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# How White nationalists mobilize genetics: From genetic ancestry and human biodiversity to counterscience and metapolitics

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**Abstract**

**Objectives:** Our aim in this study was to understand how genetics ideas are appropriated and mobilized online toward the political projects of White nationalism and the alt right. Studying three different online venues, we investigated how genetics is used to support racial realism, hereditarianism, and racial hierarchy. We analyzed how these ideas are connected to political and metapolitical projects. In addition, we examined the strategies used to build authority for these interpretations.

**Methods:** We analyze three online venues in which genetics has been mobilized to advance racial realism and hereditarian explanations of racial differences. These were (a) the use of genetic ancestry tests in online nationalist discussions, (b) blogs and other venues in which the human biodiversity ideas are articulated, (c) activities surrounding the OpenPsych collection of online journals. Ethnographic and interpretive methods were applied to investigate scientific and political meanings of efforts to mobilize genetic ideas.

**Results:** We found that White nationalists use genetic ancestry tests to align White identity with ideas of racial purity and diversity, educating each other about genetics, and debating the boundaries of Whiteness. “Human biodiversity” has been mobilized as a movement to catalog and create hereditarian ideas about racial differences and to distribute them as “red pills” to transform online discourse. The OpenPsych journals have allowed amateur hereditarian psychologists to publish papers, coordinate activity, and legitimate their project at the academic margins.

**Conclusions:** These various appropriations of genetics aim to further racial realism and hereditarian explanations of racial social and behavioral differences. Beyond these substantive aims, on a “metapolitical” level, they serve to reframe concepts and standards for political and scientific discussion of race, challenge structures of academic legitimacy and expertise, and build a cadre of ideological foot soldiers armed with an argumentative toolkit. As professional anthropologists and geneticists aim to accurately communicate their science and its implications for understanding human differences to the public, they must contend with these substantive claims and metapolitical contexts.

**KEYWORDS**

alt-right ideology, public understanding of science, race, scientific racism

Many, perhaps even an overwhelming majority, of biological anthropologists and human geneticists tell us that race is not a genetic concept (Bliss, 2012; Foster & Sharp, 2004; Jorde & Wooding, 2004; Morning, 2011; Yudell, Roberts, DeSalle, & Tishkoff, 2016). This means that while genetic variation may correlate with socially defined racial categories in some ways, these categories are poor representations of the patterns of human genetic variation overall. Furthermore, racial categories carry historical, epistemological, political, and ethical baggage that obscure our capacity to understand the true complex causes of genetic, phenotypic, behavioral, and cultural differences and similarities among people.

However, anthropologists and geneticists cannot claim a monopoly on the cultural interpretation of the genetics of human variation and race. And indeed, at the present moment they face not just inchoate public skepticism, but active and organized competition from a movement of White nationalist and alt-right forces.<sup>1</sup> These people aim to appropriate and reinterpret the findings of human genetics, anthropology, and other fields, and sometimes create research of their own, that aim to show that race is a distinctly genetic concept and that genes cause racial differences in cognition, behavior, and culture. These ideas are introduced, diffused, and debated across the Internet from social media networks like Twitter, Reddit, and Gab, to forums where White nationalists congregate like Stormfront and 4chan, to far right online magazines like *American Renaissance*, *Taki's Magazine*, and *Unz Review*, to a wide array of blogs, and finally to the margins of academia.

People have long been interested in turning science toward racist ends, but several interconnected factors distinguish the current efforts. First, the Internet dramatically multiplies how easy it is to search for and distribute these ideas, it enables distant collaboration and the coalescence of communities of interest, and it has nurtured a culture of aggressive and provocative interaction (Daniels, 2009; Nagel, 2017; Stern, 2019). Second is the sophistication and the DIY ethos of the current efforts (Panofsky & Donovan, 2019). Much more than circulating pre-packaged “scientific racism” generated by scientific professionals, this largely nonprofessional movement has a large “citizen science” component of people who actively interpret existing research and generate their own. Third, the current postgenomic moment has produced exponential growth in knowledge of genetic variation, has heightened expectations of dynamic and decisive renderings of human difference function, and has made genetic information widely available both in the form of public databases and direct-to-consumer genetic tests (Reardon, 2018; Richardson & Stevens, 2015).

And fourth, linking race and genetics has become a crucial part of alt-right and White nationalist “metapolitics.” Historian Alexandra Minna Stern describes how the sharp focus of alt-right discourse and activity is not on politics per se—winning particular offices or policy debates—but on what they themselves call metapolitics, or the “pre-political approach of white nationalists who view winning the hearts and minds of white Americans as a necessary initial step toward massive social change” (Stern, 2019, p. 10). Borrowing from the film *The Matrix* where the hero takes a red pill to understand the nature of

reality, alt-right metapolitics aims to develop “red pills” that will reveal the fallacies of mainstream culture and politics while building “soft power” outlets and practices to rival what they see as the intellectual hegemony of the left in media and universities (ibid: Ch. 1). Appropriating genetics can develop these red pills that aim to instantiate racial hereditarian ideas into multicultural society, reorganize political and intellectual authority, and arm alt-right foot soldiers with discursive skills and tools to shape debate and win converts.

This article is about the loosely organized, mostly-online movement of amateur science enthusiasts (with a few ties to professional scientists) aiming to corral contemporary genetics toward racial realism and hierarchy. We show how these substantive goals are linked, either explicitly or through double talk and denial, to alt-right and White nationalist metapolitics. We illustrate this movement by describing in some ethnographic detail three of its online domains. The first concerns online discussions among White nationalists about consumer genetic ancestry tests. Individuals use these tests to learn about their personal backgrounds, but discussions of tests quickly become entangled in assertions of White purity and White diversity, debates about versions of European nationalism, and new theorizations of Whiteness, racial differences, and hierarchies. We also consider the practices White nationalists have developed to cope with individual “bad news” results to think about the “lay expertise” (Epstein, 1995) that has emerged in the community. The second site is the “Human Biodiversity” movement and website which has coopted anthropologists’ anti-racial language (e.g., Marks, 1995) in the service of updating and mainstreaming ideas long understood as scientific racism. Under this banner a large corpus of materials about racial realism and hierarchy have been gathered. These arm alt-righters whether they are engaging in hand to hand online combat or more detailed racial hereditarian theorizing. Third, we consider the emergence of a hereditarian racial counterscience on the margins of academic research. This is centered on OpenPsych, a set of open source journals founded by a group of nonprofessional researchers who were having difficulty getting their hereditarian research published in academic peer-reviewed outlets. These individuals have created a research network that has, on the one hand, energized hereditarian thinking with both genomic concepts and alt-right concerns and, on the other, gained footholds within academic institutions. Though far from an exhaustive mapping of discussions of racial genetics online, these three sites are key hotbeds where genetic ideas are being deployed to revitalize hereditarian ideas about race and racial differences and energize alt-right and White nationalist politics.

