Building and Surveying: Relative Fundamentality in Karen Bennett's *Making Things Up*.

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I.   Introduction

Karen Bennett's *Making Things Up* is a great work of philosophy which presents a big, exciting idea and supports it with cogent, detailed argumentation. Bennett argues that many significant relations in metaphysics are united in counting as building relations. Some examples of building relations are ground, composition, property realization, set-formation, and causation. Building relations are directed, necessitating, and generative. To clarify, x stands in building relation R to y when Rxy and: R is asymmetric and irreflexive, the existence of x necessitates the existence of y, and y is generated or produced from x. A relation is "generative" in Bennett's sense when it licenses "in virtue of" talk: x generates y when y holds in virtue of x or y holds because of x.[1]

In the first part of the book, Bennett characterizes building relations, denies that there is one overarching building relation, and argues that the causation relation counts as a building relation. In the latter half of the book, Bennett characterizes absolute and relative fundamentality in terms of building, discusses whether building relations are themselves built, and how we should think about the non-fundamental, built entities.

One of the most important contributions of *Making Things Up* is Bennett's discussion of relative fundamentality, of one entity's being more fundamental than, less fundamental than, or equifundamental to another.[2] Bennett understands relative fundamentality in terms of building relations. Before delving into Bennett's account of relative fundamentality, we can first divide positions on relative fundamentality into two camps:

Builders: Facts about relative fundamentality are fixed solely by facts involving building relations and their patterns of instantiation.

Surveyors: Facts about relative fundamentality are not fixed solely by facts about building relations and their patterns of instantiation.[3]

Bennett is a builder. Surveyors come in different varieties. Some surveyors understand relative fundamentality without an appeal to building relations. While David Lewis did not provide a full

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[1] Pgs. 32-58 of *Making Things Up* (*MTU*).

[2] I use 'entity' loosely to range over members of different ontological categories (objects, facts, properties, events, and so on).

[3] This category subsumes views which define relative fundamentality in terms of other (non-building) notions as well Bennett's extreme and sophisticated primitivism about relative fundamentality. It also includes views of relative fundamentality that appeal to building relations in addition to other notions. In particular, someone like Zylstra (2014) who understands relative fundamentality in terms of a notion of "dependence" and "likeness in nature" would count as a surveyor even if "dependence" counts as a building relation. We may want a third category in addition to the Builders and Surveyors, the "Demolishers" who deny that there are relative fundamentality facts in the first place. I will not discuss Demolishers below.

account of relative fundamentality, we should probably think of him as this kind of surveyor. Lewis popularized the notions of "naturalness" and "relative naturalness" which are commonly taken to be precursors to contemporary discussions of "fundamentality" and "relative fundamentality", respectively.[4] When discussing relatively natural properties, Lewis maintained that some properties "even though they may be somewhat disjunctive or extrinsic, are at least somewhat natural in a derivative way, to the extent that they can be reached by not-too-complicated chains of definability from the perfectly natural properties." Sider (1995) argues that this characterization naturalness is problematic. Certain surveyors provide new accounts of relative fundamentality that avoid the problems of Lewis's characterization, and other surveyors suggest that relative fundamentality is a primitive notion.[5]

One hope, given the recent popularity of building relations—and the grounding relation in particular—is that characterizing relative fundamentality would become easier. After all, Bennett understands absolute fundamentality in terms of building relations in chapter 5. If we already adopt a conception of *absolute* fundamentality defined in terms of building relations, it is plausible that we could define *relative* fundamentality in terms of building as well.

While Bennett is a builder, she argues that using building relations to characterize relative fundamentality is not straightforward. We cannot just claim that x is more fundamental than y iff x builds y because x could be more fundamental than y yet not build y. This generates bad results as Bennett illustrates: A hydrogen atom in Phoenix is more fundamental than a water molecule in Ithaca; yet, the latter is not built from the former.

