DNA and Reproduction

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Selling Racial Purity in Direct-to-Consumer Genetic Testing and Fertility Markets

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Direct-to-consumer (DTC) genetic ancestry test companies and businesses that purvey human gametes provide carefully curated and bundled information that consumers can use to express and construct identity. These are genetic identity[1] markets. DTC genetic ancestry test companies offer reports that include verbal descriptions, charts, and quotients in exchange for a fee, personal information, and a spit sample. Sperm banks present a layered set of choices to intended parents that lead to selection of semen from a particular donor and all the traits attributed to the donor. Both markets use genetic ancestry in ways that code for race.

Both industries package identity in ways that prioritize the role of genetics and a genetic construction of race. In the twenty-first century, genetic race serves as a vehicle for a cluster of old ideas. This chapter elaborates on the updated versions of two old ideas. The first is racial purity, the idea that race remains intact, even after mixing. It is insoluble. In its distilled form, race can also be quantified, as seen in the chapter by Mark Fedyk. The analysis that follows traces the geneticized explanations for racial difference to the early nineteenth-century theory of polygenism, which will appear again in the chapter by Meaghan O'Keefe. The new polygenism does not necessarily claim that different racial populations have separate genetic origins, but it insists that genetic variations between racial populations are significant. It accommodates monogenism but accords greater significance to the racial ancestor than to the originating ancestor of humans.

What the new biomarkets offer is the purchase of fractionated racial identity, which is a vehicle for racial purity hidden behind a veneer of multiculturalism.

Sperm bank and genetic ancestry test company practices emphasize their ability to measure and quantify the racial components of identity, in ways that sum to 100 percent. Racial purity recalls old racisms that used science, albeit contested, to assert that the races of man are separate and unequal. Racial purity has been a core component of ideologies used to justify colonialism, slavery, eugenics, and various other forms of racial segregation and exclusion. The goal of maintaining racial purity is protecting whiteness. Racial purity as a tenet of white supremacy persists in contemporary racist ideology, including white nationalism. White nationalists have embraced the updated, geneticized version of white purity and polygenism. It's not surprising, then, that the term *racial purity* makes us flinch when used in polite company and mainstream discourse.

And yet belief in racial purity persists in the mainstream, as well. Practices used to sell DTC genetic ancestry testing dovetail with prevailing faith in genomic explanations for who and what we are and in the notion that our genomes encode our race(s) in discrete, quantifiable components. Practices used to categorize and market sperm deploy the terms *ethnicity* and *ancestry* as markers for race. The array of information blurs distinctions between the biographical, the genetic, and the socially constructed, so that every aspect of donor selection presents as genetic trait selection. Genetic ancestry testing and sperm bank companies characterize race as an elemental, insoluble component that can be measured, selected, and by implication, deselected. They sell racial purity.

The next section, "Distillation," defines racial purity and its role in the ideology of white supremacy. "The Emergence of Race" provides a selective history of explanations for race and racial purity, and their adaptations to the mid-twentieth century. "The Rise of Genetic Race" situates the production of genetic race alongside the formation of the biotechnology industry. "Racial Purity in the Market" examines the role of law and practices that AncestryDNA and California Cryobank use that instantiate genetic race, racial purity, and the new polygenism. The final section, "Genetic Identity," elaborates on commercial production of genetic identity in ways that draw from genetic race and its role in maintaining white supremacy, on the one hand, and from liberal discourses premised on the social construction of race, on the other. While these companies take no stance on racial politics, they sell concepts that serve no function outside of white supremacy.

DISTILLATION

Racial purity usually surfaces in literature about white supremacy or by white supremacists. When whiteness and purity are directly linked, we recognize racial purity as a racist idea. We know it when we see it presented that way. Yet racial purity is also embedded in everyday ways of thinking about identity. This chapter examines how racial purity functions in two markets premised on selling

biological identity. This section sets the stage for that examination by pausing to consider the basic meanings instilled in racial purity.

Purity

Purity is a state of being untainted, uncontaminated, unmixed. Something pure is something elemental, consisting solely of one ingredient. We associate pure with true, clean, and natural. A pure heart. Pure motives. Pure can hone negatives, as well. Pure spite, pure greed, and pure hatred are concentrates, outside the range of governable emotions. In positive or negative form, that which is pure is unadulterated. An impurity is something that destroys the unadulterated state. Impurities found in water may ruin its quality. We often use synonyms for *not pure* or *impure* to cast aspersions. Things that are not pure are tainted, adulterated, or unnatural.

The simplicity of purity as a concept makes it useful as a vehicle for implied meaning, especially in value judgments. Moral belief systems, including the religious, use purity to confer certain actions or states of being with great virtue. Purity is the idealized state. Dictionary synonyms for *purity* include *chasteness, innocence*, and *immaculacy*.[2] You can imagine the antonyms.

Purity often conveys superiority relative to its opposite. Pure art and pure science hold themselves apart and above their commercial counterparts. Commercial art is art degraded by its use—to sell things. Commercial science is science driven by profit motive. Pure science is performed as knowledge seeking, which some regard as more morally worthy and less corrupted than commercial science.

Ironically, purity and its associated virtues have proved persuasive in commerce. Commercial advertising uses "purity" in taglines and name brands. Consider Ivory Soap, a name connoting whiteness for a Procter & Gamble product named in 1879. Within a few years, Ivory achieved fame and sales as the "safe, pure clean" body soap that floats. Its whiteness and buoyancy represent its lack of adulteration. Recent ads for Ivory Original Bar Soap include these highlights: "Free of dyes & heavy perfumes," "IT FLOATS," and "99.44% Pure."[3] Purity's appeal, in this context, is its association with nature. Ivory's message is that which is unadulterated is natural and superior to other soaps.

Racial Purity

The idea of racial purity starts with the assumption that racialized groups of people are distinct, determinable, and separable. It includes the claim that race in an unadulterated state can be attained. In addition, distilling race is not just possible but also meaningful. This, in turn, makes measuring or quantifying the content of one's race feasible, even necessary.

The concept of racial purity derives from the claim that race marks biological differences among human populations. Belief in a biological basis for racial difference persists despite the well-established fact that race is a social construct. Biological essentialism and the concept of racial purity sustain the persistence of

belief in biological race. In other words, racial purity is a component part of belief in inherent racial difference. More specifically, racial purity is the idea that race can be distilled as an essential feature of a person or a population, and that each race can be distilled within a person or a population even after mixing has occurred.

