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## Race as a Physiosocial Phenomenon

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**ABSTRACT** – This paper offers both a criticism of and a novel alternative perspective on current ontologies that take race to be something that is either static and wholly evident at one's birth or preformed prior to it. In it I survey and critically assess six of the most popular conceptions of race, concluding with an outline of my own suggestion for an alternative account. I suggest that race can be best understood in terms of one's experience of his or her body, one's interactions with other individuals, and one's experiences within particular cultures and societies. This embeddedness of human experience has been left out of most discussions of race which tie race to a set of characteristics (either biologically or sociologically defined). To rectify this omission, I articulate what I call the "physiosocial" view of race. This emphasizes the situatedness of human experience, the reciprocal and dynamic nature of the racial identities of individuals and groups. Approaching racial identity in this way entails a union of two historically uncomfortable partners: biological and sociological conceptions of race. If successful, this philosophical stance may illuminate the process of racial self-ascription as well as provide an explanation for the potential changeability of an individual's racial identity at different times and at different places.

**KEYWORDS** – Conceptions of race, ecological kinds, embeddedness/situatedness, anti-essentialism, preformationism, natural kinds, racial self-ascription, self-organization

### Introduction

One of the ways people have been and continue to be distinguished from one another is in terms of their race (Stocking 1994). But many different traits and relationships have been used to distinguish one race from another. These have included shared phenotypic traits (hair texture, skin colour, nose and lip shape), religion (Muslim, Jewish, Ifa), cultural heritage (Inuit, Mestizo, Romany), geographical origin (Pacific Islander, sub-Sahara African, Amazonian), mitochondrial DNA or y-chromosome (distant Viking, Native American ancestry), language (Welsh, Hadza, Creole), and epidemiology or biochemistry (whether one

is likely to be resistant to malaria or can digest lactose in adulthood).<sup>1,2</sup> These conceptions each bring with them their own sets of criteria for distinguishing among races. They amount to different ontological conceptions of race that are then used to define kinds of individuals or populations.

This paper offers both a criticism of and a novel alternative perspective on current ontologies that take race to be something that is either static and wholly evident at one's birth or preformed prior to it. I suggest that race can be best understood in terms of one's experience of his or her body, one's interactions with other individuals, and one's experiences within particular cultures and societies. This embeddedness of human experience has been left out of most discussions of race, which tie race to a set of characteristics (either biologically or sociologically defined). To rectify this omission, I articulate what I call the "physiosocial" view of race. This emphasizes the situatedness of human experience, the reciprocal and dynamic nature of the racial identities of individuals and groups. Approaching racial identity in this way entails a union of two historically uncomfortable partners: biological and sociological conceptions of race. If successful, it may illuminate the process of racial self-ascription as well as provide an explanation for the potential changeability of an individual's racial identity at different times and at different places.

As the list in the opening paragraph reveals, race is frequently understood as a grouping of homogeneous human beings that share the same traits and/or relationships. Relying on the presence of shared similarities and their inheritance for the purposes of classification is not new. The various systems by which similarities might be inherited have informed biological research from pre-Darwinian comparative morphology to recent comparative genomics and epigenetics (cf. Dupré 1993; Moss 2003; Jablonka and Lamb 2005; Müller-Wille 2006; Dupré 2009).

But how do similarities and the continuity of similarities provide empirically useful information about the world and which kinds of similarity are significantly informative? Understanding something as similar to something else means there exists some relationship, property, or structure that they both share. Therefore, it is important to understand whether the identification of continuity among morphological,

<sup>1</sup> This list is illustrative and is not meant to be exhaustive.

<sup>2</sup> In later sections I argue that equating these biomedical factors with folk racial ascriptions such as "black" or "white" is both highly contentious and based on some spurious metaphysical assumptions about identity.

behavioural, environmental, sociological, and genomic similarities proves scientifically or sociologically informative, and whether this information justifies predictions of other shared characteristics or dispositions they may share.

In his "Seven Strictures of Similarity," Nelson Goodman maintains that there are an infinite number of comparisons we can make between any two things, such that any two things, no matter how different, can be understood as similar with respect to some property (Goodman 1972, 443). If everything is comparable to everything else in terms of some common feature, then saying something is similar to something else is just stating what is trivially true. In speaking of the luggage left at an airport at check-in, Goodman suggests,

the spectator may notice shape, size, color, material, and even make of luggage; the pilot is more concerned with weight, and the passenger with destination and ownership. Which pieces of baggage are more alike than others depends not only upon what properties they share, but upon who makes the comparison, and when. (Goodman 1972, 443)

Judgments and comparisons can only be made with regard to a particular set of standards. For similarity and resemblance to be explanatory, a more specific understanding of the relation of sameness is required. Our selection of which items we choose to compare and which relations of sameness are relevant in making these comparisons are dependent on our context as well as our own interests at that time.

This contextualized understanding of the similarities between different individual objects or subjects is widely criticized by many philosophers as both ontologically and epistemologically lacking. It does not provide a fixed theoretical foundation on which to secure either metaphysical or scientific investigations. A belief in some underlying form, structure, or essence within individual substances or subjects that determines their nature pervades philosophical and scientific theories concerning both the very nature of being and our ability to theorize about it (Gillett and McMillan 2001).

Just as the chemical composition of water is said to determine its dispositional properties and behaviours, the development of the characteristics, behaviours, and dispositions of organisms are held to be determined by their microstructural properties (Putnam 1975; Kripke 1978). When these microstructural properties are taken to be the right similarities to appeal to in classification, they are thought to provide an immutable foundation on which to group things according to their non-accidental properties. A classification system based on underlying essences would take all (or at least most) organisms of a particular kind as

sharing the same underlying microstructural properties or relationships (Dupré 1993).

Trying to establish the criteria for membership within one group or another on the basis of uncovering essential underlying properties or relationships of resemblance has proved an often confused and misguided project (Dupré 1993; 2001; VandeWall 2007). The confusions that arise when attempting to decide the essential elements or relationships one should use to identify different natural kinds of individuals are many. If not the most evident, the most controversial cases where these confusions occur are in the various attempts to classify human beings into races on the basis of what are purported to be their essential properties. Many properties and relationships from a wide range of disciplines, from biology and geography to sociology and religion, have been suggested as the continuities and sameness relations essential to revealing an individual's race.

The question, "Does race exist?" is a seemingly simple question concerning the existence of race itself.<sup>3</sup> Race either exists or it does not.<sup>4</sup> But when answered in the affirmative, the answer, "Yes, race exists," is highly ambiguous. What is it that exists and how does it exist? In discussing conceptions of race, there appear to be (at least) two foundational assumptions. The first assumption is that races exist. But what we do is evaluate the appropriateness of different contexts' concepts. The second assumption is that race exists only within specific contexts. But its contextual existence provides no evidence for its general existence.<sup>5</sup>

In the following, I provide thumbnail sketches of six of the most popular conceptions of race. This survey is followed by an assessment of these race conceptions and a conclusion outlining my own suggestion for an alternative account of race.