Bennett offers a new, sophisticated, and exciting way to become a builder in Chapter 6. She arrives at the following account of *more fundamental than*:

(MFT) x is *more fundamental$_R$ than y* =$_{df}$ either

. (1) *x* is fewer building steps away from the fundamental entity(ies) that terminate its unique chain than *y* is from the fundamental entity(ies) that terminate its unique chain, or

. (2) *x* at least partially builds *y*, or

. (3) *x* stands in the ancestral of a building relation to *y*, or

. (4) *x* is absolutely fundamental and *y* is not, or

. (5) *x* belongs to some kind *K* and *y* belongs to some kind *K** such that

a. neither *K* nor *K** includes both built and unbuilt members, and

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[4] Although Bennett distances her account of fundamentality from naturalness in chapter 5.
[5] See Schaffer 2010 for someone skeptical of providing an account of relative fundamentality. See Sider (2011, p.129-132) for an account of what he calls "comparative structure" which resembles an account of relative fundamentality. See Zylstra (2014) and Correia (forthcoming) for other Surveying accounts.

b. *y* does not belong to *K* and *x* does not belong to *K**, and

c. *K**s are typically or normally built from *K*s.   (161)

MFT characterizes *more fundamental than* relative to particular building relations (this is why we have subscript $_R$ above). There are many *more fundamental than* relations: *more fundamental_{composition} than*, *more fundamental_{realization} than*, *more fundamental_{causation} than*, and so on.

I have three tasks in what follows. First, I will inquire about the kinds of tasks the *more fundamental_R than* relations can perform on Bennett's account. Second, I will discuss problematic cases for MFT. Third, and finally, I will propose a way to avoid the problematic cases that (hopefully) preserves the spirit of MFT.

II.   The Significance of Relative Fundamentality

What kind of work can relative fundamentality do on Bennett's picture? Bennett explains the significance of relative fundamentality:

> "[W]hat is it for one thing to be more fundamental than or ontologically prior to another? This question is both crucial and neglected. It is crucial because philosophers engage in relative fundamentality talk all the time, and such talk ought not go unexamined. Further, it is only against a shared background story about relative fundamentality that apparent disputes about what is more fundamental than what are guaranteed to be genuine disputes.'' (137)

I am curious as to whether there are other jobs for relative fundamentality. Some philosophers appeal to relative fundamentality in the context of particular debates, like those concerning laws of nature and reference. These examples appear in connection with *relative naturalness*, but we may appeal to relative fundamentality here as well. For example, proponents of certain theories of laws (like the Best-Systems Account) take laws of nature to feature relatively fundamental properties.[6] Additionally, Reference Magnetism is a metasemantic theory which appeals to relative fundamentality. Here is an oversimplified rendition of Reference Magnetism. *I* is a good candidate interpretation for a language *L*, when the semantic values *I* assigns are relatively fundamental and the interpretation fits with common usage of the language. When ranking interpretations, we find the ones with the best balance of "eligibility" (appealing to the most fundamental candidates) and "degree of fit with usage".[7]

Can we use MFT in our theories of laws and reference?   Recall that the *more fundamental_R than* relation is subscripted to particular building relations. Just as with absolute fundamentality, Bennett treats characterizing relative fundamentality with respect to particular building relations as prior to characterizing relative fundamentality full stop. However, when we appeal to relative fundamentality in accounting for laws of nature or reference, it is not clear that we have any

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[6] See Lewis 1983, p. 368. He distinguishes between fundamental physical laws which involve perfectly fundamental or natural properties and derived laws which involve "fairly natural" properties.

[7] For Lewis's versions of Reference Magnetism see Lewis (1983), (1984). This terminology is from Williams (2018), section 3.1.

specific building relation in mind; accordingly, it is not clear that we have any one *more fundamental$_R$ than* relation in mind either.

