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Biosocial criminology and the mismeasure of race

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ABSTRACT
This article examines biosocial criminology's partial social constructionism of race, that is a logic of difference that attempts to accommodate both a social and biological interpretation of race. We focus on the way biosocial criminologists operationalize race to outline the sociological consequences of what we see as a renewed commitment to the bio-criminalization of race. Biosocial criminologists do not reject that race is socially constructed, but in practice they disregard the main consequences and *raison d'être* of this postulate. Though biosocial criminologists praise the incorporation of cutting-edge science into criminology, the research programme's actual findings concerning race do not necessarily align with views from genetic and neuroscientific research. Instead, we argue that biosocial criminology solicits social constructionism as a shield to re-insert antiquated biologic notions of race through a guise of bio-sociality.

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Introduction

In the early 1990s, breakthroughs in genetics and neuroscience thrusted biocriminology back into the national spotlight. The dubious "scientific" methodologies that characterized the controversial research programme throughout most of the twentieth century were to be replaced with new aged biotechnologies that were said to yield a more productive and objective understanding of crime. Biocriminologists also maintained that the new biology of crime would focus specifically on the clinical *risk* for crime (Raine 1993), thus they both medicalized their view of violent behaviour, and strongly eschewed the characterization of their work as a search for the "born criminal". Moreover, the adoption of a more advanced scientific approach was framed as a way to protect against the unlikely return to the programme's racist past. For instance, forensic entomologist Gail Anderson (2006, 5) contends that the programme's problematic history was due to the "public's ignorance of

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the true facts" about biology and violence, a misapplication that would be avoided with the adherence to more advanced scientific practices. Anderson's claim, however, is better characterized as a *hope for*, rather than a cogent historical view of, biocriminology. Scientists actively created and sustained the atrocities related to past biocriminology through their research design, technological practices, and dissemination of "scientific" knowledge (Becker and Wetzell 2006).

What can be gleaned from Anderson's assertion, nevertheless, is that limiting the responsibility for biological racism or eugenic practices to a cadre of "racist" or "immoral" scientists is too simplistic. The production of biological science, as a whole, is always entwined with sociopolitical views (Jasanoff 2004). This means that the science of violence today, just like in the past, cannot simply step outside of the social or cultural landscapes that empower its production, expectation, and value. If today's researchers are better aware of the atrocities of the past, as Anderson's claims, what type of "truth" does today's biocriminology reveal about the roots of violence? How will these seemingly more progressive biological claims about violence inform the way we think about race, or more specifically, the artificial dependency forged between the processes of racialization and criminalization in society? To begin to think about these questions, we assess the use of race in biosocial criminology, a growing sub-discipline of criminology that characterizes its focus as the study of *both* biological and social factors in crime.

There has been an increasing, albeit slow and contested, uptake of genetics and neuroscience in social science research (Bliss 2018), but the incorporation of biological factors to the study of crime is arguably the most controversial application of "biosocial" science. Biosocial criminology argues that crime is best understood as an interaction(s) among biological and social factors. Traditional, meaning sociological, theories of crime are thought to be resistant to this "scientific revolution" due to ideological allegiances and misunderstandings about empirical power of today's science and technology (Walsh and Wright 2015). Critics of "neo-biocriminology", on the other hand, characterize these attempts to modernize criminology through contemporary biology as an invitation for the return of Lombroso's "criminal man" (Carrier and Walby 2014). They caution that today's biocriminology has not escaped the shadow of biological determinism, and that these new understandings of violence still threaten to discriminate against the most marginalized or vulnerable in our society (Duster 2003).

Scientists studying violence regularly reject the determinism critique as a misplaced idea about the search for a distinct criminal gene. They instead defend a multifactorial, polygenic approach where single causes are supplanted with a range of factors that place an individual *at-risk* for antisocial behaviour (Raine 2008). Despite this open rebuke of determinism, abandoning the "born criminal" project is much more complicated in practice.