The six conceptions to be discussed are separated into the three categories to which they are usually – but not uncontroversially – understood to belong.<sup>6</sup> The first includes conceptions claimed to be

<sup>3</sup> This is not a question about whether conceptions of race exist. Conceptions of race can exist even if races themselves do not.

<sup>4</sup> The current cross-disciplinary consensus seems to be, if human races exist they do so only as socially constructed units. Challenges to this consensus within the philosophy of science include Mayr's (2002) biological subspecies notion of race and Andreasen's (2000) cladistic notion.

<sup>5</sup> I thank an anonymous reviewer for directing me to this distinction. I will refer to these in clarifying the positions within some of the thumbnail sketches.

<sup>6</sup> These conceptions of race are not mutually exclusive. For instance folk biological conceptions are used alongside geographical data in forming notions of race. There are ongoing debates both within and between disciplines as to how different conceptions of race are best understood – as either biological or sociological – this is especially true of the category of kinship conceptions of race [for further

based on common-sense. These assume that there are visible traits or sets of traits that can be recognized by any observer and used to classify individuals into discrete races. I refer to these typological conceptions of race as "folk biological conceptions of race" because they use biological "facts" as evidence for their common-sense view. The second category is composed of those conceptions which have been understood to be based on (putative) natural scientific evidence. The third is composed of those based on (putative) social scientific evidence.

The use of the so-called common-sense conceptions is widespread despite the continual criticism that they are racist and based on a pseudobiology. Natural scientific conceptions have been variously identified as real, biological, or absolutist (the latter by their detractors). The social scientific conceptions have been called normative, historical, and relativistic (the latter by their detractors). The natural scientific conceptions seek to order the contents of the world systematically on the basis of the physical measurement and distribution of biological variation among human bodies, whereas the social scientific conceptions focus on interpersonal relationships, interactions, and cultural dynamics within and between communities.

Folk biological race conceptions include folk morphological race conceptions, which emphasize the phenotypic variations in faces and bodies, and folk biomedical race conceptions, which use recent techniques for obtaining medical information concerning such traits as tolerance to lactose in adulthood, resistance to malaria, or genomic information (e.g., y-chromosome, mtDNA) as evidence for a biological basis to race. Natural scientific race conceptions include subspecies conceptions of race, which rely on genetic and geographical isolation, and population race conceptions, which focus on the effects of migration and mutation on different human groups. Social scientific race conceptions include kinship conceptions, which rely on ritually determined ways race is passed down directly from grandparent to parent to child, and social constructivist conceptions, which maintain that racial characteristics are not biologically fixed, but rely on the behaviours, interactions, politics, and organization of individuals within societies throughout history.

reasons for placing kinship conceptions in the social scientific category please see my discussion]. The aim of these sketches is not to suggest they lie in discrete categories – but to present a snapshot of some conceptual features discussed within the philosophical literature on race.

## Folk Biological Conceptions of Race

### *Morphological Conceptions of Race*

According to a morphological conception of race, people of the same race share certain sets of physical traits. Perceived similarities in physical features are used to group individuals into homogeneous classes. The homogeneous classes that result are considered races. These groups are often thought to correlate with one's country of origin. For example people from continents with hotter climates are believed to have darker skin, darker eyes, and darker, curlier hair; people from colder continents, lighter skin, lighter eyes, and lighter, straighter hair (Leroi 2005; Kittles 1995; Jablonski 2004).

In some morphological accounts, these bodily features are believed to be visual indicators of deeper intrinsic differences in temperament, behaviour, and ability (Entine 2000; Rushton and Jensen 2005). Approaching race morphologically means that individuals are understood to have nameable, discrete, objective, and immutable racial identities that are discoverable on the basis of their external physical appearance. Individuals sharing the same bodily traits judged to be essential features of a particular race are grouped together. For those who connect morphology to behaviour, our physical anatomy is the ultimate indicator of who we are and how we will behave. Our race is somehow written on our bodies, clear to anyone who can read the signs.

### *Folk Biomedical Conceptions of Race*

The identification of individuals on the basis of biomedical or genomic data relies on the assumption that racial variation is based on unique phenotypes or genotypes (Herrnstein and Murray 1994; Weiss 2005; Rushton 2000; 2006). Myriad studies have claimed to reveal striking genetic and biomedical similarities within racial groups and differences between different racial groups (Burchard et al. 2003; Sankar et al. 2004). These combine with an increasing confidence that the new genomic data sources developed in the Human Genome and HapMap projects will secure a gene or set of genes that are the ineluctable determinants wholly (or mostly) responsible for who we are (Leroi 2005; Chow-White 2008).

Rather than relying on externally observed morphological similarities to underpin racial groupings, biomedical conceptions seek evidence from epidemiological and genomic data for a biological justification for racial categories. Such accounts seem tacitly to rely on the idea that there is an underlying biochemical microstructure such as suggested by

Putnam and Kripke. With such background assumptions these views hold that different kinds of human beings can be identified in terms of their similar genomic complement. Reliance on genes as the most important cause underlying one's racial identity effectively essentializes these complex identities. It assumes that who we really are is wholly contained within the information encoded in our genes.

The increasing array of genetic and medical tests being offered to us to find out more about ourselves, where we really come from, and who we really are attests to the prevalence of this view of race. "If you want to know what fraction of your genes are African, European or East Asian, all it takes is a mouth swab, a postage stamp and \$400" (Leroi 2005). Although this way of speaking is pervasive in the various media, what does it really mean to say that a person's race can be fractioned, as being 1/4 African, 1/16 European, or 1/3 East Asian, etc.? Interpreting an individual's race in this way assumes race is something or some fraction of something, to be uncovered. In suggesting someone can be 1/4 African, it also assumes that someone can be 100% African. In doing so it implicitly relies on the notion of racial purity – if not as an actualized ideal, then as a theoretical one. It also assumes that our genetic complement can be apportioned in a way that provides us with knowledge of which genes are clearly attributable to discrete races and that this is a reliable indicator of one's current racial identity.

There are a number of genetic variations among human beings that have been of particular interest in the search for a biological basis for race. However, deciding what kind of biomedical data is central to someone's race has not been straightforward. Data have included autosomes, x- and y-chromosomes, introns, exons, deletions, duplications or insertions, mitochondrial DNA, or susceptibility to certain diseases. In biomedical research, racial categories, such as those used in U.S. censuses, are often used as markers, stand-ins for statistically significant differences in genetic variation within the population (Fortun 2007). In these cases, race is already assumed to exist. Race is not constituted by biomedical or genetic variation. Instead, these variations are used to justify the assumption that race exists.

Two candidates widely believed to justify the grouping of individuals into distinct racial groupings are resistance to malaria (often purported to be specific to a relatively high incidence of sickle cell disease among black-skinned people of African descent) (Rushton 2000; Risch et al. 2002) and the ability to tolerate lactose (purported to be specific to white-skinned people of European descent) (Wade 2002). Malarial resistance is widely treated as one of the quintessential racial traits. On the basis of the racialized phenotype of malarial resistance, the grouping



of individuals resistant to malaria is believed to form a racial group – black Africans and those with black African ancestry.

