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# Theorizing with a Purpose: The Many Kinds of Sex

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## Abstract

The idea of a *natural kind* purports to be of something that constitutes “the world’s joints” and is captured in good explanations. Traditionally, natural kinds are assumed to be “mind-independent.” But a plausible account of explanation takes it to be a practice of asking and answering questions. Explanations should be evaluated as answers to legitimate questions; good answers are not always in terms of “mind-independent” kinds. Drawing on the example of sex, this paper explores some of the ways differences in the word are either marked or created by us, and how these differences matter for our explanatory purposes. I argue, following Epstein (2015), that explanatory kinds can be both anchored and grounded in social facts and, moreover, that explanatory projects – like other practical projects - depend on theoretical scaffolds to provide means toward our ends.

## 1. Introduction<sup>1</sup>

The idea of a *natural kind* has a complicated history full of controversies and confusions. It would seem that, at least within one tradition, the idea purports to be of something that plays connected metaphysical and epistemological roles.<sup>2</sup> First, metaphysically, natural kinds are “mind independent” and they constitute “the world’s joints.” Second, epistemologically, good explanation depends on tracking natural kinds. Because natural kinds are responsible for the structure and behavior of the world, our explanations of how the world works can only be adequate if they capture this structure. If we further assume that sometimes we come up with good explanations, it must be that we are in a position to have knowledge of at least some of the natural kinds.

So far this reconstruction doesn’t make clear why we must think that the world’s joints are “mind-independent.” Suppose reference to humans, human minds, and human artifacts are important in explanations of how the world works. This would seem to be a fairly obvious claim. Why are there cockapoos? Why don’t cockapoos shed like other dogs? Presumably because humans bred cockapoos,

and bred them to have hair, instead of fur, because hair sheds very little, and many humans are allergic to dog fur. Dogs are wonderful companions, but allergic reactions are unpleasant. The existence of cockapoos depends on humans and, importantly, cockapoos wouldn't exist if humans didn't both enjoy dogs and dislike sneezing, runny noses, etc. Our preferences have an impact on the world. We create and manipulate parts of the world and change how the world goes on. We design our pets and our pets make us happy. (Of course this does not mean we should objectify them!)

The simple explanation of the existence of cockapoos and their hair should be sufficient to show that there are some “mind-dependent” things, e.g., our preferences, that are important in explaining the existence and properties of some things in the world, i.e., cockapoos; and there are some artifacts or (in some sense) “mind-dependent” kinds, e.g., cockapoos, that explain regularities in our moods, behavior, and consumer behavior. So maybe we ought to give up the idea that natural kinds must be “mind-independent.” Natural kinds are just those kinds that play a role in good explanations. If we go this route, it might be odd to use the term “natural” in “natural kinds,” since kinds may be psychological, social, or artifactual.<sup>3</sup> So possibly we should switch to the term “explanatory kinds.” This would allow us to avoid taking any random collection of things, or any disjunctive (gruesome) property, to constitute a kind, while also being properly inclusive.

Of course the traditional defender of natural kinds won't accept this train of thought. There are several different exit points on the train. One is to claim that my explanation of the existence of cockapoos and of the happiness they give us aren't really “good explanations.” They are just “folk” explanations, or “common sense” explanations. Cockapoos aren't a natural kind. Moods aren't natural kinds. To get good explanations and so to discover natural kinds we have to consult *SCIENCE*, probably physics. Or perhaps we must consult metaphysicians who discover the world's joints in providing *fundamental* explanations. (Barnes 2014; Sider 2015) Another exit point is to challenge the notion of “mind dependence” I'm relying on. I seem to be relying on causal “mind dependence,” but that's the wrong kind. The existence of cockapoos depends on our preferences, but not in a way that makes cockapoos less than fully real, or non-objective. When we claim that natural kinds are “mind-

independent,” we mean something else. Those taking this second exit could grant that psychological states and cockapoos form natural kinds because they aren’t mind-dependent in any “spooky” way. On this approach the worry is that there is a different sort of mind-dependence that is a problem, and natural kinds can’t be mind-dependent in *that* way.

In what follows, I am going to consider the first of these two exit strategies, viz., that natural kinds are all and only those kinds that we rely on in giving a special privileged form of explanation, a form that is capable of getting at the “real,” “mind-independent,” joints in nature. The second exit, prompted by the fear of “spooky” mind-dependence, has been discussed fruitfully in Rosen (1994). I will argue that if we want to understand what there is in the world and how the world works, we need a variety of forms of explanation that are responsive to our interests and purposes. Nevertheless, if we are more pluralistic about explanation, we can still be realists about kinds, including psychological kinds, social kinds, and artifact kinds.