The Purity of Whiteness

Racial purity is both core to the idea of biological race and foundational to claims of white superiority. The claim of white supremacy is possible only if the white race can be compared (favorably) with others and if race seems real. Mantling race in biology makes biological race appear to be both a neutral, proven claim and a natural feature of human life.

From its earliest days, biological race used phenotype to infer differences in physical, intellectual, and behavioral characteristics attributed to each racialized group. The methodologies used to produce evidence have changed over time. The ultimate goal—to justify racial white supremacist ideology—remains the same. For example, early constructions of race used physiognomy and ascribed character and intellectual profiles to explain the taxonomy of the five human types and the racial hierarchy.[4] In the early nineteenth century, the so-called science of race shifted to comparative anatomy, and to skull studies or phrenology in particular.[5] Natural history scholars and anatomists who studied phrenology explored the relationship between the shape and size of the human skull and behavior and intellectual capacity. The American race scientist Samuel George Morton, for example, used craniometry to produce evidence of inherent intellectual hierarchy among the races.[6] Phrenology is also notable because it relied heavily on measurement or craniometry. Craniometry expanded the use of quantification as a tool of establishing racial identity.[7]

Historically, the purity of whiteness mattered most. From its early days, white supremacy intertwined claims of inherent or natural racial hierarchy with strategies to protect the purity, and thus the supremacy, of whiteness. White supremacist ideology that valorized the purity of whiteness identified European forebears as the source of whiteness.[8] In short, within this ideology, 100 percent European ancestry makes one superior to those with lesser percentages.[9] This makes maintaining the purity of whiteness an explicit goal.[10]

Obvious and Nonobvious Racial Purity

Today, the association between white supremacist ideology and racial purity is both well understood and fraught, even—or perhaps especially—in globalized markets. In 2017 a company known for skin-care products, Nivea, launched a new ad that included the tagline "White Is Purity." The tagline appeared in a deodorant ad on Nivea's Middle East Facebook page. The ad prompted criticism of its racist messaging, while white supremacy organizations and individuals praised it. Mainstream media reported on the ad and the online discourse it prompted. Nivea pulled the ad two days later.[11] During that time, representative Facebook, Twitter,

and other social media comments ranged from "We enthusiastically support this new direction your company is taking. I'm glad we can all agree that #WhiteIsPurity"[12] to "Not cool @NIVEAUSA @niveauk @NiveaAustralia . . . Not cool at all. #Racism is not a good marketing tactic."[13]

The ad's content and the public's response evidence the strength of the implied association between purity and whiteness, on the one hand, and white supremacist ideology, on the other. We are quick to recognize that association, even in a deodorant ad. While white supremacist organizations and those identifying as "alt-right" embraced the ad's "White Is Purity" line, the fact is that Nivea pulled the ad. Opposition to white purity messaging prevailed. And yet, in some contexts, we fail to recognize the use of racial purity or its white supremacist implications.

When "white" and "purity" are manifest, the association with white supremacy seems obvious. Without labels, the concept of racial purity is harder to detect. In fact, the concept of racial purity remains so deeply embedded in dominant culture and discourse that it implicitly shapes some liberal understandings of race, as well. People who describe themselves as one-half Black, one-quarter Asian, and one-quarter white may be using the categories to recount family history, pay tribute to their cultural affiliations, and celebrate their multiracial identity. And yet the quantification also echoes pernicious uses of racial purity. Dorothy Roberts observed, "we can only imagine someone to be a quarter European if we have a concept of someone who is 100 percent European."[14] Quantification recalls state laws that imposed racial classification based on the concept of blood quantum. Blood quantum rules have been used to classify people by race based on quantification of racial ancestry. More specifically for purposes of this discussion, states used blood quantum laws to determine whether the percentage of a person's nonwhiteness should affect their social and legal status, or their commercial value.[15]

Quantification suggests that race remains intact or insoluble even when mixed within a person or a group. Insolubility in this context does not deny that people from different racial groups may interact, form intimate relationships, and have children. Rather, insolubility conveys the belief that essential differences between races persist after individuals have overcome social barriers, as is evident in the concept of admixture discussed in the chapter by Carlos Andrés Barragán, Sivan Yair, and James Griesemer. Race mixing, abhorred by some and welcomed by others, is not inconsistent with belief in racial purity.

THE EMERGENCE OF RACE AND RACIAL PURITY

Race is not natural. Nor is it all that old. This section provides a brief account of race theories relevant to concepts that persist in twenty-first-century markets. Each version of race depends on racial purity. In the nineteenth century, two theories and assorted variations emerged. Monogenism, which asserts that all humans have a common ancestor, officially prevailed over its rival theory, polygenism.

Polygenism posited that the different racial populations emerged from distinct creation or evolution events. Although polygenism has become intellectually untenable, the idea of branched ancestral origins has persisted.

Race and Its Explanations

Explanations or theories for racial difference have changed over time. In general, theories that succeed in becoming influential use mantles of authority relevant to the era. The mantle, whether it be religion or science, validates the claim of racial difference as knowledge rather than mere belief. Yet politics have steered prevailing theory time after time. This discussion sketches how genetics emerged as the mantle of authority in theories of race and how law has implemented those theories and corollary concepts of racial purity.

The concept of race and its companion, racial difference, formed hand in hand with colonialism. Prior to colonialism, racialization did not occur.[16] As many historians have shown, empire was built on racial (and other forms) of subordination. These forces shaped colonial and early US law. Early colonial law in British North America defined racial categories and assigned racial identity. In the postcolonial United States, racialization continued and evolved. State and federal law incorporated and adapted colonial race laws.[17]

Colonial racial classification law protected the purity of whiteness. For example, a 1785 Virginia law defined as "mulatto" or mixed-race a person with at least one-quarter "Negro" blood. This law echoed a colonial-era ban on race mixing.[18] Later, more than a century after statehood, Virginia's racial classification law, like that of other states, set a more stringent standard. The law declared that "[e]veryone in whom there is ascertainable any Negro blood shall be deemed a colored person."[19] This version of state racial classification law came to be known as a "one-drop rule."[20] It zealously guarded white racial purity.

The legal definitions of *mulatto* and *colored person* relied on quantification and the claim that race is insoluble. You can mix Black and white, but the constituent parts remain intact. The use of fractions captures the insolubility of race. It also marks the limits of race: race mixing may upgrade Blackness in some contexts, but the person will remain less than white.