After considering these three sites in some detail, we discuss some of the implications for anthropologists, geneticists, and others concerned with the accurate portrayal of their research for social understandings of race. We argue that these White nationalist and alt-right mobilizations of genetics operate both at a substantive level to promulgate hereditarian ideas about race, but also at the metapolitical level aiming to change social consciousness and public discourse about what ways of thinking about racial difference are legitimate and who has the authority to speak legitimately on these matters.

## 1 | GENETIC ANCESTRY TESTS AND THE POLITICS OF WHITE IDENTITY

Genetic ancestry testing (GAT) is a multibillion-dollar industry in the U.S. with more than 26 million customers, making it probably the most direct way that most people have contact with contemporary genomics (Regalado, 2019). One of the basic aspirations for GATs among their advocates, certainly among those who market them to the public, is that they will help dissolve racist and ethnocentric attitudes by helping people see unknown connections between themselves and different peoples.<sup>2</sup> Some have surmised that this would be particularly effective against White nationalists. One widely promulgated White nationalist membership criterion by a National Vanguard organizer called John Law holds, “non-Jewish people of wholly European descent. No exceptions. And if you tell us you're not, we will believe you” (2006). And thus, after the notorious “Unite the Right” White nationalist riot in Charlottesville, VA (in August 2017), a commentator suggested, tongue in cheek, crowdfunding GATs for neo-Nazis to make their “mongrelcy” apparent (Mangu-Ward, 2017). But in truth, White nationalists have taken up GATs with enthusiasm (Mittos, Zannettou, Blackburn, & Cristofaro, 2019; Panofsky & Donovan, 2019) (Reeve, 2016; Zhang, 2016). Here we consider the flexible and creative ways they interpret GATs and put them to their metapolitical project: promulgating nationalist ideas about White purity *and* diversity and debating individual GAT results in ways that produce genetics literacy and enable racial theorizing.

The basic reason for taking a GAT is to learn something about one's ancestry, and for white nationalists there is the special motivation to demonstrate one's White or European bona fides. Thus, in 2017 Richard Spencer—the clean cut, buttoned down White nationalist who attained media prominence during the alt-right's ascendance circa 2016—tweeted out his 23andMe results as his “Ancestry.” This portrayed his 93.1% “Northwestern European” genetic ancestry and, crucially, his 0.0% Ashkenazi Jewish ancestry.<sup>3</sup> In previous research we traced how White nationalists on the web forum Stormfront.com used GATs to flesh out genealogical stories or even to assuage anxieties about ancestry: Shatzie worried, “there might be American Indian or Jew in the mix because I tan really easily” but was gratified to learn “67% British isles, 18% Balkan, 15% Scandinavian...100% white! HURRAY!” (August 23, 2013).<sup>4</sup>

Beyond the service to individuals' identities, White nationalists have enrolled GATs in a broader effort to reframe American diversity. One part of this is that they use GATs to challenge the liberal nostrum that nearly all White Americans have some non-White ancestry. In one conflict on Stormfront, Orion22 responded to an attack on their ancestry “I am pretty sure you are NOT 100% pure either. Good luck with your DNA test, if you are North American, you will be surprised how much Native American DNA you have” (November 15, 2014). This drew a viscous rebuke from TommyGunOrange, “you are seriously retarded and ignorant about genetic studies... for your info, the vast majority of genetic studies and results show that yes, the typical white American is 99%-100% white/European” (December 1, 2014). From one perspective, this claim is fairly accurate. A population

genetics paper by Bryc et al. (2015), which used 23andMe data and a simplified ancestry model with three racial reference groups (European, African, Native American) to analyze the genetic ancestry of the U.S. population, found that the average self-identified “European American” had less than 0.4% combined African and Native American ancestry, and only about 1.4% of European Americans had more than 2% African ancestry, though there is much regional variation.<sup>5</sup> From another perspective TommyGunOrange's claim depends on the affordances of what biogeographic ancestry tests can reveal, the reference groups used, the historical “depth” of ancestry that is under consideration, who is included in the self-identified sample, and so forth. The claim's validity depends on a straightforward and decontextualized interpretation of GATs, but that is the interpretation that the GAT companies themselves promote (Bolnick et al., 2007; Lee, Bolnick, Duster, Ossorio, & TallBear, 2009).

Even while GATs help White nationalists dismiss the idea of diversity via hidden admixture among people they consider White, it also allows them to reframe and appropriate the idea of diversity as already within Whiteness. As the front page of Stormfront announces: “Black, Hispanic, Asian and Jewish Nationalists openly support their racial interests... We are White Nationalists who support *true* diversity and a homeland for *all* peoples, including ours. We are the voice of the new, embattled *White* minority!”<sup>6</sup> In the US, Whiteness is usually coded as bland and generic, that against which ethnic and racial identities are defined. Roth and Ivemark (2018) have shown how GATs abet flights from Whiteness among people bored with its blandness and seeking to define themselves in more exotic ways. White nationalists reject such aspirations as racial self-hatred due to the deracination of multicultural America. Instead, they turn GATs inward on Whiteness. Each biogeographic ancestry test reveals an array of regional, national, or ethnic ties. Consider again Richard Spencer's results: British and Irish, French and German, Scandinavian, Southern European, and more detailed results he made public on the 23andMe site list some Iberian, Italian, and Eastern European. They also use GATs to speculate about the genetic sources of phenotypic variation among White people—for example, hair, eye, and skin tone variations that contrast with what they perceive to be the brown sameness of minorities they hatefully label “mud people.”<sup>7</sup> GATs help White nationalists simultaneously demonstrate purity *and* diversity within Whiteness.

On a brief side note, it is worth contrasting this with what historian Claude-Olivier Doron (n.d., 2019) has found in his investigations of discussions of GAT and genetic anthropology on various European nationalist blogs. The core dispute Doron tracks is between “Meds” and “Nordicists.” The “Meds” aim to identify individuals of Greek, Italian, Balkan, Anatolian, etc. descent; to gather their genetic data in their own ancestry analyses, and to demonstrate the importance of Mediterranean peoples in European ancestry while also disputing the claims of both Afrocentrists and Northern European chauvinists that they share African genetic ancestry. Nordicists focus on comparisons of Northern European populations, especially Scandinavians, Poles, Baltics, etc. They're also concerned to identify boundaries, for example distinguishing Saami from Finns, and which current groups are most connected to paleolithic hunter-gatherers.

