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Putting races on the ontological map: a close look at Spencer's 'new biologism' of race

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Abstract
In a large and impressive body of published work, Quayshawn Spencer has meticulously articulated and defended a metaphysical project aimed at resuscitating a biological conception of race—one free from many of the pitfalls of biological essentialism. If successful, such a project would be highly rewarding, since it would provide a compelling response to philosophers who have denied the genuine existence of race while avoiding the very dangers that they sought to avoid. The aim of this paper is to subject those moves to careful scrutiny and thereby appraise the prospects for a new biologism about race.

Keywords Race · Spencer · Realism · Natural kinds

Introduction

What is the metaphysical status of race? No one doubts that "race" talk plays a significant role in discussions of socioeconomic relations, income inequality, urban geography, the role of policing in society—among myriad other topics—especially in the United States. But what is this race talk about?

Some philosophers of race suggest that "race" is a term that fails to denote, that our race talk does not pick out anything real in the world (Appiah 1985; Glasgow 2008). Although I won't argue against such a claim in this paper, it is clear that many find it unattractive. What interests me, instead, are the options left open for those who are looking for an alternative. Broadly speaking, there are two possibilities. Our talk of races might get a grip on the world because of the way that the world is structured socially, or it might do so because of the way the world is organized biologically. The latter view became extremely unpopular by the end of the Twentieth Century. Speaking of such views, Charles Mills has said that "Historically... not merely have all racists been realists but most realists have been

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racists." (Mills 1998, 46). But fierce resistance to the idea that race emerges from the biological structure of the world was attached to its old-fashioned presentation, according to which there are natural biological differences among races that divide them up discretely, and that explain all of the social phenomena we observe related to race.

Things needn't be so. Perhaps there is an approach to the metaphysics of race that can confer onto it a biological underpinning without treading into the dangerous waters of biological essentialism about race. Such a picture could potentially be attractive. One way of seeing its attraction is by looking at the kinds of arguments offered by the likes of Appiah and Zack. They claim, after all, that once we take away a biological underpinning to race, there is nothing left. And yet *this* is unattractive to many people. Again turning to Mills, he says "Many white liberals (and, indeed, historically many white Marxists also), aware of the verdict of science on race, are puzzled at black intellectuals retention of race as a significant social category: they wish to move from the falsity of racial realism to global claims about the unreality of race in general and the corollary political mistakenness of race-centered political discouse." (Mills 1998, 47) As it happens, I believe that Mills' social constructivist conception of race offers the correct reply to this worry. But it would be quite attractive if a biological reply could be offered to those who doubted the wisdom of Mills' approach, but a biological reply that did not fall into the pitfalls of biological essentialism.

If anyone can offer us such a picture, it is Quayshawn Spencer. In a large and impressive body of published work, Spencer has meticulously defended a picture of biological race that, if entirely successful, would fit the above bill extremely well. So I think his work is worth looking at extremely carefully. If a "new biologism" of race is possible, there is a good chance it will employ many of the moves that Spencer tries to employ. And so each of these moves warrants careful scrutiny. This is what I aim to do in this paper. I hope that by the end of the paper, readers will be able to make a sober assessment of the prospects of this kind of project.

In his "Are folk races like dingoes, dimes or dodos?" Spencer (2018a) gives a clear, pedagogically accessible gloss of his argument that races are not, like dimes, socially constructed, but are, like dingoes, biologically real.[1] The official races tabulated by the US Census bureau–the White race, the Black or African American race, the Asian race, are not social constructs. They are perfectly real biological entities, according to Spencer, and they are races.

The argument Spencer gives for this answer is deceptively simple looking. It depends on only two premises. (Spencer 2018a).

1. Human continental populations are real biological entities.
2. (Some) Races are human continental populations.
3. Therefore, (some) races are real biological entities.[2]

[1] And of course not, like dodos, non-existent.

[2] More on how important the "some" here is later. Readers should note that because of the parentheses, this should not be considered a direct quotation from Spencer.

The argument is obviously valid, so we only need to evaluate the truth value of two simple premises. Of course, the two premises are only as simple as the concepts they employ. And in fact each of the two premises relies on a piece of technical apparatus. The first premise obviously relies on the technical notion of a human continental population (HCP). The second premise looks simpler, but once we unpack it, we'll see that see that lurking beneath the surface is an appeal he will be making to the official United States government Office of Management and Budget (OMB) system of racial classification, to some philosophy of language concerning the term "race," as well as to a qualification about what he means by "race," (and thus to an important role of the word "some" in the premise). So if we are going to evaluate the truth of these two premises, the first thing we should do is get clear on these two technical pieces of software. Unpacking all of this will require us to survey several of Spencer's works.

Some Conceptual Background

Preliminaries

But first, let's start by unpacking why I have the word "some" enclosed in parentheses in premise 2 and in the conclusion of the above argument. The reason is that Spencer's argument, and the claim it is meant to support, is also more subtle than it first appears. Many people, including myself, would take the central question in the metaphysics of race to be about something like "our ordinary concept of race." In other words, to inquire into the metaphysics of race is to inquire into the metaphysical foundations of the ordinary concept of race that we have in mind when we ask what race someone is, whether members of one race are more economically privileged than those of another, or inquire into whether race plays a role in explaining phenomena such as poverty, incarceration, police brutality, etc. We want to know if *this* concept of race refers to something biologically real.

Spencer, on the other hand, claims there is no such thing as "the ordinary concept of race." He agrees with Michael Hardimon when Hardimon says in his recent book that "there is no concept that is the concept of race–no one "thing," no one item, no one reality or unreality that is race" (Hardimon 2017, 173). Spencer considers himself a "radical pluralist" about race (Spencer 2018c).

Because of this, Spencer does not take himself to be interested in asking the question "is race biologically real?" He thinks that question is not well posed. Rather, he coins the notion of a 'folk race' and then goes on to argue that *some* 'folk races' are biologically real. In particular, he argues that the races that are picked out by the OMB system of racial classification (more on this in the next section) are the specific folk races that he is interested in, and the ones that are biologically real. So the word "some" in premise 2 is very important for Spencer.

So why have I put it in parentheses?

One reason has to do with the structure of this paper. The paper contains four sets of arguments, and the distinction I am making here is only relevant to one of these sets of arguments—the ones I will be discussing in section 5, where I discuss Spencer's claims about the OMB system of classifications.

Another reason is that, though Spencer is clear enough in various places that he only wants to argue that "some folk races are biologically real," I think it is fair to say that he is often read as arguing that "our ordinary notion of race refers to something biologically real." This is in part because his full view is only entirely clear unless one reads a large number of his works. And also because many people think his claim that he is a realist about race is strongly in tension with his racial pluralism, since it is hard to be realist about a sufficiently fractured concept. But in any case, since the distinction between these two claims is not relevant to the discussions in sections 2, 3, and 4, I want to leave that distinction open for now.

Finally, as we will see in section 5, I will be arguing that his appeal to "OMB folk races" is not entirely conceptually coherent. I don't think the OMB system of racial classification picks out its own distinctive set of races that are candidates for being a folk ontology of race. And I don't think it immediately follows from the fact that the notion of race is murky in the way that Hardimon suggests that we need to give up on asking what the metaphysical status of race (*tout court*) is. So I am uneasy about setting up the paper from the start in exactly Spencer's terms. I will return to this point in section 5.