As the chapter by Meaghan O'Keefe will show, in early iterations of race, religion and science intertwined as a source of authority. According to the geneticist Joseph L. Graves Jr., "scientific ideology was not yet independent of Christian theology, and for this reason Western religion and science tended to be in general agreement concerning the significance and hierarchy of human races."[21] From the postcolonial era, science, religion, and combinations of both have persisted as mantles of authority.[22]

Monogenism and Polygenism

While theories of race proved adaptable over time, two macro theories or master narratives have competed for dominance. Monogenism asserts that there is one human

species, originating from a common ancestral line. Proponents of polygenism believe that the human races have different origins and are therefore different species.[23] Each theory has its variations,[24] but for the purposes of this chapter, these versions suffice. In basic form, the two theories have served as templates or scaffolds for debates about the existence and salience of biologically based racial difference.

Both monogenism and polygenism have been used to assert that biology explains racial difference.[25] Early monogenists and polygenists set out "five separate human types: Caucasian, Ethiopian, Mongolian, American, and Malay."[26] Perhaps monogenists have had to work a little harder at it. For example, some monogenists claim that, while people of all races are of the same species, biological variation among racial populations is significant. They argue that long-term environmental pressures on populations located in different parts of the world produced those variations. Polygenism, on the other hand, aligns more easily with claims that racial difference and racial hierarchy are biologically inherent. Not coincidentally, polygenism ascended in the mid-nineteenth century, alongside defenses of slavery.[27] Some noted polygenists of the antebellum era made use of craniometry to link racial hierarchy, separate origins, and the immutability of race.[28] Each of those claims assumes that race can be distilled.

Officially, the debate among scientists and social scientists over the two theories lasted a relatively short time. As naturalists and biologists embraced Darwin's theory of evolution, monogenism prevailed over polygenism.[29] Yet, as discussed below, polygenist thinking persists in biomedicine. Belief in inherent racial difference, scaffolded by polygenist explanations, has also continued to shape racial discourse in society and law.[30]

Race and Nation

As noted, racialization arose hand in hand with colonization. Not surprisingly, then, theories of race extend beyond projects to classify and rank individuals and populations to defining national identity. Thus, the initial contest among European imperial powers over North America depended upon establishing the non-whiteness of Indigenous peoples. Once the fledgling US government formed, the relationship between nation and race became a continuing source of political tension. Countless examples illustrate this point, but consider, for now, the ideologies of eugenics and race suicide at the turn of the twentieth century.

In the late nineteenth century and the early twentieth century, many elite whites embraced the gene pool as a vehicle for social control by population control. Rationales for population control adapted select elements of the Mendelian genetic thesis.[31] Two overlapping ideologies proved appealing enough to effect legal change: eugenics and "race suicide."[32] Both prompted state legislatures and Congress to enact legislation aimed at controlling population growth vis-*à*-vis native-born whites.[33] Both also proved plastic enough to accommodate any number of groups targeted for social control.

Eugenicists ostensibly focused on the role of the so-called genetically fit and unfit. Eugenic goals included improving society's gene pool by encouraging procreation of the fit and preventing population increase of the unfit.[34] The most notorious eugenic strategy aimed directly at procreation.[35] States enacted laws that authorized involuntary sterilization of those deemed unfit. Statutory lists of those subject to forced sterilization varied widely.[36] Broad statutory interpretation practices made it clear that poverty, breach of social norms (especially sexual mores), non-whiteness, and anything perceived as a disability could trigger the law.[37] US Supreme Court Justice Oliver Wendell Holmes Jr. validated Virginia's eugenic sterilization law:

> We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the State for these lesser sacrifices, often not felt to be such by those concerned, in order to prevent our being swamped with incompetence. It is better for all the world if, instead of waiting to execute degenerate offspring for crime or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind.[38]

As will be discussed at greater length in the chapter by Emily Klancher Merchant, eugenicists argued that improving the gene pool would benefit society and the nation, and that the resulting benefits justified the means.

"Race suicide" posited that the low birth rate among native-born whites relative to non-whites and foreign-born whites would result in a society swamped by incompetence and moral decay.[39] Influential promoters of this thesis (including Theodore Roosevelt) called it the racial purity movement. They situated "race suicide" against a wave of immigration from China and southern and eastern Europe, and in the next few years, against the Great Migration. Calls for racial purity measures ensued.[40] For some, the primary fear was the influx of Catholics, and concern they would outnumber Protestants. For many, the influx of groups deemed lower in status by ethnicity, race, and class made older measures like the Chinese Exclusion Act seem reasonable.[41]

Advocates of white superiority also touted scientific bases for eugenics.[42] Eugenicists and race suicide proponents supported population control laws such as marriage restrictions, including antimiscegenation laws, and immigration restrictions, as well as sterilization laws.[43] Both movements—eugenics and race suicide—deployed the so-called science of genetics and race to mobilize law and social policy against all but those deemed white, of northern and western European descent, and fit. In short, the gene pool was used as a site to stake out a national identity based on race and class privilege.

The race suicide and eugenics movements were less coherent and less pervasively accepted than this sketch suggests.[44] But the narratives that animated them reinforced the concept of biological race and the goal of racial purity. Both

movements sought to engineer society through genetic control. More specifically, incorporation of genetic ideas strengthened the claim that race was a biological trait subject to measurement and quantification. Second, conclusions about fitness and unfitness—by disability, race, ethnicity, or other pseudotrait—conflated traits, social value, and moral capacity or lack thereof.

The Hardening of Heredity

Theories of race have shaped theories of heredity. The science historian Brad Hume has argued that nineteenth-century polygenists "hardened" heredity.[45] A "soft" theory of heredity posits that a combination of gene mixing and environmental influences produces a blend of acquired characteristics in a person. A "hard" theory of heredity sees heritable traits as fixed, resistant to environment, and persistent over time.[46] Within a hard theory of heredity, specific traits seen as characteristic of a race will remain intact, even if they skip a generation. Race-associated traits, then, act like some genetic disorders. This hard theory of heredity has itself remained intact in race theory.