## **2. Theorizing**

Theories, as I understand them, consist of sets of propositions, or sets of beliefs. But the activity of theorizing isn’t just a matter of collecting truths. If I come up with a list of random truths, even a list of all the actual truths, this doesn’t count as a theory. I will not take on the task of defending this approach, but it may be useful to highlight some of its assumptions (See, e.g., Anderson 1995a, 1995b; Longino 1990; Garfinkel 1990).

1) Theories are answers to questions.

- There can be better or worse questions, so the question itself may need to be defended as a legitimate starting point, e.g., what are its presuppositions?
- Questions are motivated. And there are good and bad reasons for asking questions. The reasons for asking the question, the intended use of the answer, the context for asking, the question’s presuppositions, should all be explored and evaluated.

2) An adequate theory is not just a jumble of truths, but a collection of *significant* truths that *bear on* the question.

- Truths can fail to be significant because they are irrelevant, misleading, partial, trivial, etc., even if belief in them is justified. In courts we ask for “the whole truth and nothing but the truth” because sometimes a selection of truths that does not do justice to the phenomenon for the purposes of the inquiry is as bad as a falsehood (Anderson 1995a).
- Oftentimes, but not always, theories are produced to give explanations, i.e., they answer questions calling for an explanation. There are different kinds of explanatory questions, e.g., not all ‘why’-questions are alike, and other ‘wh-’ and ‘how’-questions are also requests for explanation.

3) Theorizing is a practice that has goals or purposes. What counts as a reason within the practice depends on its rules and norms. The practice itself – its ends and what it employs as means – is also open to critique.

- Even if the individual inquirer or researcher is driven by individualistic purposes, e.g., simply to make money, the adequacy of a theory will depend on the goals and purposes of the theoretical practice or discipline of which it is a part.
- Whether a truth is significant will partly depend on the goals/purposes of the theorizing as well as the question being asked. For example, a significant truth in medicine depends on the goals of promoting human health and well-being. The *contextual values* of medicine – in addition to the constitutive values of science, such as coherence, simplicity, empirical adequacy, etc., legitimately matter for determining whether or not the theory is adequate.
- Although some questions that arise in theorizing are internal to a paradigm and may not have direct practical implications, the tradition or paradigm should be evaluated in terms of the questions it allows us to raise (or doesn’t), the methods and resources it offers, the answers it renders intelligible (or doesn’t).

4) An important feature of significant truths is that the terms/concepts used to express/cognize them are *apt*, i.e., they capture the important features of the phenomenon that enable us to answer the question guiding the inquiry. This may require introducing new terms/concepts.

- Scientific theorizing is continuous with ordinary, “folk,” or common sense theorizing. There may be special methods, equipment, presuppositions, norms, expertise, and the like in science labs, but the project of science is continuous with the everyday project of getting along in the world.

5) Putting this together in a way that provides placeholders for various desiderata: A good theory will select among the [evidentially justified][truths]<sup>4</sup> those that are [apt for the purposes of the inquiry] and will [organize them] [to do justice to the issue] posed in [a legitimate question(s)] as [suited to the context].<sup>5</sup>

### **3. Theoretical Tools: Distinctions and Differences, Anchors and Grounds<sup>6</sup>**

In order to be clear in discussing the role of kinds in explanation, let’s use the term ‘distinction’ and ‘distinguish’ or ‘classification’ and ‘classify’ for the linguistic/conceptual acts of noting or marking differences, and the terms ‘difference’ and ‘differentiate’ for the ontological basis for distinctions when they are apt, i.e., we *distinguish* objects, properties, relations or kinds that are *different*; our *distinctions* aim to capture what *differentiates* the kinds we’re interested in. For example, Granny Smith apples are different from Fuji apples in color and taste. We distinguish between these kinds of apple by using the terms ‘Granny Smith’ and ‘Fuji’. We may distinguish these kinds of apple for agricultural or economic reasons, or because some prefer tart apples and other sweet. Some humans or communities of humans may not distinguish these two kinds of apple at all – they may be unfamiliar with apples and not realize they come in different varieties. But even if we don’t have the words to distinguish them, there are color, taste, and agricultural differences between them.