Indeed, new scientific technologies may help rebrand biocriminology as more legitimate in the eyes of its proponents, but uncritical applications of technoscientific knowledge can obscure the complex social forces that impact the constitution, anticipation, and management of behaviour and criminality in society (Dumit 2014; Rollins 2014). In this article, we point out to the limits of biosocial criminology's engagements with the "social" to illustrate the ineptness of these models when applied to questions of race.

Biosocial criminologists try to hold together two polemics of race. Like their focus on biosocial factors in crime, they contend that race too is a calculation of biological and social components. Some biosocial criminologists adopt a "sociogenomic" (Bliss 2018) view of race, essentially depicting the addition of genetic ancestry as the key to developing more effective solutions for racial inequalities in crime. Others, however, take a more problematic stance, using contemporary science as backdoor to justify evolutionary claims about source of criminal behaviour, what we call a *partial* adherence to social constructionism. We are critical of both approaches, as both accept the possibility for, and in some cases defend the existence of, biologically discrete racial groupings, and subsequently designate race an expedient predictor for criminal activity. More troublesome, we find that a number of significant biosocial criminologists are ardent advocates for antiquated evolutionary psychology. Subsequently, this group uncritically adopts and applies essentialist ideas about race from these perspectives to explain the utility of race for biosocial criminology. Thus, biosocial criminology may aim to advance criminology through science, but many of its views on race seem to open the door for the return, or continuance, of yesteryear's scientific racism warned about by its critics.

Methodology

Sociologist Troy Duster, who has been one of the most vocal critics of the return of biocriminology (2003, 2006a), challenges the precarious "theoretical warrant" for genetic explanations of crime by exposing the dangerous intersection between racial and genetic claims of behaviour and their application in forensic and law enforcement practices. In this paper, we limit our assessment of race and biosocial criminology to the theoretical and empirical claims used to create biocriminological knowledges before they are adopted and relied upon by police departments or in criminal proceedings. Data for this article are part of a larger project investigating the development of, and controversies surrounding, biosocial criminology in the United States (Larregue 2017a).[1] Our sample included peer-reviewed empirical biosocial criminology articles ($n = 107$) from 23 peer-reviewed criminology journals (circa 2005–2016) and a sub-set of theoretically focused articles, books and book chapters ($n = 50$).

Each empirical publication was analysed using an adapted coding scheme from Martin and Yeung's (2003) analysis of the evolution of race in the *American Sociological Review*. We aimed to capture if and how each biosocial criminology article analysed the concept of race, using the following pre-set codes: (1) interest variable, (2) control variable, (3) race-specific sample, (4) other mention of race, or (5) no mention of race. As Martin and Yeung (2003, 533) make clear, using race as an independent variable for a statistical analysis does not necessarily convey its analytical significance. Hence, they draw a distinction between "interest variable" and "control variable". Though the line between the two categories is sometimes thin, interest variables are mentioned in the articles' title, abstract and keywords, and/or thoroughly discussed during the introduction and conclusion, whereas control variables reflect demographic qualities in the methodology section. "Race-specific" sample designate empirical papers using a population sample of one particular racial group, for instance exclusively white or African American. "Other mention" is a category reserved to papers that did not integrate race in their empirical analyses but still mention it, most of the time cursorily. Lastly, the category "no mention of race" concerns papers that do not make any mention of race.

Coding of empirical biosocial articles was paired with a closer reading of a select group of theoretically focused publications identified from the original article search. Publications were included it they provided a description of the use or definition of race in biosocial criminology, and/or discussed the implications of biosocial criminology for racial groups. Using this qualitative approach, we provide a substantial understanding of biosocial criminology's engagement with race and outline specific concerns related to the potential impacts of this knowledge on the practices of racialization and racism in larger society.

De-racializing biocriminology?