THE RISE OF GENETIC RACE

State-sponsored eugenics lost ground in the 1930s and 1940s. Yet eugenic thinking and belief in biological race have persisted. As the science of genetics gained prominence, it became an influential platform for eugenic thinking and race theory. The most recent vehicle for biological race is genetic race. Genetic race has fueled the hardening of racialized heredity. Race theory, in other words, continues to adapt in the late twentieth and early twenty-first century.[47]

The Age of the Gene

A thumbnail sketch of genomics research often starts with the discovery in 1953 of the double helix structure of the DNA molecule, by Rosalind Franklin, Francis Crick, and James Watson.[48] This discovery enabled insight into what genes look like at the molecular level, how they replicate, and how they direct the chemical processes within cells. Within a short period of time, molecular biologists and other researchers generated new techniques, including the use of life's processes as lab tools, insights, and products. In the 1970s, this expanding body of work became the foundation of the biotechnology industry.

In the 1980s Congress jumped on the new genomics bandwagon. First came the Bayh-Dole Act of 1980.[49] Until this law became effective, patents on federally funded research remained under the government's control. The Bayh-Dole Act authorized academic, nonprofit, and small businesses to retain patent ownership and control of federally funded innovations. That act enabled institutions and researchers to commercialize their research, typically with industry partners. The Bayh-Dole Act effected significant change in biomedicine. It has

spurred research institutions to use technology transfer to get biomedical innovations from bench to bedside and, thus, to produce revenue. In doing so, the act has also indirectly subsidized industry with the outcomes of federally funded research. Second, the Bayh-Dole Act made patents the coin of the biotechnology industry's rapidly expanding realm. Finally, the law effected a shift from biomedical research as a primarily public enterprise to a privatized one that positions patients as consumers. Genomics, a central activity of biotechnology, became a neoliberal enterprise.

In the mid-1980s conversations about a large-scale project to map the human genome began.[50] By 1988 Congress began increasing the federal budget for genome research.[51] The Human Genome Project (HGP) officially launched in 1990. Both the funding amounts and the descriptions cast the HGP as a big science project, akin to the race to the moon. President Bill Clinton and British prime minister Tony Blair announced completion of the draft map of the human genome in 2000. Both Clinton and Blair's speeches gave a hat tip to Watson and Crick (but not Franklin).[52] Both emphasized the enormous potential of the HGP to improve and save lives. Clinton, looking to the past, compared the HGP to Lewis and Clark's expedition. Looking to the future, he embraced privatization: "biotechnology companies are absolutely essential in this endeavor."[53]

Genetic Essentialism

The Human Genome Project produced two effects relevant to this analysis. First, it fostered genetic essentialism in research, medicine, and popular discourse. Genetic essentialism is the assumption that our genes provide the primary or exclusive explanation for health, illness, and even behavior.[54] A great deal of hype and hope accompanied the HGP. The metaphors used to describe the genome reflected the hype and hope. "Blueprint," "code," and "encyclopedia" of life spurred belief in the gene as the totalizing explanation for most aspects of human life.

Genetic essentialism valorizes the genome as the source code of why we are the way we are and who we are. It's a reductionist theory that in its simplest form posits that "there's a gene for that." Perhaps genetic essentialism's appeal is that it allows us to assume a one-to-one relationship between cause and effect, between gene and trait. Genetic essentialism focuses attention on molecular-level differences within the body and then translates the hidden mechanisms into what we can see or think we can see. It takes the grade-school lessons we learned about Gregor Mendel's peas as the nearly exclusive way of thinking about who we are.

Genetic Race

Clinton's announcement in 2000 countered the idea that the genome codes for racial difference: "I believe one of the great truths to emerge from this triumphant expedition inside the human genome is that in genetic terms all human beings, regardless of race, are more than 99.9 percent the same."[55] Other official material

stated that humans are 99.9 percent genetically the same across racial populations.[56] Media coverage emphasized the finding.

And yet the Human Genome Project provided fodder for a resurgence of belief in biological race.[57] It may be that biological race is so embedded in dominant culture that it filters and reconstructs what we hear. Perhaps the mention of race and its colonial origins ("expedition") triggered that filter. Regardless, public and scientific discourses have either ignored the finding or mischaracterized the 0.1 percent difference as racially significant. Since 2000 science and society have held the 0.1 percent accountable for genomic variations that justify claims of racial difference.

Genetic race is the updated version of biological race.[58] While genetic race deploys new science,[59] it carries forward some of the old assumptions. Genetic race relies on perceived associations between specific base pairs and their order and traits associated with race. It carries phenotype inward, such that genes account not only for phenotype but also for other racialized characteristics.

Genetic race has distorted research agendas, biotechnology markets,[60] health policy, and health care. Biomedical research to determine the genetic bases for racial differences in health, disability, and behavior gained credibility.[61] As seen in the chapter by Tina Rulli and in the conclusion to this volume, medical providers have felt justified in using racial profiling in delivery of health-care services.[62] Behavioral genetics, which will be discussed at greater length in the chapter by Emily Klancher Merchant, counts the founder of eugenics among its alumni and has proven ripe for imputing racialization into its hypotheses, observations, and conclusions.[63]

The New Racial Purity

Mantling race in genomics may have strengthened the idea of racial purity. The logic now goes something like this: As the building blocks of life, genes are the basic elements. The genes for race, then, are both elemental and insoluble. Gene sequences for racialized characteristics are the distilled proof of race and racial difference. This logic carries the thread of polygenism forward in time to the twenty-first century. As mentioned, polygenists forged a hard theory of heredity that constructed traits as immutable and fixed. Contemporary use of "genetic ancestry," especially in identity markets, describes ancestry in geographic terms. This practice echoes the polygenist idea that differently racialized groups were geographically isolated and must have evolved separately from each other. That hardened theory of race fits within the dumbed-down geneticized version of biological race.

As Dorothy Roberts has shown, that logic leads to the conclusion that race-associated diseases are genetic, deflecting attention from the role of structural racism.[64] Lower risk for breast cancer among Asians. Higher risk of diabetes in Latinx people. High intelligence. Aggression. Placidity. It's all in their genes, insoluble, unchangeable, and still bundled by race.

Twenty-first-century white supremacists have embraced genetic race and its component parts, especially the purity of whiteness. News media and social media

have provided accounts of persons identifying as white nationalists using DTC genetic ancestry tests to prove their whiteness.[65] In part, white nationalists believe that maintaining white privilege and minimizing the presence and status of nonwhites are core to what it means to be "American."[66] White nationalism promotes maintaining the purity of whiteness among white individuals and as a national identity. Using genetic ancestry test results to prove national belonging and ideological affiliation makes some sort of sense within that belief system.

