Grounding

&

Metaphysical Explanation

Workshop
June 29, 2023 – June 30, 2023
University of Southampton

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Location

The University of Southampton Philosophy Department will host the Grounding and Metaphysical Explanation Workshop from Thursday 29th June to Friday 30th June, 2023. The workshop will begin and conclude at around lunchtime on each day to allow time for people to travel to and from Southampton.

The address of the venue is: Avenue Campus, Highfield Road, Southampton, Hampshire, SO17 1BF. All presentations will be held in **Room 1175 ('Lecture Theatre C') in Building 65**.

Avenue Campus is located in the north-east of the city, close to Southampton Common and The Avenue (A33). Southampton Central train station is a short bus ride or a 40-minute walk away. See here for the venue location on Google Maps.
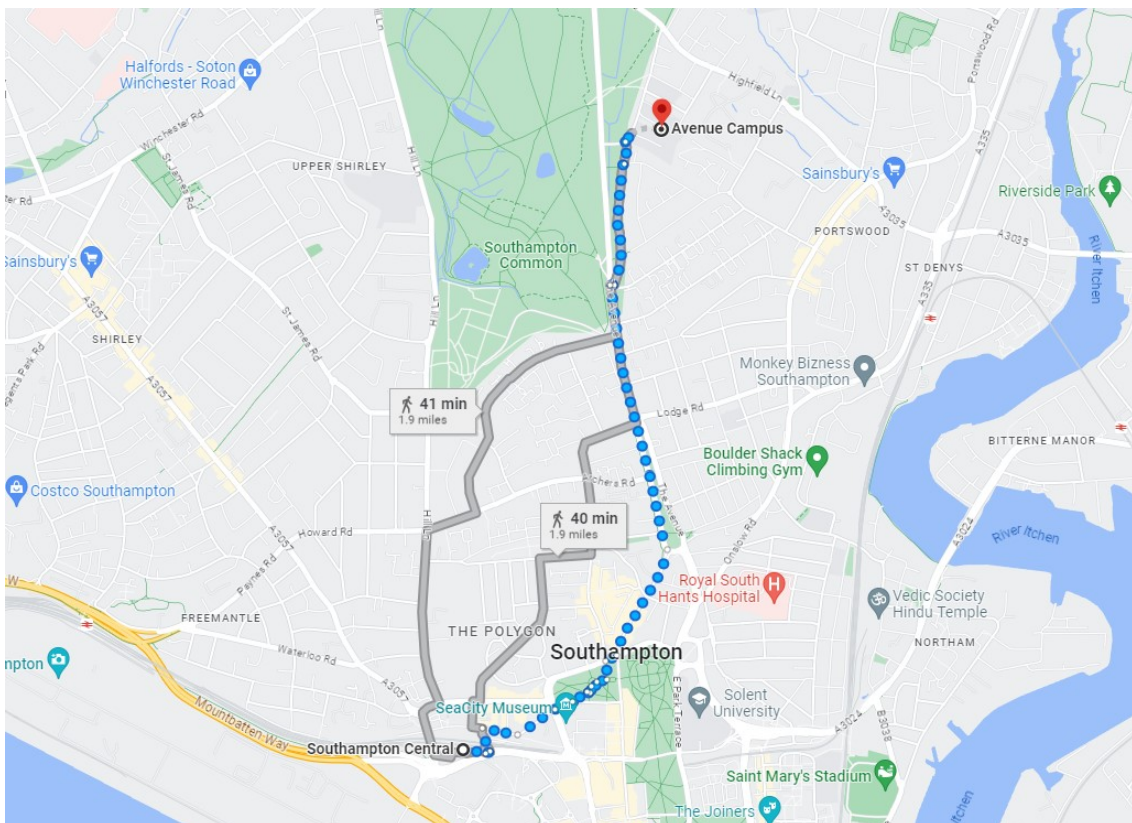
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Abstracts

The Tracking View of Mathematical Explanation

Professor Tuomas Tahko[†]

University of Bristol

Day 1, 12:40–13:55

Is science-driven mathematical explanation explanatory in its own right or does it derive its explanatory power from some other relation or relations? This is a key question in the literature on mathematical explanation, but one that is difficult to assess without some appeal to a more general account of explanation. In the literature on metaphysical explanation (often used synonymously with 'grounding'), an analogous question has received some attention. Does grounding derive its explanatory power from a distinct form of determination or perhaps a variety of different kinds of metaphysical dependence relations? In other words, how can we distinguish between the epistemic, explanatory part of metaphysical explanation and the metaphysical or 'worldly' content – the metaphysical determination or dependence – that backs this explanatory part? The tracking view of metaphysical explanation suggests that grounding itself is not a form of explanation, but it does track either worldly grounding relations or other metaphysical dependence relations. In this paper, I will examine an analogous view of mathematical explanation and the dependence relation or relations that it could be considered to track. On the tracking view of mathematical explanation, the debate about the status of science-driven mathematical explanation turns on the nature of these dependence relations, namely, does mathematical explanation track a distinct form of mathematical dependence? While I will ultimately remain neutral on this issue, the upshot of the paper is that a close comparison of these two analogous debates is warranted.