The second candidate criterion for grouping people into different races on the basis of biomedical traits is lactose tolerance in adulthood. The presence of the enzyme lactase enables individuals to digest the main carbohydrate, lactose, which occurs in milk. Nearly all infant mammals possess the enzyme lactase but later, after weaning, lose the ability to digest lactose later in life. The persistence of the lactase enzyme after weaning until adulthood arose when humans began domesticating cows, sheep, goats, camels, and buffalo for their milk. The increased prevalence of lactase has been thought to be a unique racial characteristic of white Northern Europeans in contrast to other groups such as Northern Indians, Africans, and East Asians who tend to be lactose intolerant (Cochran and Harpending 2009).<sup>7</sup> This view takes race to exist in the context of biomedicine. The biological differences of lactose tolerance, malaria resistance, and genomic information are treated as evidence for the biomedical concept that was initially assumed to exist.<sup>8</sup>

## Natural Scientific Conceptions of Race

### *Subspecies Conceptions of Race*

“Race” is often used as a synonym for “subspecies” in describing the classification of organisms from bacteria to butterflies. A subspecies refers to populations of organisms that are genetically and geographically isolated from one another (Keita et al. 2004). Geographic isolation means that two or more populations are separate from other populations of the same species. Genetic isolation results from this geographic isolation as these separate populations go on to develop different allelic frequencies from other subspecies populations.

Ernst Mayr has developed his own subspecies conception of race. “A human race consists of the descendants of a once-isolated geographical population primarily adapted for the environmental conditions of their original home country” (Mayr 2002, 91). Mayr suggests that differences among subspecies are primarily the result of genetic divergence due

<sup>7</sup> To be clear, the biomedical conception set out here is not one suggested by Cochran and Harpending’s (2009); it is a folk biomedical concept – one based on a pre-existing notion of race – that takes biomedical research as providing evidence for the racial groups already assumed to exist at the outset. A further discussion follows.

<sup>8</sup> The biomedical conception takes Assumption 2 outlined in the beginning of the paper: we assume race exists only within specific contexts.

to reproductive or geographical isolation from one another. Races each have their own gene pool. Genetic variation between races arises due to different selection pressures of the local environment. Races adapt to their specific local environment resulting in populations that become genetically differentiated from one another.<sup>9</sup> Relying on the reproductive relationships of individuals in a population, their shared gene pool, and geographic isolation, Mayr's subspecies notion of race appears to be a version of his well known Biological Species Concept (BSC; Mayr 1942).<sup>10</sup>

### *Population Conceptions of Race*

Population accounts demarcate human beings into races on the basis of their migration routes, agriculture, and geographical location (e.g., Cavalli-Sforza 1995; 2000; Cann 2001). There are a number of reasons why people migrate from one area to another. Migration might occur if there are strong incentives for one group to move into another area; e.g., better climate, more cultivatable land, or to escape political unrest. If there is another population already occupying that area, then this migration affects both the newly migrated population and the resident population. They now have an opportunity to exchange both culture and genes with populations from which they were previously isolated. For these reasons the population accounts take these geographic expansions to be genetically traceable. The high frequencies of certain genes or alleles indicate the expansion of different groups from one area to another. And genetic analyses reveal similarities among individuals of the same race and differences among individuals of different races. This approach is taken by Naomi Zack (1993). She suggests that races are populations that share a common gene pool.<sup>11</sup> This relies on a statistical notion of race based upon population genetics. On this view races are assumed to be discrete [what she calls] "breeding populations," that do not overlap with other races.

According to population conceptions of race, migration, rare genetic mutations, and genetic drift are thought to cause evolutionary variations

<sup>9</sup> He suggests that because human races have both genetic and "nongenetic cultural attributes" (Mayr 2002, 89) we would, in an ideal world (i.e. one with the appropriate technology) be able to "partition the phenotype of every human individual into genetic and cultural components" (Mayr 2002, 89). In what follows, I discuss why this kind of dichotomous partitioning is highly problematic.

<sup>10</sup> "... species are groups of interbreeding natural populations, which are reproductively isolated from other such groups" (Mayr 1942, 120).

<sup>11</sup> Although she also relies on a shared gene pool as Mayr (2002) does, she does not make the further claim that these breeding populations are best described as subspecies.

among populations. To trace the major direction of migrating populations over hundreds of generations population conceptions rely on genetic markers using haplotype data from mtDNA, the y-chromosome, and low recombination autosomal genes.

A phylogenetic conception of race based on population-thinking has been formulated by Robin Andreasen (1998; 2000). She suggests a cladistic view of race – a particular monophyletic notion of an ancestral lineage. Assuming that the structure of human evolutionary history is tree-like, a monophyletic lineage is restricted to a single bough and all and only those smaller branches and twigs branching from it (referred to as a “clade”). Races are clades; they are “ancestor-descendant sequences of breeding populations, or groups of such sequences, that share a common [ancestral] origin” (Andreasen 1998, 214). Races are special kinds of ancestrally-demarcated populational groupings – monophyletic groups.

## **Social Scientific Conceptions of Race**

### *Kinship Conceptions of Race*

One of the most prolific kinship notions of race is what I will refer to as the “naïve-recognition” concept of race. Although not labelled as such, it is a view widely discussed and criticized (Zack 2001; Piper 1992). The naïve-recognition concept is a folk social scientific notion that suggests a you-know-one-when-you-see-one notion of race. It assumes that race is exactly how “we” judge it, assuming that “we” all perceive race in the same way. This kinship notion is often justified with genealogical evidence that is sociologically determined. For instance, it groups human beings into racial kinds based on whether they are part of the same family tree. One may question why the kinship conception of race is counted as a social scientific rather than a natural scientific conception since family trees rely on biological relationships of ancestry. The significance of these biological relationships and their use in constructing family trees is biologically given but ritually determined by sociological and cultural interests; e.g., paternal inheritance of the family name, maternal inheritance, or the lineage of the mother’s brother. Family trees are never produced without heavy pruning. Without systematic pruning of certain branches one would end up with a never-ending tree (Müller-Wille and Rheinberger 2009). According to this widely adopted kinship conception, an individual is the same race as her parents if her parents both belong to the same race as each other (Gelman and Wellman 1991; Carey and Spelke 1994).

The most infamous of the kinship conceptions of race were those presupposed by the laws collectively referred to as the "one-drop rules." These were a number of laws first enacted during slavery<sup>12</sup> and were common in the southern United States. One-drop rules held that if an individual had as little as one black ancestor in her extended family tree, she was black. In some states this was set as a fractional notion, such that if one of her great, great-grandparents (one-sixteenth of her family tree), or in some states, one of her great, great, great-grandparents (one-thirty-second of her family tree) was considered black, then she was black.