Suppose 'P' is a predicate which picks out a property "that applies to all and only things [at the actual world]"[8]; 'F', the predicate 'is a mammal'; and 'G', 'is warm-blooded'. Of the two generalizations, $(\forall x)(Fx \supset Gx)$ and $(\forall x)Px$, the former is a better law-candidate than the latter because F and G pick out more fundamental properties than P. But we have no assurance that there is any specific building relation R such that F and G are *more fundamental$_R$ than* P. The issue arises for Reference Magnetism as well. It is not clear that interpretation *I* is better than interpretation *I'* because the semantic values featured in *I* are more fundamental$_{composition}$ or more fundamental$_{ground}$, etc. than the ones featured in *I'*. Instead, it seems we should have in mind a more general *more fundamental than* relation.

Bennett acknowledges that there are contexts where we desire a general *more fundamental than* relation. She provides an example (p.164-5) in which a thing (a) has parts that are more fundamental$_{composition}$ than a, and a is more fundamental$_{set-formation}$ than {a}. It seems natural to claim that a's parts are more fundamental than {a} as well; although, a's parts are not more fundamental$_{composition}$ or more fundamental$_{set-formation}$ than {a}. Bennett discusses three proposals for generalizing MFT.[9] However, Bennett questions the viability of these proposals. Bennett allows that different *more fundamental$_R$ than* relations (subscripted to different building relations) can hold in opposite directions. x is more fundamental$_R$ than y and y is more fundamental$_{R'}$ than x. If these relations can point in different directions, then it is not certain that we will arrive at an account of a general *more fundamental than* relation.[10]

If we want relative fundamentality to play roles like those above, then we should have a general *more fundamental than* relation. While this may be problematic for a builder who thinks relative fundamentality has these applications, this is not necessarily a concern for Bennett herself. In chapter 5, Bennett doubts whether a notion like naturalness can play all of the roles Lewis thinks it can.[11] Presumably, Bennett can extend this thought to relative fundamentality. Just as absolute fundamentality cannot play the myriad of roles that Lewis wanted perfect naturalness to play, relative fundamentality cannot play the myriad of roles that Lewis wanted relative naturalness to play, either.[12] In the next section, I will turn to the content of MFT and whether it accounts for our relative fundamentality judgments.

III.   Problematic Cases for Clause 5 of MFT

In MFT, clauses 1-5 provide jointly necessary and individually sufficient conditions for x to be more fundamental$_R$ than y. I will examine sub-clause 5a, and raise a problem for it. Bennett constructs MFT in stages. Here is the original version of clause 5:

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[8] Lewis (1983) p. 367.
[9] p. 165 of *MTU*.
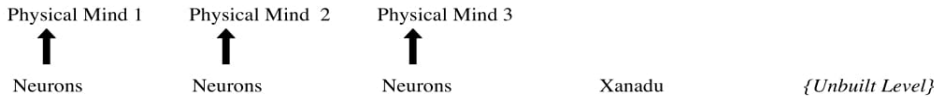[10] For related issues concerning relative fundamentality, see Wilson (2016) and Schaffer (2016).
[11] p. 134 of *MTU*.
[12] See section 5.9 of *MTU*.

OG-5. x belongs to some kind K and y belongs to some kind K* such that members of K* are [typically] built from members of K.

Bennett discards OG-5 due to the following case (in part): We can imagine a world where all but one of the minds, or souls, are built from physical neurons. The souls built from neurons are the *physical* minds. One soul is special. It is not built from neurons. It is not built from anything at all. I will call this non-physical mind, "Xanadu".[13] Here is an illustration:

