predicts; they could also be wrong about, for example, the causal or grounding structure of the world. I'm also assuming throughout that moderates are at least fairly accurate on the predictions of their preferred theory of explanation.

bruteness.

But, again, there is more to arbitrariness than bruteness. We don't usually say that it's arbitrary that although our world had the initial conditions it actually had, there are *other* initial conditions our world might have had, even though we can't explain why our world had the initial conditions it actually had; I'll return to this point in §3.5. Arbitrary distinctions are inexplicable *and* parity-violating.

We've already seen examples of parity-violations. Different candidate sizes of possible worlds are on a par. This is what makes us think that if, say, 3-dimensional worlds are metaphysically possible, so, too, are 4-dimensional worlds. And so on. Likewise, dogs and people are on a par. This is what makes us think that if, say, dogs endure in a world, people endure in that world too. Tables and chairs are on a par; if tables exist as composite objects, so, too, do chairs (Fairchild & Hawthorne, 2018). Snowballs and snowdiscalls are on a par; if snowballs exist, so, too, do snowdiscalls (Fairchild & Hawthorne, 2018).

Our judgments of parity have an implicit standard built in. Dogs and people are *not* on a par with respect to their abilities to smell. But we don't think that olfactory abilities are *relevant* to whether objects endure or perdure. What we really mean by saying "dogs and people are on a par" is that dogs and people are on a par with respect to some kind of standard we think is relevant to how objects persist (maybe, for example, that they're both concrete objects).

Parity *alone* cannot motivate permissivism or eliminativism; this is one of the main contributions of (Fairchild, 2021). Anti-arbitrariness practitioners need homogeneity principles, too. And we can think of homogeneity principles as underwriting our parity judgments. For example, we have the following parity principle:<sup>20</sup>

**Spacetime Parity:** For any worlds with spacetime sizes  $x$  and  $y$ , if there is no relevant, significant difference between  $x$  and  $y$ , then if  $x$ -sized worlds are possible,  $y$ -sized worlds are possible, too.

But **Spacetime Parity**, by itself, does not get us to a permissive or eliminative view about modal space. We need **Spacetime Homogeneity**, too:

**Spacetime Homogeneity:** For any spacetime sizes,  $x$  and  $y$ , there is no relevant, significant difference between size  $x$  and size  $y$ .

A different way to put it is that parity-violations strike us as problematic *because* we have underlying homogeneity assumptions. We expect that spacetime sizes are homogeneous with respect to being metaphysically possible; it shouldn't be the case that some spacetime sizes are possible, but not others.

---

<sup>20</sup>The structure of **Spacetime Parity** and **Spacetime Homogeneity** are borrowed from (Fairchild, 2021).

Similar to before, we can think of parity (and homogeneity) judgments as being critical to classifying certain distinctions as arbitrary. If we didn't judge that 3-dimensional and 4-dimensional worlds were on a par (because we didn't expect spacetimes to be homogeneous with respect to possibility) then we wouldn't have a problem distinguishing between 3-dimensional and 4-dimensional worlds. Anti-parity judgments chase arbitrariness away.

It is important to distinguish between **Spacetime Homogeneity** and **Spacetime Parity** if you are, as I am, engaged in a project of defending certain arbitrary theories. I want to allow for theories that violate homogeneity without additionally being committed to the conditional parity principles. That is, I want to allow for there being no relevant, significant difference between spacetime size  $x$  and spacetime size  $y$  without further committing myself to the principle that if size  $x$  and size  $y$  are on a par, then if one is possible, the other is too. **Spacetime Homogeneity** and **Spacetime Parity**, combined, rule out a Lewisian restriction on modal space.

Putting the pieces together, I suggest that we understand an arbitrary distinction as being (1) brute and (2) parity-violating with respect to a standard we expect to be homogeneous (and relevant) to the matters at hand.

One final note. Distinguishing between the bruteness aspect of arbitrariness and the parity-violating aspect might be a mistake. Why might we believe specific parity principles, like **Spacetime Parity**? It's a bit easier to defend by way of a question: What relevant, significant difference between 3-dimensional and 4-dimensional worlds could there even be? Any distinction between 3-dimensional and 4-dimensional worlds would have, it seems, to be brute because *there is no* relevant, significant difference between 3-dimensional and 4-dimensional worlds (this just is **Spacetime Homogeneity**). We ought to avoid bruteness, so given **Spacetime Homogeneity**, we ought to accept **Spacetime Parity**.

Generalized, the point is this: Underwriting our parity principles *might* be an aversion to bruteness. And if that's the case, the bruteness of an arbitrary distinction and the parity-violation ought not be so sharply distinguished.

I'd like to leave room for reasons to endorse parity principles other than a general aversion to bruteness. For example, we might be drawn to accepting **Spacetime Parity**, not because of an aversion to bruteness generally in our metaphysics, but because specific parity violations, like violations of **Spacetime Parity**, would threaten our modal epistemology (I'll return to this point very briefly in §3.4).<sup>21</sup> So I'll continue to treat the bruteness and the parity-violatingness

---

<sup>21</sup>Hawthorne & Uzquiano (2011) say something similar concerning Lewis's modal realism and Williamson's necessitism:

While it seems perfectly imaginable that there are in fact at most seven angels on the point of any needle, it would be most surprising if some particular finite number provided a necessary upper bound. We would after all, find it ridiculous to be told that there are, of necessity, at most seven happy zebras in reality. The proposed upper bounds seems no less ridiculous: in each case, the



aspects of arbitrariness as separate. But since I ultimately think that the key to making peace with arbitrariness involves thinking more seriously about explanation, it's even more grist for my mill if worries over parity ultimately reduce to worries over explanation.

### 3.3.2 How "objective" is arbitrariness?

I've been trying to think about arbitrariness, where it attaches not to our beliefs, but to distinctions postulated by a theory that are meant to reflect differences in our world. I said earlier that "in-the-world arbitrariness" could be misleading – we cooperate with the world in determining which distinctions are arbitrary.

To what extent does arbitrariness come from us and to what extent does it come from the world? This is a tricky question. And because I've broken arbitrariness up into two parts, I want to take this question into two parts.

Explanation: Some theories of explanation give the world all of the power in determining whether certain facts are brute. Take, for example, a theory that says that all explanation proceeds by way of causation or grounding.<sup>22</sup> This is a highly objective theory of explanation. If facts about what causes what or what grounds what are independent of how we view them, then bruteness facts are independent of our sensibilities as well. But think of a theory of explanation that says that explanation proceeds by way of causation or grounding *in a way that relieves our explanatory itch* – in a way, say, that unifies or simplifies the relevant facts *for us*. This is a highly subjective theory of explanation. On this account of explanation, bruteness facts have their origins in both the world and our sensibilities. Which facts are inexplicable is relative to your theory of explanation, and theories of explanation differ on how objective or subjective they are. So, how objective arbitrariness is depends, in part, on how objective the correct theory (theories) of explanation is (are).

Parity: Imagine for a moment that 3-dimensional worlds really are possible, but 4-dimensional worlds are not. If that is really the case, then we *might* be tempted to say that some Lewis apologist isn't distinguishing between things on a par when she correctly reports that 3-dimensional, but not 4-dimensional, worlds are possible. The modal universe, a bit more loosely, has already distinguished between 3-dimensional and 4-dimensional worlds. But there's clearly still a sense in which a Lewisian restriction, *even if it were true*, is weird and surprising to us (and this is so no matter where the restriction falls – *any* restriction is surprising to us because possible worlds

---

necessity seems an unhappy marriage of the brute and arbitrary. *If the true bounds of necessity would appear totally arbitrary to the human intellect, then our capacity to reason and theorize about modality is radically more impoverished than we imagine* (emphasis added, p. 56).