On my view, the world is replete with things, and parts, fusions, sets, collections, and properties of things. Differences abound. There are more divisions than we could ever note or care about. We distinguish things by classifying them, and classification is a human activity and can be done in better or

worse ways. As sketched in §2, the adequacy of a classification will depend on a variety of factors. Theoretical and practical norms will have different weights depending on the task.

For example, suppose that after lobbying from the town's dog owners, the local animal commission has designated two areas at the town dog park, one for dogs over 20lbs, the "Big Dog" area, and one for dogs under 20lbs, the "Little Dog" area. This allows the little dogs to have space to run around and play, and puppies to be socialized, without being trampled by the big dogs. In this task they were appropriately guided by some epistemic goals (it is important to determine what makes mixing the big dogs and little dogs difficult for dogs and owners), and some practical goals (the commission should be responsive to the community's interests, but also have a policy that is manageable to enforce). The commission decided that the "20lb rule" (strictly, that dogs weighing >20lbs are not allowed in the "Little Dog" area) was the differentiating feature that best served the purpose at hand. Of course, there is plenty of room for ongoing disagreement both about the overarching purpose, or about how best to fulfill that purpose. For example, should dogs weighing over 20lbs that are elderly or recovering from surgery be allowed in the "Little Dog" area?

Notice that although the commission decided what condition should divide the two areas, the *condition* itself concerns the weight of the dog. The condition is "up to us," i.e., it is up to the commission, but what satisfies the condition is not. Drawing on recent work by Brian Epstein (2015a), we might distinguish the *anchoring fact* for the "Little Dog" area and the *grounding fact*. The anchoring fact is the decision we made to use the "20lb rule" as the condition for inclusion in the "Little Dog" area. This decision creates a frame within which there is a right or wrong about whether a particular dog belongs in the "Little Dog" area. The anchoring fact, however, should be distinguished from what grounds or constitutes the kind "little dogs." Little dogs are those who weigh less than 20 lbs. In this case the anchoring fact is social (about what we decide), but the grounding fact is not (weighing more or less than 20lbs is a physical fact).<sup>7</sup>

Additional questions may arise when we come to apply the condition for inclusion in the "Little Dog" area. Since there is no scale at the park, people will have to rely on collaborative practices and

good faith, and sometimes animal commission officers, to make judgments. If this fails, there may be reason to distribute special tags to dogs who weigh <20 lbs, though with fluctuations in weight and growing puppies, this will be a fallible criterion.

We began with a contrast between distinctions and differences, and we've added to this:

- *purposes* for drawing the distinction or noting the differences, e.g., wanting to protect little dogs;
- *conditions* that differentiate members of the sets in question and provide a ground or basis for the distinction, e.g., weighing more or less than 20lbs;
- *anchors* that underwrite or establish the link between the conditions and the kind, e.g., that the animal commission (reasonably?) decided on 20lbs as the cut-off for “little dog”<sup>8</sup>;
- (epistemic) *criteria* we use to conclude that the conditions are met, e.g., wearing a “little dog” tag;
- *terminology* to mark the distinction, e.g., ‘little dog’ and ‘big dog.’

For each of these there are relevant norms and potential for debate: We can ask whether the purposes for drawing the distinction are *legitimate* (what about disabled dogs? elderly dogs?), whether the conditions are *apt* given our purposes (is 20 lbs too large?), whether the anchors are *sufficient or authoritative* (how did the Commission make this decision?), whether our criteria are *reliable* (do we need a scale at the park?), and whether our terminology is rhetorically *comprehensible and effective* (is a 21 lb dog really a “big dog”)?

#### 4. Sex

One of the longstanding debates in feminist theory is whether *males* and *females*, *men* and *women*, constitute natural kinds, i.e., whether *sexes* and/or *genders* are natural kinds (Mikkola 2012).<sup>9</sup> There is general consensus that *gender* is socially constructed, and substantial disagreement about sex. In §1, we took on the idea that good explanations track kinds (leaving off the distracting qualification ‘natural’). In §2, I made the suggestion that a good theory will select among the truths those that are apt for the purposes of the inquiry and will organize them to do justice to the issue posed in a legitimate question(s) as suited to the context. Explanatory theories will employ terms and concepts that are apt for the purposes of the explanatory demand raised by the question.