The division of races that resulted was not between individuals commonly ascribed as "black" or "white" on the basis of their skin colour. These laws were used to assess the purity or impurity of an individual's ancestral lineage. In providing a means of detecting the presence of a non-white ancestor, their aim was to protect and regulate white privilege against the perceived threat of its gradual dilution by multiracial individuals. In practice they took the form of witchhunt-like searches for any distant black ancestors of individuals living as, and accepted as, white. Although originally aimed at black and white races, the absolute intolerance to those of "mixed race" was not limited to those of black and white ancestry.<sup>13</sup>

Although now officially rejected as unconstitutional, one-drop rules are still used colloquially as an "objective" measure by those seeking to classify both others and themselves racially (Omi and Winant 1994). Their continued use is evident in the widespread use of a dichotomous racial division in ascribing an individual's race by selectively ignoring part of their ancestral history; that is, "black" used to refer to individuals of multiple racial backgrounds and "white" reserved for someone who has none or very distant ancestors identified as black.

The negative use of the one-drop rules in regulating the inheritance of white privilege can be contrasted with Du Bois's positive notion of race in terms of "common blood,"

a vast family of human beings, generally of common blood and language, always of common history, traditions and impulses, who are both voluntarily and involuntarily striving together for the accomplishment of certain more or less vividly conceived ideals of life. (Du Bois [1897] 2000, 110)

<sup>12</sup> The first of these was set into law in North Carolina in 1802: *Gobu v. Gobu*, 1 N.C. 188. The last was upheld in 1982 (Omi and Winant 1994).

<sup>13</sup> This intolerance to multi-racial individuals was not restricted to the U.S. Early in the 20<sup>th</sup> century, laws were enacted in Australia forcibly to assimilate the light-skinned children born of Aboriginal and white parents (labelled by the government "half-castes") from their Aboriginal families and taken against their wishes to government-run camps where they were trained to eventually integrate within the white community (cf. Pilkington-Garimara 1996).

In formulating his conception of race in this way, Du Bois seeks a more explicitly social scientific notion of kinship than the seemingly biological account of the one-drop rules. He does so by referring to a "vast family," sharing a "common history." A similar social-familial idea of a common blood, or "blood quantum" is also used by some Native Americans to determine their belonging to a particular tribe.

Du Bois's common blood emphasizes at once the physical, psychological, and sociological continuity among individuals of the same race. Together with common history and vast family it frames his sociohistoric conception of race, one that emphasizes multiple routes by which race is passed on.

### *Social Constructionist Conceptions of Race*

The social constructivist conceptions focus on the changeability of race rather than assuming it is biologically fixed. They deny that races are unchanging stable types that can be decided simply by looking at genes, morphological traits, or even family trees. These take race to have more to do with how people relate to one another in societies than their biological traits or even to whom they are related.

Franz Boas challenged the assumption that races were stable types in 1911 after numerous detailed comparative studies of the head shape of first and second generation-born children and those of their immigrant parents (born in the home country). He observed significant intergenerational morphological differences in the head shape of the U.S.-born grandchildren and home-country-born grandparents. He also observed changes in the head shape of children born in the home country who later moved to the U.S. On the basis of these and other studies, he argued that traits commonly considered racial are not fixed (as they are widely assumed to be) but are instead both unstable and plastic (Boas [1911]). Following Boas, many hold that the individual development of morphological characteristics can vary even among closely related family groups and can be greatly influenced by changes in the social, political, or economic lived environments (i.e., as the result of immigrating). The plasticity of one's own racialized features and ascribed racial classification can change in as little as a few months if one moves to a different country or different community within the same country with a different set of beliefs concerning the assessment of morphological traits or behavioural habits than one's own (cf. Nobles 2000; Fausto-Sterling 2008).

In contrast to both the fixed notions of the natural scientific and kinship conceptions of race, this view suggests that even how someone defines kin or family in terms of genetic, social, or cultural relationships,

depends on how and where she grew up, her religion, current economic situation, sexual orientation, community identity, language, the others within her community, and how her peers form their family units. A wide variety of kinship groupings demarcated in a number of different ways depending on their cultural heritage are possible. Family may include a much broader unit than the nuclear family or direct descendents. This means that if an adopted child is taught by its adoptive parents their customs, behaviours, language and way of life,<sup>14</sup> then the child, being part of the same family as the parents, shares their race (regardless of whether the parents are members of the same morphologically or biologically defined racial group).

### **Inadequacies of the Folk Biological Conceptions of Race**

Our bodily and facial features are often perceived as a natural and inescapable fact about who we are. Accordingly, they are believed to be more worthy of attention and provide the most justifiable basis on which to classify humanity according to natural divisions. Although these physical variations are considered by morphological views to be common to all human beings of a particular race, they are at best only mere descriptions of observed variations among individuals.

Classifying individuals using sets of putatively racial traits thought to necessarily or typically co-occur (such as skin and eye colour, hair texture, and musculature) fails because these features do not fall into neatly defined categories but occur individually and in many combinations. Knowing that an individual has light skin and light, straight hair does not provide enough information to allow us to ground generalizations about her race or make reliable predictions concerning her other morphological or behavioural traits or country of origin. While it is undoubtedly possible to group human beings on the basis of such morphological traits, it is a mistake to think that the resultant groupings form natural homogeneous kinds. This is because individuals grouped on, for example, the basis of hair texture and head shape do not necessarily coincide with individuals grouped on the basis of, for example, skin colour and eye colour.

The same criticisms hold for the classification of individuals on the basis of folk biomedical traits such as those who are lactose tolerant. Although the presence of lactase has been associated with milk drinking in Northern Europeans, it cannot be attributed to something like

<sup>14</sup> See especially Du Bois (1897) and Boxill (1996) who elaborate on race in terms of a common way of life.

the presence of a gene that is associated uniquely with white-skinned people. In fact, if we group people in terms of their ability to drink milk in adulthood due to their retention of lactase from infancy, this group would include Northern Indians, some Africans such as the Fulani, and Central and Northern Europeans; those who are not able to digest lactose include Southern Europeans, East Asians, Native Americans, and some Africans (Tishkoff and Kidd 2004).

A similar problem also affects a simplistic view of malarial resistance as indicative of blackness. Although malarial resistance is common among many West Africans with dark skin, it is also found in some North and South Americans living in areas where malaria is a threat (Lau et al. 1997; Kate 2001; Hauskeller 2004). The threat of malaria means that resistance to it is also found among individuals of the Mediterranean, Southeast Asia, and the Middle and Far East. It is not restricted to either West Africans, those of West African descent, or those with dark skin. If we were to classify individuals in terms of their resistance to malaria, we would obtain a more diverse grouping of individuals than the one expected by those seeking to underpin the morphological race category "black" with malarial resistance or sickle cell anaemia.<sup>15</sup> The grouping that would result would not align with other racial divisions (e.g., either those based on skin colour: black, yellow, white, red; or geography: Africans, Asians, Europeans, Americans). Individuals living in the Mediterranean, such as some Italians, Greeks together with some Africans, Southeast Asians, Arabians, and those of the Far East would be members of the group resistant to malaria. The Northern Europeans and the Xhosas of South Africa would be grouped together as those without a resistance to malaria (Dupré and Hauskeller 2007). When speaking of malarial resistance, it is simply not explanatory to say that the reason someone has malarial resistance is because they are black. This biomedical conception of race leads to groupings of individuals that do not map on to groupings using any traditionally understood conceptions of race (e.g., on the basis of features such as skin or hair colour, nationality, or geographic location).