Among Doron's subjects are individuals who have gathered genetic data from others curious about European ancestry—many GAT companies allow people to download their own genetic data—and use the statistical tools of population genetics to perform analyses. Playing their nationalist interests close to the vest, some have interacted positively with professional geneticists. In a news feature in *Nature*, geneticist Doron Behar gushed “They are not amateurs. They are far from being amateurs” (Callaway, 2010:880). As with the U.S. White nationalists, European nationalists also use genetic ancestry to articulate identity claims. However, in the US genetics does not seem to wedge divisions among White nationalists but lets them claim racial purity and diversity within while attacking their multiculturalist enemies. In contrast, Doron shows how in Europe the core conflict is among different nationalists as they use genetic ancestry to assert competing claims to European indigeneity.

As we have shown, for White nationalists GATs are not merely personally informative, but politically generative. Here we take the next step to show how they are intellectually generative as well, serving as sources of mutual education and racial theorization. Instead, they take an active and dynamic relationship to the technology and developed a robust set of cultural resources to interpret its revelations. These can be seen most clearly in how White nationalists on Stormfront deal with GAT revelations they consider “bad news”—some evidence of non-White or non-European ancestry. Sometimes people posting such revelations will be brutally hounded and flamed, especially if they post results that are, say, 30% non-European ancestry or higher. The reason is that they generally believe race to be visible and obvious, especially to a conscious White nationalist, and thus anyone who would post such results would never be mistaken for White offline, face-to-face.

However, most of the GAT chatter we observed on Stormfront was actually about helping people repair White identities endangered by small genetic signatures. The following example, an excerpt of a post by a woman concerned about her sister's GAT results and a selection of replies, has most of the main types of responses on parade.<sup>8</sup>

The initial post is from a woman posting about her adopted sister's results which might indicate that though she has “blond hair, dark green eyes, pale skin and NO traits of african ancestry whatsoever” she might have hidden Black ancestry:

[the GAT company] “predicted” my sister's [MtDNA] Haplogroup to be L3, which means she'd have to be of African origin. You can imagine what this did to my mom and I. The thing is, the test ALSO predicted that she could be from Hgroup N, M, H and R, in that order. (aniia April 9, 2010).

She then goes on to give more details about the variants revealed in the test and appeal to the community for interpretive help. The first response counsels rejecting the results as fake.

I would't trust those tests at all. The only trustworthy way to find your ancestors is genealogy. Most of the time those DNA ancestry tests are out to prove that race does not exist and we are never “full white” just because a half evolved ancestor of ours resided in a non-

European area, and because of that they claim that we are all racially diverse.... (Necro-I-Omen April 9, 2010).

This is typical of an anti-science style of response to GATs: The companies, it is claimed, are biased against Whites (companies are often accused of being part of a Jewish conspiracy), and that paper and pencil genealogical knowledge is superior to genetics. But other responses are grounded in reinterpretations of the results based on “lay expert” (Epstein, 1995) knowledge of genetics, statistics, or history.

L3 is indeed an African haplogroup of mostly east African origin. L3 also seems to be more related to the Eurasian haplogroups and is likely the haplogroup from which all *Out of Africa* haplogroups evolved....mtDNA is an extrachromosomal element in the human genome of about 16-K base pairs in length (compare to the 3 billion base pairs of the other genetic information). It has no effects on easily viewable racial characteristics and would thus have no role in pigmentation, skeletal structure, etc. As such, I would not view mtDNA as a defining trait of race. (Der\_Zahnarzt April 9, 2010).

There is no way a person could have an MtDNA sequence that is both M and N. That would be impossible.... That is a strange report. Polish studies indicate no African ancestry in their gene pool but Jews do have Sub-Saharan African ancestry in their genetic stock. Usually it is an older more specific Negroid one associated with pygmy Africans however. (Bana phrionnisa April 10, 2010).

The first response explains that L3 is the haplogroup from which all non-African haplogroups spawn, and also that MtDNA is not responsible for racial phenotypes, thus this result is not concerning. The next one questions the accuracy of the result claiming M and N are separate, not nested, haplogroups while offering a White nationalist brief on deep history to defend Poles and genetically link Jews and Sub-Saharan Africans. Responses like these aim to mobilize different kinds of scientific knowledge to reframe the GAT results in ways that are harmless to the individual and reinforce broader White nationalist ideas.

Finally, the post spawned a separate conversation about whether a White person with a “non-European” MtDNA haplogroup would count as White under the one drop rule:

In general, I'm relatively liberal on the question as to “who is White?” HOWEVER, When it comes to *direct maternal and paternal lines*, I'm a strict ONE DROP fanatic!...

I do not applaud or condone any bi-racial person with a White partner, BUT, the bi-racial female with a White Mother or the bi-racial male with a White father are the lesser of two evils when it comes to potential assimilation. This based on the transmission of Y and mtDNA strands.... I would find it very disturbing to have a very White looking female with a African or Asian mtDNA haplogroup! (AngryGoy November 23, 2012).

What?! I do not get this. mtDNA and Y-DNA have little influence on genetic expression when compared to autosomes. I do see your “washing out” of autosomes reasoning, but I also see long-term admixture of those genes more problematic. Once that admixture begins in a population it just builds and builds until you have Brazil. (bioprof November 23, 2012).

The first of these responses concerns what kinds of “mixed” race heritage are less troubling to White nationalists. Non-White autosomal DNA could be “diluted” away through repeated White admixture over generations, while some couplings leave non-White Y or MtDNA in the White gene pool intact forever because, unlike autosomal DNA, it does not recombine or randomly assort. The response to this held that the diluting admixture itself is the problem because it would not be controllable in practice, and the result would be a heavily mixed society like Brazil.

The point here is that a conversation initiated by a poster's personal identity question eventually spawned a debate about the boundaries and hierarchies of race within White nationalism. The conversation is perhaps distasteful, but it is based on sophisticated understandings of genetics and biology and thinking through the (racist) implications of the kinship relations that GATs make visible.

White nationalists have tried to promulgate definitions of Whiteness that circumvent “angels on the head of a needle” style arguments: If you look, live, and act White and your great grandparents are White, you are White (Law 2006). But in this example, and other similar discussions that we have observed, GATs have unsettled these definitions and promoted discussion of other criteria. Is there a particular quantitative threshold of non-White or non-European ancestry that is a cutoff? Are some Y or MtDNA haplogroups qualifying or disqualifying? Perhaps graphical methods—like a person's location on a Principle Component Analysis plot of ancestry—could be used to identify membership. Maybe there will be no single “White” race but rather a collection of partly overlapping genomically designated (Navon, 2011) identity groups in which people could have membership (Panofsky & Donovan, 2019).