Meanwhile, I want to start slow. And to start slow, I want to see how well Spencer's arguments fair at underwriting the claim that most of us would naively take the central question to be about: whether our *ordinary* notion of race picks out races that are biologically real. Only once we see exactly how the arguments fail to do that can we understand Spencer's motivations for adopting idiosyncratic concepts like that of a "folk race" , and only then can we really see how this strategy fails to save the argument and hence fails to underwrite a thesis about the biological reality of race that serves the underlying motivations we surveyed above.

Premise 1: human continental populations

Let's start unpacking the two central concepts employed in the premises. We'll start with Human Continental Populations. HCPs are identified as the output of a set of novel computational algorithms of which the program *Structure* was the first example. These "structure-like programs," as Spencer likes to call them,

> guess the populations at a specific level of possible population subdivision, guess the degree of membership for each population member at that level, and keep doing these two things until they find a population subdivision at that level that best fits the data, which is just a set of alleles at the same locus (location in the genome) for multiple loci from each organism in the sample. If no single, best population assignment is found, the computer program declares that the species has no population subdivision at that level. If a single, best population assignment is found, the computer program declares the population

> subdivision that yields the best assignment as the species' population subdivision at that level. The computer program user can search for population subdivisions from 2 on up. ...In 2002, the geneticist Noah Rosenberg and his colleagues used structure on a worldwide sample of human ethnic groups and discovered that humans have multiple levels of population subdivision. However, the result that caught everyone's attention was that humans can be divided into five continent-level biological populations that are called 'human continental populations' in the literature. The five human continental populations are Africans, East Asians, Eurasians, Native Americans, and Oceanians.[3] (Spencer 2018a)

So his first premise is quite simply that *these five HCPs are biologically real entities*.

Premise 2: the OMB system of racial classification

Spencer's second premise makes no specific mention of it, but as we will see in due course, when Spencer tries to argue for his second premise, he does it via a second piece of technical apparatus: the official United States government Office of Management and Budget (OMB) system of racial classification. This is the system that the Census Bureau, for example, has to adhere to when it conducts the census. Census.gov gives the standards for each of the five races as follows:

1. **White** – A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.
2. **Black or African American** – A person having origins in any of the Black racial groups of Africa.
3. **American Indian or Alaska Native** – A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment.
4. **Asian** – A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
5. **Native Hawaiian or Other Pacific Islander** – A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

> The 1997 OMB standards permit the reporting of more than one race. An individual's response to the race question is based upon self-identification. (noa 2018)

[3] This is Spencer's most accessible characterizations of structure-like programs but perhaps not the most accurate. For more technically detailed accounts of these programs, see some of Spencer's more technical papers, such as (Spencer 2013, 2018c, d), and also (Winther 2014) (Kaplan and Winther 2014), (Weiss and Fullerton 2005) and citations therein.

Are human continental populations biologically real?

We will come back to the role that these OMB standards play in Spencer's argument in sections 5 and 6. In this section I will evaluate the premise that Human Continental Populations are biologically real. To do this, we will need to be clear about what exactly it means to be biologically real. In Section 3.1, I will describe Spencer's account of real scientific kinds. In section 3.2 I will raise worries about whether Spencer's account of real scientific kinds can distinguish biological kinds from other natural and social kinds. Finally, in section 3.3 I will argue that HCPs depend on too many social regulating mechanisms to count as biological. In section 3.4 I raise and answer some objections.

In section 4 I will review some worries in the literature about whether population subdivisions are real kinds at all (4.1) and raise some worries of my own (4.2).

What kind of reality is at issue? Spencer's proposal

Whether or not HCPs come out as biologically real will depend on our account what makes a kind real, and what makes a real kind a biological one. Spencer claims that the question of the reality of racial kinds ought to be evaluated using his own notion of a "genuine kinds." These are kinds

> that contribute[d] to long-term scientific progress. By 'long-term scientific progress' I mean scientific progress that went beyond a theoretical paradigm in a specific SRP [scientific research program], and even beyond a specific SRP. Also, by 'scientific progress' I mean epistemic progress in science, such as improving our ability to predict known phenomena, or accurately predicting novel phenomena. (Spencer 2012, 185-6)

Worries about "Genuine Kinds"

There is a problem here. Recall that part of what's at issue here is not simply whether HCPs are real kinds *tout court*, but whether they are real *biological* kinds. Spencer's definition of a genuine kind doesn't help us to adequately make this distinction.

Now, one might think that a simple modification is all that is required here. We simply have to amend the definition to read, X is a genuine **science-S-type** kind exactly if the use of the concept of an X has contributed to the long term success of **science S**. But this won't work. The reason is that higher-level kinds are often crucial to the long-term success of lower-level sciences. No progress in physics would be possible without the concept of a trust-worthy observer, or of a veridical record of an experiment. Look at any massive, radically collaborative, multidisciplinary enterprise like the successful detection of the Higgs boson at the Large Hadron Collider. No such enterprise could be successful without making use of many concepts from both psychology and the social sciences (Winsberg et al. 2014). But that doesn't make these genuine physical kinds. It's not at all hard to generate similar

examples. Think of Duhem's claim that "bon sense" is required to do good physics.[4] Assuming that true, that doesn't make "bon sense" a genuine physical kind. If it's a genuine kind, it must surely be a psychological one. But we want to know whether races are real like dandelions, or real like dollars. So Spencer's definition of a genuine kind won't help us adjudicate whether races are biologically real kinds or not.[5]

Are HCPs really biological?

I'll show in section 4 that HCPs dont even meet Spencer's weak definition of a kind at all. But first let's try to get more clear on what it is to be a *biologically* real kind.

It will help here, to start, if we step back from this question and ask what general philosophers of science have to say about kinds being real generally. We can then see what modifications have been required when philosophers of biology have looked specifically at biological kinds. Let's start with a relatively standard and traditional take on what it is to be a natural kind. It begins with the idea that if, by grouping a certain set of objects together, we are suddenly able to reason well about those objects, to make inductive inferences, to explain many of the properties that the member objects have, and so on, then than grouping picks out a real kind. If we then find a small set of properties shared by all members of the group that seem to explain why the grouping facilitates the inferences and explanations that it does, that small set of properties tell you what sort of kind you have. If they are chemical properties, then it's a genuinely chemical kind. We can make inferences and explanations about the behavior of copper because all samples of copper have the same atomic structure. Atomic structure is a chemical property, so copper is genuinely chemical kind.

We can begin to see here the underlying intuition that makes people bristle, and bristle hard, at the idea that race is biologically real. Its precisely this nasty old biological essentialism about race that drove Appiah, Mills and Zack to their views about biologism. It seems to suggest that the *essential* thing that grounds our ability to reason about race–in all the ways that allow us to predict and explain how people of different races will differentially traverse through the social world–is grounded in biology. Once we go down *that* road, it will be very hard to avoid a racist picture. But let's not beg the question. Maybe this intuition is wrong. Maybe being a real biological kind needn't involve all that.

Indeed, not everyone agrees that natural kinds are individuated by the property essences that make their epistemic successes occur. Several philosophers of biology (e.g. LaPorte (2003), Okasha (2002), etc.) think that some natural kinds

[4] Thanks to Spencer for this example.