Human sex differentiation occurs within a framework of social meaning. An infertility specialist and an intersexed teen have different purposes and interests that will lead them, reasonably, to different conclusions about what sex is. Because there are different frameworks of social meaning, different ways of drawing sex differences will be adequate to those frameworks. It does not matter whether those who employ different frameworks in different contexts agree unless they need to communicate; and when they need to communicate, there are mechanisms available to disambiguate their terms (though not always effectively employed!). What matters is whether their conclusions about what sex is give good answers to their questions, where good answers involve tracking the parts of reality that do the needed descriptive, explanatory, normative work (Anderson 1995a; Elgin 1997, Introduction, Ch 1, Ch 11). A further set of issues concern the rhetorical and terminological choices that further the legitimate purposes of the inquiry, e.g., which meaning is, and should be, the dominant public meaning of a term, and what considerations are relevant to determining this (Bigelow and Schroeter 2009; Haslanger 2012, Ch 10, Ch 17).

For example, the question of what features *differentiate* males and females – the conditions that determine membership in the set of males or females – is a non-trivial matter, and is far from settled (Fausto-Sterling 2000a, 2000b, 2005; Richardson 2013). This can be seen from the controversy over Caster Semenya, the South African runner whose female standing was challenged after she won the 800 meters in the 2009 World Championships, and only reinstated in June 2010.<sup>12</sup> We might start by considering physical features such as: chromosomes, reproductive organs, and such. According to standard medical dictionaries, a male just is “an individual that produces small usually motile gametes (as sperm or spermatozoa) which fertilize the eggs of a female” (*MedlinePlus*). This is one way of differentiating one set of bodies from another. There are differences corresponding to these distinctions (though the boundaries will be vague). So simply considered as a distinction, it is neither correct or incorrect. Just as drawing a line between dogs over and under 20lbs is neither correct or incorrect. Such differences in weight exist. But in both cases the question remains whether it is a good way of drawing the distinction in question, given our broader purposes.

If we accept the *MedlinePlus* definition of ‘male,’ then in those contexts, the conditions for being male are wholly physical. *Maleness* is anchored by our decision to take physical features to be sufficient to determine who counts as male, and *maleness* is constituted by the physical facts we settle on. In the case of sex, however, there isn’t consensus on the purposes or the conditions for sex distinctions. Some sexologists have included in the basis for sex differentiation developmental features during adolescence, e.g., gender identity and role; these have clear social dimensions (Money and Tucker 1976; Fausto-Sterling 1997). If we authorize these sexologists to anchor what it is to be male, then whether one is male or female is also partly a function of non-biological facts, including the individual’s social role.<sup>10</sup> On this alternative account, then, sex is a social kind. In other words, on this account, sex is not only anchored in, but also “grounded” or “based in” the social.

The distinctions I have drawn and the argument I’ve offered may iterate at lower levels. For simplicity, suppose we say that a human male is a human with a penis. What counts as a ‘penis’ is a decision we make in different contexts given our purposes in classifying genitalia. On one view, penises are constituted entirely by physical properties. On an alternative view, however, it might be decided that the conditions for being a penis include social functions and/or features, e.g., something is a penis only if it is long enough for others to use it as a basis for visual sex identification of someone naked from a short distance (3 feet?), or only if it is long enough for penetration during sexual intercourse.<sup>11</sup> Such controversies might be interpreted as controversies either over anchoring or constitution. If anchoring, then the issue is what features are necessary for something to count as a penis, given the purposes of our inquiry and assumptions about what penises are *for*. The social and theoretical context might lead to a decision to select a particular length range (understood in physical terms) as a condition on being a penis. This would be compatible with penises being a purely biological kind, i.e., grounded in biology. However, if penises are socially constituted or grounded (not just socially anchored), then being able to serve a certain social function would be chosen as part of the conditions for being a penis, in addition to, or other than, length and other biological functions. For example, it would be a condition on *being a penis*

that it be recognizable by others as such, or that it be useable in social settings of intimacy for certain activities.

In the background of this discussion are actual controversies in the context of sex reassignment surgery over what it takes for something to be a penis: How important to *being a penis* is the size, appearance, sensitivity, and other biological and social functions? (Mutatis mutandis for female genitalia and other assumed sex characteristics.) For the purposes of this essay, I am neutral on the question of whether and to what extent sex and sex organs are socially constituted because I do not think this question can be answered in the abstract, apart from a particular purpose for the account being offered. Instead, I defer to the extensive literature on the topic (e.g., Laquer 1990; Kessler 1998; Fausto-Sterling 2000b, 2005; Warnke 2001; Shrage 2009; Sveinsdóttir 2010; Jordan-Young 2010; Fine 2010). My point is simply to emphasize the different ways that the social context can play a role in distinguishing different kinds of things.