### **Inadequacies of the Natural Scientific Conceptions of Race**

In framing his subspecies conception of race, Mayr suggests that although many characteristics are just quantitative or descriptive, others

<sup>15</sup> Resistance to malaria may either be the result of sickle cell anaemia (Kate 2001) or alpha-, beta- and delta-thalassaemia (cf. Lau et al. 1997; Hauskeller 2004).

– the Diego blood group for individuals of Native American ancestry and Tay-Sachs disease for those of Jewish descent – are “virtually diagnostic” (Mayr 2002, 92). And later, relying on the assumption that there are folk biological races, he suggests, “if I introduce you to an Eskimo and a Kalahari Bushman I won’t have much trouble convincing you that they belong to different races” (Mayr 2002, 90). This rhetorical flourish cannot be overlooked as it seems to rely more on a common-sense folk-biological notion of race rather than anything else. In relying on these folk notions as evidence of the natural scientific notion of race as subspecies, Mayr only succeeds in justifying the existence of folk racial groupings that were already assumed to exist at the outset.

The use of folk-biological concepts in justifying the subspecies concept does not mean that the subspecies concept is itself inappropriate. Statistically interesting biological groupings do exist – this is not in doubt. Human HapMap research suggests that there are groups of individuals that have different allelic frequencies. Although this has been used as justification for the use of a subspecies conception of race in humans, the use of this biomedical evidence to justify the folk categories already assumed to exist is problematic at best (Pigliucci and Kaplan 2003).<sup>16</sup> The main concern is with the persistence of these folk categories and their frequent use in biological research and evidential support.

Although my criticisms here are aimed at the various folk-biological conceptions and their misuse of biomedical evidence, their widespread use becomes problematic if researchers purporting to conduct scientific studies use these to preselect groups of patients they want to consider for study. The researcher in his initial assessment of the individual’s race may rely on his recognition and attribution of superficial morphological features as indicators of a particular race. If the resulting research then goes on to suggest biological variability along folk-biological racial lines, it does so only by assuming what it aims to prove. It is evidence in support of the researcher’s initial morphological assessment of race given a preselected sample of individuals chosen as exemplars of that race.<sup>17</sup> If researchers introduce folk-biological notions into their scientific investigations this compromises the results. The assumed existence of folk races and their use in grouping individuals into research cohorts would already presuppose what the folk-biomedical conception of race

<sup>16</sup> Research that supports the claim that these categories do coincide (at least occasionally – or in certain contexts) can be found in Rosenberg et al (2002). However the occasional coincidence of folk biological and statistical populations does not count as evidence for assuming coincidence in all cases.

<sup>17</sup> This has also been a criticism of physicians prescribing BiDil on the basis of their initial morphological assessment of a patient as “black” without taking that patient’s history or considering to what race they self-ascribe (cf. Lee 2005).



sets out to find – that the cohort forms a biologically or biomedically homogeneous group that maps on to folk race categories.

However, what has seemed troubling in the combining of folk- with biological and biomedical conceptions above may actually provide an opportunity in other research contexts. This kind of combined conception could be appropriate in certain contexts if the folk clustering of traits is thought to correlate with a biomedical statistical tendency of a population that is based on a particular social history. U.S. history presents a particularly salient example. Individuals in the U.S. who choose to racialize sickle cell anaemia and malarial resistance as characteristically black might do so by relying on the correlation between this statistically understood cluster of biomedical traits and the ancestral history of the racial classification black within the U.S. This correlation makes sense within this particular ancestral history – the western African ancestry of those brought to America as slaves. Understood this way, the correlation is highly context-specific. This means that the biomedical conception of sickle cell and malarial resistance may be appropriate in the context of the ancestry of geographically displaced slaves from western Africa and in the U.S. and may overlap with some other folk or social scientific conceptions of race. However, the appropriateness of use of this historically-contextualized biomedical notion provides no evidence for the use of this biomedical conception globally (that is, it is inappropriate in Europe, Africa, and the Middle East).<sup>18</sup> Folk-biologically construed, race is not the simple *explanans* to the *explanandum*: why does this group of people have a resistance to malaria or tolerance to lactose?

Do population notions fare better in securing a biological basis for racial divisions? If they do, it is because what underlies these conceptions appears to be the assumption that races are separable on somewhat similar basis as are species. They do not try to distinguish the Nordic from the subSaharan African on the basis of their phenotypic features (hair colour and texture, nose and lip shape, skin and eye colour, or musculature) but instead on the assumption that these features are caused by significantly distinct gene pools.

Taken as statistical notions, population conceptions are relatively unproblematic. Problems begin when they are thought of in terms of Zack's "breeding population." These problems are connected with those of Mayr's subspecies notion. Both conceive a race as a discrete group of individuals that interbreeds only with other individuals within that group.

Just as the similarities among members of the same species are

<sup>18</sup> This follows from the second assumption set out in the beginning of the paper.

thought to be ensured by the reproductive isolation and lack of gene flow between members of different species (according to Mayr's BSC), so too is the racial distinctiveness of breeding communities thought to be preserved by their lack of intermixing with other racial groups. Racial distinctness is maintained by the formation of reproductive relationships exclusively with members of the same racial population. Instances of intergroup relationships are thought to be rare and only occurring within very recent history. As a result race-specific traits are maintained continuously from generation to generation within the population.

Whether population concepts accurately demarcate humankind into discrete ancestrally continuous racial groupings may be in doubt if the amount of migration and intergroup mating is not new but has always occurred (Lewontin 2006). Although there may be visible differences in the characteristics of certain individuals belonging to different populations, this is not due to any underlying genetic difference or the result of isolation. In fact, the majority of biological diversity and genetic variation (an overwhelming 93.7%) in humans occurs within what have commonly been understood as racially defined populations (continental, national or linguistic populations), not between them (Lewontin 2006). If intergroup mating has always occurred, it would mean that a person who currently identifies herself as belonging to a particular race would not be distantly related to a discrete ancestral racial population to which her current racial group are the direct descendants of a pure unbroken ancestral lineage. Instead, she would only ever be able to trace her ancestry to a combination of interrelated groups.