[5] Adam Hochman has articulated similar worries in his (2014). He argues that Spencer's account of being "biologically real" is too weak to contrast with anti-realism about biological race. Such anti-realists, he points out, do not believe that race talk is inconsistent with biology–or that it captures no biological features at all. They deny, rather, that race talk carves up the world in a way *that ought to be recognized as valid by biologists*

have essences comprised of *extrinsic relations*. Others, like Boyd, as we will see, think it's loosely defined property *clusters*. Almost all philosophers of science who work in natural kind theory accept that natural kinds are the kinds that permit one to make reliable inductions. But one thing that generally divides philosophers of science is whether any underlying thing has to underwrite that. (Häggqvist 2005), for example, has a bare projectibilism view of natural kinds. But as we've noted, if you specifically want to argue that something is a real *biological* kind, then you can't just have a bare epistemological theory. You have to have some story about some underwriting elements, because you need to have a story about when those underlying elements are sufficiently biological to make the *kind* biological.

But philosophers of biology have long noted that a simple property essences theory of natural kinds doesn't work well for biological kinds. The reason is that many people have had the strong intuition that species are biological kinds, but that species don't have essences that consist of intrinsic unary properties. Mark Ereshefsky (2009) explains this particularly nicely:

> a number of biological forces work against the uniqueness and universality of a trait in a species. Suppose a trait were found in all the members of a species. The forces of mutation, recombination, and random drift can cause the disappearance of that trait in a future member of the species... Given the stringent requirements of essentialism and the confounding forces of evolution, many philosophers and biologists reject the view that species have essences. (Ereshefsky 2009)

It is worth noting that many philosophers of biology have concluded from this that not even species are kinds precisely because they lack essences.[6] If species aren't kinds, its unlikely that HCPs will turn out to be. Another popular view is that species *are* kinds, but that the notion of a kind needs to be modified somewhat in order to work well for biology. One very natural way to do this goes by the name of the "homeostatic property cluster" (HPC) theory, originally developed by Boyd (1999) but articulated in a way that is more helpful for us by Ereshefsky (2009)[7] .

> Acording to HPC Theory, the members of a natural kind share a cluster of similar properties, but no property is necessary for membership in a natural kind. Such properties must nevertheless be stable enough to allow for successful induction...According to HPC theory, the co-occurrence of properties among the members of a natural kind is caused by the homeostatic mechanisms found among the members of a kind. (Ereshefsky 2009)

I want to stress here that while I find the homeostatic property cluster theory to be an attractive account of what it is to be a real biological kind, I don't want to hang my hat on it entirely. I think most of the arguments I will run could be run equally

[6] See, for example, David Hull (1976),Michael Ghiselin (1974), and Roberta Millstein (2009).

[7] I use Ereshefky here because Boyd does not specify that a mechanism is required. But this means Boyd isn't really going to help us to tease out which kinds are biological and which are not. And this is central to Spencer's argument.

well on an "extrinsic relations" account of biological kinds. The point is just that homeostatic property cluster theory takes seriously the problem that *biological kinds are special*, and are *held together by various biological mechanisms*. Paying close attention to this reveals a feature of HCPs that that is in strong tension with thinking of them as entirely biological in nature.

We can see this feature in sharp relief if we pay attention to a difference between what holds species together and what holds HCPs together. Both species and races, I would argue, are held together by homeostatic mechanisms. Not everyone agrees with this claim but it does seem like a helpful way to tease apart genuinely biological kinds from pretenders. The mechanisms that hold most biological species together are biological in nature (or at least, are features like physical separation that live at a level of description below the biological.) But what holds HCPs together are social practices, social norms and social structures. If it's true, for example, that there are two HCPs that are roughly co-extensive with people of what we sometimes crudely call the White and Black races in North America, then it's clear that the mechanisms that keep these HC populations more or less distinct, in North America, are social practices and social structures. But we ought to be extremely uncomfortable, I would suggest, in calling two things biologically real if what holds them apart, what keeps them from blurring together into a single kind, are mechanisms that are themselves contingent on the continued existence of social practices.

Why would I say that the mechanisms that hold HCPs together in North America are social mechanisms? Let's think about what we are asking here: why is it that there is a close overlap between the population groups structure-like programs spit out for k=5 and the groups we get if we ask people what continent (roughly) their ancestors (primarily) hail from? This fact would not obtain if it weren't for the history of slavery, Jim Crow laws, especially miscegenation laws, residential segregation, mortgage loan discrimination, discrimination in access to education[8]. It would also not obtain if it were not for some of the more positive social forces, like group self-identification and shared cultural products[9], as well as all the myriad other social structures that play a role analogous the role played by biological, geographical, and physical homeostatic mechanisms in holding together the cluster of properties that make for biological species.[10] Acting as if these two very different kinds of mechanisms are equally biological elides over all the complex ways in which the social structures race and race structures the social. I think this is true whether or not one thinks the HPC theory is the correct theory of biological kinds. *Any correct account of biological kinds should be able to draw attention to this stark difference.* And when it does, it is unlikely HCPs will come out as strictly biological kinds.

[8] See, for example, (Goldfield 1997).

[9] I thank Chike Jeffers for encouraging me to add these elements to the list and making the important poing that non only bad, racist social forces have shaped the social construction of races.

[10] Spencer himself actually acknowledges this point in (Spencer 2014). He calls these mechanisms "social isolation mechanisms" and "social cohesion mechanisms."

Are HCPs really biological? An Objection and reply

Objection: Lots of species are reproductively isolated through their behavioral characteristics. Some of them even might be able to interbreed in the right (sufficiently exotic) circumstances. But their mating displays don't mesh, so this doesn't happen in the wild. These are nevertheless distinct biological species – human social barriers are just more sophisticated versions of these relatively implastic behavioral phenotypes.

Reply: Equating implastic behavior phenotypes with social behaviors precisely elides over the distinction between the social and the behavioral. The question of whether race is biologically real or merely socially real presupposes that that there is a dimension to human existence that is lacking in other animals, and that that dimension can give rise to entities and processes that would be lacking absent historically contingent social practices. In that context, the difference between socially emergent human behaviors and implastic behavioral phenotypes is fundamental. Without it, there would be no distinction between the social and the biological.

Counter objection: It is common practice in biology to describe various non-human species as "eusocial" (truly social) and to explain the cause of breaks in reproductive interaction (even speciation) by appealing to eusocial behavior. For example, our closest living relatives, the common chimpanzees (Pan troglodytes) and the bonobos (Pan paniscus) live adjacent to each other in central Africa. They have been reproductively isolated (except for a few instances of gene flow) for about 2 million years. Yes, there is a river that separates their geographic ranges, but given the gene flow that has occurred, we know that the river isn't what's primarily responsible for their isolation and speciation.[11]

Counter-reply: I think that, at most, this objection simply suggests that the line between social mechanisms and biological mechanisms is a bit blurry. But that does not prevent us from identifying obvious cases of each. Moreover, when we say that races are "social kinds," we are using the word "social" in the human sense in exactly the same way that it would seem odd to describe the study of chimp behavior as "social science." Of course, if we were chimpanzees, we would have a different conception of the domain of social science. And if we were having a debate about the nature of the difference between common chimpanzees and the bonobos, we would probably agree we were doing social science, and declare that the two groups were social kinds. But we are not chimpanzees.

