Fundamentality in the Social World
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The notion of *fundamentality*-- roughly, the hierarchical explanatory relationship between facts and things-- plays a significant role in theorizing in numerous philosophical domains. In metaphysics, the notion of fundamentality is used to explain the relationship between ordinary objects and the sums of particles that make them up, between "lower level" facts governing the micro-level and "upper level" facts governing the macro-level, and between laws and their instances, to name just a few examples.

Recently, social metaphysicians-- theorizers who seek to understand socially constructed entities like the Chicago Cubs, money, the social category *womanhood*, and The Beatles-- have begun to utilize the notion of fundamentality in analyses of the social world. (Griffith 2018, Taylor 2023, Epstein 2015, Schaffer 2019, Pagano 2024, Baysan 2025) Just as the natural world is stratified into an explanatory hierarchy of the more and less fundamental, the social world is also divisible into more and less fundamental social entities in a hierarchy of explanation. For example: a group of musicians is thought to be more fundamental than the band that they make up; coarse-grained social categories like "woman" are thought to be more fundamental than fine-grained social categories like "person born in 1968 with a long left toe"; and individual countries are thought to be more fundamental than the United Nations.

This paper explores the use of fundamentality as a tool for understanding the social world, focusing on both the relation and the *relata* of fundamentality. I ask two broad questions: (i) what is the notion of fundamentality that we should use when analyzing the social world, and is it the same notion that we use in analyzing the natural world? (ii) what is fundamental in the social world? I articulate and defend two main proposals.

The initial proposal is that the notion of fundamentality that is useful for understanding the objects and entities of the natural sciences is different from the notion of fundamentality that is useful for understanding objects and entities in other philosophical domains, including the social sciences and the social world more broadly. While the notions of fundamentality are conceptually related, they differ in such important ways that we should not think of them as exactly the same tool.

Accepting the distinction between "natural" fundamentality and social fundamentality paves the way for several other insights about the relationship between fundamentality and the social world. The first insight is that relative fundamentality in the social world is different than relative fundamentality in the natural world. Modal

differences between natural fundamentality and social fundamentality, including necessity in one case and contingency in the other, speak to different sorts of explanatory relationships. The second insight is that the joint-carving entities in the social sciences are different than the joint-carving entities in the natural world. I suggest that social categories are among the *fundamentalia* of the social world. I draw these ideas together into a more radical proposal: the social world itself should be viewed as containing fundamental facts, in a particular sense of "fundamental." In attempting to identify the unexplained explainers of the social domain, it will turn out that some social phenomena are best explained by the social world itself. Appeals to natural metaphysics are not helpful or illuminating in these cases because the social world contains domain-specific *fundamentalia.* This point applies to other domains of inquiry as well, opening the possibility of multiple levels of fundamental explanation.

I also incorporate some methodological lessons. The distinction between natural fundamentality and social fundamentality can be used to help us understand the difference between fundamental metaphysics and social metaphysics. Fundamental metaphysics utilizes a notion of natural fundamentality, and social metaphysics utilizes a notion of social fundamentality. In some surprising cases, theorizing that is thought to fall in the domain of one sort of metaphysics actually falls within the domain of another.

1. Fundamentality and *Fundamentalia*

Before proceeding, it will be helpful to clarify what is meant by "fundamentality" in this discussion. First, distinguish between *relative* fundamentality and *absolute* fundamentality. Relative fundamentality captures the comparative relationship between different sorts of facts. For example, "the group of particles shattered the window" is more fundamental than "the rock shattered the window," in virtue of the group of particles being more fundamental than the rock. For my purposes, I will suppose that x is more fundamental than y if x is explanatorily prior to y.[1] Relative fundamentality is to be contrasted with absolute fundamentality. X is absolutely fundamental if x lacks an explanation. Absolutely fundamental entities are those that are explanatorily primitive: there is nothing "below" them to explain them.