To summarize this section, GATs have been important for intellectual and ideological life of recent White nationalism. GATs have helped center genetic essentialist conceptions of ethnicity and race in public discussion. White nationalists have used these to promulgate their ideas about White racial purity and to appropriate the cultural value of diversity. When GAT results seem to contradict their ideas, White nationalists have collectively developed a robust set of interpretations to manage potential dangers. The discussions and debates engendered by GATs strengthen White nationalism, not because they have been able to produce a coherent theory about race, but because the discussion itself builds the community, develops their skills and knowledge in interpreting genetic knowledge, and generates a bricolage theory of race, genetics, and identity. All of these can be deployed as they move beyond GATs and seek to appropriate genetics in other venues.

## 2 | HUMAN BIODIVERSITY: GENERATING AND CIRCULATING RACIAL RED PILLS

Biological anthropologist Jonathan Marks (1995) introduced the phrase “human biodiversity” as a label and a framework for thinking about human difference. The basic aims were to show, first, that human differences are essentially biocultural in character—both

biological and cultural diversity are essential to humanity, and neither is reducible to the other. Second, “race,” with its focus on indelible essences, hierarchies, and discrete continental dividing bins is an inadequate framework for understanding human difference. And third, understanding human diversity is simultaneously a project of empirical biological measurement, humanistic interpretation, and critical analysis of ethical and conceptual shortcomings of historical frameworks for understanding.

Online, the idea of “human biodiversity” has flourished, but those responsible have pushed an almost opposite meaning to the one Marks originally intended. The Reddit page devoted to human biological diversity defines it as “the study of human genetics and how they are responsible for our inclinations, behaviors, preferences, abilities, intelligence, life span, and other attributes.... Where “normal” human society considers the human mind to be programmable, HBD starts from the other perspective, which is that genetics is the cause and behaviors the effect.”<sup>9</sup> Human biodiversity is here defined as both an interest in hereditarian explanation and, more subtly, an approach opposed to the beliefs of “normal human society.” Marks deployed biological diversity as a way of illustrating how incomplete categories for race/ethnicity are, and how even with continuous refinement they can never be part of a clear-cut classification system that people entrust science to produce. But the human biodiversity movement has inverted this formulation, using it on the one hand for establishing the “Reality of Race” and attacking “Fraudulent Science to Disprove Existence of Race,” and on the other as a warrant for investigating the ways that biology determines the social behavior and culture of those races. Thus, the focus of their practice is compiling massive troves of papers, references, facts, claims, and arguments to link these elements.

The public face of human biodiversity includes, on one side, writers for the far right, White nationalist outlets like Steve Sailer of the *Unz Review* and Jared Taylor of *American Renaissance*, and, on the other, people who are not ostensibly political but willing to write provocatively about topics like race and eugenics like Razib Khan of *Discover* magazine and Steve Hsu, physicist and entrepreneur of the company Genomic Prediction (Error, 2013; Feldman, 2016; MacDougald & Willick, 2017; Schulson, 2017) or centrist liberals like Steven Pinker (2006) who legitimates human biodiversity ideas like the evolution of Jewish intelligence. There is also a large set of less well-known and especially anonymous or pseudonymous bloggers and tweeters in the human biodiversity orbit. There is an effort to conceal or deny how organized human biodiversity is. The humanbiologicaldiversity.com website's design is attributed to the generically named “James Wilson” though no contact information is offered. Blogger @hbdchick recently tweeted “human biodiversity isn't a movement” it's “simply the diversity found among and between human populations that has a biological basis.”<sup>10</sup> But journalist Angela Saini (2019, Ch. 6) reports that the movement got its start in the late 1990s when Steve Sailer worked to advance these ideas and identify fellow travelers by coordinating a private and secret email list of scholars in biology, psychology, and social sciences. The secrecy, anonymity, and denial of organization in human biodiversity have at least

two functions. First, it helps protect participants whose ideas or associations with provocative racial ideas might make them targets of public opprobrium. Second, it helps align human biodiversity with science that gains much of its authority precisely from the lack of an author. The implicit claim: This is knowledge, not perspective.

The Humanbiologicaldiversity.com website stands as a kind of centerpiece of the movement and it reveals much about its characteristic concerns and bids for authority. The site has the look and feel of the late 1990s—no interactivity and graphics limited to a double helix. The bulk of it is a massive two-column bibliography of over 900 scholarly articles and essays broken into about 20 categories. The linked-to materials range from articles in White nationalist websites, to white papers from far right think tanks, to race science “classics” from the likes of Rushton, Jensen, Murray, Cochran, MacDonald, and Lynn, to mainstream health and genetics articles (about population differences) from sources like *PNAS*, *AJPH*, *Science*, and *Journal of Neuroscience*. What stands out first about this list is its mass; it goes on and on as you scroll down. Most of the categories have dozens of entries. Secondly is the circumscribed diversity of the topics: From mainstays like “HBD & IQ,” “HBD & Crime,” “Immigration,” and “Evolutionary Psychology, Sociobiology, & Darwinism” to “History and Economics” (mostly about civilization differences and hierarchies), “HBD & Religion” (mostly about racial roots of different religious traditions and whether religion is an evolved instinct), and “Plants and Animals” (which mostly concerns how animal breeding and behavior can be models for human races and race relations). The effect of these juxtapositions is to illustrate that heredity can be observed everywhere. By situating race and IQ, immigration, and crime in a wider field of ideas about evolution and plant breeding patterns, the race science topics are portrayed as naturally another way that heredity is significant.

The basic sense conveyed is that the biological reality of race and hereditarian explanations for racial differences are massively well-supported by science. This style of argumentation by accumulation is a longstanding tradition in race science. For example, psychologist Audrey Shuey's infamous *Testing of Negro Intelligence* (Shuey, 1966) purported to review nearly 400 IQ studies which she interpreted as proving “Negros” are inherently less intelligent than Whites and thus schools should not be integrated. And Philippe Rushton and Arthur Jensen (2005) wrote a notorious review of “race differences in cognitive ability” categorized into 10 lines of evidence that they meticulously scored and added up: 17 for hereditarianism, –7 for culture only explanations of racial differences. In a response Nisbett (Nisbett, 2005) showed that almost all the evidence Rushton and Jensen marshal is non-dispositive for hereditarian explanation of racial differences, and it demonstrates no genetic component to cognitive differences. Reviewing Rushton's magnum opus book, Barash (1995) averred that combining “numerous little turds of variously tainted data” does not yield results, just a “pile of shit.” It is a good line, but to our argument, it speaks to the cognitive style of the human biodiversity movement: accumulate a giant corpus of decontextualized mainstream science, flawed race science, and political writing, ignore or dismiss any critiques, and then treat genetically

determined racial differences in behavior as forbidden knowledge—obviously true, but suppressed by the academic left.