Are HCPs real at all?

We learned in section 3 that it is difficult to maintain the premise that HCPs are entirely biological in nature. But are they real kinds at all (biological or otherwise?) In section 4.1 I review some objections from the literature to this claim. In

[11] I thank an anonymous referee for providing this objection (verbatim).

section 4.2 I look at Spencer's responses to (some) of these worries and highlight two problems with them.

Population subdivisions are are too promiscuous for HCPs to be real

There is already a huge debate about this question and I do not want to wade too deeply into it. Many philosophers of biology, however, have argued that the literature on HCPs 'reifies' the human divisions that structure-like programs discover. Much of this debate centers on just how reliable and robust the findings of these programs are, and its unlikely that I will be able to substantially advance this debate here. One frequently made complaint is that the samples of people in genomic data sets used for running these programs are heavily biased in favor finding genetic clusters. (Bolnick 2008; Hochman 2013; Serre and Pääbo 2004; Templeton 2013)

Weiss and Fullerton (2005), "Racing Around, Getting Nowhere," does a good job showing why this is the case. You only get HCPs at k=5 IF you choose your inputs very carefully (Weiss and Fullerton call this "loading the dice"). The clusters you get out of structure-like programs, in other words depend on how you sample from the real population when you input the data into the algorithm. In effect, the clusters you get out depend on the clusters you put in. Tishkoff et al. (2009), for example, got two (roughly) African populations at k=5—one corresponding to Eastern Africa and the other to the rest. Could one argue that this happened because she sampled more heavily from Africa. Did she over-sample? How would anyone know? What is the right amount to sample? There is no objective answer to that question—that is, there is no "neutral" way to choose inputs.[12]

Another worry is that there are just too many human subdivisions for them all to be biologically real. Novembre et al. (2008) did a very revealing analysis of population clustering in Europe. They found a very large number of clusters, mostly aligning more or less well with countries. And within countries, there is sufficient population structure to place individuals within a few hundred kilometers of their parents' hometowns with impressive reliability! It would be alarming to have to declare that all of these tiny microclusters were biologically real on any account of what it is to be a biologically real entity.

Spencer responds to some of these worries in (Spencer 2018d) and readers should judge for themselves how they think this debate ought to be resolved, since it hinges on more technical details than I have space to devote to here.[13]

But there is a deeper problem lurking here that is not discussed anywhere in the literature that I am aware of:

[12] See (Kaplan and Winther 2014), (Hochman 2013) and (Pigliucci and Kaplan 2003) as well as (Tishkoff et al. 2009) and references therein for more discussion of these kinds of issues, broadly construed.

[13] Though not all–I am unaware of any place in which Spencer responds to the worries raised by, for example, the Novembre et al. (2008) study. Suffice it to say that its less than obvious to all parties what the path is from Spencer's preferred notion of a genuine scientific kind to the claim that its exactly the k=5 partition that comes out of "Structure" that picks out the five real biological entities.

POPULATION SUBDIVISION might be real biological kind even though population subdivisions are not.

As I mentioned above, Spencer spends a great deal of time, particularly in (Spencer 2018b) responding to arguments against the claim that HCPs are real. The best passage I can find that makes the positive argument for HCPs being biologically real is also from (Spencer 2018b), It is worth quoting at legnth:

> In Spencer's (2012, 193) theory, one sufficient condition for an entity e being biologically real is that e is epistemically useful for generating a theory T in a scientific research program in biology P, using e to generate T is warranted according to the epistemic values of P to explain or predict an observational law in P, and P is well-ordered (e.g. it has coherent and well-motivated aims, competitive predictive power, and routine and rigorous cross-checks). So, given that population genetics is a well-ordered scientific research program in biology, one way to support an inferred genetic cluster of structure-like programs as a real biological population is by offering up evidence that it not only satisfies the criteria for being a biological population, but also, that it's epistemically useful for generating a theory that explains or predicts a population-genetic observational law in a way that exemplifies population-genetic epistemic values. For example, if we have evidence that a level of genetic structure is best explained (in a population-genetic sense of 'best') by underlying biological population structure, then that itself is evidence that the biological populations in question are biologically real. Interestingly, the human continental populations clear both of these hurdles.
>
> For one, human continental populations are biological populations in the aforementioned sense. For example, it's widely accepted in population genetics that Native Americans are modified descendants of Northeast Asians due to evolutionary forces like drift and mutation (Wang et al. 2007, 2059; Reich et al. 2012, 2). But also, the proposition that the human continental populations form a human population subdivision is a theory that explains why humans have a $K = 5$ level of genetic structure, why this genetic structure tracks "continental" barriers to human interbreeding (e.g. the Sahara, the Himalayas, etc.), why an isolation-by-distance explanation leaves 1.53% of the genetic variance at this level unexplained, and why this genetic clustering pattern is 70% robust across replicability tests (Spencer 2014, 1033–1036). Furthermore, this theory accomplishes these feats in a simple, predictively powerful, and quantitatively precise way, which are important epistemic values among population geneticists. (Spencer 2018b)

Let's work through this carefully. We can start with the claim that "Native Americans are modified descendants of Northeast Asians *due to evolutionary forces like drift and mutation*" (my emphasis). This is manifestly false. It might have been true in 1492, but it is no longer true today. Any real explanation of the *present day* genetic clustering that picks out Native Americans in some structure program outputs is going to involve the complex social history of racial segregation that has preserved this clustering over five centuries of colonial and post-colonial history.[14]

That's just the old problem of section 3. The deeper problem is that the quoted passage above evinces a confusion between the usefulness of structure-like programs, and the research program that they are a part of, on the one hand, and the particular population subdivisions that they output on the other.

This is a specific version of a more general confusion between two very different questions:

1. Is the study of population subdivision something which is likely to lead to long-term, epistemic, scientific progress? If so, might it be warranted to say that POPULATION SUBDIVISION is a real kind.[15]
2. Is each and every population subdivision itself a real entity? In other words, is NATIVE AMERICAN a genuinely real kind?

These are not the same question at all! One could easily concede that POPULATION SUBDIVISIONS is a real biological kind without countenancing the reality of all the promiscuously many population subdivisions that *fall under* that kind. There is obviously nothing incoherent about this. Notice that many philosophers of biology do not believe that species are natural kinds. But most philosophers of biology agree that SPECIES is either a natural kind, or a few different natural kinds[16]. To be clear what I mean, it is perfectly coherent to think that the kind that includes Pan paniscus, Maki mococo, Myrmecobius fasciatus, Apis florea, Equisetum diffusum, along with about nine million others, is a true natural kind, while at the same time insisting that Pan paniscus and Maki mococo themselves are not. It's perfectly coherent to declare that SPECIES is a natural kind but that species aren't.

[14] This echoes the point we made in 3.4 and 3.5, but here we can see the point getting purchase on an actual example.

[15] For the rest of the paper, I will use this small cap font whenever the words in question are referring to the *concept* or the *kind* it picks out, and not the objects that fall under them. Ordinary english doesn't do a great job of representing this difference, but in this context that is a very important distinction. People with four or more moles are of course real. But the concept PERSON WITH FOUR OR MORE MOLES does not pick out a real kind. So notice then, that the central topic of this paper is whether races (no caps) are biologically real, that is, whether WHITE PERSON and ASIAN PERSON are concepts that pick out real biological kinds. Not whether RACE is a real kind. And certainly not whether white people are real.