Genetic race and racial purity are interlocking concepts, both contingent on genetic essentialism. Consider how this affects how we think about identity in the absence of white supremacy politics. In popular discourse, biocultural versions of race probably prevail.[67] That is, race in popular discourse mixes biological and cultural concepts. The biological concepts strongly shape how we talk and think about racial identity. For example, we assume that a person with an Asian forebear and a Black forebear is bound to receive a percentage of traits from each, respectively bundled as "Asian" and "Black." If each forebear is the person's parent, then the person is biracial, or half-Asian and half-Black. Half of her Black genes presumably remain intact as Black genes. The other half presumably remain intact as the genes for Asianness. While states no longer legislate "mulatto" classification or the one-drop rule, social norms still incorporate the practice of racial quantification that, in turn, animates racial purity.

RACIAL PURITY IN THE MARKET

The biotechnology industry and the Human Genome Project produced a swirl of research and discursive activity, often spurred by the hope and hype deployed to gain funding. As genetics emerged as the primary explanation for race and racial difference, genetic tools and use of human genes expanded. Genetic testing methods and uses have proliferated. Companies offer diagnostic testing, health risk assessment and prediction, and genetic ancestry description. The users and settings have also changed. Scientists use biotech tools in labs. Clinicians use them in medical settings. Other products are offered DTC as home-testing kits. In the meantime, collections of human cells, tissues, and DNA have become capital assets. Biobanks are curated for research, for therapy, and as collections of human data available not only for scientific discovery but also to commercial entities, consumers, and law enforcement. Well-known markets include human DNA biobanks, genetic testing, sperm banks, egg agencies, in vitro embryo banks for fertility purposes, and DTC genetic testing for medical and ancestry purposes.

Industries premised on DTC genetic ancestry testing and genetic selection are vehicles for social transmission of racial purity.[68] DTC genetic ancestry testing companies offer to provide genetic information to those who submit a sample of spit or other body materials containing DNA. Services include screening for genetic predisposition to everything from breast cancer to addiction to premature

balding, carrier testing, paternity testing, noninvasive prenatal genetic testing, a child's potential for athletic or intellectual prowess, wellness information, and, of course, ancestry. The fertility industry not only uses genetic testing but also offers gametes and in vitro embryos for use with assisted insemination and in vitro fertilization. Both industries deploy practices that suggest and facilitate inference of connections between race, genes, and other traits. Both industries incorporate quantification methods that perpetuate the concept of racial purity.

The Law of Choice

The United States, relative to other countries, imposes little direct regulation of biotechnology markets. Generally, federal law provides a series of pathways to market, albeit with checkpoints. The Bayh-Dole Act, as discussed, promoted technology transfer and privatization of federally funded research work products. It expanded the role of patent and biobanking in biotechnology. Patent law standards and procedures, then, shape some aspects of the biotechnology markets. For the most part, patent law's stated purpose is to incentivize and reward innovation, without regard to necessity, efficacy, or social or ethical implications. Genetic ancestry testing methods and some other services they offer are, no doubt, patented. But patent law does not bar ethnicity estimates that instantiate genetic race and racial purity.

The US Food and Drug Administration (FDA) has authority to review and approve or disapprove for market a limited range of products. That authority includes human drugs and biological products and medical devices. Donated human semen is a biologic. The FDA does not, however, review ancestry tests.[69] When the FDA does review, it assesses clinical safety and efficacy of products. The agency can impose conditions on market distribution. As a result, sperm banks must register with the FDA. They also must obtain and review specified donor medical information and test for a specific set of communicable diseases.[70] But the FDA has imposed no conditions on how sperm banks curate and represent their product.

State law provides little to no direct restriction on sperm banks or genetic ancestry testing. Very generally, states tend to regulate assisted reproductive technology indirectly. State law consists largely of family law—to determine legal parentage when assisted insemination or in vitro fertilization have successful outcomes. State law regulation of ancestry testing is nonexistent or nearly so. In both sectors, the general laws of fraud, tort, or other consumer protection have the potential to redress some harms. But the companies carefully avoid offering facts or representations that are obviously actionable. Rather, their practices are crafted to invite conflation and interpretations structured by dominant discourse about race.

Privacy law in the United States is an ad hoc mix of federal and state law. Some state privacy laws address unauthorized disclosure of private information or failure to protect information by genetic ancestry testing companies or sperm banks.

But privacy does not really address the practices these companies use to produce race and reinforce racial purity.[71]

The US regulatory framework, such as it is, is notable for what it does not do. Other developed countries have regulatory approaches that screen products and new technologies to determine whether they should be developed or go to market. For example, comparative effectiveness research is used to compare harms, benefits, and costs of existing health interventions or products with new alternatives.[72] Arguably, comparative effectiveness assessment could be used on other technologies, as well. The United States, unlike Canada and much of Europe, rarely uses the precautionary principle, which aims to prevent or slow down new technologies that are potentially dangerous or have controversial social and ethical implications.

In contrast, the United States tends to allow evaluation of ethical, social, and even legal implications only when market distribution is inevitable or nearly so. Because those concerns have few, if any, legal handles, review of ethical and social implications is largely performative. In an industry founded hand in hand with neoliberalism, social norms impose limits based on consumer sensibilities. But in a society shaped by and inured to intense commercialization, concerns about commodification of human reproductive cells or racial identity have had only discrete force.[73] As a result, only minimal standards of good taste limit marketing messaging.

The absence of robust industry regulation and accountability places "personal responsibility," in neoliberal terms, on the consumer. The legal doctrine of informed consent serves this purpose beautifully. It presumes individual agency and validates placing the burden of protecting consumers on the consumer. The figure of the informed consumer, capable of determining exactly what she wants, backstops the lack of robust technology assessment.

In 1990 the California Supreme Court validated the assumption of agency in *Moore v. Regents of the University of California*.[74] John Moore sued his UCLA doctor, a researcher, the University of California, and its commercial partners. Moore had consented to a splenectomy two years before Congress enacted Bayh-Dole. Over the next seven years, he provided tissue samples for what his doctor said was necessary follow-up treatment for hairy cell leukemia. No one had mentioned using Moore's tissue and medical information for research and development of a cell line. When the case reached the California high court, his claims had been whittled down to two: breach of informed consent and conversion, a property-based tort. The court determined that John Moore had no property interest in his own cells and tissues, and therefore no claim for conversion. It did recognize a cause of action for breach of fiduciary duty or informed consent, but only against his doctor.