The human biodiversity movement is having both political and metapolitical influence in the world. Among the former is the spread of movement-influenced figures into positions of power in the media and policy worlds. Journalists have covered this extensively, most notably its influence on Steven Miller, a key architect of Trump's immigration policies (Hayden, 2019) and Dominic Cummings, a conservative political strategist in the UK (Raw, 2020). Though this trend is of obvious and crucial political importance, the metapolitical influence is less well-known and more intellectually dynamic. And that is the way that human biodiversity ideas are deployed online in the development of “red pills,” the alt-right term for political awakening borrowed from the film *The Matrix*, or “the process by which someone comes to realize that things are not what they seem...[and] whites have been sold a bill of goods called diversity, inclusion, multiculturalism, and gender equality” (Stern, 2019 p. 10). Human biodiversity materials are explicitly linked to these concerns. For example, the introductory resources are labeled, “Ready to take the red pill?” and one set of resources is labeled “Gender, Sex & Game” which references the antifeminist “pickup artist” branch of the alt-right.<sup>11</sup>

These red pills come in two basic forms. The first is the set of ready-to-go memes, images, and discursive objects that can be circulated online to spread racial realism and hereditarianism. These range from pictures from early 20th century anthropological texts of racial and ethnic “types,” to principle component and Structure plots of genomic diversity revealing racial clusters, to pictures of different dog breeds or a pith-helmeted colonialist next to Pygmy people to mock “cultural Marxist social construction” of race.<sup>12</sup> These objects often juxtapose bold images with technical information or technical images with common-sense labels. Removed from the scientific and historical contexts that qualify their interpretation, they are selected because they seem to deliver bold visual and technical support to racial realism certified by scientific authorities. In exchanges where racial differences or the social construction of race come up on 4chan, Reddit, Twitter, and the like, these images and others like them can be deployed to make the hereditarian point. When, in a debate, “citations” are demanded for a debater's racist claims, references or links from the human biodiversity page can be trotted out. Human biodiversity advocates also maintain Pastebin files, which are massive online repositories of writings in the scientific racism tradition plus alt-right and fascist political writings, conspiracy theory materials, shooter manifestos, and the like. These can be drawn from or linked to in efforts to red pill newcomers or trump opponents in argument.

The second type of red pill is less about prepackaged racial information concerning instead to racial theorization to process new scientific findings or draw novel connections to older ideas to develop human biodiversity prerogatives. Though blogs have fallen a bit out of fashion (with YouTube videos and discussion sites are more in vogue), human biological diversity ideas have been worked out on dozens of them.<sup>13</sup> Just one example, but an emblematic one, is The Alternative Hypothesis which offers “an alternative to the status quo perspective on issues like race and diversity. We take empirical

evidence very seriously, so expect a lot of it.”<sup>14</sup> The core topics are typical: race realism, IQ, crime, how genes not politics explain national economies and cultures. There are dozens of pages with extremely long essays synthesizing massive and diverse literatures in the service of racial hierarchy arguments. The writers also do their own secondary analyses—for example, compiling into a single table published frequencies of different MAOA gene variants for Blacks and Whites,<sup>15</sup> modeling different possible values of *Fst* to argue it should not be a criterion against the existence of race,<sup>16</sup> and plotting various national economic data over time to argue that colonialism is not the cause of African poverty.<sup>17</sup>

Such arguments gain their power because of the ways they trade on images and asymmetries of expertise. The areas of research they draw upon are subtle and technical enough that properly understanding the fallacies of their arguments can demand advanced knowledge. Indeed when they misrepresent their sources—as does the Alternative Hypothesis in its tables of *Fst* and heterozygosity frequencies—it is difficult for non-experts to detect it.<sup>18</sup> Further, they frequently err in their reification of statistical correlations, capitalizing on their, and others', ignorance of standards for causal inference in genetics or social science. Amateur hereditarian arguments are strengthened because they aren't dependent wholly on the “classics” of scientific racism, but they have put in a massive effort to mobilize a diverse host of information to make the old arguments about racial hierarchy in new ways. In this way, they represent a well-armed, difficult to argue against, DIY intelligentsia of the far right.

Finally, there is a version of human biodiversity that has gone beyond this pseudointellectual movement to repackage biological and social science in the service of racial hierarchy. For some, biodiversity has become a label for White separation and supremacy. For example, the perpetrator of the El Paso massacre in August 2019 issued a manifesto entitled “The Inconvenient Truth” that stated,

I am against race mixing because it destroys genetic diversity and creates identity problems.... Cultural and racial diversity [from “Hispanic immigration”] are largely temporary. Cultural diversity diminishes as stronger and/or more appealing cultures overtake weaker and/or undesirable ones. Racial diversity will disappear as either race mixing or genocide will take place.<sup>19</sup>

The shooter here draws from “Great Replacement” theory (Camus, 2012) that holds that Western countries are facing “White genocide” owing to a conspiracy to ensure permissive immigration policies, racial differences in birthrates, and the inherent violence of non-Whites. Ideas from human biodiversity have served to inform this world view, but in particular it has offered a genetic rationale for White nationalist violence and a specific focus on the preservation of White biodiversity as a goal. Earlier we argued that genetic ancestry tests were attractive to White nationalists partly because they made White genetic diversity visible and aided in the appropriation of diversity as something that Whites should care about and defend for themselves. Here we see how human biodiversity goes beyond a supposedly neutral label for an abstract intellectual interest in human differences, to a specific ideological component of a violent worldview.

### 3 | EMERGING RACIAL HEREDITARIAN COUNTERSCIENCE

For some human biodiversity enthusiasts, engaging interpretation of and commentary on others' science is not enough. For sure, they might find the traditional corpus of racial research convincing—racial IQ comparisons, twin and adoption studies to demonstrate the genetic influence on behavior, studies claiming MAOA is the “warrior gene” and Blacks are more likely to have it, evolutionary “life history” explanations of differences in cultural achievement, and so on. But there are at least two problems. First, the bulk of these claims are pre-genomic. An irony is that those interested in racial realism might have more access to cutting edge genomics through genetic ancestry tests, which ostensibly celebrate multiculturalism, than through the human biodiversity literature. Second, whatever euphemistic value the “human biodiversity” label provides, much of its canonical literature is indelibly branded as racist. For example, in 4chan discussions, commentators sometimes complain that referring to articles by J. Philippe Rushton during debates is worthless because opponents instantly reject his work (and them) as irredeemably racist rather than the open-minded inquirers they aim to portray themselves to be. Charging the academy with being beholden to “cultural Marxists” who prohibit research into racial differences, a set of human biodiversity enthusiasts have taken it upon themselves to create a counterscience on the margins of the academy to pursue this research on their own.