<sup>22</sup>See (Skow, 2016).

don't wear their size limit on their sleeves). Even if our modal universe were to "disagree", *to us* worlds with different spacetime sizes are on a par. I think we ought to take this intuition seriously. If we treat parity-violations as being determined by the world, moderates trivially get to deny that their view is parity-violating, and, by extension, arbitrary. But moderates clearly have something to answer for; they shouldn't get to weasel out of an arbitrariness charge so easily. I suggest that parity-violations are "up to us"; they depend solely on our beliefs about homogeneity and relevance. So, no matter how objective your preferred theory of explanation is, arbitrariness inherits at least some subjectivity from our judgments.

So, our arbitrariness judgments are partially subjective. Deciding on how objective or subjective arbitrariness is raises a bit of a dilemma for eliminativists and permissivists that take arbitrariness arguments seriously; I return to this point briefly in §3.6.

### 3.3.3 *Why is arbitrariness bad?*

What's the badness of an arbitrary theory? In being committed to a parity-violating distinction, the theory violates our relevant parity principle. This calls out for explanation. But since the distinction is brute, no explanation is in the offing, leaving us both wanting more and unable to get what we desire.

Given this account of arbitrariness, one natural way to argue *against* an arbitrariness charge is to argue that your theory is *not* parity-violating (generally, but not always, by way of denying the relevant homogeneity principle). But what if we don't see a way to deny a parity-violation? Or, what if we don't want to see a way? Even if Lewis couldn't find a way to argue that different spacetimes are not on a par, he could have just denied that there is a set of all possible worlds in order to avoid arbitrariness. But Lewis (1986), instead, restricts the size of possible worlds, holding out hope that there might be some "natural break" (p. 103). I'm going to try and defend the spirit of Lewis's moderate response, but I'd like to cancel any thought that Lewis need be holding out hope for non-arbitrariness: A bit loosely, it's only by recognizing that any restriction to our principle of recombination *must* be arbitrary that Lewis's restriction becomes tolerable. And in order to do this, we need to focus on the bruteness of arbitrary distinctions. This will be the eventual focus of the next section.

So, I want to turn our attention to a different lesson about arbitrariness we can learn by thinking about examples: Not all arbitrary theories are themselves on a par. Some are worse than others. And once we learn how to distinguish between different kinds of arbitrary theories – specifically, between different levels of explanation – we can think more seriously about whether some kinds of arbitrariness are tolerable in our existing theories.

### 3.4. Can arbitrariness be tolerable?

#### 3.4.1 Parity

We don't tolerate every arbitrary theory equally. Compare, for example, Lewis's theory that there is some restriction to the size of possible worlds and a fictitious Lewisian that agrees with Lewis on everything except, according to the fictitious Lewisian, my two dogs necessarily co-exist. Lewis arbitrarily distinguishes between spacetimes. The fictitious Lewisian arbitrarily distinguishes between spacetimes *and* arbitrarily distinguishes between my dogs and other concrete objects. So the fictitious Lewisian is committed to a greater number of parity-violations than Lewis, which seems worse. There are more why-questions going unanswered. For example, why is the restriction *here* rather than *there*? And, why do *these* two dogs necessarily co-exist, but not *those* pairs of concrete objects? But, maybe, the fictitious Lewisian is also committed to a more severe parity-violation; distinguishing between my dogs and other concrete objects is weirder or more surprising. Maybe, the fictitious Lewisian threatens our modal epistemology more than Lewis by being committed to a weirder parity-violation.

Just what amounts to severe, or more-severe, parity violations, and when a parity violation threatens our epistemological story in some philosophical landscape are *very* delicate questions. And they are questions that I won't spend my time on here.<sup>23</sup> This isn't because I think that answering these questions doesn't do any work for the moderate or permissivist who wants to commit herself to some kind of arbitrariness, but because I think there's *even more work to be done*. Even if we can give a theory about what makes a parity violation severe (so that we might motivate adopting less severe parity violations) and even if we can tell a story about when parity violations threaten (or fail to threaten) our epistemology in some philosophical landscape, the moderate/permissivist isn't done.

All this little example is meant to show is this: The kinds of parity-violations matter. Arbitrary theories can differ on the *amount* of parity-violations they're guilty of. They can also differ on the *severity* of their parity-violations. And surely this matters when we go to chalk up the scoreboard comparing competing theories.

*But*, in order to really start rehabilitating arbitrary theories (and the reputation of arbitrariness in our metaphysics, more generally), we need to do *more* than just think seriously about parity-violations. Lewis's moderatism – for all I've said so far – still isn't a very attractive view: It

---

<sup>23</sup>Other people have spent time thinking about related questions, especially whether our "knowledge" of moderate views is debunkable because our beliefs in moderate views aren't appropriately connected to the world. See (Korman, 2015), especially Chapter 7, for an extended look at how to formulate debunking arguments concerning moderate mereological views and for skepticism that these debunking arguments are successful. Fairchild & Hawthorne (2018) also share this skepticism and go on to motivate a case against certain moderate views in metaphysics in a different way: they're weird!

cannot explain why it distinguishes between spacetime size  $x$  and spacetime size  $y$ , which are on a par.<sup>24</sup>

And I suggest that arbitrary theories can also differ on the score of explanatory depth. Some arbitrary theories have *shallow* inexplicability, and it's this kind of arbitrariness that ought to be tolerated in our philosophical theories. The rest of this section will be devoted to clarifying this idea.

### 3.4.2 Explanation

Here's a preview of things to come. I go through three examples (regarding a restricted principle of recombination, possible worlds without mixed persistence facts concerning concrete objects, and mind-body physicalism) where I try to show that given certain background metaphysical assumptions and theories of explanation, we can isolate specific views that are tolerably arbitrary. Such views are *tolerably* arbitrary, I'll argue, because we *can explain* why we cannot explain whatever arbitrary distinction the view is committed to. One or more of the examples might not strike your fancy, and that's okay. My goal isn't to argue that each of these views is the best view *all things considered*; I want to, instead, illustrate a general move available to the moderate that helps to keep her view viable for continued investigation. Along the way, I address whether tolerably arbitrary theories are *worse* than views in which we cannot explain some arbitrary distinction.

#### 3.4.2.1 A restricted principle of recombination and weak arbitrariness

If I'm going to be using different levels of explanation, I want to start off with a particular theory of explanation. This is the theory that I'll rely on for our first example; other examples use other theories of explanation.

In particular, I want to start by thinking about what makes for a mathematical explanation; here I borrow from (Lange, 2016), especially chapters 7 and 8. Lange evocatively argues for a distinction between mathematical proofs that *explain why* some result obtains and proofs that merely *show* that some result obtains. As an example (see (Lange, 2016), §7.4), consider d'Alembert's theorem:

If the complex number  $z = a + bi$  (where  $a$  and  $b$  are real) is a solution to  $z^n + a_{n-1}z^{n-1} + \dots + a_0 = 0$  (where the  $a_i$  are real), then  $z$ 's "complex conjugate"  $\bar{z} = a - bi$  is also a solution.

---

<sup>24</sup>In other words, even if our knowledge of some moderate view isn't debunkable, we still need to defend the view's weirdness.

Explanatory proofs of d'Alembert's theorem exploit the symmetry of  $i$  and  $-i$ . As Lange puts it:

... $-i$  could play exactly the same roles in the axioms of complex arithmetic as  $i$  plays. Each has the same definition: each is exhaustively captured as being such that its square equals  $-1$ ...Whatever the axioms of complex arithmetic say about one can also be truly said about the other. Since the axioms remain true under the replacement of  $i$  with  $-i$ , so must the theorems – for example, any fact about the roots of a polynomial with real coefficients...The symmetry expressed by d'Alembert's theorem is thus grounded in the same symmetry in the axioms (p. 240-1).

And proofs of d'Alembert's theorem that don't exploit the symmetry of  $i$  and  $-i$  (Lange calls them “brute-force” proofs), are those that merely show that d'Alembert's theorem is true.