The controversy over whether sex is a physical or social category is a controversy over what differentiates the sexes, what differences count and why some (but not other) differences count. There are certainly vested interests at stake and social pressures to select one set of conditions or the other. However, if we allow that it is possible (and in some contexts, for some purposes, even reasonable) to define sex in physical terms, then the fact that sex distinctions are socially motivated and have a social function, is compatible with sex differences being physical. In such a case, sex would be *grounded* in the physical, in Epstein's sense. As in the case of distinguishing "Little Dogs" and "Big Dogs," the *anchoring* facts may depend on social context, "on us" if you like, but social anchoring does prevent a kind from being an physical kind. However, it is a further, and politically important question, who actually gets to "define" what 'male' and 'female' mean and for whom.

Given this model, one might ask whether *all kinds* are anchored in the social. Don't we similarly decide what counts as a tiger or conifer? Epstein (2015) argues that there are many kinds of "glue" that hold kinds together, and that not even all social kinds are anchored in social facts such as human convention or stipulation. Consider private property: suppose we assume, following Locke, that

something becomes your property if and only if you mix your labor with it. We can reasonably ask: by virtue of what does mixing one’s labor with an object constitute it as one’s property? This is the anchoring question. A natural rights theorist would argue that this is not simply a matter of convention, but due to a kind of natural law. In other words, the conditions for private property are *not* anchored by conventions, we-intentions, or the like; what constitutes private property is anchored by moral facts that are not reducible to social facts. One might analogously argue that although whether ‘tiger’ refers to the kind *tigers* is anchored by social facts about our use of language, the conditions for *being a tiger* aren’t up to us, but depend on biological and evolutionary facts. That is, the kind *tiger* has a biological/historical unity “independent” of us.

### 5. Anchoring and the Unity of Kinds

In the previous section I drew on Epstein’s anchoring/grounding distinction to help clarify certain debates over the constitution of social entities. As Epstein notes, there are two dimensions along which social facts might matter for kinds. Social facts might be included in the conditions for a membership in a kind – in Epstein’s words, they might *ground* (or *partly ground*) the kind; social facts might also determine which conditions count for membership in the kind – in Epstein’s words, they might *anchor* the kind. On Epstein’s view, we have a possible matrix with all four options open:

Figure 1

	<b>Social Grounds</b>	<b>Non-social Grounds</b>
<b>Social Anchor</b>	Money, Genders	Meters (measurement), Little Dogs (20 lb rule)
<b>Non-social Anchor</b>	(Non-conventionalist) Promising	Tigers, Lockean Private Property

Depending on what definition is apt for what purposes, *sex* might fit in any of the four boxes. Yet I think there are some confusing aspects of Epstein’s distinctions worth getting clearer about.

Epstein uses several metaphors in describing anchoring, e.g., anchors set up the “frame” for social facts (e.g., 2015b, 72, 74); they are the “glue” that hold the kind together (2015b, 73). He also suggest

that they enable us explain “how we introduce new social objects and kinds into the world”:

I argue against the idea that there is a single generic method or set of requirements for [introducing social kinds]. Instead, there is a variety of what I call "anchoring schemas," or methods by which new social kinds are generated. (Epstein 2015a, 41)

How should we understand this talk of “generating” kinds? It might appear that Epstein’s picture is this: because social kinds are generated by us, they don’t have a “natural” internal unity or cohesion that other kinds have. So when we create them we have to rely on certain anchoring schemas that ensure a sufficient unity to qualify the result as a genuine kind. This is where the metaphor of “glue” seems apt: *We glue the conditions together by selecting an anchoring schema.* Fortunately, as Epstein points out, we don’t have to rely on a single schema. We have options, e.g., we can anchor kinds functionally by determining that the conditions for membership require functional properties, or historically by determining that the conditions for membership require historical properties, etc.

However, this can’t be Epstein’s picture because he also wants to allow that some social kinds aren’t anchored socially, i.e., by us. The fact that anchoring is not only done by us (or us alone) is crucial for his critique of Searle, Gilbert, and others (Epstein 2015b, Ch. 4, Ch 8; see also Mason 2015). So anchoring isn’t just something *we do* to settle conditions for social kinds because they lack sufficient unity on their own. But what anchoring involves remains unclear. Epstein says:

Suppose that a given social property or kind has such-and-such instantiation conditions and such-and-such identity conditions. The anchoring project asks why are these the property or kind's instantiation and identity conditions? Or, to put the question slightly differently, why is this the property or kind that we have introduced or created? What have we done – or what facts are there in the world – that put a given property or kind, having these instantiation and identity conditions, in place? As I will term it, what facts anchor the property or kind? (Epstein 2015a, 43)

Going back to figure 1, it seems that Epstein allows that nature, God, mathematical and moral reality, as well as individuals and social groups can anchor kinds. Anchors don’t just depend on what we do, but also “what facts there are in the world.” If worldly anchors can constitute functional, historical, and qualitative social kinds, surely they can do the same for non-social kinds as well.