An institutional focal point for this movement is OpenPsych.net, a set of open access online journals: *Open Behavioral Genetics*, *Open Differential Psychology*, and *Open Quantitative Sociology & Political Science*. The founders set up the journals because they believed that existing journals were biased against the papers they and their conferees were submitting. Their suspicion was that it was the contentious nature of the articles, many of which were focused on racial/ethnic comparisons, not their quality that was leading them to be rejected, and that the opaque review process at most journals concealed this bias.

OpenPsych journals are organized around radical open science principles. They are free to access and submissions are free. The peer review process occurs out in the open with no blinding: A draft is submitted, reviewers comment on the article, the author debates the comments and makes changes, eventually after this process the article is accepted, and all the commentary (which can continue after publication) accompanies the article. In an article defending the journals against critics, the editors explain they are open to heterodox ideas, are open about their evaluation practices, and judge scholars on their ideas not their credentials (Carl et al., 2018). This defense implicitly invokes sociologist Robert K. Merton's (1973) ethos of science—communalism, universalism, disinterestedness, and organized skepticism. They charge, furthermore, that mainstream journals have not prevented the replication crisis from happening. Thus, *pace* the charge that OpenPsych journals are a pseudoscientific vanity project, their claim is that they better embody scientific ideals than the scientific mainstream.

Many of the articles in OpenPsych journals are about racial realism, genetic explanations for racial or ethnic differences in psychological variables, comparisons of ethnic or immigrant groups in criminal behavior, genetic and intellectual explanations for socioeconomic differences, and so forth—articles that focus on biologizing racial differences or offering scientific support to conservative or reactionary political ideas.<sup>20</sup> For example, “The Nature of Race: the Genealogy of the Concept and the Biological Construct’s Contemporaneous Utility” by John Fuerst (2015) is a book length review of historical debates about the race concept and contemporary genetics research about human variation and speciation criteria to argue that race is a biological concept and arguments to the contrary are made on political and moral grounds, not scientific ones.

Other articles offer a genomic twist to hereditarian psychology, for example, Piffer and Kirkegaard’s “The genetic correlation between educational attainment, intracranial volume and IQ is due to recent polygenic selection on general cognitive ability” (Piffer & Kirkegaard, 2014). The overall argument is that there are frequency differences among racial groups in alleles associated with cognitive traits (IQ, education, brain size) and these are due to natural selection—different races have evolved different levels of intelligence which might be linked to the evolutionary pressure of coping with cold environments (a common argument in the racial hereditarian literature). Lacking access to the original data in this article, they use summary statistics of allele frequencies and SNP/trait correlations and population trait averages. Their analyses involve using principle components reductions of the gene frequencies among ethnic and racial populations and then interpreting different correlations among the principle components and population levels of traits as evidence of selection.

There is a strong DIY ethos here. In some cases, these scholars are able to download publicly available genetic datasets for their analysis. When such data, or the particular variables or populations of concern, are not available, they must make do with nonindividual, aggregate data available, combine statistical analyses in creative ways to make evolutionary inferences, and be willing to make bold extrapolations about group traits from information about a small number of gene variants and correlations. For example, Piffer (2015) uses one data set to infer “national IQ” and a separate dataset to infer partial polygenic scores for IQ in said nations in order to argue a polygenic gradient for national IQ. On top of ignoring problems of population stratification, such reasoning engages the ecological fallacy in multiple ways.

In other contexts, DIY biologists (Patterson, 2010), have rejected precautionary admonitions as tools of professionals to patronize amateurs and stifle their creativity. This can be seen in, Kirkegaard’s (2015) call for behavioral geneticists to publish polygenic scores for educational attainment for different racial groups. Geneticists have argued such comparisons are invalid, likely reflecting population stratification and different environments than different genetic endowments for education (Duncan et al., 2019; Novembre & Barton, 2018). Kirkegaard agrees such cautions “should be taken into account when interpreting the results, but is not sufficient for not showing the

results” (3) he then accuses researchers of not publishing the data for political reasons. But his interests aren’t purely intellectual; such information, he argues, would be necessary for eugenic programs of selective abortion or genetic engineering to improve cognitive outcomes. In contrast to the relative caution of professional geneticists, the energy of this group of amateur researchers comes from the bold, unconventional (many would say fictitious) statistics and provocative interpretations.

OpenPsych is a key node linking together three networks interested in hereditarian racial psychology.<sup>21</sup> The first is the set of younger individuals lacking either PhD credentials or professional positions. They might be characterized as amateur or aspiring scientists who are blocked from the academy. A second set are PhD psychologists working in the field of intelligence. Most of these seem to have academic jobs, but not necessarily in psychology departments. And the third set are individuals who have longstanding ties to racial research and eugenics, and their traditional institutions like the journal *Mankind Quarterly* and the Pioneer Fund.

The connections afforded by this network have amplified the amateurs influence. For example, many of them have published in *Mankind Quarterly* and several became scholars at the Ulster Institute for Social Research (the think tank run by IQ researcher and eugenicist Richard Lynn and supported by the remains of the Pioneer Fund).<sup>22</sup> Their participation has given these longstanding institutions of “scientific racism” an infusion of new blood. Many in the network were participants in the London Conference on Intelligence hosted at University College London, which was a scandal because some participants’ presented on race and eugenics and the university was implicated as either condoning the topic or lacking oversight.<sup>23</sup> And there have been multiple collaborations across the network in hereditarian psychology—for example, they have put together a special issue of the journal *Psych* devoted to articles working in the tradition of a “classic” article arguing the hereditarian explanation of racial cognitive differences by Philippe Rushton and Arthur Jensen. Indeed, one of us (AP) was invited to contribute—not to agree with them but to extend their network of professional interlocutors and demonstrate their openness bona fides.

These efforts have begun to pay off in terms of pushing their ideas into mainstream American Psychological Association journals such as *Intelligence* and *Evolutionary Behavioral Sciences*. Consider for example, a recent article “Polygenic scores mediate the Jewish phenotypic advantage in educational attainment and cognitive ability compared with Catholics and Lutherans” in *Evolutionary Behavioral Sciences* (Dunkel, Woodley of Menie, Pallesen, & Kirkegaard, 2019). Its first author, Curtis Dunkel is a psychologist at Western Illinois University, the other three fit the amateur designation: Michael Woodley of Menie is listed as an affiliate with the far right Unz Foundation, and Jonatan Pallesen and Kirkegaard list no affiliation. The article draws on polygenic scores for IQ from the Wisconsin Longitudinal Study comparing Jews to Catholics and Protestants. They claim that Jews’ higher polygenic scores cause them to have an IQ advantage. This was rebutted by a group of sociogenomics researchers who showed that given the polygenic score of the Jewish group, their IQ should



actually be four standard deviations above non-Jews not slightly above average as it is. This means the polygenic score is actually a function of population stratification and the direct comparison that Dunkel et al. made is fallacious: “The obvious danger of naïve efforts to use polygenic scores is that the influence of various sorts of social differences will be misidentified as genetic influences” (Freese, Domingue, Trejo, Sicinski, & Herd, 2019).