Grounding Totality Facts

Dr Kelly Trogdon

Virginia Tech

Day 1, 14:00–15:00

In *The Philosophy of Logical Atomism*, Russell writes that we have a 'a certain repugnance' to the notion of negative facts, and his suggestion at a lecture at Harvard that there are such facts 'nearly produced a riot' (1940, pp. 41-42). Despite the disgust and social unrest associated with negative facts, I assume that there are such facts (i.e., negative facts obtain). But there remain interesting questions about negative facts, specifically about what if anything grounds them. In this talk I begin by setting out a puzzle regarding the grounding profile of negative facts.

[†]*Keynote speaker*

Where *D* is the property of being a 50,000-carat diamond, consider the following contingent negative existential fact:

(1) $[\neg(\exists x)Dx]$.

Supposing that (1) obtains, what is its grounding profile? Let $a_1, a_2, \ldots a_n$ be what are in fact all existing individuals. (1) and $[(\forall x)\neg Dx]$ are the same fact, or so we will suppose. Plausibly, quantificational facts are partially grounded by their instances. So, consider the following facts:

(2) $[\neg Da_1], [\neg Da_2], \ldots [\neg Da_n]$.

As (2) specifies the instances of (1), the former partially grounds the latter. What, however, *fully* grounds (1)? Not (2), as (2) doesn't necessitate (1), and full grounds necessitate what they ground. Plausibly, universally quantified facts are fully grounded by their instances and corresponding 'totality' facts. So, consider the following totality fact that corresponds to (2):

(3) $[(\forall x)(x = a_1 \lor x = a_2 \lor \ldots x = a_n)]$.

Hence, (2) and (3) together fully ground (1). So far, so good. Note, however, that (3) itself is a contingent negative existential fact, as (3) and $[\neg(\exists x)\neg(x = a_1 \lor x = a_2 \lor \ldots x = a_n)]$ are the same fact, or so we will suppose. This is where we run into trouble.

We have what seem like good reasons to think that (3) is partially grounded. One is already implicit in the discussion above: as quantificational facts are partially grounded by their instances, (3) is partially grounded by the following:

(4) $[a_1 = a_1 \lor a_1 = a_2 \lor \ldots a_1 = a_n], [a_2 = a_1 \lor a_2 = a_2 \lor \ldots a_2 = a_n], \ldots [a_n = a_1 \lor a_n = a_2 \lor \ldots a_n = a_n]$.

Another consideration: a fact is *fundamental* just in case it isn't partially grounded, and there are various reasons to think that (3) isn't fundamental. Here's one. (3) concerns every individual whatsoever, and many individuals (e.g., ordinary macroscopic objects) fall outside the subject matter of our best physical theories. This gives us (defeasible) reason to think that (3) isn't fundamental, as the content of our best physical theories serves as a guide to which sorts of facts are candidates for being fundamental. As such, facts involving the instantiation of quantitative relations (e.g., *same charge as*) by microphysical objects (e.g., electrons) are instead good working candidates for fundamental facts.

The problem is that, by appealing to various widely endorsed principles, we can also construct an argument for the claim that (3) *isn't* partially grounded. Here are the relevant principles:

The *standard definition of partial grounding*: a collection of facts Δ partially grounds $[\varphi]$ just in case Δ either on its own or together with other facts fully grounds $[\varphi]$.

Metaphysical foundationalism: any fully grounded fact is fully grounded by fundamental facts.

Grounding necessitation: full grounds necessitate what they ground in that if Δ fully grounds $[\varphi]$, then it's necessary that if the facts among Δ obtain then $[\varphi]$ obtains.

Negative necessitation: the positive fundamental facts fail to necessitate any contingent negative existential fact.