[16] Some philosophers of biology argue that the word "species" picks out a heterogeneous set of kinds, such as historical species, genetically structured species, morphological species, ecospecies, etc, but no species-kind in general. But I'm not aware of anyone who denies that SPECIES is a kind. And certainly there are philosophers who think SPECIES is a kind or set of kinds, but that species themselves are not kinds.

I make this point only for the following reason: one can be quite sympathetic to Spencer's intuition that the people who use structure-like programs are really onto something, that they are building a research tool that will contribute to the long term success of population genetics, *and* one can think that when such an activity takes place, a real scientific kind is being discovered, *without* thinking that individual HCPs are real kinds. If we go back to the quoted passage we find Spencer saying: "The proposition that the human continental populations form a human population subdivision is a theory that explains why humans have a $K = 5$ level of genetic structure..." etc. But even if this is true, and even by Spencer's own lights, this only shows that HUMAN POPULATION SUBDIVISION is a real kind, not that the individual human population subdivisions revealed at any particular time are. Nowhere does he show that NATIVE AMERICAN PERSON, or WHITE PERSON, for example, are concepts that are useful for generating new biological theories or inductions or anything of the like. I would be pretty shocked if they were. This problem becomes particularly acute if we combine it with the problem we highlighted in section 3: that these HCPs are only held together by social isolation and social cohesion mechanisms. If we were to wake up tomorrow to find that all such presently existing social forces were gone, I wonder what inductions Spencer imagines that the kind BLACK PERSON would support. Or in what ways would it be epistemically useful for generating new theories? Here's my bold conjecture: in such a situation, that kind would be epistemically useless. If that's right, then its at best a sociologically real kind.

To summarize the last two sections, the claim that human continental populations are real biological kinds faces insurmountable difficulties, and is not supported even by tremendous optimism about the research project that HCPs are a part of, or even the claim that HUMAN BIOLOGICAL POPULATION is a genuine biological kind. We ought to reject it.

Are HCPs races? Part I: Is OMB a family of folk races?

Now we come to a fork in the road. I take myself to have shown, in sections 3 and 4, that Spencer's first premise is false. HCPs are not biologically real. At best HUMAN POPULATION SUBDIVISION is a real scientific kind, though not a specifically biological one, and individual human population subdivisions, including HCPs, are not genuine kinds at all. If that much is right, we are done. The argument is no longer sound. But I would still like to evaluate premise 2.

2: There are many different sets of folk races, the OMB is exactly one of these sets, and the five OMB races are pairwise identical to the five HCPs.

Evaluating either of these premises will require two steps. First, we have to evaluate either the claim that OMB is a set of folk races, or the claim that OMB just are *the races*. And then we need to evaluate the claim that what is picked out by the OMB is identical to HCPs. I think all of these claims are false. I will argue that the first two are false in this section, and then argue that the identity claim is false in section 6.

Let's get started on the first two claims by looking carefully at the OMB system of classification.

Operationalism is false

Let's begin by being perfectly clear about one thing: The OMB criteria are not constitutive of races, they are attempts to *operationalize* race for the purposes of measurement.[17] The OMB groups are no more races than rulers are length or buckets are volume. The philosophy of science that literally identifies concepts with the operations we use to sort them, a philosophy associated with Percy Williams Bridgeman, was rightly abandoned long ago. It was bankrupt. Here's a standard reason to reject this kind of operationalism: If the OMB groups and races[18] were definitionally identical, then it would make no sense at all that that we sometimes revisit the question of, and argue about, whether the criteria that the OMB uses are a good operationalization of race. Such a question would be incoherent if the OMB groups and races were definitionally identical. Such a question can only be up for debate if race and the operations we use to measure race are distinct things. Luckily they most certainly are distinct things. If Spencer were right that the OMB groups are races, then every time the OMB changed its criteria, the very nature of race would change. Until the beginning of the Trump presidency, the OMB were strongly considering adding a sixth race: peoples from the Middle East or North Afica (MENA). According to Spencer, if they were to do this, and the six groups no longer were co-extensive with the groups that structure-like programs spit out for n=6 (I strongly suspect that they wouldn't be) race would go from being biologically real to not being biologically real. This is not a happy result. It would also be an unhappy result that it would become impossible to argue that the OMB should or shouldn't change its definition, since anything it decided would be right by definition.[19]

Race has no clear supervenience base

Here is another point we should be clear about: Much of the point of Charles Mills' essay "But what are you really? The metaphysics of race" (Mills 1998, Chapter 3) is to show that the real folk ontology of race is incredibly murky and hard to pin down, and not the kind of thing that could literally be identical to the groups of people picked out by the OMB criteria. Though he doesn't use the term, Mills can

[17] To be quite a bit more specific, they say that they are trying to develop a race talk that facilitates communication of racial data across federal agencies, that can be used to collect federal statistics on race, and that can be used to enforce federal civil rights laws. But this is more or less what all operationalizations do.

[18] And it doesn't matter here whether we are talking about the one univocal notion of race, or just one particular folk one.

[19] Hochman (2014) makes a similar point. He says "One consequence of Spencer's view, hidden by his exclusive focus on 'ordinary folk in the U.S.', is that because folk racial taxonomy is different in different parts of the world, the philosophical race realist is necessarily a relativist about race. Race might be real in the U.S., but an illusion in Australia."

easily be seen as arguing that American races, especially the Black race, do not *supervene* on any clear set of social, biological, or psychological characteristics.[20] The concept of supervenience is one we use to describe cases where some entity's higher-level properties are determined by its lower-level properties. You might think, in other words, that a person's property of being Black supervenes on his or her appearance. Or on their ancestry. Or on their experiences. Or on what people think their ancestry is. Or on what they think their ancestry is. Mills deftly shows, using a set of "problem cases" that their race depends on a impossible-to-pin-down mix of all of these things, and that it does so in no clear set of proportions–that race, in other words, does not have a clear supervenience base, and that it is not the kind of ontology that is even possible to pin down with necessary and sufficient conditions in the way that the OMB tries to get at race. No one should think they are getting at the essence of race without carefully considering Mills' arguments. I cannot do complete justice to those arguments here. But the much more basic point is simply that the OMB's various attempts to operationalize race so that it can be studied should not be confused with the thing itself.

The Census Bureau themselves are not operationalists

In fact, the census bureau says this themselves:

> The data on race were derived from answers to the question on race that was asked of individuals in the United States. The Census Bureau collects racial data in accordance with guidelines provided by the U.S. Office of Management and Budget (OMB), and these data are based on self-identification. The racial categories included in the census questionnaire generally reflect a social definition of race recognized in this country and *not an attempt to define race biologically, anthropologically, or genetically*. In addition, it is recognized that the categories of the race item include racial and national origin or sociocultural groups. (noa 2018, my emphasis)

The OMB themselves say:

"The racial and ethnic categories set forth in the standards should not be interpreted as being primarily biological or genetic in reference. Race and ethnicity may be thought of in terms of social and cultural characteristics as well as ancestry." (noa 1997)

[20] Chike Jeffers (who studied with Mills), informs me that this was probably not Mills' view. Still, I think he can very usefully be read as providing an argument for this–particularly since, in his "table 1" (p. 55) he provides a chart that would give you a function from the seven characteristic to race, and there are "?"s in the chart representing truth gaps in the function. After all, one nice way of defining "X doesn't supervene on Y" is by saying "the function from Y to X sometimes has no determinate value."