I will also refer to *natural* fundamentality and *social* fundamentality. By natural fundamentality, I mean the relation and the *relata* of the mind-independent physical world that are typically taken to be ontologically basic. The

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[1] This approach is a bit simplistic, but has the advantage of not claiming more about the relationship between fundamentality and building than is necessary. For a more substantive approach, see Bennett (2017, p. 156). She proposes jointly necessary and sufficient conditions for relative fundamentality.

particles that form a rock, for example, are naturally fundamental. Natural fundamentality is meant to track the widely used and analyzed notion in the contemporary literature on grounding and fundamentality. By social fundamentality, I mean the relation and the *relata* of the social world, roughly defined as containing mind-and-human-dependent entities. As I shall suggest, the concepts do overlap in key ways. That something is socially fundamental does not indicate that it is non-physical or non-natural. Rather, the differences between them mean that they are subtly different analytic tools.

I will claim that in the social world, there are instances of both relative fundamentality (things being more and less fundamental than each other) and absolute social fundamentality (facts whose best explanations have ultimate grounds in the social world.) The first claim seems obvious, while the second claim seems outrageous. We can easily generate examples of relative fundamentality in the social world. The members of the philosophy department are explanatorily prior to the philosophy department; the romantic relationship between the three partners is explanatorily prior to the throuple; the members of the committee are explanatorily prior to the committee. In each case, looking at the "lower level" entities explains the "upper level" entities. But what about instances of absolute fundamentality in the social world? Examples seem hard to find, impossible even, if one is naturalistically friendly. How can the social world be explanatorily fundamental when it is so obviously grounded in the same stuff in which physical objects are grounded? Getting this idea off the ground will take a bit of work.

Suppose that just as there are "building blocks" of natural reality, there are "building blocks" of social reality. If one were trying to build a new world that included social components, what would these social pieces be? They wouldn't necessarily be purely physical things. *Dollar bill* and *Chicago Cubs* are not informative *qua* physical objects, for example-- for explanatory purposes, one doesn't necessarily care about the slip of paper or the particular group of people. It is the network of social conventions and attitudes that imbue physical objects with social content. The social world is an explanatory layer on top of the physical world.

I suggest that the best candidates for building blocks of the social world are social categories like *woman*, *professor*, *dollar*, and *baseball fan*.[2] Generally, social categories correspond to social predicates. The social world is constructed from social categories like these; one cannot model the social world without reference to them. Social

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[2] Mason (2016) is tempted by the idea that the building blocks are social kinds, where social kinds are a type of natural kind. Just as kinds like *water*, *quarks*, and *wallabies* are to be found in nature, kinds like *cryptocurrency*, *restaurants*, and *teams* are to be found in social reality. I will not mount an argument against the social kinds as the *fundamentalia* of the natural world here, since I take social category talk and kind talk to be intertranslatable. One reason to be wary of utilizing social kinds for joint-carving purposes is that they lack the boundaries of canonical natural kinds. While it is somewhat clear what is water and what is a wallaby, it is a substantive and complex inquiry in social metaphysics what counts as cryptocurrency, a restaurant, or a team.

categories predict and explain each person or entity's trajectory though the social world, as well as predicting and explaining the functions and roles of social entities. For example, belonging to the social category *bitcoin* yields different predictions than belonging to the social category *Euro*. Belonging to the social category *Buffy the Vampire Slayer Television Show Superfan* yields different predictions than belonging to the social category *Macgyver Fanfiction Author*. In other work (Bernstein 2024, Bernstein manuscript), I suggest that social categories are causal: they are causes, effects, and intermediaries. But even without causal powers, social categories are a plausible candidate to be the building blocks of social reality.

Supposing that social categories are the building blocks of social reality, it seems obvious that not all social category are equally explanatorily powerful. There are differences in fundamentality between social categories: some social categories have greater predictive and explanatory power than others.
For example, the category *people with a long left toe born before 1979* probably doesn't have much predictive and explanatory power in most social contexts, but *Black woman* has great explanatory power in the United States. Counterfactually intervening on the former variable ("What if she had not been born before 1979 and with a long left toe?") would not yield much useful predictive information. But intervening on the latter variable ("What if she were not a Black woman?") would result in important information about a person's life.

This sort of data is an indication that there are differences in fundamentality between social categories. Some categories are more explanatorily powerful than others. This mirrors natural metaphysics, in which some entities are thought to carve nature at its joints better than others. Joint-carvingness is taken to be a marker of fundamentality. In the natural world, the joint-carvers are often taken to be Lewis's "perfectly natural properties"-- properties declared by physics to be the most basic. The property *having mass m*, for example, is more basic than *having mass m and being square.* Similarly, some social categories carve social reality at its joints. In the United States, *Black woman* carves social reality at its joints; in India, *Brahmin man* is a joint-carver. These categories are more fundamental than ones like *Buffy the Vampire Slayer Television Show Superfan*. In predicting and explaining social reality, we look to the most fundamental categories.