To explain why some kind K is the kind it is, we must look to actual objects in the world and the properties they have in common. We cannot only look to how we think about some set of objects, or how we cognize them. Instead, properties of sets of tokens of K, and the relations among them, are part of the "glue" holding together K as a kind. (Epstein 2015a, 48)

Hearts are functionally anchored by biology – the biological fact that the conditions for being a heart constitute it as something that serves a particular function unites hearts in a kind. So it would seem that Epstein’s account is perfectly general: all kinds have grounds and anchors. How might this work?

Here is another picture: there are many different sorts of kinds, and many ways that conditions can unify a group of things. Some kinds are functional (screwdriver, heart), some are historical (the Aldino typeface, *homo sapiens*), some are qualitative (italic, spherical), and presumably there are other sorts of kinds. It would seem that what distinguishes whether a kind is functional or historical or qualitative will depend on the conditions that things must satisfy in order to count as a member of the kind in question, i.e., unity amongst the grounds. For example, a condition on being a screwdriver or heart is that it must be capable of (or have at some point been capable of) fulfilling a certain function.

Epstein and I share a realist assumption that there are all sorts of functional, historical and qualitative kinds in the world, regardless of whether we notice them or care about them, etc. We don’t create the kinds *tigers* or *homo sapiens* or *spheres* (though we do create the words and concepts used to distinguish them). Their membership is settled by nature, or mathematical reality, etc. And the kinds don’t need “us” to glue them together. Whether a set of conditions for a kind is functional or historical is something we can tell by investigating the kind. But, as Epstein and I also agree, the same is true for many social kinds – we aren’t the source of their unity. They are unified functionally, historically, qualitatively and other ways. (Boyd 1999; Mallon 2003, 2007, 2014; Bach 2012; Mason 2015) Social science, in fact, is in the business of discovering such kinds. So there is no reason to think that *we* need to provide glue; but then one might wonder, what is this “glue,” and is there a need for “glue” at all?<sup>12</sup>

The idea of social kinds being “generated” lends itself to several interpretations; this may be where we need further clarity. On one hand, we generate social kinds and facts by causing artifacts to exist: we make bridges, corporations, laws, etc. Things, come into existence by virtue of our activity, and those things fall into kinds. But we also “generate” kinds by deciding how to understand or group things that already exist, by determining what counts as a member of kind K. For example, the police might define what counts as a *mob* for the purposes policy and training; a medical board might define what

counts as *male* or *female*; or a university committee might establish a category of *MOOC-graders* to whom certain policies apply. Once there is a category of MOOC-graders, then of course there can be people who identify as MOOC-graders, aim to be MOOC-graders, change the category of MOOC-graders; this is a well-known looping effect (Hacking 1986).

However, there is a further way in which kinds function in (social) science. By making reference to a kind in theorizing, the (social) scientist is usually not creating a kind, but is rather describing the social world using kind-talk. Sometimes this requires introducing theoretical terms for the purposes of explanation, e.g., ‘inflation,’ ‘scapegoat,’ ‘social capital.’ Of course here too there is a possibility of looping effects – social scientific categories can change the world.<sup>13</sup> Yet the authority and purposes of the university committee or the engineer are different from those of the theorist. The committee defines the social category, and thereby creates the kind of job; the engineer designs and produces the object, and thereby creates the kind of artifact; whereas the theorist’s role is, in the primary instance, descriptive/explanatory. Theorists look for the kinds “out there” that are important for our theoretical purposes, sometimes creating names for them, or new concepts, even new forms of explanation. Admittedly, the theorists creates something new – a new theory, concepts, meanings, or generally, new tools for understanding. These too are artifacts, and they fall into kinds. But they are socio-cognitive artifacts. And it is not entirely clear how they fit into the Epstein picture I’ve been sketching.