Symmetry isn't the only feature that mathematical explanations might exploit; we care about other features, too: for example, simplicity and unity. Generalizing these thoughts, explanatory proofs are those that exploit some salient feature in the setup – the same kind of salient feature found in the result that we want to prove.

I happen to find Lange's account of mathematical explanation (which I've only just briefly glossed here) to be rich, interesting, and worth taking seriously. But the broad point that I make in this section – that we can recognize different levels of explanation once we sign up for a specific theory of explanation – is independent of any specific theory we might adopt. So, I adopt something like Lange's account in order to help think about this specific example of arbitrariness, but the general lesson of this section doesn't rely on this assumption.

Now that we have an idea of what makes for a mathematical explanation, we can identify certain results that we *expect* to have no explanation. Explanatory mathematical proofs require picking up on a salient feature in the desired result in the setup of the proof. But if some desired result has no salient feature (no feature that strikes us as calling out for explanation) or if no setup (for the same desired result) can take advantage of any salient feature of the result, then our desired result has no explanation *even if we can show that it is true*. We *predict* this just by reflection on our account of explanation.

Here's a concrete example of a so-called *mathematical coincidence*, a mathematical result we can *show* to be true, but can't explain why it's true:<sup>25</sup>

---

<sup>25</sup>This example is also from the (Lange, 2016); Lange is drawing, in part, from (Baker, 2009) who credits this example to mathematician Timothy Gowers. See all of Chapter 8 of the (Lange, 2016) for a wealth of examples. See also (Baker, 2009) for more examples of and defense of mathematical coincidences.

Consider the decimal expansion of  $e$ , which begins 2.718281828...Mathematicians regard this fact about  $e$ 's decimal expansion as having no explanation. Of course, there are many ways to derive  $e$ 's value and thus to derive that the third-through-sixth digits of its base-ten representation are repeated in the seventh-through-tenth digits. For example, we could derive this result from the fact that  $e$  equals the sum of  $(1/n!)$  for  $n = 0, 1, 2, 3, \dots$ . However, such a proof does not *explain why* the seventh-through-tenth digits repeat the third-through-sixth digits...[because] from which the proof begins does not exhibit any feature similar to the repeated sequence of digits in  $e$ 's decimal expansion (p. 257).

We can extend Lange's account of mathematical explanation to cover proofs more generally: When a proof's result has a salient feature that calls out for explanation and the setup of that proof exploits that very same feature, the proof is explanatory.

And now we finally have enough tools to talk about arbitrariness directly.

Forrest & Armstrong (1984)'s argument, remember, is a *reductio ad absurdum* of the assumptions that (1) there's a set of all possible individuals and (2) an unrestricted principle of recombination holds. This leads to a contradiction; the moderate (like Lewis) responds by restricting her principle of recombination. If we were to restrict our principle of recombination, any restriction would strike us as parity-violating. Is such a restriction brute?

I think, yes. Throughout this example, I'm going to assume two things about explanation: (1) that a Lange-inspired view of explanatory proofs is correct and (2) that explanation outside of proofs proceeds by way of causation or grounding in a way that unifies or simplifies or otherwise illuminates the relevant facts for us.<sup>26</sup> Here's a template of one moderate story:<sup>27</sup>

Recall Lange's distinction between a proof merely *showing* us that some result is true and a proof *explaining why* that result is true. Forrest & Armstrong (1984)'s argument *shows* me that I must limit our principle of recombination; it doesn't *explain why* there must be some restriction.<sup>28</sup> Moreover, given the homogeneity judgments I have about the spacetimes of concrete possible worlds – there is no relevant, significant world-theoretic difference between spacetime size  $x$  and spacetime size  $y$  – *nothing* could explain why  $x$ -sized worlds are possible, but  $y$ -sized worlds are not. So, my restriction is brute.

---

<sup>26</sup>For an example that employs more "objective" views of explanation, see §3.4.2.3 and §3.4.2.4.

<sup>27</sup>And just to emphasize, you don't need to believe in this story, or believe that the moderate view is the best view *all things considered*, in order to appreciate the "weak arbitrariness" dialectical move that's available to the moderate.

<sup>28</sup>That is, unless we were to become permissivists or nihilists about modal space, but I'll set those views aside.

Filling in the details, now.

The Forrest & Armstrong argument doesn't *explain why* modal space has a restriction on the size of possible worlds. The salient result of the Forrest & Armstrong argument (taken as a reductio ad absurdum argument) is that we need some, non-specific restriction to our principle of recombination. But the setup of the argument only requires premises that do not have any obvious built-in restrictions (after all, one of the premises is the unrestricted principle of recombination). And, assuming our Lange-inspired theory of explanatory proofs, we *predict* that if the setup of a proof cannot exploit the salient, surprising feature of the result, then the proof cannot be explanatory. So, under this view of explanation, Forrest & Armstrong's argument (and any other reductio ad absurdum argument) is not explanatory.

Moreover, nothing could explain why  $x$ -sized worlds are possible, but  $y$ -sized worlds are not. Why? Well, what explanation could there be if spacetimes  $x$  and  $y$  really are on a par? Put differently, our acceptance that for any spacetime sizes  $x$  and  $y$ , there is no relevant, significant difference between  $x$  and  $y$  prevents there from being any explanation for our restriction. Any explanation that would be illuminating to us would cite a relevant, significant difference between possible spacetime sizes and impossible spacetime sizes. So, our restriction is brute.

The moderate's template above is incomplete. All she's done is say why her restriction is brute. Is there a way to make her theory more attractive? Yes, if she draws on more of the explanatory resources at her disposal. The template is missing this:

Even though my distinction between  $x$ -sized and  $y$ -sized possible worlds is brute, I can explain why I can't explain it.

How can we explain why I cannot explain my restriction on the principle of recombination? In some sense, we already have the explanation. Because I've already explained why – I didn't just stipulate that – this restriction is brute, and brute facts cannot be explained. But in a bit more detail, assume:

**Spacetime Homogeneity:** For any spacetime sizes,  $x$  and  $y$ , there is no relevant, significant difference between size  $x$  and size  $y$ .

**Spacetime Homogeneity** can be used to motivate a permissive or eliminative view about modal space: if all spacetime sizes really are on a par, then any restriction on our principle of recombination would violate parity. But permissivists and eliminativists need something additional, an anti-arbitrariness premise, to move from **Spacetime Homogeneity** to **Spacetime Parity**:

**Spacetime Parity:** For any worlds with spacetime sizes  $x$  and  $y$ , if there is no relevant, significant difference between  $x$  and  $y$ , then if  $x$ -sized worlds are possible,  $y$ -sized worlds are possible, too.

The arbitrariness-tolerant moderate can accept **Spacetime Homogeneity** and use it not as motivation to accept **Spacetime Parity**, but, instead, as an explanation of why her restriction is brute. If spacetime sizes are on a par, and if explanation requires illumination, any distinction between spacetime sizes will be brute. No illuminating explanation is in the offing as to why we are forced to distinguish between spacetime sizes on a par.<sup>29,30</sup>

This example gives the moderate a gift: Sometimes bruteness is quite shallow. Even if we cannot explain some commitment of our theory (e.g., the restriction to our principle of recombination), we can sometimes explain this explanatory “shortfall” (e.g., no proof can proceed from the premises of the Forrest & Armstrong argument to the denial of the unrestricted principle of recombination in a way that is explanatory; moreover, given our homogeneity judgments concerning spacetimes of possible worlds, there could be no explanation for our specific restriction).

A bit more formally, the move I’m after is this: A theory is *weakly arbitrary* if and only if it’s committed to a brute (and parity-violating) distinction whose bruteness we can explain. And I submit that the moderate view sketched above is only weakly arbitrary.