However, there are limits to the parallels between natural reality and social reality, and the uses of fundamentality to explain each of them. In what follows, I will identify numerous informative differences between the notion of fundamentality used to explain the natural world and that used to explain the social world. As I will suggest, these differences raise questions about the absolute fundamentality of the social world more generally. They

also give rise to further methodological insights about the differences between natural metaphysics and social metaphysics.

2. <u>Differences between Natural Fundamentality and Social Fundamentality</u>

The first difference is that what is naturally fundamental is always naturally fundamental, whereas what is socially fundamental changes cross-culturally. Whatever the class of fundamental things in the natural world turns out to be, they do not change from one moment to the next. It is not as if protons once fundamental and then stopped being fundamental, for example. Though our best scientific theories of the basic building blocks of reality continue to develop and evolve, the *fundamentalia* do not change across time. Nor do they change across space. Basic building blocks are fundamental for all of reality-- or so the typical concept of fundamentality says.

In contrast, what is fundamental in the social world is both diachronically and geographically variable. 500 years ago, *landed gentry* was a fundamental social category in the United Kingdom. If one wanted to predict whether or a particular person would have a life of ease or of servitude, or their marriage prospects, or even their life expectancy, one would have to know whether or not they fell into the *landed gentry* category. In the contemporary era, however, other markers of socioeconomic status-- as well as other sorts of social categories like race and gender-- yield the most explanatory power.

Fundamental social categories also differ with respect to culture and geography. Caste,[3] for example, plays a central role in social joint carving in India. Whether one is Dalit or Shudra predicts and explains one's social trajectory within Indian society. These categories have little predictive and explanatory power in contemporary France, however. in the United States, racial categories are strong determinants of social trajectories, including social determinants of health. In the United Kingdom, however, it is often thought that class plays a more central role in prediction and explanation than race.[4]

What is socially fundamental also differs between localized social situations. Suppose that one is a social anthropologist studying comparative social cachet and social power of high school cliques in different American regions. And suppose one wants to know which students are conventionally permitted to sit at which cafeteria table in a particular American high school. Then one would need to know which social categories there are in a particular

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[3] Here I intend caste to refer to Varna rather than Jati, though some of my points will apply to both.
[4] See https://natcen.ac.uk/news/40-years-british-social-attitudes-class-identity-and-awareness-still-matterfor a summary of these attitudes.

high school (e.g Drama Geeks and Jocks), as well as which people belong to them. These features plausibly vary between high schools. Similarly, religious categories in Northern Ireland in 1995 had different explanatory significance than the same categories in England at the same moment. But the same cannot be said of natural fundamentality, which does not vary between local educational institutions or geopolitical regions.

Another difference is that socially fundamental entities can be brought into or out of existence by human beings, whereas human beings do not bring natural *fundamentalia* into existence. For example, the social categories *Trump Republican* and *witch*-- which have carved social reality at its joints at different points in history-- were brought into existence by human thought and convention. Similarly, there will be joint-carving social categories in the future that we do not yet know about. There might be social hierarchies between artificially intelligent agents. "Artificial being with sentience level 3A," for example, might have great predictive and explanatory power in the next century, whereas it is presently hard to limn the relevant social categories involving artificially intelligent entities.

Social categories can also be removed from existence, or at least their referents can be. French francs were removed from use in 2002, and Bitcoin could plausibly be banned as a form of currency. But barring human-caused termination of the universe, categories of natural *fundamentalia* are not removed from existence by humans. Natural *fundamentalia* exist apart from human thoughts and conventions, whereas social *fundamentalia* depend on them.