Last, I focus on Andreasen's cladistic notion of race. For the cladistic notion to succeed, populations considered races need to be monophyletic. The big problem with this view (and perhaps other cladist views) is that the structure of evolution is always assumed by cladists to be best modelled as a tree. This tree model has been widely criticized for failing to represent human evolutionary history accurately (cf. Gannett 2004). If human evolutionary history were not tree-like, this would call into question the appropriateness of a conception of race based on such a model.

### **Inadequacies of the Kinship Conception of Race**

The naïve-recognition concept of kinship is similar to the common-sense biological notion used by Mayr (2002, 90-92). This naïve realism assumes the judgement of another's race is given – unmediated – to “us.” This requires the further assumption that the “us” is taken to be a generic

perceiver. In making this further assumption, this view fails to capture the specificity of the perceiver and the effect of this perceiving individual on the judgement of the race of the individual being perceived. It fails to represent the judgement of race as a two-place relationship, one that requires both the individual whose race is being perceived as well as the perceiver perceiving the individual's race. Only by neglecting the specificity of the perceiver can this notion assume that there is a homogeneous "we" who all perceive race similarly.

Although a putatively social scientific notion, the updated common use one-drop rules (cf. Omi and Winant 2000) are often based on folk genetic notions of race. These notions rely on a folk genetics of racial inheritance: individuals inherit all of their genes from their parents, genes code for traits, and so all of their racial traits are encoded in the genes they inherit from their parents. They are of the same race as their parents, if their parents both belong to the same race as each other.<sup>19</sup> One's race is determined by the continuity of the genetic material (as stand in for microstructural essence) passed on from one generation to the next. Individuals have the same traits, same genes, and same talents, same diseases, and same behaviours as their ancestors because these are all reliably inherited through a pure, unbroken lineage of ancestors.<sup>20</sup>

Not only does this view overestimate the role of genes in development, it mistakenly assumes the identity of genes across generations. The genes we inherit from our parents are not the same, they are neither materially nor structurally identical with our own. Not only are the genes not identical across generations, they are also non-identical within the trillions of cells of one's body throughout one's ontogeny. Cells do not have identical genomes due to mutation in cell division and differentiation. The DNA may be the same sequence in all cells but the methylation of the genome in each cell type, the specific cell products, proteins, and daughter cells may differ (Hauskeller 2004, 294). The assumption that there is a structural or material identity of the genetic substratum by which racial traits are inherited seems to try to justify rigid criteria for race where there may be none.<sup>21</sup>

<sup>19</sup> Appiah (2006) also criticizes this view.

<sup>20</sup> Taking the view that an individual's race is the same as her parents if they share the same race as each other to its logical conclusion has surprising consequences. If an individual's race depends on the race of her parents, their race in turn depends on the race of their parents, and so on. Iterated enough times, this takes us back to some ancestral population. We know that our matrilineal mitochondrial most recent common ancestor (MRCA), mt-Eve lived some 200,000 years ago whereas the patrilineal MRCA, Y-Adam lived 50,000-90,000 years later. But it is crucial to note that mt-Eve and Y-Adam are only two of many MRCAs. [19-2-2011, from <http://www.sciencedaily.com /releases/2010/08/100817122405.htm>].

<sup>21</sup> In the remaining sections I suggest that the more overtly sociohistorical notions such as the kin-

## Preformationist Assumptions

What unifies the folk morphological, biomedical, and population conceptions of race is that they all assume that race is something that is preformed prior to one's life in the world in the sense that it is fixed and given to us through our (narrowly defined) biological inheritance. This assumption is also shared by some social scientific accounts.

Our morphological and behavioural differences are frequently reported in the various media as being down to our "biology." This way of speaking has buoyed a strong belief that our "biology" or more frequently our "genetics" determine our racial characteristics. Philosophers may recognize this understanding of race to be a sort of Putnam/Kripke approach to races as natural kinds that defines race in terms of fixed underlying biological essences that are shared by all human beings of the same race. This approach is largely reductionist and underlies many folk-biological conceptions of race.

Everything from differences in morphology, disease resistance or susceptibility, variations in height, weight, strength, spatial awareness, and intelligence have been attributed to one's underlying pre-existing racial biology (Lau et al. 1997; Kittles 1995; Risch et al. 2002; Leroi 2005; Rushton and Jensen 2008). In assuming that race is preformed, the morphological, biomedical, population, and kinship conceptions of race take a person's racial identity to be determined prior to and irrespective of an individual's experiences and relationships with other human beings during her lifetime. In the biomedical and population conceptions, an individual's racial inheritance is understood to be exclusively passed on to her from her ancestors, encoded in the informational script within her genes as expressed in her racialized traits. Racial categories are often used not just as pragmatic markers for differences in genetic variation but as evidence to explain these differences (Outram and Ellison 2006). These conceptions take race to be an essential quality – perhaps unseen, but potentially discoverable. A person's race can be assessed purely given her immediate or, in the case of the one-drop rules, distant ancestry – the presence of one black ancestor of 32 great, great, great-grandparents being black is thought to determine definitively that an individual really is black. And conversely, the absence of one black ancestor out of 32 determines one's whiteness. The one-drop rules determine race in terms of relational rules of exclusion and assume an individual's racial identity to be essentially fixed and unchangeable. Race is determined once and

ship conceptions as set out in Du Bois and the notion of "blood quantum" of Native Americans fare much better.

for all on the basis of ancestral relationships. It is an inescapable feature of who one is. As such, it is unaffected by life activities and is something that can be determined before birth simply by examining family trees, genetics, or ancestral epidemiology.

What is pervasive in all of the conceptions criticized above is the belief in race as a natural kind and that racial similarities are thought to have a common cause – an underlying structure, immutable quality, or essence which reliably determines raciality. As such, they assume race is something that is preformed and thereby provides a stable and objective foundation for the delineation of a supposedly natural division of humanity. Rather than justifying racial categories on the basis of real divisions of humanity, they succeed only in reifying those that are already believed to be natural within society.

### **Framing a New Approach to Race**

If the above folk natural scientific conceptions, biomedical conceptions, as well as some of the folk biology-based kinship conceptions provide metaphysically untenable or morally suspect bases upon which to conceive of race, does this mean that race is a spurious category? Some have suggested that we eliminate the category altogether.

[T]he truth is that there are no races, there is nothing in the world that can do all we ask race to do for us. [...] The evil that is done is done by the concept, and by easy – yet impossible – assumptions as to its application. (Appiah 1992, 45)

Although avoiding the racism imputed and perpetuated by the use of racial categories, this eliminativist solution introduces a host of other problems. Denying the biological bases for racial differences does not mean race is not a real category. There may be other ways race is real. If the category of race cannot be biologically justified, can it be culturally or socially justified?

Social constructivists believe it can be. They suggest race is something that is formed socially not biologically. They often view race as the product of social creation or the result of personal decision-making. This latter view has been criticized as implying that one's racial identity is completely within our control and as such can be changed if we choose. But is racial identity that plastic? Can people choose to change their racial identity from one day to the next? If it is this easy to change, surely many individuals would have done so to avoid persecution in racist regimes throughout history.