This example shows how the ideas of this group are gaining influence. First, this group has been able to push hereditarian racial (in this case racial-religious) comparisons using cutting edge genomic data into the mainstream literature. Second, they have been able to capitalize on the lack of genomics expertise in these journals as well as the enthusiasm of their editors for intellectual “heterodoxy” regarding the publication of more racial and politically conservative research.<sup>24</sup> Third, they have forced a response from the experts at the center of the field. And thus, these scholars and ideas, even if they have been shown to be in error and even labeled “naïve,” have been endowed with a form of legitimacy. Step by step, such efforts expand the conversation about race and genetics—especially as they serve as the material for human biodiversity conversations among White nationalists and the alt-right.

## 4 | DISCUSSION

In this article we considered three online ethnographic settings in which ideas and frameworks from contemporary genetics are being appropriated in the service of alt right and White nationalist ideas. The first was the use of genetic ancestry tests to assert ideas of White purity and diversity and to adjudicate White membership. Next was the human biodiversity movement's efforts to catalog, theorize, and develop red pills about racial hereditarianism. And third we considered a hereditarian counterscience that is aiming to change the shape of legitimate academic discourse on race from its margins. Across the cases we saw an increase in the sophistication of the engagement with genetic science as well as a decrease in the explicit articulations of White nationalism or alt-right politics. Without the idea of metapolitics—projects to change “hearts and minds” and reorder symbolic frameworks and authority—the efforts to appropriate genetics discussed above are somewhat puzzling: If you are a racist, why do you need science? If you are not a racist, why care so much about genetically grounding race and racial differences?

Beyond generating and churning material arguing for racial essentialism and biological hierarchy, these appropriations of genetics and the practices surrounding the appropriations in the contexts of genetic ancestry testing among White nationalists on Stormfront, the human biodiversity movement, and amateur genetics research aim to change the metapolitical conditions of political discourse about race.

White nationalists use genetic ancestry tests simultaneously to claim personal White bona fides, to demonstrate the relative “purity” of White Americans (against the liberal nostrum that “we're all mixed”), to claim diversity within Whiteness (in an effort to colonize the discourse of multiculturalism), and also to educate each other

about genetic concepts and reasoning. They, and the human biodiversity movement have challenged and reframed the language of diversity to include Whiteness and be about biological race (not cultural inclusion or political and economic equality).

The human biodiversity movement is a rebranding of racial genetic essentialism and biological explanations of hierarchies—scientific racism, on any reasonable definition—as a mere intellectual concern with variation. It is also about the gathering and maintenance of a tradition, both old and new, distinguished both by its mass and its heterodoxy—the 800-pound gorilla that the liberal academy has attempted to cage and conceal. It is noteworthy that the proximate target of human biodiversity is not, for example, political movements of racial minorities for civil rights or social justice, but rather “social constructionists” and “cultural Marxists.” The targets are primarily metapolitical, not political. The human biodiversity movement is also about inculcating in its devotees the knowledge, argumentative skills, and DIY ethos to propagate new syntheses of racial ideas and do combat with liberals.

And finally, the set of amateur race scientists show that race research is young, dynamic, and genomic. By broadcasting their commitment to scientific openness—openness of process, publication, and to controversial hypotheses about race—they try to bat away the charge of pseudoscience and claim the high ground of scientific norms. And they have worked their way to the margins of legitimate science forcing a degree of recognition—even if it is mostly negative and critical—from the mainstream.

Substantively, geneticists, human biologists, anthropologists, and social scientists might not be impressed with this array of interpretations and appropriations of genetics and the claims made about race. And indeed, the claims that genetics defines racial groups and makes them different, that IQ and cultural differences among racial groups are caused by genes, and that racial inequalities within and between nations are the inevitable outcome of long evolutionary processes are neither new nor supported by science (either old or new). They're the basic, tired evergreens of ancient racist thought.

But as we have shown, the substantive claims are only part of what these efforts represent. The metapolitical effects of these appropriations of genetics can be grouped into three basic categories:

1. Reframing concepts and standards: For example, racial essentialism is biodiversity; diversity is redefined around Whiteness; speculating about racial superiority and inferiority is not racism but exploring hypotheses about differences—or, data cannot be racist; repeating correlations (in endless variations) is evidence of causation.
2. Challenging academic legitimacy and expertise: The academy may be a valuable source of data but not of reliable interpretations about race. In a reversal of Oreskes and Conway's *Merchants of Doubt* (Oreskes & Conway, 2010) story about climate change, metapolitical activism in this domain attacks academics as ideological in order to promulgate *certainty* about genetic causes of race and racial differences.
3. Building a cadre and a toolkit: This activity has produced a set of ideological foot soldiers armed with diverse race science materials

from memes, to IQ classics, to cutting edge population genetics, with the skills and dispositions to engage metapolitical conflicts ranging from shitposting on Reddit, to commenting on *New York Times* articles, to publishing in scientific journals.

Interestingly, these appropriations of genetics also shape or steer the metapolitical possibilities of alt-right and White nationalist politics. For example, in the genetic ancestry testing instance, some of the White nationalist discussion circulated around how genetic information would force changes to membership rules as discussed above. The qualitative criteria of coming from a White family and looking and acting White might not be enough in a genomic era when traces of ancestry from “non-White” populations can be detected. Even as it emphasizes racial distinctiveness and hierarchy, the human biodiversity corpus does always fit well with many claims of White supremacy—Jews (to whom White nationalists deny Whiteness) and Asians, for example, come out higher in many of their intellectual comparisons. Previous versions of scientific racism placed Whites on top of a hierarchy to justify colonialism, genocide, slavery, and White rule in a common space. In contrast, the language of human biodiversity has accompanied the emphasis in today's White nationalist thought on separated racial ethnostates that would allow each race to pursue homophily and biological integrity (Stern, 2019) (Tenold, 2018)—although, clearly, they are eager to use spectacular violence to achieve this goal. In the domain of amateur genetics, participants are bound by norms of science and weighed down by their associations with institutions and individuals long associated with the stigma of scientific racism. The amateurs' associations with people like Richard Lynn—long notorious for his promotion of racist eugenics (Lynn & Vanhanen, 2002)—may offer resources and a network but undermines their bid to expand beyond the “scientific racism” label. Getting their papers published in mainstream psychology journals boosts the amateurs' profile, but may also undermine the reputation of those journals. The appropriation of genetics has both served White nationalist metapolitics but also in some ways shaped those politics.