A final difference between natural and socially fundamental entities is that the latter do not obey Schaffer's *tiling constraint*. (Schaffer 2010, 38-42) Roughly, the tiling constraint holds that the ways of carving reality neither leave out any bits of reality, nor double count any bits of reality ("no gaps, no overlaps"). Schaffer depicts the tiling constraint this way:

"Consider all the ways that one may slice a pie. One might leave the whole uncut, or slice it in half, or cut it into quarters, and so forth. One cannot leave any part out. However one cuts, one divides the whole. And one cannot serve any part twice. Each part belongs to one and only one slice. In place of the pie, consider the cosmos. Different answers to the question of fundamental mereology can be seen—in light of the tiling constraint—as different ways of carving up the cosmos into basic pieces. The question of fundamental mereology can be seen as presupposing that there is a metaphysically privileged way to carve up the cosmos, provided by the notion of a basic piece." (Schaffer 2010, 41-42)

The central idea of the tiling constraint is the following: if the world is a giant Scrabble board, then the tiles that make up the world cover every square in the board, and no square has more than one tile.

However, the basic building blocks of the social world-- including social categories and other entities from which the social world is built-- create both gaps and overlap. First, gaps. Even if one were to list every joint-carving social category, there would be people and social entities that are not members of any fundamental social category.[5] And the joint-carving social categories do not cover all of social reality, for several reasons. The first reason, already suggested, is that joint-carving social categories differ across times, cultures, and even local environments. Any attempt to give a comprehensive, across-the-board account of social joint-carvingness immediately runs into trouble because of local variability. This is a feature rather than a bug. For social metaphysics to appropriately model social reality, the ontology should be sensitive to local and culturally variable conditions in a way that natural metaphysics is not.

The basic building blocks of social reality also generate overlap. Suppose that one is trying to model modern Indian society, which is socially stratified by both caste and gender. The members of the joint-carving category *Dalit woman* overlap with the members of the joint-carving category *Dalit*, even though both categories provide different sorts of prediction and explanation. Similarly, members of the category *Modi cabinet leaders* partially overlap with members of the category *Brahmin,* even though both are different joint-carving categories.

Intersectional social categories-- roughly those social categories which involve multiple, intersecting forms of oppression not reducible to the oppression faced by either category alone-- are also examples of overlapping joint-carving categories. In other work (Bernstein 2020), I argue that intersectional social categories are metaphysically and explanatorily prior to their constituents. For example, the category *Black woman* is explanatorily prior to the category *Black* and *woman*, and the former grounds the latter. I also suggest that social categories that represent common forms of intersectional oppression are socially joint-carving. The categories can be used to understand and predict particular structures of oppression and privilege in the societies in which they operate. Like other social *fundamentalia*, these categories vary across societies and historical moments.

A brief recap will be helpful. I have suggested that the natural world and the social world utilize different notions of fundamentality, as well as different sorts of *fundamentalia*. The notions of fundamentality differ insofar

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[5] Note that the claim here is about membership in fundamental social categories. There are obvious stipulative categories such as every human being that include every member of the human race by definition, but that is not a joint-carving social category.

as natural fundamentality is necessary whereas social fundamentality is contingent. The *fundamentalia* are different because natural *fundamentalia* are perennial and not formed by humans, whereas social *fundamentalia* are created by humans, differ cross-historically, and differ cross-culturally.

The upshot, I suggest, is that there are numerous notions of fundamentality put to work in service of explanation. Perhaps they are all determinates of the same determinable. For example, one might hold that fundamentality$_{natural}$ and fundamentality$_{social}$ are determinates of the same determinable, fundamentality. but they are different enough to warrant formal distinction.

This suggestion leads me to a further methodological upshot. We can use the distinctions between notions of fundamentality to get a grip on methodological differences between natural metaphysics and social metaphysics. Traditionally, it has been hard to draw a line between the two, since some fundamental entities have social involvement and social entities are still grounded in the natural world.[6] For example: if one is attempting to give a metaphysical theory of what a television show is, one might think this is a straightforward example of doing social metaphysics. But the television actors, television writers, and token instantiations of each television episode are still rooted in natural, physical stuff. Or if one is attempting to give a metaphysical theory of obesity, one might think this is a straightforward example of doing natural metaphysics. But social norms and cultural beliefs govern what is considered obese and what is not.