Here's the argument. Suppose that (3) is partially grounded. Given the standard definition of partial grounding, (3) is fully grounded. Given metaphysical foundationalism, (3) is fully grounded by fundamental facts. Given grounding necessitation, there are fundamental facts that necessitate (3). And, given negative necessitation, the positive fundamental facts on their own fail to necessitate (3). Hence, the fundamental facts include negative facts.

In the talk I suggest that a reasonable way to resolve the puzzle is to reject the standard definition of partial grounding, embracing *non-augmented* grounding – mere partial grounds such that you can't add anything to them to make these facts full grounds. I ultimately suggest the following. While (3) is partially grounded, it's not fully grounded. So, for any Δ that partially grounds (3), Δ is a non-augmented ground for (3). In this case, (4) is a non-augmented ground (3). Note that there are collections of facts that fully ground the facts among (4) such as the following:

(5) $[a_1 = a_1]$, $[a_2 = a_2] \ldots [a_n = a_n]$).

Given the transitivity of grounding, these facts partially ground (3). So, they too are non-augmented grounds for (3).

In the talk I explain how a consequence of this proposal is that metaphysical foundationalism – the thesis that any fully grounded fact is fully grounded by fundamental facts – is wrong. Importantly, however, the thesis isn't wrong because (3) is fully grounded but not fully grounded by fundamental facts. (3), while partially grounded, isn't fully grounded. Metaphysical foundationalism is wrong instead because (1) is fully grounded but not fully grounded by fundamental facts.

I go on to explain how the proposal is compatible with various theses that have a foundationalist flavor such as the following: if $[\varphi]$ is partially (i.e., merely partially or fully) grounded, then there are fundamental facts that partially ground $[\varphi]$. Given this principle, no non-fundamental fact is entirely untethered from the fundamental facts, as any such fact is at least partially determined/explained by the fundamental.

As a final observation, I suggest that there is a structurally similar puzzle concerning *individualistic* facts (i.e., facts concerning particular individuals) that non-augmenting grounding might be useful in addressing. The upshot is that the theoretical utility of non-augmented grounding goes beyond addressing problems concerns negative facts.

The Disclosing Window:
Shaping the Bones of a Novel Temporalist Theory of Time
Emanuele Tullio
Central European University
Day 1, 15:20–16:20

I shall put forward the bones of a novel temporalist theory of time built within the framework of the perdurantist theory of persistence. Standard perdurantism is tied together with two interlaced theses – which are discussed at length in, e.g., Hawthorne (2006) and Sattig (2006). According to the first, temporal parts are more fundamental than the perduring worm that they compose. According to the second, temporal parts are the primary bearers of the properties instantiated by worms: a worm derivatively instantiates the properties had by its temporal parts – informally, the worm *inherits* the properties of its temporal parts.

I shall show that there is conceptual space for building a temporalist theory which holds that the *only* temporary facts are facts about inheritance, e.g. the fact that a given worm inherits properties from a given

temporal part. More fundamental facts about the instantiation of properties by temporal parts, e.g. the fact that a given temporal part instantiates such and such properties, are by contrast eternal and always hold. More broadly, this sort of view restricts temporalism to a non-fundamental layer of reality and maintains that all fundamental facts are eternal – this is a *moderate* temporalist theory in Bacon's (2018) sense.

According to the resulting picture, while it is always the case that temporal parts instantiate their properties, it is not always the case that a perduring worm inherits properties from a given temporal part. Inheritance can be figuratively described like a window which is sometimes open and sometimes closed. When open, it discloses to a worm the property-landscape of one of its parts; when closed it makes it completely inaccessible. But its openness and closure does not affect the reality of the landscapes, which remains always the same regardless of where inheritance is centred. I shall thereby label the theory the *Disclosing Window Theory* (DW). I contend that DW is worthy of scrutiny and exploration and note that it is kindred to non-standard temporalist theories which have been recently explored by Dorr (MS), Bacon (2018) and Effingham (2021).

I shall focus on a major prima facie concern about DW (and moderate temporalism more broadly). DW postulates an asymmetry between fundamental and derivative facts: as time passes, the very same fundamental facts bring about different derivative facts about inheritance. This becomes especially puzzling if it is assumed that the relation linking the fundamental and derivative facts at stake in SW is a necessary relation. In such a case, DW comes with the weird – and possibly unwelcome, see Dorr & Goodman (2020) – implication that some necessities are temporary. I review two possible strategies for coping with this issue. First, building on the solution that Bacon (2018) recommends, I briefly consider a strategy which in fact accepts temporary necessities. Then, I explore an alternative strategy according to which the relation between the fundamental and the derivative is not a matter of necessity. In particular – taking inspiration from Werner's (2022) recent account of arbitrary grounding – I develop a version of DW according to which the relation linking worms to the properties of their parts is a grounding relation which holds both *temporarily* and *contingently*: according to such an account, it is a temporary and yet contingent matter that a given worm inherits properties from one of her temporal part as opposed to another – for defences of a distinctive notion of contingent grounding, see Leuenberger (2014) and Skiles (2015). Temporary necessities are avoided for what's temporary is a merely contingent matter.