Contemporary genetic and neuroscientific investigations of crime and violence have been cautions with their treatment of race. As Duster (2006b, 10) points out, "most of those engaged in the search for the genetic basis of criminality are now scrupulously avoiding the issue of race". The "absence" of race does not mean that it is no longer an obstacle for the biology of crime (Duster 2006b; Rollins 2014), but it does reflect an ongoing effort by many proponents to adjudicate the programme's historical ties to scientific racism, and to rebrand neo-biocriminology as a beneficial and unbiased assessment of violence behaviour. We are not advocating that every study of crime must deal with race, but race neutrality does not mean impartiality, nor is it axiomatically a defence of research ethics, nor does it address fully the social concerns about racial prejudice. Instead,

purposely omitting race can feed into adverse tactics of *colour-blind racism* (Bonila-Silva 2006).

In contrast to genetic and neuroscientific research on violence, race seems to be having pertinent role in biosocial criminology. Race was mentioned or analysed in over three-fourths of the reviewed empirical biosocial criminology articles (see Table 1). Most often, however, race was limited to a control variable in the article's sample. Controlling for race is a normal component of social science research. However, race is neither a neutral category nor a linear variable, thus to truly control for race it would be necessary to mediate the interactive social relationships and processes that make and give meaning to the concept (Zuberi 2000; James 2008). Thus, while controlling for race is statistically sound, it may still limit a researcher's ability to decipher fully the complex significance of racial process on the aetiology of violence (Zuberi, Patterson, and Stewart 2015).

Only three out of the 107 biosocial criminology articles treated race as an interest variable (e.g. discussed the significance of race). However, these articles failed to account for the social mechanisms that actually make, reconstitute, and stratify racial experiences with crime, i.e. the *effects* of race. Hence, if we leave aside another three (out of five using a black population sample) race-specific papers (Simons et al. 2012; Burt, Sweeten, and Simons 2014; Simons and Barr 2014) using data from a longitudinal analysis of approximatively 900 African American families (FACHS), virtually no biosocial criminology articles directly address the social effects of race. In fact, there is an equal chance that a random paper in the sample will not mention race at all (23.4 per cent) or use race as an interest variable, use a race-specific sample, or make another mention of race (28 per cent).

Tracking the mentions of race in biosocial criminology articles unearths the programme's methodologies toward race, but alone it does not reveal how biosocial criminologists perceive the importance of race for the study of crime. Below we re-consider these results through our analysis of theoretically focused biosocial criminology publications. As we discuss, these more race-specific publications provided a greater understanding of

Table 1. Use of race in biosocial criminology empirical articles ($n = 107$).

Period		2005–2008 ($n = 17$)	2009–2012 ($n = 42$)	2013–2016 ($n = 48$)	2005–2016 ($n = 107$)
Interest variable		5.9%	2.4%	2%	2.8%
Control variable		64.7%	50%	41.7%	48.6%
Race-specific	Black	5.9%	4.8%	4.2%	4.7%
	White	0%	2.4%	0%	0.9%
Other mention		5.9%	11.9%	31.25%	19.6%
No mention		17.7%	28.6%	20.8%	23.4%

Source: Larregue (2017a, 291).

biosocial criminology's efforts to sketch the ontological importance of race and demonstrate its epistemological imports for the study of crime via biology.

Partial recognition of social construction

Biosocial criminologists acknowledge the social construction of race, but in practice they ignore its *raison d'être*. "The main constructionist premise" states philosopher Sally Haslanger (2003, 308), "is that our concepts and ideas are the product of historical [and sociocultural] forces and could have been different". Race works with and through our society to make and interpret meaning, structure and fracture collectives, and influence life choices and actions, and is both adaptable over time and mendable to differing social circumstances. Biosocial criminologists state that they acknowledge the "social" character of race, but in their scientific practice race is reduced to a biological referent.