Different notions of fundamentality can help clarify the terrain. Suppose that one doing natural metaphysics if one is using a notion of natural fundamentality, and one is doing social metaphysics if one is using a notion of social fundamentality. When one is limning joints in reality that can be socially created or destroyed, or joints that are contingent, one is doing social metaphysics. When one is limning joints in reality that is not created by humans, one is doing natural metaphysics. From this perspective, some theorizers are mistaken about which one they are doing. Believers in modern astrology, for example, view the theory as natural metaphysics, when in fact the basic commitments of astrology have the hallmarks of social metaphysics. Holding that Leos and Scorpios are not romantically compatible based on birth conditions is a form of social joint-carving.[7] And sometimes theorizers think they are doing social metaphysics, when they are actually doing natural metaphysics. Hegel, for example, viewed himself as undertaking a project about the teleology of history-- a model of how history's repeated cycles produce a

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[6] See Barnes (2012) for an argument at emergent entities, including social ones, can be ontologically dependent while being fundamental. See Mason and Ritchie (2020) for a further elucidation of the challenges in distinguishing between fundamental and social metaphysics.

[7] See Cull and Mehdi (2023) for a discussion of astrology as social metaphysics.

particular end or ends. But Hegel's central ontological posit-- *Geist*, or "World Spirit"-- has a plausible interpretation as a natural metaphysical entity driving history forward.

Natural metaphysics and social metaphysics are not mutually exclusive: sometimes an explanandum requires both notions of fundamentality and *fundamentalia*. For example, a comprehensive metaphysical theory of health might include might natural kinds such as blood, vessels, and bodily organs, but also social kinds such as ethnicity and gender. And sometimes it will be unclear which notion of fundamentality is required precisely because one's background ontological commitments are unclear. A particularly strident believer in astrology, for example, might hold that it is entirely a natural metaphysical endeavor rather than a social one.

2. Absolute Fundamentality and the Social World

I have suggested that there are at least two different kinds of explanatory structures and sets of explanatory demands for natural metaphysics and social metaphysics. And I have also suggested that there are comparatively socially fundamental entities, just as there are comparatively fundamental natural entities. A question that naturally follows is whether there are any absolutely fundamental social facts, given the kind of fundamentality most relevant for social inquiry. The answer is normally assumed to be no: any naturalistic picture of the world of does not countenance an explanatorily independent level of reality apart from the most basic microphysical level.

I suggest that some social facts are absolutely fundamental, on a particular interpretation of fundamentality. The idea is that the best explanations for some social facts "bottom out" in the social world-- nothing below or above some social facts best explains them, because some *fundamentalia* are domain-specific. I'll give a few motivations for this idea.

First, consider the existence and conceptual content of the social category *African American*. If one were to try to explain the existence of the social category *African American* to a very smart alien, or even a reasonably smart anthropologist, one would not launch into an explanation of how particles and other microscopic bits of reality are arranged. Nor would giving an inventory of individual human mental states truly illuminate the situation. Explaining that humans #4, #568, and #6092 each have mental states that represent the category *African American* neither illuminates the category, nor why the social category has particular joint-carving power in contemporary society in the United States. The best explanations of the category come from other fundamental social facts, including facts about history, culture, and racial identity.

The suggestion is that the best explanations for the existence and conceptual content of the category are themselves social. Such explanations still involve collective social attitudes and psychological states, but do not necessarily invoke the microphysical level of reality, or other canonical natural *fundamentalia*. In a typical case of natural fundamentality, one automatically appeals to the microphysical level. For example, the particles that compose a rock are more fundamental than the rock, and thus predict and explain the existence of the rock. But in many cases of social facts, the microphysical level does not truly explain the existence of the social world-- at least not in exactly the same way that the particles explain the rock. Something slightly different is going on in these cases.[8]

Now, there is an immediate temptation to try to find a non-social candidate for the explanatory grounds of the social category. For example, it is tempting to try to seek explanations for the existence of the category in the microphysical natural world, or to appeal to numerous collections of neurons within human brains as the basis of explanation. But even general collectives of human minds or mental states will only get so far in terms of prediction and explanation of the macro-level social world: we can't *understand* the social world by only appealing to those things. Like the physical and the mental world, there is an explanatory gap between the natural *fundamentalia* and the social world. The social world is, in an important sense, unexplained. At the very least, it is not explained by the non-social world in the same way that the existence of a rock is explained by its constituent particles.[9]