Diagram 1: Bennett's Soul World

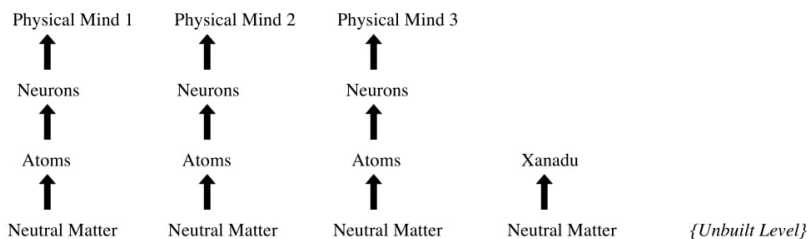| Physical Mind 1	Physical Mind 2	Physical Mind 3		
↑	↑	↑		
Neurons	Neurons	Neurons	Xanadu	*{Unbuilt Level}*

For simplicity, the up-arrows represent building$_{ground}$ relations holding between entities. By clause 4 of MFT, Xanadu is more fundamental$_{ground}$ than the physical minds, given that the physical minds are built from neurons and Xanadu is unbuilt. That is good.

The problem is that all of the souls, including Xanadu, belong to the kind "mind". All of the neurons belong to the kind "brain matter". Minds are typically built from brain matter: all of the minds except Xanadu are built from neurons. Thus, OG-5 above will count the neurons as *more fundamental$_{ground}$ than* Xanadu.

Bennett introduces 5a. to guard against this case. 5a. restricts the kinds we can deploy. Neither the kind K nor K* can include both built and unbuilt members. "Mind" is now disqualified as a legitimate kind. It includes built members (physical minds 1-3) and an unbuilt member (Xanadu). With the addition of 5a, clause 5 no longer generates the result that neurons are more fundamental$_{ground}$ than Xanadu.

My concern is that we were lucky that Xanadu was unbuilt in this world. There are other scenarios that are similar in spirit where Xanadu is built as well. For example, we can consider a world where every mind except Xanadu is built from physical neurons. This world is not ultimately physical; the neurons are built from non-physical, non-mental stuff, "neutral matter". The neurons are built from microphysical units, the atoms, which are built from the neutral matter. And while Xanadu is not built from neurons, she is built from the neutral matter as well. The neutral matter is fundamental. See the second diagram below:

Diagram 2: Another Soul World

Physical Mind 1	Physical Mind 2	Physical Mind 3		
↑	↑	↑		
Neurons	Neurons	Neurons		
↑	↑	↑		
Atoms	Atoms	Atoms	Xanadu	
↑	↑	↑	↑	
Neutral Matter	Neutral Matter	Neutral Matter	Neutral Matter	*{Unbuilt Level}*

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[13] See pgs. 159-160 of *MTU* for Bennett's depiction of the case.

In this case, we should maintain that Xanadu is more fundamental$_{ground}$ than the other physical minds. Clause 1 of MFT yields this result. Xanadu is also more fundamental$_{ground}$ than the neurons by clause 1, since there is intermediate physical matter building the neurons (the "atoms"). The neurons are two steps away from the fundamental level. Xanadu is only one step away.

Clause 5 is still problematic. Members of the kind "mind" are typically or normally built from members of the kind "brain matter". All minds but Xanadu are built from neurons. Neither the kind "mind" nor the kind "brain matter" includes both built and unbuilt members. All of their members are built. So it seems like clause 5 should tell us that the neurons are more fundamental than Xanadu.

I believe the issue is that clause 5a does not go far enough. A kind should not contain both built and unbuilt members as 5a states; moreover, perhaps the members of the kind in question should be *equifundamental*. This provision would disqualify "mind" above from counting as an acceptable kind. And the neurons would not be more fundamental than Xanadu. We could try adding this clause:

5d: The members of kind K* are *equifundamental*.

The problem with 5d is that Bennett later defines "equifundamental$_R$" in terms of the *more fundamental$_R$ than* and *less fundamental$_R$ than* relations.