Catherine Bliss (2018) uses the term *sociogenomic paradigm* to capture the way health and behavioural outcomes get refashioned as products of the combination of genetic and social influences in contemporary research. Race also gets refashioned through this paradigm, as *both* a social and genetic characteristic (Bliss 2012). Biosocial criminology exemplifies the diverse and uneven employment of a sociogenomic understanding of race. However, many of these readings of race are essentialist, which rely on a misreading of sociology in general, and of social constructionism in particular. Using a partial account of the social construction of race, biosocial criminologists have tried to frame their research through contemporary genetic and neuroscientific terms, while simultaneously drawing upon and extending antiquated biologic claims about race. New discoveries in genetics certainly play a role in the thinking behind race, but often the focus on "biological" race emphasizes evolutionary traits and physiological measures that are, at best, tangentially related to contemporary genetics. Instead of a true "biosocial" account, this paradigm frames social definitions of race as malign and dangerous, while promoting biological or genetic understandings as socially pure representations of race.

This partial social constructionist view of race is far from an antiracist stance, as it fails to recognize the historical and sociocultural schemes used to generate biological classifications of criminality and transforms race into the vital link between crime and biological peculiarities. This move impoverishes our understanding of race. It confines what the social is, and how it impacts criminal and legal outcomes, to biological properties. Indeed, race realism eschews the question to know why it is that distinct individuals and societies attribute different meanings or social worth to skin pigmentation or physical phenotype.

Race realism and political correctness

Biosocial criminology does not have an "official" statement on the use of race in research. Yet, our examination reveals a troublesome and uncritical ontological dependency on a biological basis of race. For example, biosocial criminologists Anthony Walsh and Ilhong Yun (2011) accept the existence of social constructionism, but they characterize it as unscientific and too ideological entrenched for the purist of knowledge. They propose that genetics provides an empirical referent for racial groups. Therefore, they refer to "race" as inconsequential in the sense that it can be replaced with any other term, like "population" or "ethnicity", without losing any significance. For Walsh and Yun, then, social constructionism undermines the true reality of race. Walsh and Yun's conceptualization of race does not specify a lone focus on phenotypical representations, but their perspective does advocate for biological science as the valid way to unearth the true nature of race.

We do not accept the rationale that biological science and technology is the most appropriate, or exclusive, method to prove (or disprove) the existence of race. The reality of race, its weight, value, and standards, works through and upon bodies, but is not reducible to calculable biological processes. What makes an object "real", is not simply what is observed with the naked eye or through technological practices, but instead "realty" is configured through sociocultural arrangements and symbolic meanings (Knorr-Cetina 2009). An acknowledgement of this contingent meaning making process is at the heart of social constructionism. Concepts like race, then, do not represent simple identifiers nor the inevitable result of an organic social reality (Lopez 1994; Omi and Winant 1994). Therefore, even if differences are observed, scientifically or otherwise, between human groups, it is how these *meanings* of differences are made to matter that underpins the realness of race in society.

Other biosocial criminologists have taken Walsh and Yun's logic further, depicting the social construction of race as the true threat to social equality. For instance, John P. Wright and Mark Morgan (2015, 70) contend that:

> [C]oncern that biological race will somehow incite people to hatred seems misplaced. The social construction of race is what we should be more concerned about given the tendency of powerful politicians and academic societies to manipulate public opinions and views.

Wright and Morgan's dichotomous interpretation of race has roots in the UNESCO debates on race in the late 1950s, in which "social" race was characterized as arising from an "ideological" or "false" understanding of the concept. Although Wright and Morgan acknowledge the practicality of the social construction of race, they characterize the perspective as too beholden to an "egalitarian fiction" of race. For them, racial differences and hierarchies

exist naturally due to evolutionary and genetic factors. While Walsh and Morgan are correct to note the political exploitation of race in society, their distinction between "social" and "biological" race is misleading.