Race, if changeable, does not seem the kind of thing that can be easily

changed. It depends not only on one's own racial ascription, but on the recognition and acceptance of that ascription by others. What seems unavoidable is that the identification of human beings in terms of their race is tied to the norms within the society doing the classifying. But what seems right about social constructivist views, like Appiah's, is that they construe race as something which is dependent upon an individual's life in the world, not something that is wholly determined prior to or at their birth.

Although sympathetic to some of what the social constructivist conceptions propose, I reject the disciplinary division that they presuppose. These, like the other conceptions discussed, set a disciplinary if not an ontological divide between the social or cultural characteristics on one side as those things that can be changed (acquired by non-genetic inheritance processes such as learning or imitation), and the "scientific" or "biological" characteristics on the other considered to be those things which cannot be changed (transmitted from parent to offspring through genetic inheritance). This tradition was followed in the initial presentation of the six conceptions discussed within this paper.

This dichotomization was originally intended to help prevent racist assumptions about a person's behaviour, temperament, or intelligence being drawn on the basis of their biological features (cf. Boas [1911], 1940). Although perhaps originally necessary for avoiding racist theorizing, maintaining this dichotomy is now a barrier to understanding race. I suggest that we dissolve the division that separates the biological from the cultural factors used to understand race. Being human just means that we are at once biologically and culturally living and interacting within our various physiosocial ecologies. Taking the dissolution of this dichotomous thinking seriously means that, far from being separate and unconnected, our genetic, morphological, biomedical, national, cultural, behavioural, kinship, and cultural traits are all different facets of ourselves *qua* human, not two sets of ontologically distinct characteristics.

Conceiving of race in a purely biological way effectively alienates us from our racial identity. It does so by alienating us from our self-defining life activities and by locating the source of our racial identity outside our influence and control – in our genes or in our biological morphology. The persistent argument for such a fixed, essential biological basis for racial classifications misjudges both the basis for racial groupings as well as what is required for them to be objective. They do so by ignoring how these so called purely biological features may be both cause and effect of political, societal, class, and economic practices. For instance, discriminatory practices based on perceived differences among raced individuals have led to gross inequities where some are systematically

privileged while others are oppressed. Living within a prejudicial environment may affect diet, mental and physical stress, access to medical care, social cohesion, access to education, and financial security – all of which can greatly impact the health of individuals, families, and communities (National Research Council 2004).

The putative natural scientific approaches tend to emphasize the role of genetic inheritance. However, there are many different mechanisms of inheritance. In addition to the vertical genetic inheritance from parent to offspring, there are also epigenetic, behavioural, symbolic, and cultural mechanisms of inheritance (Jablonka 2001). Features such as one's dietary preferences, immunity from disease, acquisition of language, and cultural mores are inherited in various ways; that is, through the ingestion of the breast milk of one's mother or through cross-feeding, the teaching and mirroring of behaviours of tutors, the direction of mentors, community leaders, participation in political groups, religious congregations, or youth or senior groups throughout an individual's lifetime. Once inheritance ceases to be equated with genetic inheritance, we can begin to articulate how racial identity comes about over time rather than assuming it is fixed and genetically preformed.

### Resituating Racial Identity

In setting up an alternative conception of race, I draw on elements from those notions discussed and criticized in the foregoing (but stripped of their strongly preformationist or essentialist assumptions). My approach attempts to orient ecologically what Robert Gooding-Williams refers to as “the politics of recognition,” Du Bois calls “cultural recognition,” and Susan Wolf calls “self-recognition” (Gooding-Williams 2001, 446).<sup>22</sup> To do this, I utilize the ecological framework set out by James Gibson (1979/1986).<sup>23</sup>

This Gibson-inspired approach is a situated, ecological notion of race conceived within the philosophy of science. This alternative takes racial identities to be the products of the situatedness<sup>24</sup> of the experiences of being human within diverse environments. This way of talking about race attempts to capture the causal reciprocity between an individual's

<sup>22</sup> For Gooding-Williams (2001), this recognition “is, as it was for Du Bois, a matter of seeing one's cultural identity in connection to the cultural identities of other members of one's community” (Gooding-Williams 2001, 447).

<sup>23</sup> Gibson did not apply the ecological view to race. The application of Gibson's view and of “affordance” to the self ascription/identification of race is entirely my own.

<sup>24</sup> My discussion of the situatedness of race may be considered complementary to and utilizes some of the same kinds of arguments to that of the literature on situated cognition (cf. Wheeler 2005).

experiences of herself, within her environments, and her interactions with others. One's experience of race is not wholly predetermined by the morphology, physiology, or genetics of one's body. But neither is it simply the result of one's intentions, choices, or the product of social construction. While denying that race is the morphological instantiation of an inner preformed essence, this view accepts that it is something that emerges from the resources inherited through different systems of inheritance and the complex interactions among groups. I suggest that race is a multiple embedded "physiosocial" unity of phenomena. I will unpack what I mean by this phrase in the remaining pages.

Metaphysical justification for a physiosocial view comes from the nature of our ecologically-embedded experience: human beings experience the world through their bodies. Experience is always of a body situated in a certain place at a certain time (Wheeler 2005).

Our experiences depend in part on how our bodies enable us to perceive and interact with different individuals in diverse ecological and social environments. We inherit genetic, epigenetic, extragenetic, cellular, ecological, and cultural resources vertically from our parents. But this intergenerational route is not the sole route of inheritance. Our inheritance is also horizontal and diagonal, including from our extended families, friends, communities, and teachers (cf. Keller 2001).<sup>25</sup> From these we may gain the resources of language, customs, traditions, historical narratives, and ways of living. Human beings are situated agents who self-organize their own racial identit(ies) utilizing a diverse set of inherited resources and relationships which are integrated with their own experiences in the world throughout their lifetime. This is a reciprocal process of co-perception, in perceiving the world; one at the same time also perceives oneself (Gibson 1986, 141).

Using the situated notion of race as a physiosocial unity of coperception<sup>26</sup> can explain the changeability of one's racial identity and how it can be understood in terms of the different environments in which one is embedded. This identity may vary over one's lifetime and may depend on whether an individual relocates herself within a different

<sup>25</sup> Vertical inheritance describes those routes that occur intergenerationally, horizontal inheritance describes those routes that occur within the same generation or among living generations. The articulation of these routes as "horizontal," "vertical," and "diagonal" is intended to direct attention to the multiplicity of ways of describing inheritance – as I have and will later suggest, inheritance is not something that can be discretely partitioned into cultural and biological components – or vertical and horizontal.