Moore v. Regents of the University of California serves as legal precedent only in California. But the case sets out the logic of acquisition that sperm banks and genetic ancestry testing companies use. Patients, sperm donors, and ancestry test users who submit spit samples effectively lose any property interest in their own

cells and tissues once they leave the body. Sufficient disclosure confers protection against any other liability. Not surprisingly, *Moore* is the biotechnology industry's favorite case.[75] In *Moore*, informed consent documents with a sentence acknowledging the use of Moore's tissue for potential economic gain would have sufficed to protect the doctor. Upon disclosure, sperm banks and genetic ancestry testing companies can assert ownership of the cells and tissues. Sperm banks typically pay donors not because law requires purchase but to recruit inventory. The FDA requires medical screening, but otherwise sperm banks are free to market and sell to intended parents. Genetic ancestry testing companies have it better. They charge fees for providing genetic ancestry test reports to those who send spit samples, and if they disclosed other potential use and economic gain, they can also sell access to the information to third parties, subject to confidentiality protections.

Free market individualism reigns in the fertility and DTC genetic ancestry testing industries. Or rather, companies are free to market race, purity, and selection and to valorize individual choice. It's the vast unregulated spaces that law protects, rather than substantive regulation, that foster the production and purchase of genetic race.

Finding Ancestry, Making Race

The DTC genetic testing industry is global and growing. The North American market has the largest revenue share. Consumer use is expected to expand geometrically in the near future. In 2021 industry reports identified six or more segments in the DTC genetic testing market: "carrier testing, predictive testing, ancestry and relationship testing, nutrigenomics testing, skincare, and others."[76] Carrier testing and ancestry and relationship testing are the top two segments. 23andMe, Ancestry, and Color Health, Inc., consistently lead the industry.

AncestryDNA is the global leader in genetic relationship testing. "Know your world from the inside" appears at the top of the home page. Shortly below, the company website offers "your DNA story" based on DTC genetic testing.[77] The initial messages suggest that DNA contains everything you need to know about who and why you are. The claim that DNA provides a totalizing explanation taps directly into genetic essentialism.

The key to AncestryDNA's report is an "ethnicity estimate" that locates your genetic ancestors geographically.[78] Researchers challenge the methodology and content of the material that DTC ancestry testing offers.[79] This chapter focuses on specific aspects of the content. Social science definitions of ethnicity vary[80] but consistently use shared culture and identity as criteria. The use of geography depends on whether it informs shared group identity. In other words, ethnicity, like race, is socially constructed. In fact, the two are often conflated.[81] Ethnic identity arises from a sense of shared culture, heritage, sometimes language, and social experience.

In the United States, I have been assigned to and claim "Asian" as a racial category. Of course, others assign an identity to me that is a mix of ethnicity, race, and

other social norms that have little to do with the ethnicities I claim. For example, like many others of Asian, Latinx, Middle Eastern, and North African descent, I am often cast as "foreign," "immigrant," and non-American. My assigned ethnicity also varies by time and place. When I first moved to Indiana in 1989, I was a presumptive Japanese foreigner. When media coverage of the 1992 civil unrest in Los Angeles hit the airwaves, I suddenly became a presumptive Korean. All of my grandparents immigrated from Japan, but I am not Japanese by ethnicity or nationality. Rather, depending on the context, my claimed ethnicity is Japanese American or Asian American, or sometimes Los Angeleno. Those socially constructed identities best fit my social experience within family, vis-à-vis dominant society and communities of color, including those I call my own. People whose grandparents immigrated from Japan to Cuba or France might have substantially different ethnicities. In other words, DNA cannot express ethnicity any better than it can express race.

Medical anthropologist Duana Fullwiley has told her personal experience of the social constructedness of race, in order to counter genetic race. "I am an African American," says Fullwiley, "but in parts of Africa, I am white." To do fieldwork as a medical anthropologist in Senegal, she says, "I take a plane to France, a seven- to eight-hour ride. My race changes as I cross the Atlantic. There, I say, '*Je suis noire*,' and they say, 'Oh, okay—*métisse*—you are mixed.' Then I fly another six to seven hours to Senegal, and I am white. In the space of a day, I can change from African American, to *métisse*, to *tubaab* [Wolof for "white/European"]."[82] AncestryDNA's "ethnicity estimate" is, at best, misnamed. Despite this, the website promises that as the company database grows, you will receive updates that correct the "ethnicity estimate."

The AncestryDNA website does not use the word *race*. It does link words such as *ethnicity, diversity*, and, of course, *ancestry*. Those words trigger consumer correlations between ethnicity and ancestry, on the one hand, and race, on the other.[83] In public discourse, race and ethnicity are often used in combination or interchangeably. Diversity and race are so often paired in public discourse that diversity must inevitably remind some viewers of race. As a result, geographic ancestry is conflated with race.[84] The website's images of people, family trees, and global maps also invite consumers to leap from ethnicity or ancestry to race. On AncestryDNA's website, many, if not most, of the photographic portraits are of people of color. The website's ethnicity lists include geographic regions like Oceania and the Balkans, countries like England and Norway, and names for racialized ethnic groups like Nilotic peoples and Maori. The elastic use of ethnicity provides space for interpolating race or simply conflating ethnicity with race. US consumers, embedded in culture and discourse that includes, for example, racial profiling of geographic regions, countries, and whole continents, readily interpret ethnicity estimates through the lens of race.

The website's message is that DNA, "cutting edge science," and "our science team" make all this possible.[85] The accompanying illustrations cluster photos of

people of different phenotypes with labels for familial relationship, side by side with a representative ethnicity estimate that sums to 100 percent and a multicolored pie chart that presents the estimates in graphic form.[86] Thus, from genetic ancestry, race is readily distilled, quantified, and converted to separate colors, in the guise of science and technology-enabled precision. AncestryDNA's key product relies on the concept of racial purity.

While white nationalists have used genetic ancestry tests to prove the purity of their whiteness, others use the tests to affirm their multiracial identity. A study of 100,000 adults in the United States illustrates this point. Among other things, the study showed that people who identify as multiracial are more likely to have taken genetic ancestry tests.[87] It also concluded that those who take genetic ancestry tests "more frequently translate reported ancestral diversity into multi-racial self-identification."[88] AncestryDNA, in fact, promotes a geneticized version of diversity. The multicolored pie charts, world maps, and portraits suggest that racial diversity has been achieved—in biologized form.