I then discuss a two views in the proximity of temporary and contingent grounding. One view, which holds that it is necessary that a given plurality of facts about instantiation of properties by temporal parts temporarily and contingently grounds an arbitrarily chosen plurality of facts about inheritance, in some general sense preserves the idea that grounding is necessary – I label it *global necessitism*. Another view, which allows pluralities of facts about instantiation to take place without grounding any arbitrarily chosen plurality of fact about inheritance, is by contrast at odds with any form of necessitism on grounding and in fact endorses a fully contingentist stance – I label it *global contingentism*.

Finally, I conclude by reviewing the implications and prospects of the accounts considered. In particular, I observe that, while global necessitism comes with the apparent implication that some facts about inheritance, e.g. the fact that Socrates inherits properties from one of his temporal parts, will always take place, global contingentism can avoid such implication. In such a way, global contingentism seems to allow the somewhat more intuitive stance according to which Socrates is currently not inheriting any property from its temporal parts. After discussing the issue, I draw some general moral about what version of temporary and contingent grounding relate to the broader picture which DW is intended to convey.

Indiscernibility and the Grounds of Identity

Dr Samuel Elgin
University of California
DAY 1, 16:25–17:25

Let an identity fact be any that takes the form $a=b$. Over the past decade, a number of philosophers have advanced competing views over the grounds of identity facts. Fine (2016) argues that identity facts are zero grounded, but may have substantive grounds; Litland (Forthcoming) argues that they are *only* zero-grounded; Wilhelm (2020) argues that they are grounded by the entities that occur within them; Rubenstein (Forthcoming) argues that they are grounded by *the existence of* the entities that occur within them; and Shumener (2020) argues that they are grounded by the way in which they stand in certain qualitative relations.[1]

One view has often been discussed – yet has never been endorsed: the claim that the fact that $a=b$ is grounded by the fact that a and b bear all of the same properties. In a slogan: indiscernibility grounds identity. I take it that this proposal is extremely natural – but it faces a serious challenge. Given standard assumptions about the logic of ground, it entails that the fact that $a=b$ partially grounds itself – thus violating the irreflexivity of partial ground.[2] The aim of this paper is to develop a theory of identity via indiscernibility that is immune to this circularity.

The Circularity

Let us denote partial ground with $\prec$, full ground with $<$ and the fact that p with $|p|$.[3] One way we might formalize the claim that indiscernibility grounds identity is $|\forall \lambda X.(Xa \leftrightarrow Xb)| < |a=b|$. On the standard view, universal claims are treated like large conjunctions (possibly with an additional totality fact). So, the claim that a and b bear all of the same properties is grounded by the co-bearing of each individual property. That is, $|Fa \leftrightarrow Fb|$, $|Ga \leftrightarrow Gb|, \ldots, < |\forall \lambda X.(Xa \leftrightarrow Xb)|$. Given the transitivity of ground, this entails that these individual instances of property co-bearing collectively ground the fact that $a=b$.[4] One of the properties that a bears is *is identical to a*: $\lambda x.(x=a)$. So, we have $|\lambda x.(x=a(a)) \leftrightarrow \lambda x.(x=a(b)| \prec |a=b|$.[5]

The grounds of biconditional facts are not as immediately apparent as the grounds of conjunctive and disjunctive facts, but a natural thought is that they are grounded in their true instances – that is, either $|Fa|, |Fb| < |Fa \leftrightarrow Fb|$ or $|{\sim}Fa|, |{\sim}Fb| < |Fa \leftrightarrow Fb|$.[6] If so, then $|\lambda x.(x=a)(b)|$ partially grounds $|\lambda x.(x=a)(a) \leftrightarrow \lambda x.(x=a)(b)|$, which, in turn, partially grounds $|a=b|$. There is an ongoing debate about the relation between $|\lambda x.(x=a)(b)|$ and $|a=b|$. Some (like Dorr [2016]; Caie, Goodman and Lederman [2020]; Fritz [2021]) hold that they are identical, while others (like Rosen [2010] and Fine [2012]) hold that $|a=b|$ grounds $|\lambda x.(x=a)(b)|$. On either suggestion, it follows that $|a=b| \prec |a=b|$ – in violation of the irreflexivity of partial grounds.