Operationalism is incompatible with realism

We should reject the idea that the OMB is perfectly capturing the underlying idea of race that is out in the world. I think the quoted passages make it clear that the OMB and the Census bureau think they are trying to find a rough operationalization of a murky concept that is out in the world. Of course it was never Spencer's claim that the OMB was capturing our pre-existing conception of race. What they are in fact doing, according to Spencer, is constituting via a creative act a set of "folk race" terms and concepts. And these "folk races" that they created exist alongside a myriad of other folk races out there in the world.[21]

Though the primary response to this will come in the next section (where I will argue that it is incoherent to claim that there are OMB "folk races" *that are identical to* HCPs), there are few important things to say here.

The first thing to say is that I should admit that I can partially sympathize with where Spencer is coming from here. In cases where ontologies strongly intersect with public interests, it's tempting to conflate institutional operational definitions with the real kinds being measured. *But this is an anti-realist temptation not a realist one.* Consider a very different example, the definition of a climate. The climate is usually defined as the statistical description in terms of the mean and variation of some relevant set of quantities that describe the atmosphere and oceans over a period of time. The classical period is 30 years, as defined by the World Meteorological Organization (WMO). Is this what climate is, really? I think there are two attitudes one can coherently take here, and I confess that I'm not sure which one I prefer. The first is to deny that climate is a real natural kind. If you do this, then you can say that by stipulation, climate is the description of these variables over a 30 year period. The second attitude is to be realist about climate–to say that the climate is a real natural kind.[22] If you say this, you have to downplay the WMO definition and say that it is nothing beyond a convenient operationalization–one that might be good enough for some purposes, but perhaps subject to criticism in other contexts, etc. You cannot be a realist about climate and say that the WMO gets to stipulate the 30 year time period. The same is true of race. If you think there are no such things, really, as races, then you can say that the OMB gets to make them up as they like–that whatever they stipulate is constituative of race because they are talking about a fiction. We could then argue about whether or not it's the most useful fiction we could think of. But you can't have it both ways, you can't claim that race is real (either biologically real, or socially real) and claim that somebody's stipulation is definitionally correct about what the boundaries of the kind are. That's not how realism goes. But now we have begun to bleed into the topic of the next section. In some sense, it doesn't really matter that much whether the OMB groups are an operationalization of a set of real social kinds, an institutionally constituted

[21] Notice that to maintain this, Spencer has to deny that the OMB can be taken at their word as to what they are doing, since his view conflicts with what they say. I believe he is willing to bite the bullet on this.

[22] See (Werndl 2016) and (Winsberg 2018) for more on defining climate.

construct (maybe like the WMO "climate") or a "folk race" if the OMB groups are not identical to HCPs in the first place. And they are not.

But the second thing to point out is that a bureaucratic classification scheme is simply not the topic of interest when people go to read a paper on whether race is biologically real. We are only interested in the OMB classification insofar as we think they are latching on to the thing we are interested in.

Let's take a moment to recall the motivation for a biological approach to race that we discussed in the opening paragraphs of this paper. We might be inclined to explore a "new biologism" about race in order to avoid having to confront the conclusion that there is no such thing as race. The problem with such a conclusion, recall, is that it seems to lead to the further conclusion, as Mills put it, that there is a "political mistakenness [associated with] race-centered political discourse". But if Spencer's argument depends on the claim that OMB races are entirely different kinds than all the other 'folk races' out there in the world, then it's not clear how this is going to help. Suppose I want to understand housing discrimination. Is the folk-Black-race that is potentially facing discrimination the same kind as the folk-OMB-Black race? It would seem that Spencer is committed to the answer to this question being "almost certainly not." Why should we even bother having the Census bureau keep track of data regarding the five races they keep track of, if these are entirely different from the races that play an explanatory role in the various phenomena we want to understand? This is a serious problem with proliferating the number of different races that are out there.

Most people come to the table having a pretty good intuitive understanding of what race is. As the census.gov page says, there is a generally socially recognized notion of race in the United States, and its the one they are trying to get at with the OMB classification. And readers of these sorts of philosophy papers want to know if that social thing they have a pretty good intuitive grasp of also happens to be a real biological thing. This is true even if they agree with Hardimon that "there is no concept that is the concept of race–no one 'thing,' no one item, no one reality or unreality that is race" (Hardimon 2017, 173). It's one thing to say (as Mills does, and as Hardimon does) that race is grounded a complex multifaceted intertwined clusters of ideas and characteristics. It is another thing entirely to say that all of these ideas and characteristics pick out entirely different kinds. Maybe, if one is *only* interested in, for example, the role that race plays in the study of diseases that have a genetic component, then Spencer's account could be helpful (modulo many of the other problems we have canvased in other sections). But as soon as we leave the narrow confines of those concerns, and begin to tackle the concerns that animate most philosophers of race, the account is going to get very limited purchase on our concerns.

Are HCPs races? Part 2: Is co-extension identity?

I've argued, and I think Spencer would agree, that the OMB classifications do not pick out our true notion of race. And I've tried to put some pressure on the idea that they pick out a set of "folk races" that are the kind of thing that should interest us, or that are candidates for being real kinds. But the far bigger problem is the argument Spencer uses to try to establish that the OMB groups are identical to the HCPs. In

this section I will argue that the OMB groups are not identical to HCPs and that Spencer's argument that they are is grounded in a mistaken claim: that OMB races are picked out referentially.

We obviously cannot infer from the fact that HCPs are merely *coextensive* with the OMB groups that they are identical. Some simple examples can make the case that this is not a generally warranted kind of inference. Suppose, for example, that Donald Trump has a favorite kind of bird. Say his favorite kind of bird is any red grouse with an even number of feathers. Say, even, that he likes red grouse with odd numbers of feathers less than all other birds. And say that, on the basis of that preference, Trump orders the extermination of all red grouse with an odd number of feathers. Suddenly, Donald Trump's favorite kind of bird becomes co-extensive with the red grouse. But that doesn't make "Donald Trump's favorite kind of bird" a real biological entity, let alone the same real biological entity as the red grouse–a species about which he has decidedly mixed feelings.[23].

Spencer is aware of this problem. He acknowledges that the mere co-exention of races and human biological populations has

> faced criticisms from many race scholars. For instance, the philosopher Joshua Glasgow has argued that folk races in the US are, by definition, distinguishable from one another by visible physical features of the relevant kind—namely, skin color, hair texture, and facial features—that are disproportionately prevalent in one race but not the others. So, even if there is high overlap among, say, Black people and African people, that is orthogonal to whether Blacks are Africans. The only way Blacks could be Africans is if they shared the same essence; or, said another way, is if 'Black' and 'African' shared the same meaning. However, according to Glasgow, 'Black' and 'African' do not share the same meaning. The former is defined by visible physical features, while the latter is defined by genomic ancestry.(Spencer 2018a)

He replies to this worry as follows: "However, I disagree with Glasgow that OMB race terms are defined by a set of superficial properties as opposed to the referents of those terms. This assumption is made a lot in race theory." (Spencer 2018a) But this is not an adequate reply. It does not matter at all to the issue at hand whether Glasgow gets right whether it's visible features, or some other characteristic, or no clear set of *underlying* characteristics at all (as I believe Mills' correctly argues in his 1998) that definitionally pick out the groups of people that function as races in our society.[24] The issue is only whether or not it is exactly the same set of features

[23] An anonymous referee has urged me to consider the following interpretation of Spencer here: "The best way to interpret him is that he is claiming that the co-extension of OMB races and n = 5 clusters is the DISCOVERY of a CONTINGENT truth, and so definition is not involved." Unfortunately, this cannot be right, since Spencer explicitly says that the OMB baptized an existing natural kind and made these race terms rigid designators. And rigidly designating terms pick out their referents necessarily. And of course Spencer *has* to say something like this on pain of falling to the main worry of this section: just because the extension of a concept is contingently coextensive with a real kind doesn't mean the concept picks out a real kind. That's the point of the "Donald Trump's favorite kind of bird" example.