"x and y are equifundamental$_R$ $=_{df}$ $(\forall x)$[(z is more fundamental$_R$ than x iff z is more fundamental$_R$ than y) and (z is less fundamental$_R$ than x iff is z less fundamental$_R$ than y)]."[14]

Employing equifundamental on the right-hand side of our analysis of MFT will not work if we are builders. Even if we are surveyors, we may still object to including this clause on pain of circularity. *more fundamental$_R$ than* should not be partially characterized in terms of equifundamental$_R$ if equifundamental$_R$ is characterized in terms of *more fundamental$_R$ than*.[15]

Would Bennett be concerned with this example? Not necessarily. Bennett acknowledges the following:

> "Perhaps clause (5) requires some further tinkering; perhaps there needs to be an additional clause. I do think this definition is, at a minimum, on the right track. But I am frankly not particularly concerned about small counterexamples and consequent tweaks, as long as those tweaks result in clauses that remain formulated in terms of building...I rather suspect that there are multiple slightly different ways to characterize the *more fundamental than* relation in terms of building, each of which would in effect count as a competing partial realizer of our ordinary concept."[16]

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[14] p. 173 of *MTU*.
[15] This is too quick. We may have other reasons to want our kinds to have more and less fundamental members.
[16] p. 161 of *MTU*.

I have tried to add an additional clause with 5d above, but it was not builder-friendly. In section V, I will suggest a different way to use a principle like clause 5 of MFT to characterize relative fundamentality.

IV. Patterns of Building and Externality

I will now raise a second, related, concern for MFT. Clause 5 renders MFT, in part, a pattern-subsumption account of relative fundamentality. Whether x is more fundamental$_R$ than y can be determined by the overall pattern of building relations instantiated in the world. If members of K* are typically built$_R$ from members of K, then x (of kind K) is more fundamental$_R$ than y (of kind K*).

A pattern-subsumption account of relative fundamentality shares certain features of "regularity" accounts in metaphysics which appeal to patterns in order to account for an otherwise mysterious phenomenon. We will look specifically at a pattern-based account of causation, and two features it has in common with MFT. For illustrative purposes, we will examine a "Humean" Regularity Account of causation—although this view is unpopular:

Regularity Account: Event c causes event e when c belongs to event type C and e belongs to event type E and events of type C are constantly conjoined with events of type E.

In the Regularity Account of causation we ask, are events of type C regularly (or always) succeeded by events of type E? If so, then c must cause e. Bennett's account shares one of the Regularity Account's the greatest assets: it takes a mysterious phenomenon and shows how it arises from a less mysterious base. For the Regularity Account, the mysterious phenomenon is the causation relation and the less mysterious base is the Humean mosaic of events. For Bennett, the mysterious phenomenon is relative fundamentality and the less mysterious base is the panoply of building relation-instantiations.

There is another point of comparison between Humean accounts and Bennett's account of relative fundamentality. Bennett's account of relative fundamentality renders *more fundamental$_R$ than* as a relation that is external to its relata and the entities building its relata. According to clause 5, to determine whether x is more fundamental than y, we look at the behavior of entities distinct from x and y and (in many cases) distinct from the entities in the building chains of x and y. The Regularity Account exhibits a similar kind of externality. Whether c causes e is partially determined by the existence and patterns of distinct events. Often, neither c nor e stand in any direct causal relations to these distinct events.

Some philosophers take issue with Humean accounts of causation because they think it is problematic (at least in some cases) to determine whether c causes e by appealing to patterns of distinct events.[17] Does a similar concern arise with MFT? Is it problematic that, in order to determine whether x is more fundamental than y, we must sometimes examine the behavior of entities that are distinct from x and y and stand in no building relations to x and y? This seems, if not decisively problematic, at least curious. You may think that whether x is more

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[17] See Hawthorne (2004) and Weatherson (2007) for reasons for and against taking this kind of externality to be problematic in the context of causation.

fundamental than y should not concern objects external to x, y, and x and y's building chains. I will provide two examples that emphasize this externality.