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[1]Much of Rubenstein's paper consists of a challenge to the existence view posed by Burgess (2012). For a response to Wilhelm, see Lo (2020). For a detailed discussion of many of these views, see Shumener (2017).

[2]For a slightly different circularity concern that the resulting theory also avoids, see Burgess (2012).

[3]Throughout, 'ground' should be interpreted as strict ground.

[4]Schaffer (2012) provides some putative counterexamples to the transitivity of ground – but my impression is that philosophers generally have found these counterexamples unpersuasive. See Litland (2013) for a response. For the purposes of this paper, I assume that transitivity holds.

[5]Note that there is a shift from full to partial ground because there are other properties which constitute partial grounds of the universal claim.

[6]Alternatively, we might suggest that $|(Fa \wedge Fb) \vee ({\sim}Fa \wedge {\sim}Fb)| < |Fa \leftrightarrow Fb|$. This proposal entails – but is not entailed by – the proposal mentioned in the main text.

Indiscernibility by Proxy

Recently, Fritz (2021) has developed a theory of higher-order proxies that resolves some puzzles structured propositions face.[7] One of the core commitments of the structured proposition view is that differences in syntactic structure correspond to differences in proposition. The fact that 'Jack is tall' differs syntactically from 'Jack is not not tall' ensures that the propositions that the sentences express are distinct.[8] This commitment is widely recognized to be inconsistent. One upshot of the Russell-Myhill problem is that it is impossible, given the proposition Fa, to recover F and a – in the sense that there may be a distinct G and b such that $Fa=Gb$. For example, the properties $\lambda x.Rxx$, $\lambda x.Rxa$ and $\lambda x.Rax$ could all be seen as figuring within the proposition Raa, so we cannot recover 'the' property contained within this proposition.

But, as Fritz notes, there is a term from which we *can* recover a unique F and a: the relation between properties and objects that has only the ordered pair $<F,a>$ in its extension – that is, the relation that property F stands in to object a and that no other property stands in to any other object. Let us denote this relation with $[F,a]$. Given the fine-grained distinctions ground is intended to make, Fritz suggests that these proxies may stand in grounding relations – perhaps $[F,a]<|Gb|$.[9]

With proxies at our disposal, the claim that indiscernibility grounds identity might be interpreted in one of two ways. It might, as before, be interpreted as $|\forall \lambda X.(Xa \leftrightarrow Xb)|<|a=b|$. Alternatively, it might be interpreted as $[\forall,=\lambda X.(Xa \leftrightarrow Xb)]<|a=b|$. On this second view, what grounds the fact that $a=b$ is the relation between the (second-order) universal quantifier, and being a property X that holds of a iff it holds of b. While the first interpretation violates the irreflexivity of partial ground (for reasons mentioned above), the second does not. The logic of ground does not require that relations between second-order universal quantifiers and properties be grounded by their instances. By embracing this second view, we can thus accept that indiscernibility grounds identity without violating the irreflexivity of partial ground.

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[7]For a discussion of some of these puzzles, see Fritz (2022).

[8]Bacon (forthcoming), however, presents a theory on which propositions are distinguished by their pictorial – rather than their syntactic – structure

[9]Note that $[F,a]$ is not expressed inside the | | notation. It is a relation between properties and objects, and is thus of the wrong syntactic category to be a fact.

Grounds for Inheritance?

Professor Anna-Sofia Maurin and Dr Naomi Thompson[‡]

University of Gothenburg and University of Southampton

DAY 2, 09:30–10:45

Grounding is often said (explicitly or implicitly) to *inherit* features from metaphysical explanation. In a recent paper, Skiles and Trogdon (2021) articulate how explanation can be a guide to ground and mount a careful defence of this claim against some objections. Their work rests on three claims, each of which we reject: that metaphysical explanation can be both representational and fully objective (and support inheritance claims); that features of metaphysical explanation could be inherited by grounding even if there is a mismatch with respect to the objectivity of the relata of the inheritance relation; and that the (unionist) identity between grounding and metaphysical explanation does not obey Leibniz Law. We thus reject Skiles and Trogdon's conclusion that explanation is a (good) guide to ground, and we identify and distinguish some features of the notion of inheritance at play in these arguments.