First, as Ann Morning (2014b) makes clear, supporting the social constructionism of race is not a rejection of the fact or realness of race, and the perspective already accommodates biological notions of difference, thus a division between "social" race as dangerous and ideological and "biological" race as empirical and real is illogical. It is this flexibility of race that allows it to serve multiple, and even diametrically opposed, purposes at once in society. The social constructionism of race does not simply point out overt and obviously forms of individual discrimination based on racial identity, but seeks to uncover the structural, institutional, and systemic forms of inequality that arise from normal and mundane social practices and ideologies of race (Omi and Winant 1994; Bonila-Silva 2006). Wright and Morgan's challenge to constructionism, instead, endorses race, at least its "biological" version, as a socially detached and useful predictor of criminal behaviour, without fully acknowledging that the embedded consequences of such logics can reinforce and exacerbate racial inequalities in policing and criminal law under the guise of racial impartiality (Duster 2006a).

Second, Wright and Morgan (2015) make the egregious claim that social constructionists' politically driven "authoritarianism" in criminology impedes discoveries about the true cause of racial differences that will alleviate human suffering and inequality. This argument typifies a larger position of the sub-discipline, namely what many biosocial criminologists see as the need to challenge ideologically driven (sociological) criminology (for an analysis of this rhetoric, see: Larregue 2017b).[2] However, the intentions of this quest to transform criminology expands well beyond the adoption of biological science. It is clear that biosocial criminology sees the debate about biological origins of crime as a larger conflict over the authority of the discipline.

Sociologists are not the only ones who are accused by biosocial criminologists of being ideologically driven. It is quite telling that Walsh and Yun (2011, 1283) criticize prominent geneticist Luigi Luca Cavalli-Sforza's argument that molecular genetics does not support a biological notion of race as a "denial of race". Moreover, the attempts to employ ancestry, and move away from race, was not a simple "denial of race" but a strategic shift to help avoid the problematic interpretations of difference that accompany race (Bliss 2012). This is not to imply, however, that the move from racial categories to genetic ancestry or populations is without serious limitations (Fullwiley 2008; Fujimura and Rajagopalan 2011; Shim et al. 2014; Yudell et al. 2016) or conceptually transparent (Panofsky and Bliss 2017), but that the pushback from biosocial criminologists seems to limit these attempts to "de-racialize" such genetics as "political correctness".

The biological basis for crime argument is thus being portrayed by biosocial criminology as a struggle for the right to speak for criminology. The claim that "biological" race provides a more rational and empirical understanding of social difference has become an intricate, if not vital, component of this debate. Biosocial criminology's position on race is yet another manifestation of this stance. Thus, the question of race, both its ontology and value for criminology, is also about the right to dictate what type(s) of scientific claims about race matter for criminology.

Evolutionary distinctiveness: writing crime into race

Many of the biosocial criminologists mentioned above are heavily influenced by controversial academics like Arthur Jensen, Philippe Rushton, Richard Herrnstein and Charles Murray, who are depicted as models for the sub-discipline (Beaver, Barnes, and Boutwell 2015, 5). Their support of these provocative actors resonates through an embrace of evolutionary based ideas of race. This evolutionary stance positions race as (partly) biological, and the ostensible engineer of natural racial differences and outcomes. These views are reminiscent of Lombroso's atavism and related dubious scientific takes on race, biology, and crime of the early twentieth century that historian Khalil Muhammad (2010, 35) describes as "writing crime into race".

This version of race often undermines the long and extant list of theories that have placed sociopolitical practices at the heart of racial inequality. Instead, the evolutionary basis of race adopted by biosocial criminology attenuates the focus on inequality, supplanting it instead with a focus on "inconvenient truths" about the racialization of crime. For example, John P. Wright (2009, 151) argues that:

> [Evolution] helps explain why races would appear and under what condition races would appear. It helps to explain why certain traits would be beneficial and why these traits, such as higher IQ, would be unequally distributed across races. Moreover, evolutionary theory helps explain why race-based patterns of behavior are universal, such as black over-involvement in crime. No other paradigm organizes these patterns better. No other paradigm can explain these inconvenient truths.