A weakly arbitrary theory answers the question as to why a particular distinction is brute. Bruteness is often viewed as a vice. Is weak arbitrariness an explanatory burden of a theory at all? If we know that we cannot explain why  $x$ -sized worlds, but not  $y$ -sized worlds, are possible (our theory of explanation and our metaphysics of possible worlds seemingly rules out there being explanations of this distinction), then we shouldn’t be pressed to be in search of some explanation we know that we cannot procure. Once we discover that any explanation for our theory’s brute commitment is out of reach, weakly arbitrary theories don’t postulate distinctions that call out for explanation. We have all of the explanation that we could reasonably want or need.

### 3.4.2.2 Is weak arbitrariness *worse*?

A brief pause. I think weak arbitrariness is tolerable. But knowing that we cannot explain some commitment of our theory might feel *worse* than not knowing if we can explain that commitment or not. I’m going to try and explain away this intuition by providing a bit of an error theory.

---

<sup>29</sup>This isn’t the only way a moderate can explain why her distinction is brute. See §3.4.2.3 and §3.4.2.4.

<sup>30</sup>We could treat the Williamsonian restriction prompted by Sider (2009) analogously to this example.



Coming to know that we cannot explain something squashes hope that we just haven't figured it out yet. Coming to realize that your theory is weakly arbitrary squashes hope that it is not arbitrary at all. This is obviously disappointing: Weakly arbitrary theories have an unanswered why-question where non-arbitrary theories do not.

But, coming to know that we cannot explain something because it's brute at least alleviates our fears over our own explanatory deficiencies. This is obviously comforting: the unanswered why-questions of weakly arbitrary theories don't call out for further explanation. We know there is no such explanation, given a package of explanatory and metaphysical commitments.

The phrase "we cannot explain" is ambiguous between a reading in which we cannot explain something simply because we haven't discovered an explanation which is ripe for the picking and a reading in which we cannot explain it because there is no explanation. On the first reading, coming to realize that we cannot explain a commitment of our theory is disappointing. But on the second reading, it's a relief – it relieves one of the obligation to do something not even an ideal reasoner could do, given a package of some theory of explanation and background metaphysical beliefs.

### 3.4.2.3 Mixed-persistence worlds

The above example suggests that, maybe, using weak arbitrariness as a tool to rehabilitate moderate views is only going to work when we have a paradox or *reductio ad absurdum* on our hands. Or, maybe, using weak arbitrariness requires highly subjective theories of explanation. This is mistaken.

Suppose that I'm a Humean about metaphysical laws: I believe (1) that metaphysical laws (like laws concerning how concrete objects can persist) are grounded in/reduce to/read off of individual matters of fact and (2) that these individual matters of fact are not grounded in/reduced to/read off of anything else.<sup>31</sup> Let's also suppose that I believe that metaphysical explanation proceeds by way of pointing, only, to grounding facts: If a fact cannot be explained via this mechanism, then we expect that this fact is brute.

I postulate a specific metaphysical law: Necessarily, there are no "mixed" possible worlds both with enduring and perduring concrete objects. So, necessarily, in worlds with dogs and humans, if dogs endure, then humans endure, too. And, necessarily, if dogs perish, then humans perish, too.

A modal rationalist would object: Modal space without mixed worlds has an arbitrary hole (mixed and non-mixed worlds are on a par with respect to conceivability), and modal space cannot be arbitrary.

---

<sup>31</sup>And analogously to the other examples above, you don't need to endorse Humean accounts of metaphysical laws or explanation in order to acknowledge whether the Humean is committed to weak arbitrariness.

Can I, as a Humean, explain why some worlds are possible, but not others? No. Neither the law I've postulated nor the individual matters of fact will do the required explanatory work (and there seems to be nothing else that will do this explanatory work).

Not the law: Humean metaphysical laws come metaphysically downstream of individual matters of fact. That non-mixing worlds are possible, but mixing worlds are impossible, is metaphysically prior to my metaphysical law. So, I can't make appeal to my metaphysical law in order to explain why non-mixing worlds are possible and mixing worlds are not.

Not the individual matters of fact: Another tenet of Humeanism is that individual matters of fact – in this case the individual persistence facts of each world – are not reduced to anything else. So, I can't make appeal to anything else in order to explain why non-mixing worlds are possible and mixing worlds are not.

So, the Humean's distinction between non-mixing and mixing worlds, with respect to possibility, is brute.

Can we explain why I cannot explain why some worlds are possible but not others? Yes. Individual persistence facts are not reduced to anything else (they're either not reducible or not apt for reducing). So, we cannot metaphysically explain them; there just are no grounding facts to point to. And we expect this because my background Humean metaphysics requires that individual persistence facts are fundamental.<sup>32,33</sup>

So, the Humean who denies that persistence mixing within worlds is possible can respond to the modal rationalist's charge of believing in an arbitrary theory: It's only weakly arbitrary. This response might not be dialectically responsive; modal rationalists might reject a Humean

---

<sup>32</sup>Note that I am not directly inferring ontological bruteness from the fundamentality of patterns in modal space. Taylor (2018) taught us why fundamentality doesn't entail ontological bruteness: Sometimes fundamental facts can explain other fundamental facts. What's important for our purposes, is that such a "same-level" explanatory fact doesn't appear when trying to explain the patterns of modal space.

<sup>33</sup>Humeans sometimes distinguish between *metaphysical* explanation and *scientific* explanation in order to avoid circularity worries; see, for example, (Loewer, 2012) and (Bhogal, 2020). And Bhogal (2020) suggests something similar for Humean accounts of *scientific* explanation. Bhogal, p. 6-7, suggests a unificationist approach to Humean *scientific* explanation: Explanatory theories are those that unify. Loewer (1996), p. 197, and Miller (2015), p. 1326, also articulate a unificationist approach to Humean scientific explanation. And, given this account of scientific explanation, Bhogal gently proposes that the Humean is off the hook for certain facts being brute:

After all, if the force of explanation comes from fitting particular events into more general patterns, in order to unify the event in question with other events, then it is natural to think that the most general patterns in the mosaic must be unexplained. So, perhaps we could argue that the unificationist conception of explanation motivates the appropriateness of taking these general patterns as unexplained (p. 7).

And, what I've just suggested, is that we can understand the Humean as being similarly off the hook for metaphysically explaining facts her metaphysics requires to be brute.

account of metaphysical laws, for example. But, by the Humean's own lights, she needn't be worried about her theory being overly arbitrary.<sup>34</sup>

#### 3.4.2.4 Mind-body physicalism

You don't need to be a Humean to argue that your view is only weakly arbitrary using broadly objective views of explanation. Suppose that I believe in psychophysical identities. I think that pain is identical to c-fiber firing, where 'c-fiber firing' is just a stand-in for whatever happens to actually describe the physical basis of our pain. (Or, I think that instances of pain are identical to instances of c-fiber firing.) And let's also suppose, following the last example, that metaphysical explanation proceeds by way of pointing to grounding facts. If some facts cannot be explained via this mechanism, then we can expect that and explain why these facts are brute.<sup>35</sup>

Physicalism infamously give rise to an *explanatory gap*, often glossed as a why-question: Why is c-fiber firing associated with *this* phenomenal state/property rather than *that* phenomenal state/property?<sup>36</sup> The explanatory gap isn't always framed in terms of arbitrariness, but it's easy to do: Why is c-fiber firing associated with *this* phenomenal state/property rather than *that* phenomenal state/property; isn't it arbitrary that c-fiber firing be associated with *this* phenomenal state/property?

The identity theorist tries to close this gap. C-fiber firing is associated with *this* phenomenal state/property because c-fiber firing is *identical with* this phenomenal state/property. But worries might remain. Once we learn of other identities (for example, that Hesperus is identical to Phosphorus), we're seemingly no longer able to conceive of one existing without the other. Hesperus cannot exist without Phosphorus; they're identical. Any case in which I thought I had imagined Hesperus existing without Phosphorus is really just a case in which I imagined a qualitatively identical scenario where Hesperus and Phosphorus are still identical. But, in the voice of an objector, pain is different than Venus: anything qualitatively identical with pain just is pain. So whenever I imagine there being c-fiber firing without there being pain or vice versa, I *cannot* redescribe these cases where it turns out that c-fiber firing is still identical with pain. Learning that Hesperus is identical with Phosphorus screens off epistemic possibilities in a way that learning that c-fiber firing is identical with pain does not. In other words, the physicalist's identities seem gappy when compared to other identities, which is what makes the "why is c-fiber firing identical to *this* phenomenal state/property rather than *that* phenomenal state/property?" question still feel enticing as a challenge to the physicalist.