[‡]*Keynote speakers*

Grounded Normative Non-Naturalism
and Reductionism About Grounding

Dr Henrik Rydéhn
University Tübingen
Day 2, 10:50–11:50

Recently, advances in hyperintensional metaphysics have been put to use in trying to capture and clarify the commitments of important metanormative theories. In this talk, I will argue that the natural way of *capturing* normative non-naturalism with the help of hyperintensional machinery is incompatible with hyperintensionalist reductions of metaphysical grounding available in the literature, and I will consider questions of what this implies for the question of reductionism.

I will start by laying out the theses that capture the central metaphysical commitments of non-naturalism. On the one hand, non-naturalists emphasize the metaphysical *discontinuity* of the normative and the natural. This can be captured with commitments about normative phenomena being *unbuilt* from and *irreducible* to natural phenomena, as well as their *essences* not involving natural phenomena. On the other hand, non-naturalists still think there is a certain connection between normative and natural features in things: if something is e.g. *right* then it must be *because* of some natural feature that thing possesses which *makes* it so. For all the discontinuity they ascribe to the relationship between the normative and the natural, non-naturalists thus still accept that particular normative facts are *grounded* in particular natural facts.

I will then proceed to show that these commitments are incompatible with the main reductive accounts of grounding available in the literature. That literature has tended to look to other hyperintensional phenomena in order to account for grounding. Consequently, we can divide the options into *building-based* and *essence-based* accounts.

Building-based accounts rely on the idea that there is a class of *building relations* (encompassing e.g. constitution, composition, set formation, and realization) which explain patterns of relative fundamentality between entities. Wilsch (2015, 2016) provides a *deductive-nomological* account which takes grounding to be determination in accordance with metaphysical laws – general principles governing the behavior of building relations. But since (as I will demonstrate) Wilsch's account entails that [P] can only ground [Q] if there are building relations holding between the constituents of [P] and [Q], it cannot capture the non-naturalist position. A hedonistic utilitarian non-naturalist would e.g. take [a maximizes happiness] to ground [a is morally right] (where a is a specific token action), while denying that the *property* of moral rightness is *built* out of any natural property. McDaniel (2017) sketches another building-based reduction, suggesting that we account for [P_1]-[P_N]'s jointly grounding [Q] in terms of (i) there being some building relation R connecting [P_1]-[P_N] to [Q], and (ii) [P_1]-[P_N] possessing a greater degree of *reality* than [Q]. McDaniel's account thus requires building relations to hold directly between grounds and grounded facts *themselves*, rather than between *constituents* of those facts. I will argue, however, that once grounding itself is excluded from the list of building relations available to play the role of R in condition (i) of McDaniel's account, there is no plausible candidate available that a non-naturalist would accept as holding between a particular normative fact and its natural ground. Nor is the non-naturalist particularly likely to accept that a particular normative fact has a lesser degree of *reality* than its natural grounds.

Essence-based reductions try to account for grounding in terms of a heavy-weight, hyperintensional notion of *essence*. Correia (2013) offers an account according to which [P_1]-[P_N]'s grounding [Q] consists in (i) [P_1]-[P_N] obtaining, and (ii) it being part of the essence of [Q] that if [P_1]-[P_P] obtain, [Q] obtains. But this account is straightforwardly incompatible with the ideas motivating normative non-naturalism. For such a non-naturalist will hold that the project of charting the natural conditions which *make* a given thing (say) morally right is distinct from uncovering *what* moral rightness is – its essence. A more sophisticated

essentialist account is provided by Zylstra (2019). On this account, some facts G grounding [Q] amounts to there being some relation R such that (i) it is essential to [Q] that [Q] exists only if there are Fs such that [Q] stands in R to the Fs and the Fs exists, and (ii) [Q] stands in R to the Gs, and the Gs exist. This account avoids the straightforward objection facing Correia's account, for on Zylstra's account, the essence of (say) [a is morally right] need not make mention of the natural ground for that fact, but only of there being *some* appropriate relation R connecting [a is morally right] to *something* or other. However, in the non-normative cases where Zylstra's account is apt, it relies on there being *building* relations available to serve the role of R. As I will demonstrate, in the normative case, there is no plausible candidate for a building relation available that the non-naturalist will accept as entering into the essence of the normative fact, unless R is some building relation tacitly appealing to grounding, thereby undermining the account's reductive credentials. Zylstra's account too therefore fails to accommodate the non-naturalist position.