What ancestry testing sells is a version of genetic race that has its roots in polygenism. The new polygenism does not insist that the races are different human species. But it assumes that race-specific genetic variation is significant enough to explain many differences among racial groups. This version of racial difference does not ostensibly premise white superiority. Racial purity, however, remains a core concept. This racially fractionalized version of identity also incorporates the hard theory of heredity. How else to explain the belief that racial identity is genetically represented in separable, insoluble percentages that sum to 100 percent?

Selecting Race, Making Descendants

Assisted reproductive technologies (ART) form the basis of a multibillion-dollar industry.[89] Core technologies include in vitro fertilization, assisted insemination, and egg freezing. People provide gametes—eggs and sperm—for others' use, in combination with assisted insemination, in vitro fertilization, and/or surrogacy. People who obtain others' gametes for their own use often do so through sperm banks and egg agencies. As discussed in the introduction to this volume, they are simultaneously acquiring a bundle of choices and a bundle of genes. Most consumers use ART to have a child with gametes from one or two intended parents, and thus to establish a genetic tie. Many intended parents use sperm and/or eggs that others provide, most often through sperm banks and egg agencies.

Industry analysts characterize the sperm bank industry by segments: semen analysis, storage, and donor. In the donor market, North America and Asia Pacific produced the largest revenues as of 2021.[90] The US market, in particular, has the highest revenue share. Of US-based sperm banks, California Cryobank is one of the largest in the domestic and global markets. While there are nonprofit sperm banks, most fertility businesses, like California Cryobank, are for-profit. Like its competitors, California Cryobank touts selectivity and sells gametic selection.

California Cryobank's website leads off its homepage with "Find Your Hidden Gem."[91] "Hidden Gems" is the name of "a carefully curated" portfolio of in-demand donors. The "Hidden Gems Gallery" contains donor numbers and photos suggesting why these donors are in demand. Most photos represent sports activities—soccer and basketball, for example. Others represent musical talent or professional achievement.

The website emphasizes the bank's selectivity in creating its catalogue of donors. Donors are described as "rare finds." The "Choosing Your Donor" page states: "California Cryobank's high standards and extensive screening process means our catalogue has nothing but the highest quality donors for you to choose from."[92] The Donor Recruitment page promises: "The majority of our sperm donors are recruited from world-class universities*, including UCLA, USC, Stanford University, Harvard University and MIT. Other donors are established professionals in various fields including business, medicine, law, and the entertainment industry."[93] And the "Donor Qualification" page opens with "Good Isn't Good Enough," followed by "[a]t California Cryobank our stringent donor qualification process allows less than 1% of all applicants to make it into our program."[94]

Messaging about selectivity and selection simultaneously anticipates consumer demand and shapes it. Basic qualification requirements for donors include a height minimum of five feet, nine inches, presumably because intended parents prefer tall donors.[95] In 2011 Cryos, one of the largest suppliers in the global sperm market, stopped accepting red-haired donors because it determined that its inventory was sufficient to meet limited demand.[96] Cryos officials explained that demand for ginger donors came only from Ireland.[97] Sperm banks also shape demand. California Cryobank, for example, provides a webpage and video under the heading "How To Find Your Perfect Sperm Donor." The information describes how to operate the digital catalogue. It also suggests selection criteria that align with the curated phenotype, medical history, and biographical profiles the company offers.[98]

Biographical and social achievement information about donors allows intended parents to find donors similar to an actual or imagined partner,[99] to satisfy hopes for a healthy or successful child, or to align with other values. For those using genetic selection to replace genetic descent, sperm selection offers a range of choices, packaged and priced for the discriminating consumer. The amount and detail of donor information that California Cryobank provides depends on the subscription level. California Cryobank offers three subscription levels, with the pitch that it's for your child. "Most likely, it's these little things that your child may find fascinating about your donor one day." The "little things" include whether donors described themselves as "artists, athletes, musicians, or scientists" and the childhood photos that enable "your son or daughter" to recognize "that button nose or big brown eyes as their own."[100] The pitch does not state that all donor characteristics are heritable, but intermixes those in which genetics play a role with those in which genetics do not.

On its "Donor Search" page, California Cryobank's website offers menus and access to donor profiles.[101] The mix of information presents intended parents a great deal of choice. Like the selectivity information, the selection information places donor information that may be genetic, and may even be heritable, alongside information that is biographical and not biological. A sample donor profile form intermingles phenotype descriptors, parental ancestry, high school and college GPAs, check boxes for mechanical skills and abilities, mathematical skills, sports played in high school or after, and language fluency. The last section of the form allows the donor to respond in their own words to queries such as hobbies and talents, how do you express your creativity, and what makes you laugh. Perhaps intended parents use the information to demedicalize a process that is an intimate one for people not using ART. Some intended parents construct a persona for the donor[102] in ways that reframe the act of shopping for gametes to something less commercial. Yet California Cryobank arrays that information in a format that suggests that donor selection is trait selection.[103]

The website does not include a menu labeled "race," although racialized choice is rampant in fertility markets.[104] Offers of racial selection use methods similar to AncestryDNA's ethnicity estimates. On California Cryobank's website, the Ethnic Origins and Ancestry lists are nonspecific and overlapping. Both contain racial categories and invite racialized readings of the information. The menu lists and donor profiles conflate race, country, and region. The Ethnic Origins list has seven items: American Indian or Alaska Native, Asian, Black or African American, Caucasian, East Indian, Hispanic or Latino, and Middle Eastern or Arabic. Most, if not all, of these items are constructed as racial and/or ethnic categories in the United States. The Self-Reported Ancestry list consists primarily of countries (the donor profile form prompts donors to identify countries in response to the Ancestry query). Notable exceptions include African American, American Indian, Caucasian, East Indian, Native American, and Native Canadian.[105] The interchangeable use of ethnicity, ancestry, region, and race simultaneously blurs the already fuzzy distinction between ancestry and race. Of the information deemed necessary to select a donor, "ethnicity" is third, along with medical history, height, GPA, and childhood photo.[106] The itemized list format for "ethnicity" reinforces assumptions that genetic race is both real and significant in donor selection. It also suggests that race remains discrete and fixed as components of the donor's body.