[24] It is not perfetly clear what account of race Mills wants to offer in his (1998, Chap. 3), since he deliberately leaves things rather murky. But presumably he thinks the features in that define races as real social kinds are a complicated mix of biological, social, and personal-psychological characteristics

that make the HCPs exactly what they are. Whether or not Glasgow gets the supervenience base right, co-extensiveness is not the right criterion by some sort of default reasoning. Glasgow was probably mistaken in trying to rebut Spencer's claim by saying that it doesn't accord with how the various races are "defined." The OMB-defined groups can fail to be races without conflicting with some alternative definition!

There are three different things here, and any account that conflates any two of the three just by default is getting something wrong. First, there are the sets of alleles and ancestry relations that underpin the outputs of the structure-like computer programs. These are, in fact, somewhat opaque to us. Second, there are the real social things: races, and the things that underpin those. Those are the underpinings that Mills deftly shows us are hard to pin down. That races have no simple supervenience bases. And third, there are the criteria which the OMB uses to try to operationalize the measurement of the second thing.

Why does Spencer think that he can get from the fact that races and HCPs are co-extensive to the claim that they are the identical kinds? He says this: "However, the problem here is that philosophers have come up with two different possibilities for identifying a name's meaning. One possibility is providing a list of superficial properties, and the other is providing the referent of the name. The former is known as descriptivism and the latter is known as Referentialism." But this confuses an issue in the philosophy of language with the issue at hand, which is one of ontology. And it clearly reaches a mistaken conclusion.

Its just not possible that the five OMB groups are picked out referentially. This can be more or less proven.

First, why do philosophers have these theories of meaning? Why do we think names and descriptive-looking terms sometimes have their meanings picked out referentially, rather than by some essential feature(s) of the things they are trying to pick out? These referential accounts are designed to address puzzles about how we understand some sentences that include either what are called modal or epistemic contexts.[25] Strangely, it sometimes seems possible for me to say things like "If the president weren't president, he would be a reality TV star." Or go back to our example of birds with an even number of feathers, philosophers want to be able to explain the fact that we can say sentences like this one "If birds with an even number of feathers had an odd number of feathers, they would still be birds." Or this one "John doesn't know that all the birds with an even number of feathers have an even number of feathers." We explain how these sentences work by saying that the expressions in them pick out their objects referentially. So when we say "John doesn't know that the president is president" we mean that John doesn't know *of the thing I pick out referentially to you* by saying "the president" that he has the essential properties of being president. The technical expression is that the descriptive phrase "the president" is being used "de re" in the first case, and "de dicto" in the second case. And we say that names work referentially in most contexts in order to explain why we *can* say things like "If Gödel hadn't proven the

[25] There are other motivations, but this is the one that matters most to us here.

incompleteness theorem, he wouldn't be famous" or "John doesn't know that Gödel proved the incompleteness theorem." If the name Gödel picked out [whoever has the property we most commonly associated with the name–that is, the prover of the incompleteness theorem], then we wouldn't be able to express this thought with that sentence. But we don't usually allow ourselves to say things like "If Gödel hadn't proven the incompleteness theorem, he wouldn't be Gödel."

So, its easy to test whether the five OMB terms are, as Spencer says, rigid designators— terms whose meaning is specified by its referent, such that it refers to the same entity in every possible world. We simply have to check to see whether the counterfactuals work as they are supposed to. To see the difference, consider the following two expressions:

A. a great science fiction movie

B. Donald Trump

Notice that in the case of the second sentence, I can easily say things like

A1. "This movie is a great science fiction movie, but if George Lucas hadn't borrowed so many ideas from other artists and movies for it, it would not have been a great science fiction movie."

But I would challenge anyone to find a string of words to replace for *X* in B1 that would make B1 coherent, let alone true.

B1. "That person is Donald Trump, but if *X*, he wouldn't have been Donald Trump."

What's going on in these two sentences? Both start with a demonstrative, which picks out an object rigidly, but the first sentence uses a kind term that is not a rigid designator ("great science fiction movie") and the second one does use a rigid designator ("Donald Trump"). Sentences of form **B1** are always incoherent precisely because "Donald Trump" is a rigid designator.

So all we need to know in order to know whether OMB race terms are rigid designators is to determine whether I can write down a sentence of form C that is coherent:

Form **C**. "*Y* is *Z*, but if *X*, *Y* would not have been *Z*"

where *Y* is a demonstrative, *Z* is an OMB race term, and X is any counterfactual condition phrase (such as "George Lucas hadn't borrowed so many ideas from other artists and movies.")

But this is easy! In fact, the OMB made this unbelievably easy for us when they gave us this definition:

"**American Indian or Alaska Native** – A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment."

All I need to do to make a sentence of form **C** that is not only coherent but obviously true is make

Y be an ostensive demonstrative: "That person (while pointing)"

Z be: "OMB-American Indian or Alaska Native"

and

X be: "he (referring back to the demonstrated person) hadn't maintained tribal affiliation or community attachment."

And I get the following sentence that is not only coherent but true (assuming I am pointing a person that the OMB would classify as American Indian or Alaska Native.)

C2. "That person is an American Indian or Alaska Native but if he hadn't maintained tribal affiliation or community attachment he wouldn't be an American Indian or Alaska Native."

QED.

This proves that 'OMB-American Indian or Alaska Native' is not a rigid designator, and its meaning is not picked out referentially.

You might think this is just a trick I am playing with the funny characteristics of the OMB's definition of an American Indian or Alaska Native.[26] But first, even if it were, this would be devastating for Spencer's account, because he is claiming that this is exact set of terms are rigid designators. And second, it is not a trick. The peculiar definition of an American Indian or Alaska Native helps us find a sentence of form C that is not only coherent but *obviously true*. But surely sentences of the following kind are coherent, even if we might have to argue about whether or not they are true.

C3: "That person is white, but if all of his ancestors had come from Asia he would not be white."

There is a second puzzle here about how Spencer thinks the OMB terms could have *come* to rigidly designate populations. We normally think that names come to rigidly designate via an act of ostension or baptism. 'Saul Kripke' came to rigidly designate Krikpe when his parents held him out and gave him a name. I'm not a fan of the idea that words like 'water' rigidly designate[27], but its at least plausible that an act of ostension could have baptized water, since we all recognize water when we see it. How did the OMB manage to baptize all and exactly the people that structure-like programs spit out into the five diffferent groups, since these are not outwardly visible?