It is natural to wonder what absolute fundamentality amounts to in this context. One worry is that the social world floats free of the natural world, and thus the explanatory proposal is not naturalistically friendly. I do not deny that the social world physically arises from the natural world, though dualists and non-naturalists of various stripes might embrace this non-physicalist conclusion. Rather, my claim is that best explanations sometimes "bottom out" within the social level, even where other logical and natural dependence relations hold between the natural and social levels. We can accept existential dependence of the social world on the collective human mental world, or on the physical world, while rejecting that the social world is best explained by these things. As instances of the social world, social categories are not best explained by anything "above" or "below" them, but that does not imply existential independence from those levels. Dependence relations and best explanations, which are often thought to be intertwined, sometimes come apart in these cases: Though the social world would not exist without the natural

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[8] See (Trogdon 2013, 478-479) for an argument that even natural notions of fundamentality are not explanatorily satisfactory.
[9] See (Bliss 2019, 366-369) for a helpful discussion of the relationship between fundamentality and explanation.

world, some parts of the social world are only best explained by other social facts. This view is compatible with a physicalist picture of the social world.

A second consideration in favor of the fundamentality of the social world is broadly methodological: it could be that a "middle" level of reality, rather than a "bottom" or "top" level of reality, is the most ontologically fundamental. According to the view that I call *middleism* (Bernstein 2021), the middle level could be the level inhabited by medium-sized dry goods like iPhones, tables, and coffee cups. Middleism takes those facts "below" and "above" the middle level, like facts about particles and galaxies, to depend on facts involving entities at the most fundamental middle level. According to middleism, all facts obtain in virtue of middle-level facts. A middle level is the most ontologically independent of all levels: all God has to do is create the fundamental middle level of reality, and the existence of the bottom-most levels and the uppermost levels comes for free. Lowest-level things like particles and highest-level things like planets inherit their existence from middle-level facts. Fundamental grounding claims take the form "x obtains in virtue of y", where y is a fact about some middle-level fundamental entity. Middle grounding is asymmetric, irreflexive, and intransitive. Transitivity of ground holds upwardly from middle facts and downwardly from middle facts, but not unidirectionally across all levels. As I suggest in previous work, a middleist world is logically, conceptually, and metaphysically possible. Arguably, it is no stranger than ontological views that take the top level of reality to be the most fundamental, and it has some explanatory advantages over conventional fundamental ontologies.

A plausible version of middleism holds that the social world is what constitutes the "middle" fundamental level. Call this view *social middleism.* Social middleism holds that the social level ontologically grounds the macrophysical and microphysical levels. Social middleism makes a stronger claim than the explanatory claims above, since it posits the ontological independence of the social world in addition to its being explanatorily primitive. As Mason and Ritchie (2020) note, one advantage of social middleism is that it places social metaphysics squarely within the domain of fundamental metaphysics, appeasing skeptics about the inclusion of social metaphysics in the subject matter of the subject as it is traditionally defined.

Like general middleism, one result of social middleism is that the transitivity of explanation might not hold across the natural and the social domain.[10] Social facts ground downwardly to microphysical facts and upwardly to macrophysical facts. But microphysical facts do not ground macrophysical facts in some cases. I do not take this to

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[10] Thanks to Emilie Pagano for this point.

be a downside of the view. As Schaffer (2012) notes, it is not even clear that traditional views of fundamentality maintain transitivity of grounding explanations. And Tahko (2013) holds that truth-grounding is not transitive. Transitivity is not necessarily a desideratum of a theory of grounding and fundamentality.

One need not endorse social middleism to accept that its plausibility lends support to the explanatory claims about social fundamentality. The mere possibility of the ontological independence of the social world should generate some philosophical openness to the idea that the social world contains its own best explanations. Accepting distinctive social *fundamentalia* already provides explanatory and predictive benefits, and undergirds the flexibility needed to model to the social world. Distinctive notions of fundamentality are necessary in order to account for the constant changes in the construction of the social world.

Distinguishing between types of fundamentality would not be unique to metaphysics. With respect to physical science and engineering, Thalos (2009: 11-15) argues that *systemism* should be considered alongside atomism. Systemism views structural qualities of systems as fundamental, whereas atomism views individual bits of systems as fundamental. Systemism is better suited to the social sciences.