<sup>26</sup> I rely here on Gibson's notion of proprioception as a coperceptive system: Gibson's notion of coperceptive proprioception unifies two perceptual systems usually treated as distinct – knowledge of body and knowledge of external environment (Gibson 1986, 182-187). Gibson does not apply this notion to race.



set of environments, how she interprets and reinterprets her interactions in these, and how she sees her own ontogeny as part of or separate from those of others, both in her lifetime and throughout history. The process by which she links together her outward morphologies, ancestral and familial relationships, her cultural heritage or practices, national, and political affiliations constitutes the self-organization of her racial identity. One's racial identity comes from the meanings one attributes to one's bodily features as well as one's way of living within different environments. What changes when one moves from one country to another is not just the politics, social groups, religious affiliations, or currency. It is the individual's whole physiosocial unity of racialized traits that changes. Different cultures have different experiences of skin colour, face shape, and religious affiliation. These are perceived, understood, and believed to be indicative of race in different ways by different groups. A particular group may favour the use of certain physical features over others as indicators of race.

The list of conceptions including morphological features, biomedical traits, statistical population features, subspecies characters, kinship relations and other conceptions all provide possible sources for racial self-ascription. As has been discussed, some do this better than others. What unifies them is that they are all those things that can be used to understand both ourselves and others. These may be within our bodies, in others' bodies, in our relationships with them, or in other self-specifying properties of environments. These are all real parts of our extended environment (including our "inner" bodily environment) that provide opportunities for the recognition of race (either of self or of others). Applying Gibsonian language, we might say that they serve as "affordances" to those individuals interested in cultural and self recognition. An affordance is a perceived avenue for response and habit formation that is recognized in a field of invariances (regularities) in the visual and temporal array (Gibson 1996, 127). Affordances are those objects of perception that perceivers may use. But an observer may also choose not to attend to the affordance (Gibson 1986, 139). These affordances may include those mentioned: morphological traits, biomedical information, ancestry, population demography, biogeography, and historicosocial factors as well as many others. Although these are objective features of the world, their figuring as affordances is perspectival. The same object or property may be judged to afford the opportunity of self-specificity by one perceiver and not by another. These affordances can contribute to one's racial identification as well as shaping our experience of the world, our interactions with others, and how we are perceived by others. These affordances include

those of interactivity with other communities and individuals (either those considered conspecifics or not). All of these afford potential use for racial self-ascription. Some, such as other persons and communities are mutual affordances. These and other affordances "all depend on the perceiving of what another person or other persons afford, or sometimes on the misperceiving of it [...] affordances may either be beneficial or detrimental" (Gibson 1986, 135). Understood in terms of the enumerated list of possible race conceptions and traits, and the histories of racism, this is clear. Affordances may offer exceedingly damaging ways for one to understand either one's own or others' races.

It is important to note that while this approach provides an account of the dynamic process of racial ascription, it does not suggest that individuals are impelled to recognize and use any of their characteristics, relationships, or environments in terms of race. An individual may recognize some of these as perceived avenues for understanding her race(s) and interpret all or some of these factors as constitutive of her racial identity, but she may also attend to none of these affordances and reject any identification of herself in terms of race.

This approach takes the process of racial self-ascription to involve a process that is constrained by and reciprocally dependent on our interactions with others and the histories of race that came before us. Individuals do not act autonomously; their lives are historically and culturally embedded. In some situations one may choose a particular racial identity or may choose not to identify with any race. However, this may not be possible in other situations or under certain conditions, for instance if one is identified as a member of a particular race by others on the basis of some of one's characteristics. These constraints would mean one's own racial identity is chosen from a much more limited range.

History is something that is fixed. As such, it presents a host of affordances. One cannot change the historical context into which one is born or the attributions of race tied to their morphology that are reified through it. What one can change is what these histories mean. Histories afford self-recognition in a special way to race communities understood by the individual as his or her extended self. The meaning of historical events, challenges, celebrations, and disputes can be understood in the context of a narrative or a series of narratives. Narratives are usually thought of as something wholly social. I suggest this may misrepresent what the activities and processes involved in the formation and passing down of certain narratives may entail. Narratives often are the making sense of events, activities, and processes experienced by someone or some group (one with which we may self-identify). The meaning of them is formed as a result of the interactive rearrangements and relationships

(both synchronic and diachronic). These give meaning to the historical events which are then later updated in light of new events or in light of other affordances. These narratives provide a separate kind of affordance to one wishing to self-ascribe one's race(s). They may be complementary to one's own racial notions but also may be contrary to it and restrict one's self-ascription.

One's racial ascription is also restricted by others' acceptance (or not) insofar as it maps onto their own historically-embedded conceptions of race. An individual may make some choices as to her racial identity. But these may not be recognized as legitimate by some communities within the society in which she lives. These may offer resistance or antagonism which may have numerous detrimental affects to the individual and frustrate her desire for acceptance within one or more of the race communities with which she identifies (Root 1994).

For instance, in her travels an individual may find that although she is considered white at home, on holiday she is considered brown, and when abroad, black, depending on where, when, and by whom her race is being judged. Not all of these racial ascriptions may match her own. If she is a light-skinned South Asian woman living in New England, she may be considered white or nearly-white, she may be brown in the American South, and she may be surprised that in the United Kingdom she is black (Alcoff 1995 makes a similar point). Variation in these racial ascriptions across different communities and countries may either be based on the identification of different features as definitive of one's race or they may be different interpretations of the same features. All of these racial ascriptions have a history and a place to which they refer. Race cannot be defined once and for all with no reference to time, place, social structure, cultural heritage, or individual ontogeny. This makes race a highly unpredictable and plastic category.

In the last two sections, I have attempted to formulate a conception of race that situates the multi-relationality of racial identities. The physiosocial phenomenon of race is presented as a reciprocally self-organized process leading to one's racial identification. Unlike preformationist and essentialist notions of race, this conception does not presuppose that an unambiguous racial self already exists or even that racial self-determination is a prescriptive ideal. Instead, the conception I have developed calls attention to the mutuality of self-ascription and the embeddedness of the perceiver and perceived within the environment. This account embraces rather than ignores the internal heterogeneity of individuals and their disparate relationships, environments, morphologies, and familial lineages. All can be possible affordances by which the individual decides her racial identity.

I have surveyed six of the most popular conceptions of race and assessed their shortcomings. I concluded by outlining an alternative account, one that does not strictly bifurcate but instead situates the historical/social within the natural world. After dismissing the naïve-recognition conception because it lacked a multi-place relationship between perceiver and perceived, this approach is offered as replacement. Hopefully, it does more than that. It explains how the multi-place relationship is situated and what facts in the world afford possible means of self- and other race recognition.

The physiosocial approach connects the relationship between the ecologically embedded individual and his or her relationship with other individuals that situate him or her in the world. In this way I have tried to situate Gooding-Williams (2001) and Du Bois's notions of self-recognition and cultural recognition so that by perceiving the various relationships between the individual self and others, one obtains an understanding of one's self.

The suggestion outlined in this paper – that self understanding and ascription is always and only situated or embodied – is largely inspired by situated/embedded accounts of the mind. I then applied this to the particular case of the understanding of one's self in terms of race utilizing Gibson's concept of affordances. The resulting ecological approach provides a way to explain the environmental and interactive processes of racial self ascription that contribute to self understanding and how these may change.

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