Finally, the array of practices and materials presents substantial challenges and dilemmas for professional biological anthropologists, human geneticists, and others concerned with “interpreting and communicating biological variation and race” in professionally responsible ways. The efforts described here resist many standard discrediting labels. The level of knowledge about genetics, statistics, and human variation demonstrated here cannot be dismissed as mere “ignorance.” They have actively worked to define “racism” as a psychological and political label irrelevant to inquiries into the causes of human differences. Though tempting to charge them with “pseudoscience,” their performance of scientific norms and practices and occasional success in publishing in mainstream psychology journals is a strong defense.

There are multiple challenges to attacking their ideas as “misappropriations” or “misinformation.” For one, the mass of claims is nearly endless. Engagement is a form of legitimation that may aid their metapolitical cause. Furthermore, many of the findings about human evolution and variation are genuinely complex, ambiguous, contested, changing, and involve historically contingent judgments. This is not to

say the views we have considered are valid, but rather that knowledge in this domain is a Gordian knot, but there is no sword to slice it open. Lastly, the substantive claims about racial realism and hereditarian explanations of human variation are only part of the point for White nationalists, human biodiversity activists, and amateur geneticists. Any effective effort to discredit their ideas must also find ways to contend with the metapolitical dimensions as well.

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## AUTHOR CONTRIBUTIONS

**Aaron Panofsky:** Conceptualization; data curation; project administration; supervision; writing-original draft; writing-review and editing. **Kushan Dasgupta:** Conceptualization; data curation; project administration; writing-review and editing. **Nicole Iturriaga:** Conceptualization; data curation; writing-review and editing.

## CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

## DATA AVAILABILITY STATEMENT

This study is based on ethnographic observations of internet domains; thus, no new data were created. The data that support the findings of this study are publicly available on the internet. Sources are referenced in the text.

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## ENDNOTES

- <sup>1</sup> In this article we capitalize White, Black, and other racial labels to highlight their historically constructed character. We do not, however, change the way the sources we cite refer to these groups.
- <sup>2</sup> Travel website Momondo filmed GAT revelations of people from different national backgrounds to encourage them to see mutual connections and encourage travel (<https://www.momondo.com/discover/momondo-the-dna-journey-how-it-was-made>, Accessed May 13, 2020). Using the slogan “there are no borders within us,” AeroMexico promised DNA discounts for travelers willing to take DNA tests (see, <https://theconversation.com/how-dna-ancestry-testing-can-change-our-ideas-of-who-we-are-114428>, Accessed May 13, 2020)
- <sup>3</sup> <https://twitter.com/richardbspencer/status/816721891331375104?lang=en> (Accessed July 20, 2020).
- <sup>4</sup> Posts in this section acquired from searches on Stormfront.org.
- <sup>5</sup> See also, <https://blog.23andme.com/ancestry-resports/our-hidden-african-ancestry/> (Accessed May 14, 2020).
- <sup>6</sup> <https://www.stormfront.org/forum/index.php> (emphasis in the original, Accessed April 1, 2020).

- <sup>7</sup> The "mud people" idea derives from Christian Identity theology of a pre-Adamic creation of non-Caucasians, but the term spreads more generally in White nationalist circles (Barkun 1994).
- <sup>8</sup> <https://www.stormfront.org/forum/t698418/> (Accessed April 1, 2020).
- <sup>9</sup> <https://www.reddit.com/r/HBD/> (Accessed May 14, 2020).
- <sup>10</sup> <https://twitter.com/hbdchick/status/1202688790822838272> (Accessed May 14, 2020). In response to an investigative article about the motivations of those publishing in the "intellectual dark web" affiliated magazine *Quillette* (Minkowitz 2019).
- <sup>11</sup> <http://www.humanbiologicaldiversity.com/#GenderSexGame> (Accessed May 12, 2020).
- <sup>12</sup> [http://www.humanbiologicaldiversity.com/Race\\_Face\\_Plates.htm](http://www.humanbiologicaldiversity.com/Race_Face_Plates.htm) and <http://www.humanbiologicaldiversity.com/RaceandIQWorldMap.htm> (Accessed May 14, 2020).
- <sup>13</sup> See for example, <http://www.humanbiologicaldiversity.com/#Blogroll> (Accessed May 14, 2020), for links to blogs on everything from cultural Marxism, Islam, genetic genealogy, Roman DNA, taboo science, environmental sustainability (hint: immigration control), and many biological and political issues.
- <sup>14</sup> <https://thealternativehypothesis.org/index.php/about-the-alternative-hypothesis/> Accessed May 14, 2020.
- <sup>15</sup> <https://thealternativehypothesis.org/index.php/2016/04/15/maoa-race-and-crime/> Accessed May 14, 2020.
- <sup>16</sup> <https://thealternativehypothesis.org/index.php/2016/04/15/variation-within-and-between-races/> Accessed May 14, 2020.
- <sup>17</sup> <https://thealternativehypothesis.org/index.php/2016/04/15/colonialism-did-not-make-africa-poor/> Accessed May 14, 2020.
- <sup>18</sup> Thanks to geneticist Kevin Bird for pointing this out to us.
- <sup>19</sup> The authors have archived a copy of the manifesto which has been suppressed on much of the Internet.
- <sup>20</sup> See <https://openpsych.net/journal/OQSPS>, <https://openpsych.net/journal/ODP>, and <https://openpsych.net/journal/OBG> (Accessed May 14, 2020).
- <sup>21</sup> Of the thirteen members of their reviewing board, two are anonymous, and eight others seem to have PhDs. Five seem to have positions as university professors, and about half of the remaining are university researchers, and the others independent scholars. Incidentally, all have male names, and two of the named thirteen have Asian surnames, while the rest are European.
- <sup>22</sup> <https://www.ulsterinstitute.org/> (Accessed May 14, 2020). See also Saini (2019) and Tucker (1994).
- <sup>23</sup> See Daley (2018) and Fazackerly (2020) on the controversy. For a rejoinder from conference participants see Woodley of Menie et al. (2018).
- <sup>24</sup> Both Richard Haier, editor of *Intelligence*, and Catherine Salmon, editor of *Evolutionary Behavioral Sciences*, stated these motivations at the Heterodoxy in Psychology conference (Chapman University, January 2020).
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