## **6. Anchoring and the Practice of Theorizing**

Let’s return to the example of sex. As we saw in section §4, there is considerable controversy over how to understand the kinds *males* and *females*. There is controversy over the purposes of the distinction, over the grounding conditions, over who is authorized to anchor the conditions, over the epistemic criteria, and the terms that should be used (Fausto-Sterling 1993, 2000a). One might suggest that the case should simply be settled “by science,” since the distinction is a biological one. But that begs the question about the purposes of the distinction. Moreover, there are a number of different ways of sorting the biological facts to yield different legitimate classifications (Fausto-Sterling 2000; Richardson

2013). Although sex is an especially charged case because of the political stakes, the question of kinds – which ones to track, how to track them, which ones to create, and how to create them – is always up for negotiation. This falls out of the approach to theorizing I started with. If a theorist undertakes to study sex, there is no value-free starting point, though there may be several that are reasonable.

How does this bear on anchoring? Suppose that we undertake to discover what it is *to be male* with the purpose of drawing a distinction among humans (leaving out other animals and non-animals).

We find that there are several different sets of conditions that constitute relevant kinds:

- humans with XY chromosomes;
- humans who produce relatively small motile gametes;
- humans who produce relatively small motile gametes and no large gametes;
- humans who produce fertile relatively small motile gametes and no large gametes;
- humans who exhibit the range of primary and secondary sex characteristics associated with men and none associated with women;
- humans who believe that they are male;
- humans of whom others believe they are male;
- humans who function socially as male, etc.

In other words, suppose there are multiple candidate kinds that are anchored – in the sense that they have sufficient “glue” to hold them together – in the domain we are considering. What next? How do we decide which of the kinds is *males*?

This, I think, is a practico-theoretical decision. As suggested in previous sections, we are not left with “anything goes!” Rather, we must consider carefully the question we are asking, the purposes we have in asking the question, and evidence before us. But given Epstein’s model, there is a problem. When we, the theorists, decide that conditions C (rather than C\* or C\*\*...) constitute being male, are we anchoring maleness? It would seem not, because, ex hypothesi, the kinds we are considering have already been anchored. They are all sufficiently unified, without our decision concerning what constitutes ‘males,’ to qualify as kinds as opposed to gerrymandered sets. And yet, by our decision that C are the conditions for *being male* for the purposes of our inquiry, we are anchoring the kind *males*. We are making it the case that the conditions C ground maleness. And this, plausibly, sets the frame for our ongoing inquiry. This is one place where the metaphor of anchors as frames seems especially apt.



Anchoring sets a frame that distinguishes what are the important kinds, the ones that are significant for the purposes of the inquiry, from the rest. Because inquiry is a social practice with specific purposes (as I outlined in earlier sections), the adequacy of anchoring will always be relative to the practice. Anchors, then, might be seen as an epistemic tool of inquiry and so will be social, whether or not the kind is socially grounded.

Once we see the theorist's task as one of choosing an apt kind for the purposes of inquiry, this allows us to recognize a parallel between theory and other social endeavors. Consider the committee deciding how to define teaching roles and distribute rights and responsibilities. Here too they are faced with a range of possibilities and need to select the kind of role that is apt for the purposes at hand. Consider the engineer who is designing a new tool. She is faced with a range of possible designs and needs to select the design that is apt for the purposes the tool must serve. Consider a sports organization such as FIFA that is responsible for setting the rules of soccer. If they are to do their job well, they should not make up rules arbitrarily. They must select a set of rules – adjusting them over time – that is responsive to the purposes of sport (such purposes, of course, being controversial as well). Does the American Psychiatric Association get to make up the rules for sex? Or perhaps the Department of Motor Vehicles? (Please read the sarcasm here!)?<sup>14</sup>

Given these parallels, I would like to suggest that it is confusing to use both the metaphors of “gluing” and “framing” to characterize anchors. Gluing and framing are two different tasks, and we should not conflate them. Glue is what holds together a set of conditions that constitute a kind rather than an ad hoc set of things. But even when kinds are glued together, we still need to select from among the possible or available ones (constituted by different conditions) those to be used to serve the purposes of the project.<sup>15</sup> Interestingly, framing – and this is what Epistemic focuses on – can add additional unity to an otherwise fragmented set of conditions, e.g., because they together have been chosen to serve our needs or interests, that otherwise they would lack. So sometimes framing provides glue, but sometimes glue is not necessary because the choice of frame already takes account of the fact that the conditions constitute a kind.