---

<sup>34</sup>And since Lewis is, after all, a Humean, he could respond to the arbitrariness charges in this vein rather than what was suggested earlier.

<sup>35</sup>This example is inspired from Almotahari (2011)'s Chapter 3, who already had all of the tools to argue that a version of physicalism is only weakly arbitrary when employing a unificationist picture of explanation.

<sup>36</sup>See for examples (Levine, 1983), (McGinn, 1989), and (Nagel, 1974).

A lot of ink has been spilled about these and related issues.<sup>37</sup> Here's what an identity theorist, who doesn't want to get tangled in these weeds, could say: Different psychophysical states are on a par with respect to their suitedness for realizing pain. But identities are brute.<sup>38</sup> Identity facts are not grounded (either they are ungrounded or they are not apt to be grounded). So, if explanation requires citing grounding facts, we can't explain why c-fiber firing is identical with pain rather than some other phenomenal state/property. But, at least, our metaphysics and our theory of explanation allow us to explain why we cannot explain this fact.

Such a response will likely not be dialectically responsive. But, by the physicalist's own lights, she needn't be worried about her theory being overly arbitrary.

To summarize where we've been so far, I've tried to show that certain moderate views concerning a restricted principle of recombination, non-mixed-persistence worlds, and mind-body physicalism can be defended on the basis that they are only weakly arbitrary. There may be ways to defend these moderate positions on the basis that they aren't arbitrary at all, but I haven't explored that route. I haven't even argued that any of these views are the best or desirable all things considered.

Weak arbitrariness is a stable stopping point for moderate theories. Although weakly arbitrary theories have fewer why-questions answered than their non-arbitrary counterparts, weakly arbitrary theories answer all of the why-questions they deem as being answerable. From their perspective, they bear no explanatory deficit.

Looking forward, now, I end this section by thinking about how to compare contingent and necessary arbitrariness. §5 addresses a couple of questions about context-sensitivity. And §6 concludes with three general morals.

### 3.4.3 *Contingency*

I started this section by suggesting that arbitrary theories can differ on the score of parity. This kind of difference is *important*, but we also need to think about how arbitrary theories can differ on the score of explanatory depth as well. I'd like to end this section by thinking about another way arbitrary theories can differ: They can disagree on the modal strength of their arbitrary distinctions. And I want to think about modal strength because it can feel tempting to suppose that contingent arbitrariness is always better than necessary arbitrariness.

Lewis, certainly, seemed quite comfortable with contingent arbitrariness in his picture of modal realism. Think of genuine chance processes that result in one outcome over another. Or

---

<sup>37</sup>For an incomplete list, see (Kripke, 1980), (Chalmers, 1996), (Chalmers, 2002), (Yablo, 2000b), (Yablo, 2006b), and (Byrne, 2007).

<sup>38</sup>For two very different metaphysical systems sympathetic to this, see (Sider, 2013) and (Dasgupta, 2014). For a nice overview of whether and how to think of identity facts as being either fundamental or not, see (Shumener, 2017).

suppose that fundamental particles cannot be created or destroyed; we have one number of these particles in the actual world instead of another number. Or imagine that our world has certain physical constants that figure into the actual laws of nature instead of others. All seem arbitrary. Does modal realism explain away the arbitrariness? Here's Lewis (1986), being rather nonchalant:

So we have, first, the non-contingent fact that there are a plurality of worlds, wherein the alternatives are selected all different ways. There is nothing arbitrary there, and nothing that cries out for explanation...And we have, second, the ego-centric fact that we are these people who live in this world, rather than other people who live in other worlds. Maybe that is in some sense arbitrary, but it also does not cry out for explanation. But take the two together, and they yield the arbitrary facts about this world that caught our attention: the outcome of the chance process, the number of the conserved particles, the value of the physical constant...So where has the arbitrariness gone? Nowhere. It remains where it always was (p. 130).

But Lewis was quite concerned about positing a size-limit for all possible worlds. In part, Lewis (1986) seemed more concerned with arbitrariness of his size restriction than arbitrariness of the outcome of actual chance processes because, to paraphrase, when something is arbitrary it feels like it could have been otherwise (p. 103). The outcome of the actual chance process could have been otherwise. But Lewis's size restriction is a feature of "all possible worlds" so, under his view of modality, it couldn't have been otherwise.

I'd like to quite explicitly push back against this temptation to think that contingent arbitrariness is always better than necessary arbitrariness. We've already seen that weakly arbitrary distinctions can be necessary. For example, Lewis conceived of his size and shape restriction to apply consistently to all possible worlds. The Humean metaphysical law that worlds cannot have persistence-mixing was stipulated to be metaphysically necessary. And identities, like the physicalist's psychophysical identities, are metaphysically necessary.

Lewis already had the tools to see that we ought to be thinking about explanatory depth instead of modal strength. Sometimes, an arbitrary distinction couldn't have been otherwise, and we can explain why this is so. I'll leave this section with a lesson from Lewis (1986) that he, himself, ought to have taken more seriously:

If arbitrary-seeming facts cry out for explanation and no explanation is forthcoming, modal realism may somehow provide solace and remove our stubborn conviction that there *must* be some further explanation, if only we could find it. If so that is all to the good, since that conviction was unreasonable in the first place (p. 132).

### 3.5. Sensitivity to background metaphysics

Whether or not a distinction is arbitrary requires teamwork from both the world (which helps to determine which facts are brute) and us (we determine which distinctions are parity-violating given our homogeneity judgments). Which homogeneity judgments we take to be relevant to matters at hand, however, is sensitive to background metaphysical assumptions. (I give an example of this below regarding the grounds of modal truths.) So, whether a distinction is arbitrary is sensitive to background metaphysical assumptions.

This sensitivity of arbitrariness raises a whole host of interesting and worthwhile questions. I want to think through (but not necessarily answer) two:

- 1 If our judgments of arbitrariness are sensitive to background metaphysical assumptions, can you always get rid of arbitrariness by changing background metaphysical assumptions?
- 2 Which background metaphysical assumptions ought we to prioritize when doing metaphysics?

To take the first question first, can you always change background metaphysical assumptions in order to get rid of arbitrariness? Not obviously.

Think about our world's initial conditions. Imagine for a moment that the actual initial conditions couldn't have failed to obtain. If the initial conditions couldn't have been otherwise, then we have a parity-violation between possible and impossible worlds. We could wonder why *this* world (with the actual initial conditions) is possible, but not *other* worlds (with different initial conditions). Both kinds of world are on a par, for example, with respect to conceivability. Now stop imagining that it's necessary that our world had the initial conditions it actually had. Even if the initial conditions could have been otherwise, we have a parity-violation between the actual world and only merely possible worlds. We could wonder why *this* world (with the actual initial conditions) is actual, but not *other* worlds (with different initial conditions). Both kinds of world seem to be equally good candidates for being the actual world. And, it's important to note, facts concerning actual initial conditions are still brute; we still haven't provided any explanations as to why certain initial conditions actually obtain just by varying the modal status of facts concerning the actual initial conditions.