So Spencer's conclusion in (Spencer 2014) isn't right. Where does his argument go wrong? With this premise:

> If...a term **t** has a logically inconsistent set of identifying conditions but a robust extension, then it is appropriate to identify the meaning of **t** as just its referent. (Spencer 2014, 1026)

I'm not perfectly clear what he means by "a logically inconsistent set of identifying conditions" but I assume he simply means that one can't give a clear and coherent set of necessary and sufficient conditions for being a member of the group picked

[26] Though you might of course wonder how it could ever have come out to be true that a classification system that appeals to people's community attachments could ever have been identical to a real biological kind. I myself find this somewhat baffling.

[27] I think naturalistically inclined philosophers of science should be wary of notions like a posteriori necessity and magical notion of reference of a kind that Putnam, in his more sensible moments, described as functioning via "noetic rays"(Putnam 1981, 51).

out by **t**. But of course lots of kind terms are like this. The literature on concepts makes this clear. Many kind-picking-out concepts lack clear necessary and sufficient conditions for membership. But it doesn't follow from this that they are picked out by rigidly designating names. In any case, the argument can't be sound, because the conclusion has been demonstrated to be false above.

And if OMB-race terms are not rigidly designating terms (which they are not) then it does not follow from the fact that OMB races and HCPs are co-extensive that they are identical. They are not.

Conclusion

HCPs are not real biological entities; races aren't HCPs; and the OMB race criteria are operationalizations of, rather than definitions of, or 'reference-fixing' christenings of, races. So there is no cogent argument from the discovery of HCPs as the outputs of structure-like programs, and the OMB criteria, to the biological reality of race.

Of course, I have only argued that Spencer's argument that race is biologically real fails. I have given no positive argument that race is not biologically real.

It does seem, however, like Spencer has sketched out the best hope for making race out to be biologically real, and it fails. Spencer has done us the favor of pointing the way to seeing the extent to which Structure-like programs get at everything that is going on in the component of race that lives at the biological level. And yet its clear that not even HCPs are real biological kinds, and that even they are only loosely, if at all, connected to race. In fact, the great benefit of Spencer's work is that it shows us precisely all of ways in which race is insufficiently well grounded by biology.

Declarations

Competing Interests I have neither financial nor non-financial interests that are directly or indirectly related to this work submitted for publication.

References

(1997) Review of the Racial and Ethnic Standards to the OMB Concerning Changes ..., in The White House. https://obamawhitehouse.archives.gov/node/15631

(2018): 'About Race', U.S. Census Bureau. https://www.census.gov/topics/population/race/about.html

Appiah A (1985) The Uncompleted Argument: Du Bois and the Illusion of Race, Critical Inquiry, **12**(1), 21–37. https://www.jstor.org/stable/1343460

Bolnick DA (2008) Individual ancestry inference and the reification of race as a biological phenomenon, Revisiting race in a genomic age, pp. 70–85

Boyd R (1999) Homeostasis, Species, and Higher Taxa. In: Wilson RA (ed) Species: New Interdisciplinary Essays. MIT Press, pp 141–85

Ereshefsky M (2009) Natural kinds in biology, in Routledge Encyclopedia of Philosophy, Taylor and Francis. https://www.rep.routledge.com/articles/thematic/natural-kinds-in-biology/v-1
Ghiselin MT (1974) A radical solution to the species problem. Syst Biol 23(4):536–544
Glasgow J (2008) A Theory of Race. Routledge, New York
Goldfield M (1997) The Color of Politics: Race and the Mainsprings of American Politics, New Press Google-Books-ID: fIQMnwEACAAJ
Hardimon M (2017) Rethinking Race: The Case for Deflationary Realism. Harvard University Press, Boston, MA
Hochman A (2013) Against the new racial naturalism. J Philos 110(6):331–51
Hochman A (2014) Unnaturalised racial naturalism. Stud History Philos Sci Part C: Stud History Philos Biol Biomed Sci 46:79–87
Hull DL (1976) Are species really individuals? Syst Zool 25(2):174–191
Häggqvist S (2005) Kinds, projectibility and explanation. Croat J Philos 5(1):71–87
Kaplan JM, Winther RG (2014) Realism, antirealism, and conventionalism about race. Philos Sci 81(5):1039–1052
LaPorte J (2003) Natural Kinds and Conceptual Change, Cambridge, U.K. ; New York: Cambridge University Press
Mills CW (1998) Blackness Visible: Essays on Philosophy and Race, Ithaca, N.Y: Cornell University Press, 1 edition edition
Millstein RL (2009) Populations as individuals. Biol Theory 4(3):267–273
Novembre J, Johnson T, Bryc K, Kutalik Z, Boyko AR, Auton A, Indap A, King KS, Bergmann S, Nelson MR, Stephens M, Bustamante CD (2008) Genes mirror geography within Europe. Nature 456(7218):98–101 https://www.nature.com/articles/nature07331
Okasha S (2002) Darwinian metaphysics: species and the question of essentialism. Synthese 131(2):191–213
Pigliucci M, Kaplan J (2003) On the concept of biological race and its applicability to humans. Philos Sci 70(5):1161–1172
Putnam H (1981) Reason, truth and history, vol. 3 Cambridge University Press
Serre D, Pääbo S (2004) Evidence for gradients of human genetic diversity within and among continents. Genome Res 14(9):1679–1685
Spencer Q (2012) What 'biological racial realism'should mean. Philos Stud 159(2):181–204
Spencer Q (2013) Biological theory and the metaphysics of race: a reply to Kaplan and Winther. Biol Theory 8(1):114–120
Spencer Q (2014) A radical solution to the race problem. Philos Sci 81(5):1025–1038
Spencer Q (2018a) 'Are Folk Races Like Dingos, Dimes, or Dodos?', in G. Rosen, A. Byrne, J. Cohen, E. Harman and S. V. Shiffrin (eds), The Norton Introduction to Philosophy, New York, NY, USA: W. W. Norton & Company, 2nd edition, pp. 571–578
Spencer Q (2018) Racial realism I: are biological races real? Philos Compass 13(1):e12468
Spencer Q (2018) Racial realism II: are folk races real? Philos Compass 13(1):e12467
Spencer QNJ (2018) A racial classification for medical genetics. Philos Stud 175(5):1013–1037
Templeton AR (2013) Biological races in humans. Stud History Philos Biol Biomed Sci 44(3):262–271
Tishkoff SA, Reed FA, Friedlaender FR, Ehret C, Ranciaro A, Froment A, Hirbo JB, Awomoyi AA, Bodo J-M, Doumbo O (2009) The genetic structure and history of Africans and African Americans. Science 324(5930):1035–1044
Weiss KM, Fullerton SM (2005) Racing around, getting nowhere. Evolut Anthropol: Issues, News, Rev: Issues, News, Rev 14(5):165–169
Werndl C (2016) On defining climate and climate change. The Br J Philos Sci 67(2):337–364
Winsberg E (2018) Philosophy and climate science,
Winsberg E, Huebner B, Kukla R (2014) Accountability and values in radically collaborative research, Studies in History and Philosophy of Science Part A, **46**, pp. 16–23 Publisher: Pergamon
Winther RG (2014) The genetic reification of race?: a story of two mathematical methods. Crit Philos Race 2(2):204–223