Having shown that non-naturalism is incompatible with a representative sample of the hyperintensionalist accounts of grounding available in the literature, I will turn to address some related questions. These include whether involving general normative *principles* in the grounds for normative facts might save reductionism, whether reductionists can simply bite the bullet and dismiss non-naturalism to preserve their accounts, and how far the results of my argument generalize. I will argue that the 'thin' nature of the grounding connection posited by non-naturalists means that any account of grounding in terms of other heavyweight, hyperintensional phenomena is likely to run into the same problems, and that there is no easy way out for such accounts if they are to adhere to the methodological standards typically employed in discussions about the nature of grounding. I will conclude by suggesting that there might be a way for reductionists about grounding to accommodate the non-naturalist view by giving up on the common assumption that grounding needs to be accounted for in terms of *other* hyperintensional phenomena. To account for the metaphysics of normative non-naturalism while avoiding primitivism about grounding, reductionists may need to pin their hopes on there being some satisfactory sophisticated *modalist* account of grounding.

Against Cross-World Anchoring

Alexios Stamatiadis-Brehier and Yorgos Karagiannopoulos
Tel Aviv University and University of Amsterdam
DAY 2, 12:10–13:10

A social fact S holds in virtue of some plurality of grounds Γ. In turn, the fact that S holds in virtue of Γ is not a brute fact: it holds in virtue of some set of anchors Δ. The first 'in virtue of' locution is underwritten by a grounding relation. The latter by the relation of anchoring, championed by Epstein (2015; 2019).

In this paper we argue against the view that anchoring is a cross-world determination relation. In other words, we reject the claim that anchoring can 'travel' between possible worlds. An example:

(*) Genghis Khan is a war criminal.

At least some propositions like (*) are true. On the face of it, this is curious: the anchors which 'set-up' the fact that Genghis Khan is a war criminal are not present at the Genghis Khan-world (w). So, the fact that Genghis Khan possesses the relevant characteristics which, in turn, ground the fact that he is war criminal at w, holds at w without the relevant anchors (i.e. the Geneva convention does not exist at w). Epstein (2019: 772) has recently argued that propositions like (*) are true because of the following thesis:

(**UNIVERSALITY**) At a possible world w the fact that x is K ([x is K]) has anchors $[A_1 \ldots A_n]$. At w* [x is K] can hold in the absence of $[A_1 \ldots A_n]$ (and without there being any substitute anchors at w*).

The idea behind UNIVERSALITY is this: (*) is true and it doesn't matter that the relevant anchors don't exist at w. The fact that Genghis Khan is a war criminal is anchored by the anchors that hold in another possible world: w*. So, there is an anchoring relation that links some anchor-facts at w to some grounding-facts at w*. For this to be possible the following principle of anchoring must be true:

(CROSS-WORLD) The relation of anchoring is a cross-world relation. Anchoring can hold between relata that exist in different possible worlds.
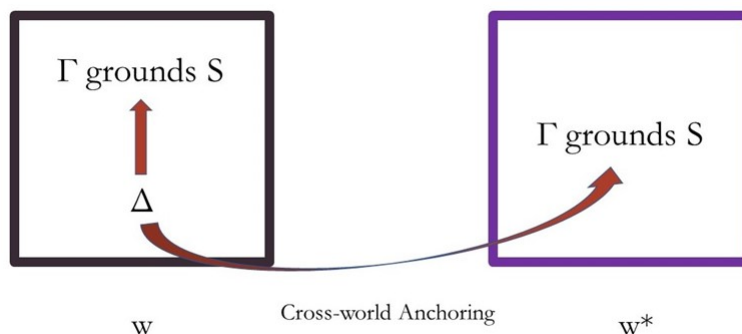

Figure 1

In this paper we argue that CROSS-WORLD should be resisted. To that end, we propose three different arguments: *The argument from the analogy with non-social natural kinds, the argument against cross-world determination relations, and the argument from anchor indeterminacy*.

The Argument from the Analogy with Non-social Natural Kinds

Our general argument states that if we take the analogy between social and scientific kinds, then CROSS-WORLD is controversial. Simply put, under plausible assumptions about the metaphysics of scientific laws, the anchoring-analogue of scientific kinds should be understood as world-bound.

Compare the two following views:

(SOCIAL) Some set of anchors $A_1 \ldots A_n$ *anchor* a frame-principle F specifying the grounding-conditions Γ for social kind S, and F *frames* the fact that Γ grounds S.
(SCIENCE) Some nomic facts $N_1 \ldots N_n$ (i.e. a law of nature) *govern* nomic generalization G specifying the grounding-conditions C for some scientific kind K, and G *subsumes* the fact that C grounds K.