Here, we've shifted background metaphysical assumptions by changing the modal strength that facts about actual initial conditions are taken to have. We start off by thinking of the actual initial conditions as being metaphysically necessary, but we end by thinking of them as being metaphysically contingent. The arbitrariness doesn't disappear. Now, it might have

gotten more tolerable (impossible-possible parity-violations often strike us as worse than actual-possible parity-violations because the former threaten our modal epistemology). Nevertheless, arbitrariness remains.<sup>39</sup>

So, it isn't obvious that we can *always* get rid of arbitrariness merely by modifying our background metaphysical assumptions. But, *maybe*, sometimes we can. Recall the rationalist's "dilemma" from §3.2. It isn't a real dilemma; two different rationalists – with different metaphysical starting points – end up with very different modal maps. Each can accuse the other of having an arbitrary theory. But, *by their own lights*, do they view their own theories as being arbitrary?

**Our world first:** If the modal truths of the actual world guarantee all truths of possible worlds, and if we wanted to minimize arbitrariness, we might be enticed by the idea that our world cannot be a mixed world. This is because mixed worlds distinguish between people and dogs, which are on a par with respect to their persistence conditions (they're both concrete objects). Zoom out, now, and think about the consequences for modal space. If it is impossible that our world be a mixed world, then no mixed worlds will be in our modal map.

If what matters in our metaphysical theorizing is minimizing the arbitrariness that *our world* could bear, then we'll be left with a small modal space. The **modal space first** theorist, who cares most about minimizing any arbitrary holes or edges in her modal map, criticizes our view as being arbitrary. But do *we* have to think of our view as being arbitrary?

We probably won't accept that conceivability entails possibility. We can conceive of our world featuring all sorts of arbitrariness: It's conceivable that in our world dogs endure, but people perish. So, even if mixed worlds and non-mixed worlds are on a par with respect to conceivability, the **our world first** theorist doesn't think that for any *conceivable* worlds  $x$  and  $y$ , there is no relevant, significant difference between worlds  $x$  and  $y$  with respect to being possible. Distinguishing between mixed worlds and non-mixed worlds is not parity-violating. So, it isn't arbitrary to include non-mixed worlds, but not mixed worlds, in our modal maps.

*From the perspective of the **our world first** theorist, her theory isn't arbitrary.*

---

<sup>39</sup>This kind of arbitrariness is analogous to the arbitrariness permissivists are often charged with being committed to even when paradox is out of sight. Remember from §1 that in response to the problem of the many, the mereological permissivist distinguishes between mereological fusions that are persons and very similar fusions that are not, in a seemingly arbitrary way. Why is *that* fusion a person and *this* fusion, not? And being a contingentist about certain facts is a way of expanding your modal map, a way of being more permissivist.

**Modal space first:** If the truths of possible worlds guarantee the modal truths of the actual world, and if we wanted to minimize arbitrariness, we might be enticed by the idea that mixed worlds are possible. This is because mixed and non-mixed worlds are on a par with respect to conceivability. Zoom in, now, and think about the consequences for specific worlds that show up in our modal map. If mixed worlds show up, then it is possible that our world be a mixed world.

If what matters in our metaphysical theorizing is minimizing the arbitrariness that our *modal map* exemplifies, then we'll be left with a large modal space. But the cost of having such a large modal space is that we allow in mixed worlds. The **our world first** theorist, who cares most about minimizing worldly arbitrariness, criticizes our view as being arbitrary. But, do *we* have to think of our view as being arbitrary?

We could try making the same move as the **our world first** theorist above and deny that distinguishing between dogs and people is parity-violating. But, remember, parity-violations come from us, not the world. The **modal space first** theorist has quite an uphill climb to try and convince others that dogs and people aren't on a par with respect to their persistence conditions.

Better, I think, to just admit that our theory is arbitrary (dogs and people are on a par with respect to their persistence conditions) and see if we can cook up a defense that our theory is only weakly arbitrary.

I take two big lessons away from this comparison.

First, sometimes a shift in background metaphysical assumptions can dissolve arbitrariness, at least when being judged by that view's own lights. The **our world first** theorist needn't view her own theory as being arbitrary. So, sometimes changing background metaphysical assumptions dissipates arbitrariness.

Second, and this lesson I take to be quite general and quite important, what plenitude amounts to depends on one's background metaphysics. The **our world first** theorist can view herself as being committed to a modally plenitudinous view. She can think, for example, that any non-arbitrary way for a world to be that we can conceive of is a possible way for a world to be. Any worlds the **modal space first** theorist thinks the **our world first** theorist's modal map lacks, are impossible by the **our world first** theorist's lights. She has achieved a maximally abundant array of possible worlds (other paradoxes notwithstanding). Put a different way, even "small" modal maps can still be thought of as plenitudinous. So, even our judgements about which views count as being permissive, moderate, or eliminative are sensitive to our



background metaphysical assumptions.<sup>40</sup>

Finally, I want to end this section by raising the following question: Which background metaphysical assumptions ought we prioritize when doing metaphysics? This is, I think, a question answered not by a theory of arbitrariness, but by one's metaphysics. I suspect that actualists, for example, with anti-arbitrariness intuitions will reason similarly to the **our world first** theorist above and possibilists with anti-arbitrariness intuitions might reason similarly to the **modal space first** theorist above. But I don't want to adjudicate (and I strongly suspect that we should be flexible about) these matters here. I want to say, instead, that it isn't the job of a theory of arbitrariness to give us prescriptions about which metaphysical assumptions we ought to prioritize. The job is to give a common framework and language for eliminativists, moderates, and permissivists in order to clarify what is at stake and what argumentative moves are available. And I hope that the framework that I've been building has done just that.

### 3.6. Conclusion

This paper has been a bit of an exploration: What does it mean for a theory to be arbitrary? Why is arbitrariness a theoretical vice? Are there less vicious varieties of arbitrariness? How sensitive to background metaphysical assumptions are our judgments of arbitrariness? I've been using the landscape of modal metaphysics when thinking through answers to these questions.

I take three large lessons from these travels.

First, viable metaphysical theories *can* be arbitrary. When a theory can explain why some parity-violating distinction is brute, it's potentially viable; weakly arbitrary theories explain all the facts they deem explicable. Of course, the specific parity-violations postulated by weakly arbitrary theories matter, too. Not every weakly arbitrary theory will be viable, because some parity violations threaten to undermine our epistemological prospects in a domain of inquiry.

Second, our arbitrariness judgments are partially subjective. This is because our judgments of parity are subjective, and theories of explanation differ in how subjective they are. A word of caution: Deciding on *how* objective or subjective arbitrariness is raises a bit of a dilemma for anti-arbitrariness practitioners. The more subjective our arbitrariness judgments are, the less arbitrariness arguments seem like a reliable guide to the world. Permissivists or eliminativists

---

<sup>40</sup> And this is important because permissivists often take themselves to be off the hook for answering certain questions. It's their commitment to permissivism that allows them to ignore questions of the form "Why is *that* fusion a person and *this* fusion, not?", "Why does *that* object have *that* modal profile but *this* object, co-incident with the first object, have *this* modal profile?", "Why is *this* world actual, but *that* world only possible?", and so on. See (Bennett, 2004) for an argument that permissivists concerning material plenitude don't have to answer the question "Why does *that* object have *that* modal profile but *this* object, co-incident with the first object, have *this* modal profile?"; this question, under permissivism, doesn't arise. But if what even counts as a permissivist view is context-sensitive, then views that are often considered to be moderate can be seen as permissive by their own lights (like the **our world first** view). *These* views can take advantage of this dialectical move, too.

sometimes frame arbitrariness worries as a concern over anthropocentrism. Why ought we expect the world to conform to our ordinary judgments regarding ontology; wouldn't this be arbitrary?<sup>41</sup> But if arbitrariness is highly subjective, then anti-arbitrariness permissivists and eliminativists can also be charged with anthropocentrism. Why ought we expect the world to appear non-arbitrary to us? But the less subjective our arbitrariness judgments are, the stronger the weak arbitrariness defense seems to be. Assume that we ought to adopt a purely objective account of explanation. Any facts that cannot be explained with this account are *ontologically brute*; there just are no other facts in virtue of which the brute fact obtains. How could we count it a vice if somebody couldn't explain a fact, that according to their theory, *the world* doesn't allow us to explain?