Then there is the case of macroeconomics versus microeconomics. There is significant debate about whether macroeconomic explanations (that is, explanations of high-level economic phenomena like inflation) can be reduced to or derived from microeconomic explanations (that is, explanations of low-level economic phenomena like supply and demand for individual services and goods.) Many economic theorists have long thought that macroeconomic explanations do not reduce to microeconomic explanations. The best explanations for macroeconomic phenomena bottom out at the macroeconomic level, in a similar way that social explanations bottom out at the social level.[11]

Consider the existence of inflation in the United States economy. If one were to try to find a micro-economic explanation for the phenomenon, what would it be? The plausible candidates are individual production cost raises, individual supply differences, or inflation expectations. None is satisfyingly explanatory of the target explanandum, especially individually. Even collectively, the phenomena do not completely add up to a complete explanation of inflation. The best explanations for the existence of inflation, many economists suggest, reside in the macroeconomic level.

Note also that microeconomic entities do not obey Schaffer's tiling constraint, since microeconomic entities

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[11] See Hoover (2001) for a long discussion of causation and causal explanation at the macroeconomic level.

create both gaps and overlaps. They create gaps because there are some macro-level entities unexplained by micro-level entities, and they create overlaps because there are often multiple microeconomic explanations that are individually sufficient to predict and explain the same macroeconomic phenomenon. Epstein (2014: pp. 18-20) argues that macroeconomics does not even supervene on microeconomics.

My suggestion is that there are different notions of fundamentality at work in microeconomics and macroeconomics. Not all microeconomic phenomena give rise to macroeconomic phenomena. As in the case of natural and social metaphysics, transitivity of explanation does not necessarily hold across both domains: some macroeconomic phenomena will lack good explanations outside of the macroeconomic domain. The macroeconomic domain is explanatorily fundamental, and also contains the *fundamentalia* of macroeconomics.

This example from outside of metaphysics is broadly suggestive. While my main focus is differences between natural metaphysics and social metaphysics, it seems plausible that every domain of inquiry has its own sort of fundamentality and *fundamentalia*, and that many best explanations are within levels rather than at microphysical natural levels. As there are certain hallmarks of fundamentality in social metaphysics, so, too will there be hallmarks of fundamentality in the social sciences, the biological sciences, and the artificial sciences (philosophy of artificial intelligence.) If I am right, the world is more explanatorily splintered than often admitted.

The world is also structured differently than often assumed. According to traditional views of fundamentality, the world is hierarchically structured in a "layer cake" model, with transitive, unidirectional explanations from bottom to top. But accepting different notions of fundamentality and *fundamentalia* for different domains of inquiry refashions the layer cake model into something less hierarchical. Layers of reality co-exist, but explanatory "in virtue of" claims do not link the levels into size-based tiers. The world is more like a layer cake turned on its side than laid horizontally. Such a model also incorporates a more expansive view of fundamentality as a tool. Rather than view fundamentality as an indication of absolute explanatory independence, one can view fundamentality as a way to carve up the world's explanatory structure by domain. Domain-specific fundamentality is a fruitful way to make sense of the distinctive explanatory demands and desiderata of different areas of inquiry.

Concluding Remarks

I have suggested that the notion of fundamentality used to analyze the social world is different than the notion utilized to analyze the natural world. There are differences in the *fundamentalia* themselves and also in the

relationship of fundamentality. What carves natural reality at its joints is different than what carves social reality at its joints. While the natural *fundamentalia* are unchanging, the social *fundamentalia* are often in flux. While the relationship between comparatively natural fundamental entities is metaphysically necessary, the relationship of comparative social fundamentality is contingent. And while natural *fundamentalia* are often taken to be ultimate explanations, socially fundamental entities can also provide ultimate explanations, on a certain domain- specific conception of fundamentality.

These flexible features are appropriate for social metaphysics, which seeks to model the social world in all of its complication and flux. Identifying and articulating these differences also introduces new avenues of investigation. For example, social *fundamentalia* might differ between ideal and non-ideal social metaphysics, or between morally and legally joint-carving social categories. Clarity on the conceptual differences between types of *fundamentalia*, and types of fundamentality, helps us to demarcate the subject matter of social metaphysics from natural metaphysics, and to situate the project of social metaphysics in intellectual space more broadly. By sharpening the tools of metaphysics and of explanation, we are better able to apply them in creative and intellectually fruitful ways.

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