The argument is this:

1. SOCIAL is importantly analogous to SCIENCE.

2. So, from (1), the anchoring-relation is importantly analogous to the governing-relation.

3. The governing-relation is not cross-worldly.

4. So, from (3) and (2), CROSS-WORLD is false.

The Argument Against Cross-World Determination Relations

Anchoring is supposed to respect CROSS-WORLD while also being a non-causal determination relation (see Epstein 2019: 770). In this section we present an argument according to which the very idea of cross-world determination relations is extremely controversial. The argument:

1. Anchoring respects CROSS-WORLD.

2. Cross-world determination relations do not exist.

3. So, anchoring does not exist *or* it doesn't respect CROSS-WORLD.

Naturally, our preferred view involves rejecting (1). This is because we take the anchoring relation to exist. We also take (2) to be independently plausible. To argue for this, we proceed largely by elimination: we identify two potential candidates which could exhibit cross-world determination and we argue that they fall short. Specifically, we consider: *grounding at a distance* (Baron et al. 2019) and Schaffer's (2019) appeal to relational facts.

The Argument from Anchor Indeterminacy

Consider a constructivist view about gender. According to such a theory, the grounding-conditions of *being a man* hold in virtue of some societal-facts (e.g. determined by structures of power). Call this the *master-frame* as it is the frame that specifies the grounding-conditions of gender in all possible worlds. Given the nature of the constructivist view, there can be variations *within* the master-frame.

For example, some worlds will involve societies that set-up the grounding-conditions of *being a man* in terms of some bodily features X. Other worlds, however, will involve societies that set-up the grounding-conditions of *being a man* in terms of some bodily features Y.

Now imagine a world (w) without any societal facts about gender. In other words, the relevant communities have not determined what are the grounding-conditions of properties like *being a man*. So, at w, there are no anchors about gender-properties.

Additionally, imagine two other possible worlds: w_1 and w_2. The former world has anchors that set-up a frame according to which *being a man* is grounded by X, whereas the latter has anchors that set-up a frame according to which *being a man* is grounded by Y.

Now assume that all worlds share the same non-anchor, or *pre-social*, facts:

w: <pre-social facts, no anchors>
w_1: <pre-social facts, anchors$_X$>
w_2: <pre-social facts, anchors$_Y$>

What grounds the property of *being a man* at w? According to our preferred view, it is natural to hold that there are no genders in this world – because of the lack of anchors at w. However, consider the view that there *are* gender-facts at w. The proponent of such a view would appeal to CROSS-WORLD to explain how this is so: some world other than w has anchors that cross-world anchor the gender-facts at w. But now the question is this: *which* anchors cross-world anchor the facts existing at w? Anchors$_X$ or anchors$_Y$? Call this *the indeterminacy-problem*. In what follows, we consider potential strategies on behalf of the proponent of CROSS-WORLD, and we argue that they all deliver philosophically unattractive consequences. Specifically, we consider the appeal to Lewis-style similarity between possible worlds, the appeal to social naturalness, and the appeal to social kind eliminativism.

Work-in-Progress Group

Joining

Are you keen to continue engaging with the grounding and metaphysical explanation community?

Then register to join the Metaphysical Explanation Work-in-Progress Group (WiP) here.

The Grounding and Metaphysical Explanation Workshop follows a successful first year for the WiP, which is run by both Will Moorfoot and James Ross. The WiP began in September 2022, has so far spanned two semesters, and will continue after the summer. The termcards for semesters 1 and 2 can be found here and here respectively.

Sessions begin at 1 pm (UK time) and are held on Microsoft Teams. They each last approximately 1 hour and 30 minutes and consists of a 45-minute presentation followed by questions and discussion. An invite and handout (if available) is sent out prior to the session.

This group is particularly aimed at academics and postgraduate researchers. However, please do still contact us if you are interested in joining and do not meet these criteria.

Presenting

If you are interested in presenting next term, please send an abstract of no more than 500 words to Will Moorfoot (W.A.Moorfoot@soton.ac.uk) and James Ross (J.C.Ross@soton.ac.uk). Papers should be suitable for a 45-minute presentation (e.g., about 5000 words). Please give an indication of when you would be happy to present.

We are happy to interpret the theme of grounding and metaphysical explanation broadly. However, we particularly welcome work in the following areas.

- Pure work on the metaphysics or logic of grounding and metaphysical explanation.

- Applications of grounding and metaphysical explanation to areas such as ethics, philosophy of mind, wider issues in metaphysics, philosophy of science, social ontology, and philosophy of mathematics.

- More historically-minded approaches.