First, we should note what this issue is not. The issue is not whether relative fundamentality is an *intrinsic property* of an object. In other words, I do not propose that each object has an intrinsic degree of fundamentality. Bennett explains why she does not consider relative fundamentality to be an intrinsic property.[18] The concern here is different; the *more fundamental$_R$ than relation* is external in the sense that when x is more fundamental$_R$ than y, this is determined by relations holding between objects distinct from x and y and which stand in no building relations to x and y. Even if the *more fundamental$_R$ than* relation was not external in my sense, whether x is more fundamental than y may not derive from any intrinsic relative fundamentality properties of x and y.

Suppose an atom a partially composes table t, and there is another atom, b, which is intrinsically identical to atom a where b does not compose any table. We want to compare the relative fundamentality$_{composition}$ of b and t. It seems at first that b should be more fundamental$_{composition}$ than the table. Clause 5 will secure this result as long as the other tables in the universe are typically built by atoms. We can presume they are. Every table is built$_{composition}$ from atoms. So b is more fundamental$_{composition}$ than t. Now we can switch this result just by altering the contents of the universe outside of b and t. If it turns out that most of the items we thought were tables built from atoms were actually tables built from alien matter, then it will no longer be the case that tables are typically built$_{composition}$ from atoms. Clause 5 will no longer maintain that atom b is more fundamental$_R$ than table t.

What do these other tables have to do with b and t? My thought is: b may not be more fundamental$_{composition}$ than any of those alien tables. But that is not the question; we want to know whether b is more fundamental$_{composition}$ than *table t*. Table t, residing in my house in Pittsburgh, is made of atoms. The atoms composing it are just like b. There are no hidden features of b which render it a bad candidate for building table t. b was just unlucky in failing to compose table t. It was not in the right place at the right time. Why should the existence of the other tables make a difference to this particular relative fundamentality fact?

It is open to the builder to just agree the *more fundamental$_R$ than* relations are external in my sense but deny that this externality is problematic. Perhaps some would find it counterintuitive to examine the other tables in the universe in order to determine whether a particular atom is more fundamental than a particular table. Tough for them! It is not clear how seriously we should take this concern at first. However, I think that this externality is the source of our discomfort with the other cases discussed, including the soul example that Bennett raises and the alternate version I discussed last section. Clause 5 of MFT generates the result that the neurons are more fundamental than Xanadu in both cases because of the behavior of *other* minds. The problem is that those other minds should not impact our judgment of the relation between the neurons and Xanadu.

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[18] P.176 of *MTU*.

V.   Clause 5 and General Relative Fundamentality.

Due to this externality, I think clause 5 is *prima facie* problematic for trying to compare the relative fundamentality of two specific entities. Nevertheless, I think there is still important work for clause 5 to do in a builder's account of relative fundamentality. Picking up on a distinction Bennett makes elsewhere in Chapter 6[19] between singular and general relative fundamentality claims, I suggest that clause 5 is better suited for establishing *general* relative fundamentality judgements rather than singular ones. In other words, if we want to know whether it is correct to claim that atoms (in general) are more fundamental than tables (in general), we can appeal to something akin to clause 5 of MFT:

GMFT: Objects of kind K are *generally more fundamental$_R$ than* objects of kind K* if members of kind K* are generally or typically built$_R$ from members of kind K."[20]
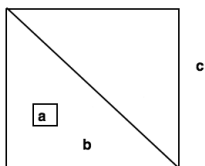
According to GMFT, atoms in our world are generally more fundamental$_R$ than tables, where all tables are built of atoms. But in the possible world containing the vast array of alien tables, we deny that atoms are generally more fundamental$_R$ than tables; although, it is still open that *some* specific atom or other, atom b, is more fundamental$_R$ than *some* particular table or other, table t, in that world. And it is true in the Xanadu worlds that the kind "brain matter" is more fundamental$_R$ than the kind "mind" (where this is a generic statement) even though Xanadu, in particular, is more fundamental than the neurons (as in the second scenario).