Finally, our arbitrariness judgments depend on our background metaphysical assumptions. This is important because you might have thought that doing metaontology doesn't require doing ontology. This paper joins several others – see Hewitt (2015) regarding Uzquiano (2006), and Fairchild (2021) – in suggesting that this is a mistaken methodology. Whether or not a distinction is arbitrary depends on whether it is brute and parity-violating. And whether or not a distinction is brute and parity-violating depends on our theories of explanation and our homogeneity judgments, both of which can be influenced by our background metaphysical assumptions.

If anything, I hope that this paper has further complicated the charge of arbitrariness. With all of these moving parts, it's possible to recognize different degrees and kinds of arbitrariness, which I've tried to illustrate through examples. This opens up new stops on the road to permissivism or eliminativism, which is helpful for both moderates and more cautious permissivists, alike.

---

<sup>41</sup>See (Yablo, 1987), p. 307.

## Bibliography

- Adams, Robert Merrihew. 1974. Theories of actuality. *Noûs*, **8**(3), 211–231.
- Adams, Robert Merrihew. 1981. Actualism and thisness. *Synthese*, **49**(1), 3–41.
- Almotahari, Mahrad. 2011. *Situating language and consciousness*. Ph.D. thesis, Massachusetts Institute of Technology.
- Armstrong, David Malet. 1989. *A combinatorial theory of possibility*. Cambridge University Press.
- Bacon, Andrew. 2013. Quantificational logic and empty names. *Philosophers' Imprint*, **13**(24).
- Baker, Alan. 2009. Mathematical accidents and the end of explanation. *Pages 137–159 of: Bueno, Otávio, & Linnebo, Øystein (eds), New waves in philosophy of mathematics*. Springer.
- Balaguer, Mark. 2016. Anti-Metaphysicalism, necessity, and temporal ontology. *Philosophy and phenomenological research*, **92**(1), 145–167.
- Bennett, Karen. 2004. Spatio-temporal coincidence and the grounding problem. *Philosophical Studies*, **118**(3), 339–371.
- Bennett, Karen. 2006. Proxy “actualism”. *Philosophical Studies*, **129**(2), 263–294.
- Bhogal, Harjit. 2020. Humeanism about laws of nature. *Philosophy Compass*, **15**(8).
- Black, Max. 1952. The identity of indiscernibles. *Mind*, **61**(242), 153–164.
- Builes, David. 2021. Ontology and Arbitrariness. *Australasian Journal of Philosophy*.
- Builes, David, & Teitel, Trevor. forthcoming. Lawful Persistence. *Philosophical Perspectives*.
- Byrne, Alex. 2007. Possibility and imagination. *Philosophical perspectives*, **21**, 125–144.
- Cartwright, Richard. 1975. Scattered objects. *Pages 153–171 of: Lehrer, Keith (ed), Analysis and metaphysics*. Reidel.
- Chalmers, David. 2002. Does conceivability entail possibility? *Pages 145–200 of: Gendler, T.S., & Hawthorne, John (eds), Conceivability and possibility*. Oxford University Press.
- Chalmers, David J. 1996. *The conscious mind: In search of a fundamental theory*. Oxford University Press.
- Dasgupta, Shamik. 2014. The possibility of physicalism. *The Journal of Philosophy*, **111**(9/10), 557–592.

- Davies, Martin, & Humberstone, Lloyd. 1980. Two notions of necessity. *Philosophical Studies*, **38**(1), 1–30.
- Einheuser, Iris. 2012. Inner and outer truth. *Philosopher's Imprint*, **12**(10), 1–22.
- Fairchild, Maegan. 2017. A paradox of matter and form. *Thought: A Journal of Philosophy*, **6**(1), 33–42.
- Fairchild, Maegan. 2021. Arbitrariness and the long road to permissivism. *Noûs*.
- Fairchild, Maegan, & Hawthorne, John. 2018. Against conservatism in metaphysics. *Royal Institute of Philosophy Supplements*, **82**, 45–75.
- Fine, Kit. 1977a. Properties, Propositions and Sets. *Journal of Philosophical Logic*, **6**(1), 135–191.
- Fine, Kit. 1977b. Properties, propositions and sets. *Journal of Philosophical Logic*, **6**(1), 135–191.
- Fine, Kit. 1985. Plantinga on the reduction of possibilist discourse. *Pages 145–186 of: Tomberlin, James E., & van Inwagen, Peter (eds), Alvin Plantinga*. Springer.
- Fine, Kit. 1994. Essence and modality: The second philosophical perspectives lecture. *Philosophical Perspectives*, **8**, 1–16.
- Fine, Kit. 1995. The logic of essence. *Journal of Philosophical Logic*, **24**(3), 241–273.
- Fine, Kit. 2003. The problem of possibilia. *Pages 161–179 of: Loux, Michael J., & Zimmerman, Dean W. (eds), The oxford handbook of metaphysics*. Oxford University Press.
- Fine, Kit. 2006. Relatively unrestricted quantification. *Pages 20–44 of: Rayo, Agustín, & Uzquiano, Gabriel (eds), Absolute generality*. Oxford University Press.
- Fine, Kit. 2016. Williamson on Fine on Prior on the reduction of possibilist discourse. *Canadian Journal of Philosophy*, **46**(4-5), 548–570.
- Fitch, Gregory W. 1996. In defense of Aristotelian actualism. *Philosophical Perspectives*, **10**, 53–71.
- Forbes, Graeme. 1985. *The metaphysics of modality*. Clarendon Press Oxford.
- Forrest, Peter, & Armstrong, David M. 1984. An argument against David Lewis' theory of possible worlds. *Australasian Journal of Philosophy*, **62**(2), 164–168.
- Fritz, Peter, & Goodman, Jeremy. 2016. Higher-order contingentism, part I: Closure and generation. *Journal of Philosophical Logic*, **45**(6), 645–695.
- Fritz, Peter, & Goodman, Jeremy. 2017. Counting impossibles. *Mind*, **126**(504), 1063–1108.
- Hale, Bob. 2013. *Necessary beings: An essay on ontology, modality, and the relations between them*. Oxford University Press.
- Hawthorne, John. 2006. Determinism de re. *Pages 239–243 of: Metaphysical essays*. Oxford University Press.

- Hawthorne, John, & Uzquiano, Gabriel. 2011. How many angels can dance on the point of a needle? Transcendental theology meets modal metaphysics. *Mind*, **120**(477), 53–81.
- Hewitt, Simon. 2015. A Cardinal Worry for Permissive Metaontology. *Metaphysica*, **16**(2), 159–165.
- Hughes, George Edward, & Cresswell, Max J. 1996. *A new introduction to modal logic*. Routledge.
- Jacinto, Bruno. 2019. Serious Actualism and Higher-Order Predication. *Journal of Philosophical Logic*, **48**(3), 471–499.
- Kleinschmidt, Shieva. 2014. Reasoning without the principle of sufficient reason. *Pages 72–87 of: Goldschmidt, Tyron (ed), The Puzzle of Existence*. Routledge.
- Korman, Daniel Z. 2015. *Objects: Nothing out of the ordinary*. Oxford University Press.
- Kripke, Saul. 1980. *Naming and necessity*. Harvard University Press.
- Kurtsal, Irem. 2021. Persistence egalitarianism. *Res Philosophica*, **98**(1), 63–88.
- Lange, Marc. 2016. *Because Without Cause: Non-Casual Explanations In Science and Mathematics*. Oxford University Press.
- Lavine, Shaughan. 2006. Something about everything: Universal quantification in the universal sense of universal quantification. *Pages 98–148 of: Rayo, Agustín, & Uzquiano, Gabriel (eds), Absolute generality*. Oxford University Press.
- Leslie, Sarah-Jane. 2011. Essence, plenitude, and paradox. *Philosophical Perspectives*, **25**, 277–296.
- Levine, Joseph. 1983. Materialism and qualia: The explanatory gap. *Pacific philosophical quarterly*, **64**(4), 354–361.
- Lewis, David. 1978. Truth in fiction. *American philosophical quarterly*, **15**(1), 37–46.
- Lewis, David K. 1986. *On the plurality of worlds*. Blackwell Oxford.
- Linnebo, Øystein. 2010. Pluralities and sets. *The Journal of philosophy*, **107**(3), 144–164.
- Linsky, Bernard, & Zalta, Edward N. 1994. In defense of the simplest quantified modal logic. *Philosophical Perspectives*, **8**, 431–458.
- Loewer, Barry. 1996. Humean supervenience. *Philosophical Topics*, **24**(1), 101–127.
- Loewer, Barry. 2012. Two accounts of laws and time. *Philosophical studies*, **160**(1), 115–137.
- Markosian, Ned. 1998. Brutal composition. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, **92**(3), 211–249.
- McDaniel, Kris. 2017. *The fragmentation of being*. Oxford University Press.
- McGinn, Colin. 1989. Can we solve the Mind–Body problem? *Mind*, **98**(391), 349–366.