‘Anchoring’ is Epstein’s word. Of course it is up to him to decide how to use it. My sense is that he is primarily committed to the ontological project of understanding the kinds of “glue” that hold social kinds together. This is valuable work. I am more concerned with the practico-theoretical activity of choosing a frame, and the role of frames in ideology, in the construction of the social world, but also in theorizing more generally. I am tempted to appropriate the term ‘frame’ for this practico-theoretical activity – after all, Epstein didn’t introduce the term. But I also think it can be useful to select a different term so it is clear that our projects are distinct.

If it is allowable to use the term ‘scaffold’ as both a verb and a noun (which is one of the advantages of ‘frame’), then perhaps we can speak of the theorist, the committee, the engineer, as scaffolding their projects by relying on kinds or types to canalize their choices. The animal commission scaffolds their policies by defining little dog/big dog in terms of a particular weight (thus ignoring the needs of elderly and disabled dogs). Note that the distinction between dogs weighing >20lbs and those weighing <20lbs needs no further *unity* to do the work needed; the two sets have all the glue they need without us. The engineer scaffolds the project of designing a toy by assuming gender differences,<sup>16</sup> together with gender norms and symbols (thus creating agentic conflicts for non-stereotypical children). This choice both depends on a predictable unity of preferences among boys and girls, but also causally contributes to further gender unity by reinforcing a binary choice architecture (pink or blue? Transformer or pet hospital?). The United States Treasury approves and the United States Mint produces the Sacagawea dollar, thereby creating a new kind of thing. In this case the scaffolding process is complex, for there were many separate decisions that had to be made and approved. But the process authorized a specific design and conditions concerning composition, and the like, that ground the property of being a Sacagawea dollar. Traditional political philosophers scaffolded their theories by assuming that citizens are independent, able-bodied, rational, plausibly also white and male, adults. Currently *sex* is being scaffolded by a variety of institutions, and this is a topic of political and legal concern. In each case, these are practico-theoretical choices with consequences. The term ‘scaffold’ also has the advantage that it conveys a sense of something complex, often but not always pre-packaged or pre-designed, that used in

action, for a purpose, that can collapse under us or be intentionally destabilized.

Scaffolding is not always conscious or intentional. It is also not a success term. Sometimes we select the wrong kinds or something that isn't even, strictly speaking, a kind. These can be theoretical mistakes, or they can be engineering mistakes, or political mistakes (this is not intended as a complete list of mistakes!). Moreover, the collective intentions (or whatever) of a group are not sufficient to constitute kind. Muddled and inapt collective intentions based on false beliefs may still have a huge effect on the social world, not initially by constituting *kinds* – in the sparse sense – but by setting up a scaffold that purports to track such kinds, e.g., race, and only later after much damage does so. Part of the challenge of understanding scaffolding is determining when it succeeds in tracking an apt kind, when it causally contributes to unifying a kind, and when it creates a kind. The fact that scaffolding occurs in these distinct forms is not a weakness of the concept (a problematic disunity), but an important feature.

## **7. Scaffolding and Mind-Dependence**

We began this paper with a set of questions about natural kinds and their role in explanation. The idea under consideration was that natural kinds are those kinds that play a special role in explanation (or play a role in special explanations!), and that in order to play this role, the kinds must be “mind-independent.” How does a view like this make sense of artifacts or social kinds? Does it discredit all of social science in one quick move? I sketched a view of theorizing as a kind of practice, and we considered possible sources of mind-dependence on such a model.

My goal has been twofold. First, I have indicated how social kinds may be internally and objectively unified in a way continuous with physical kinds. This point has been argued extensively elsewhere, so my discussion focused mainly on what it might mean for a social category to be grounded in or constituted by physical facts. Second, I argued that the practice of theorizing is continuous with other practices to the extent that theorists, like anyone engaged in a practice, needs to make choices that are responsive to purposes (and corresponding values) guiding the practice. To put it in a Quinean mode, however firm we might take our scaffolding for theorizing to be, it is always open, and sometimes

mandatory, to recognize that the scaffolding is unsteady or insufficient to take us where we need to go, and consequently to shift our weight onto something else to we repair, extend, or abandon the scaffold. (Obviously, this is a variation on the theme of Neurath's boat.) Practical and theoretical rationality are interdependent. One consequence of this, I think, is that it is rational to accept good theories (criteria for which I began to sketch at the end of §2) that will enable us to engage effectively in our practical pursuits. I submit (without argument, though I am hoping it is obvious) that such theories will not be restricted to physics and fundamental metaphysics. However, if we should accept theories that commit us to social kinds – whether cockapoos or corporations – then we have reason to accept those kinds as real and not demand further reduction that will, even if “successful,” render them less suited to our purposes.

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