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[19] See section 6.7.3 of *MTU*.

[20] We should add qualifiers here as Bennett did with clause 5 of MFT. I suggest we add the following clause:

GMFTa*: It is not the case that objects of kind K are typically or generally built$_R$ from objects of kind K*.

Why? Consider we live in a world where large square pieces of wood are typically composed of two triangular sheets of wood. Suppose those triangular pieces of wood are typically partially composed of smaller square pieces of wood. In this scenario, triangular pieces of wood are typically built$_{composition}$ from square pieces of wood. Square pieces of wood are also typically built$_{composition}$ of triangular pieces. We can imagine that this is a strange world where this building pattern repeats itself indefinitely. Without GMFT* we would claim that square pieces of wood are generally more fundamental than triangular pieces and triangular pieces are generally more fundamental than square pieces. That is bad. We do not want to say that in general square pieces of wood are more fundamental than triangular pieces of wood or that triangular pieces of wood are in general more fundamental than square pieces of wood. I have included an illustration below where c picks out a big square of wood; b, one of the triangular pieces; and a, the smaller square.

We can also add analogues of Bennett's 5a and 5b, though I'm not sure at present whether they are necessary here:
GMFTa: There are no built$_R$ and unbuilt$_R$ members of a kind K.
GMFTb: Individuals do not belong to both K and K*.

What does it mean to say that "Objects of kind K are *generally more fundamental $_R$* than objects of Kind K*"? We can refine this idea in different ways. One way is to understand this as a claim about kinds. The *kind* K is more fundamental $_R$ than the *kind* K*. We can also understand it as a generic statement akin to "horses are taller than pigs". Sure, there may be some miniature horse and some giant pig for whom this claim is false. But generally, it holds true.

Neither of these approaches is without its problems. It is difficult to spell out the content of generic claims, and it is difficult to determine what constitutes a kind and the underlying metaphysics of kinds.[21] Furthermore, GMFT only provides a *sufficient condition* for when objects of kind K are generally more fundamental than objects of kind K*. It is a bigger project to investigate whether we can appeal to other clauses (perhaps analogues of certain clauses in MFT) in order to provide necessary and sufficient conditions or general relative fundamentality.

This proposal separates how we treat general and singular relative fundamentality judgments. We cannot look at whether entities of kind K are *generally more fundamental than* entities of kind K* in order to determine whether an individual x (of kind K) is more fundamental than an individual y (of kind K*). GMFT does not help us determine when an individual entity is more fundamental than another one. We still need a criterion (in addition to clauses 1-4 of MFT) to determine singular relative fundamentality judgments.

Nevertheless, prying apart general and singular characterizations of relative fundamentality may be valuable for the builder. In addition to avoiding the problematic cases from section III, GMFT may have useful applications. For example, if we want our law candidates to feature relatively fundamental properties, we may take generalizations featuring neural properties to be better law-candidates than generalizations involving mental ones because the entities of the kind "brain matter" are generally more fundamental than entities of the kind "mind" (*pace* the issue raised in section II).[22] This may even hold if there are individual exceptions.

I proposed GMFT in order to highlight an approach the builder can take if she wants to focus on general rather than singular relative fundamentality judgments. This is a way of embarking down the path Bennett points us to when she suspects that "there are multiple slightly different ways to characterize the *more fundamental than* relation in terms of building, each of which would in effect count as a competing partial realizer of our ordinary concept." Thanks to Bennett's provocative, exciting and compelling proposals, builders (and philosophers in general) are now in a position to better understand and refine our concept of relative fundamentality.[23]

References

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[21] See deRosset (2018) for issues concerning kinds in the context of Bennett's MFT.

[22] Although, this is just a rough starting point. We must clarify how to interpret GMFT as applying to properties, and the relationship between kinds and properties.

[23] I am grateful to Karen Bennett for helpful discussion.

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