The company offers DNA Ancestry reports, along with the menu lists and donor profiles. The service offers intended parents the opportunity to "discover the biological ancestry for select donors."[107] Like AncestryDNA, DNA Ancestry provides estimates of "geographical ethnicity" in percentages that sum to 100 percent. The website claims the data is sufficient to provide "ancestry data for 26 unique geographic regions and ethnic groups," all color-coded.[108] Unlike Ancestry DNA, DNA Ancestry's use of ancestral origins is nearly exclusively (except Ashkenazi Jewish) a list of geographic origins, rather than a mix of geographic, racialized

populations and ethnic-associated items. As discussed, while ancestral geographic origin may inform one's ethnicity, it's neither synonymous with nor determinative of ethnicity. The DNA Ancestry page explains why the company offers two types of ethnicity information. The text acknowledges that DNA Ancestry does not include "the donor's experiences and cultural identity," the type of information that social scientists consistently use to define ethnicity. The selling point is that "having both pieces of information can help create a more detailed picture of your donor to aid in donor selection."[109] In short, California Cryobank offers a carefully screened and curated set of choices, presented as traits and wrapped in color-coded percentages that sum to 100 percent.

Sperm banks like California Cryobank provide the opportunity to assemble racial identity, one composed of fractionalized components of race. Donors are the ancestors in the fertility industry. Of the many selections offered to consumers, race/ethnicity is prioritized. Other phenotyped features, biographical information, and medical screening data follow, as items bundled with "ancestry." Intended parents who choose the "selected donors" with DNA Ancestry reports double down on racial selection.

GENETIC IDENTITY MARKETS

Genetic ancestry test companies and sperm banks sell the opportunity to construct identity, attached to human tissue. Consumers of genetic ancestry test kits send spit samples and personal information. Companies like AncestryDNA then return a report, a bundle of information that consumers can use. Intended parents obtain reproductive material from sperm banks like California Cryobank after working their way through layers of choice, by which they gain access to a bundle of information about the donor. In both cases, the information, not the spit or semen, provides the means to construct identity based on twenty-first-century biological race.

In these markets, genetic race is a component part of the product. The new racial purity gives genetic race specificity. It makes fractionated identity, a thin representation of multicultural values, possible. It perpetuates the idea that race is insoluble and quantifiable. That old idea also helps sustain belief in polygenism. The new polygenism posits that genetic variations between races are significant and useful in research, health care, and kinship. The new polygenism incorporates monogenism by according less significance to the source of our species. In short, even if we can all trace our ultimate ancestors to one source, it's our racial ancestors that matter.

Both genetic ancestry testing and sperm bank companies offer services that increasingly tap into two technology sectors. During the past 30 years, makers of devices, tests, information banks, and an expanding range of products have made data about the self a technology sector and social phenomenon. Deborah Lupton

calls this the "quantified self."[110] The quantified self, in Lupton's account, arises from self-tracking devices and the cultures formed around their use. Think Fitbit trackers or wearable sensors and "other computerised and automated ways of collecting personal information over a period of time."[111] DTC genetic testing stretches Lupton's technology boundaries, but seems apt in its use of quantified information presented with color-coded graphics that make the data digestible for nonexperts. It's the defining characteristics of racial purity—elemental, meaningful, and subject to precise measurement—that connect these identity markets. Like data produced by self-tracking devices, quantified race is shaping how we measure identity and imagine embodiment. It's not just race, but racial purity that sells.

Obviously consumers of genetic ancestry testing and sperm can accept or reject genetic race. They can use the bits and pieces that align with their preexisting sense of self. The bundles of information seem carefully assembled with enough space to permit individualized interpretation. At the same time, they direct use of genetic information in identity construction. White nationalists often interpret confounding results by deeming small fragments as insignificant. People who identify as multiracial are more likely to use genetic ancestry tests, and people who use genetic ancestry tests are more likely to identify as multiracial, despite the fact that the reports use "ancestry" and "ethnicity" and not "race." Some intended parents who are lesbians choose donors whose ethnicity and/or race differs from their self-identified race. Instead they prioritize the ability to use the same donor for future conceptions or to extend their already multiracial family identity.[112] In one case, family use of genetic ancestry tests revealed that decades earlier, a hospital had accidentally switched two babies. As a result, a person whose genetic family identified as white was raised in an Indigenous family and community, and the person with Indigenous ancestry was raised as white and with greater privilege. Both men reportedly faced uncomfortable, complicated questions about their identities. Both have recently stated that the test results do not change who they are, based on how they were raised, but they also feel a sense of loss.[113] Anecdotally, those statements are not singular. Others have also chosen their preexisting social and cultural identity over genetic identity.

These choices do not necessarily challenge the stability of genetic race. They may confirm that genetic race persists alongside the understanding that race is socially constructed. In the political flashpoint that race has become in the twenty-first century, the choice is between the two understandings of race. On the one hand, the Black Lives Matter movement has used the social construction of race to reveal how state law enforcement power masks violence against Black communities. The stark racial disparities in infection and mortality rates during the COVID-19 pandemic made undeniable the role of structural racism in health. Policy debates over use of race classifications in state law have prompted many states and the US Census to offer some flexibility in self-identification, including making limited versions of multiple race possible. And yet affirmative action opponents

have produced state law that bans use of racial classification for education and employment purposes.

Genetic ancestry test companies and sperm banks are working the divide between the two theories of race. But, make of it what you might, what these companies sell maintains biological race, an updated version of polygenism—a theory inextricably grounded in defending slavery, and a new, perhaps hardened version of racial purity. At the same time, they foster—even celebrate—genetic multiracialism. The companies have no commitments to white supremacy. What they sell, however, has no neutral function. They are legacy concepts, adapted in twenty-first-century markets and hardened in twenty-first-century racial politics.

CONCLUSION: NEOLIBERAL IDENTITY

In a society where neoliberalism has prevailed, many aspects of our personal, even intimate, lives are governed through choice.[114] That is, our identities are partially formed in relation to commerce, through the exercise of free-market individualism. In identity markets based on genetic ancestry testing and sperm banking, companies offer genetic race and its components, racial purity and the new polygenism, in carefully curated, color-coded bundles. Free-market ideology says that consumers have freedom to use genetic race as they see fit. Yet market practices have preselected and refined the choices in ways that affirm the validity of genetic race and racial purity.

NOTES

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