- Menzel, Christopher. 2015. Logic, Essence, and Modality – Review of Bob Hale’s *Necessary Beings: An Essay on Ontology, Modality*. *Philosophia Mathematica*, **23**(3), 407–428.
- Menzel, Christopher. 2020. In defense of the possibilism–actualism distinction. *Philosophical Studies*, **177**(7), 1971–1997.
- Miller, Elizabeth. 2015. Humean scientific explanation. *Philosophical Studies*, **172**(5), 1311–1332.
- Mitchell-Yellin, Benjamin, & Nelson, Michael. 2016. S<sub>5</sub> for Aristotelian Actualists. *Philosophical Studies*, **173**(6), 1537–1569.
- Nagel, Thomas. 1974. What is it like to be a bat. *Readings in philosophy of psychology*, **1**, 159–168.
- Nelson, Michael. 2009. The Contingency of Existence. *Pages 95–155 of: Newlands, Samuel, & Jorgensen, Larry M. (eds), Metaphysics and the Good: Themes From the Philosophy of Robert Merrihew Adams*. Oxford University Press.
- Nolan, Daniel. 1996. Recombination unbound. *Philosophical Studies*, **84**(2), 239–262.
- Plantinga, Alvin. 1974. *The nature of necessity*. Oxford University Press.
- Plantinga, Alvin. 1979. Actualism and possible worlds. *Pages 253–273 of: Loux, Michael J. (ed), The possible and the actual*. Cornell University Press.
- Prior, Arthur N. 1957. *Time and modality*. Oxford University Press.
- Quine, Willard V. 1948. On what there is. *The review of metaphysics*, **2**(1), 21–38.
- Rayo, Agustín. 2020. On the open-endedness of logical space. *Philosopher’s Imprint*, **20**(4), 1–21.
- Rayo, Agustín, & Uzquiano, Gabriel. 2006. Introduction to absolute generality. *Pages 1–19 of: Rayo, Agustín, & Uzquiano, Gabriel (eds), Absolute generality*. Oxford University Press.
- Rayo, Agustín, & Yablo, Stephen. 2001. Nominalism through de-nominalization. *Noûs*, **35**(1), 74–92.
- Rosen, Gideon. 1990. Modal fictionalism. *Mind*, **99**(395), 327–354.
- Salmon, Nathan. 1987. Existence. *Philosophical Perspectives*, **1**, 49–108.
- Shumener, Erica. 2017. The metaphysics of identity: Is identity fundamental? *Philosophy Compass*, **12**(1), e12397.
- Sider, Theodore. 1999. Presentism and ontological commitment. *The Journal of Philosophy*, **96**(7), 325–347.
- Sider, Theodore. 2001. *Four-dimensionalism: An ontology of persistence and time*. Oxford University Press.
- Sider, Theodore. 2002. The ersatz pluriverse. *The Journal of Philosophy*, **99**(6), 279–315.
- Sider, Theodore. 2009. Williamson’s many necessary existents. *Analysis*, **69**(2), 250–258.

- Sider, Theodore. 2013. *Writing the Book of the World*. Oxford University Press.
- Sider, Theodore. 2020. *The tools of metaphysics and the metaphysics of science*. Oxford University Press.
- Skow, Bradford. 2016. *Reasons why*. Oxford University Press.
- Sosa, Ernest. 1987. Subjects among other things. *Philosophical perspectives*, **1**, 155–187.
- Stalnaker, Robert. 2012a. *Mere possibilities: Metaphysical foundations of modal semantics*. Princeton University Press.
- Stalnaker, Robert. 2012b. *Mere possibilities: Metaphysical foundations of modal semantics*. Princeton University Press.
- Taylor, Elanor. 2018. How to Make the Case for Brute Facts. *Pages 28–44 of: Vintiadis, Elly, & Mekios, Constantinos (eds), Brute Facts*. Oxford University Press.
- Teitel, Trevor. 2019. Contingent existence and the reduction of modality to essence. *Mind*, **128**(509), 39–68.
- Thomasson, Amie L. 2014. *Ontology made easy*. Oxford University Press.
- Turner, Jason. 2005. Strong and weak possibility. *Philosophical Studies*, **125**(2), 191–217.
- Uzquiano, Gabriel. 2006. The price of universality. *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, **129**(1), 137–169.
- Van Cleve, James. 1986. Mereological essentialism, mereological conjunctivism, and identity through time. *Midwest Studies in Philosophy*, **11**, 141–156.
- Vetter, Barbara. 2018. From Potentiality to Possibility. *Pages 279–301 of: Engelhard, Kristina, & Quante, Michael (eds), Handbook of Potentiality*. Springer.
- Werner, Jonas. 2021. Contingent Objects, Contingent Propositions, and Essentialism. *Mind*, **130**(520), 12823–1294.
- Williamson, Timothy. 2013. *Modal logic as metaphysics*. Oxford University Press.
- Williamson, Timothy. 2016. Reply to Fine. *Canadian Journal of Philosophy*, **46**(4-5), 571–583.
- Wright, Crispin. 2007. On quantifying into predicate position: Steps towards a new(tralist) perspective. *Pages 150–174 of: Potter, Michael (ed), Mathematical knowledge*. Oxford University Press.
- Yablo, Stephen. 1987. Identity, essence, and indiscernibility. *The Journal of Philosophy*, **84**(6), 293–314.
- Yablo, Stephen. 2000a. A paradox of existence. *Pages 275–312 of: Hofweber, T., & Everett, A. (eds), Empty names, fiction, and the puzzles of non-existence*. CSLI Publications Stanford.

- Yablo, Stephen. 2000b. Textbook Kripkeanism and the open texture of concepts. *Pacific Philosophical Quarterly*, **81**(1), 98–122.
- Yablo, Stephen. 2002. Coulda, woulda, shoulda. *Pages 441–492 of*: Szabó Gendler, Tamar, & Hawthorne, John (eds), *Conceivability and possibility*. Oxford University Press.
- Yablo, Stephen. 2006a. Circularity and paradox. *Pages 139–157 of*: Bolander, Thomas, Hendricks Vincent, & Pedersen, Stig Andur (eds), *Self-reference*. CSLI Publications Stanford.
- Yablo, Stephen. 2006b. No fool's cold: Notes on illusions of possibility. *Pages 327–346 of*: Garcia-Carpintero, Manuel, & Maci, Josep (eds), *Two-dimensional semantics*. Oxford University Press.
- Yablo, Stephen. 2006c. Non-catastrophic presupposition failure. *Pages 164–190 of*: Thomson, Judith, & Byrne, Alex (eds), *Content and modality: Themes from the philosophy of Robert Stalnaker*. Oxford University Press.