While Wright's views *may* not be shared by all biosocial criminologists, we find it noteworthy that figures like Wright and Walsh are often tasked, in a quasi-official capacity, to write about biosocial criminology's view on race in popular textbooks and readers (see Walsh and Beaver 2008), or serve as co-authors for empirical articles focused on racial differences (Beaver, Wright, and Walsh 2008; Vaske et al. 2009; Beaver et al. 2013; Beaver, Barnes, and Boutwell 2014). As a result, the work from these biosocial criminologists suggest that African Americans, specifically their biological predisposition for lower intelligence, are the cause of their own social ills and "over-involvement" in criminal

activities (Beaver et al. 2013; Beaver, Schwartz, et al. 2013). These controversial views provide a path to *re*-introduce outdated and essentialist biological claims about racial origins through a supposedly racial conscious rhetoric of social constructionism.

Walsh and Beaver (2009) also use evolutionary biology to reframe sociological theories of crime, including Elijah Anderson's (2000) "code of the street" thesis to argue that African Americans' allegedly higher level of testosterone provides an evolutionary advantage in the selection of sexual partners for reproduction. The root of this argument is that African Americans males *naturally* produce more testosterone than their "white" or "Asian" counterparts. This perspective mimics the discredited arguments of Rushton's differential *r/K* hypothesis, which also depicts African Americans as innately more active sexually and less socially invested in parenting that other racial groups. Higher levels of testosterone are a positive consequence of genetic fitness, according to Walsh and Beaver (2009, 93), but one that is unfortunately settled through aggressive competitions over limited resources and often "trivial challenges" to male's reputation.

It is no accident that biosocial criminology has turned to subcultural theories on race and crime, like Anderson's code of the street. Subcultural theories in general have been criticized for their overemphasis on individual level factors, which can minimize structural, political, and economic factors that impact patterns of violence. These warnings are even more critical when Anderson's argument is read through an essentialist biosocial lens. Such interpretations illustrate well what Duster (2006c) calls a "reductionist challenge" for social scientists; a warning of the expanding search for individualized and biologized explanations for society's problems through the authority of science. The reduction of violence to antiquated evolutionary biological claims about sexuality and morality operate as a backdoor to remake race a serviceable predictor of crime, and as a result it renders the structural effects and lived experiences or race *less* significant.

Inequality through a biosocial criminology lens

Genetic researchers have linked the presence of monoamine oxidase A (MAOA) to a host of psychological disorders, including antisocial behaviour (Buckholtz and Meyer-Lindenberg 2014). Utilizing this research, biosocial criminologists contend that unique variants of MAOA, the so-called warrior gene, help explain specific criminal characteristics such as gang membership. For example, Beaver, Barnes, and Boutwell (2014) have suggested that the rarest variant of MAOA, the 2-repeat allele, is more common in African American men, which increases their likelihood to engage in criminal activity. The significance of this allele as a cause of violence, however, is curtailed due to its low distribution in society. The authors note that they omitted white males

from the sample because only 0.1 per cent of the population are assumed to carry the allele. Yet, they were interested in the estimated 5.5 per cent of African American men that are said to have the allele. Thus, MAOA becomes a natural explanation for African Americans involvement in crime, but a less useful in explaining crime by other racial groups. While the Beaver, Barnes, and Boutwell (2014, 263) admit that, "it would be premature to speculate as to the potential ramifications of the 2-repeat allele in explaining any of the well-known crime trends" such premature speculation is exactly what the entire article seems to convey. The article's title reads, "The 2-Repeat Allele of the MAOA Gene Confers an Increased Risk for Shooting and Stabbing Behaviors", and they group sums of the significance of the article in the abstract this way "analyses revealed that African American males who carry the 2-repeat allele are significantly more likely than all other genotypes to engage in shooting and stabbing behaviours and to report having multiple shooting and stabbing victims". Moreover, Beaver and colleagues' interest in the 2-repeat allele seem to counter the sub-discipline's larger argument about the biosocial basis of violence. They argue that this rare allele may work independently of environment; meaning, simply carrying the 2-repeat allele is interpreted as greater chance that that individual will engage in criminal behaviour.

This is not the only example where biosocial criminology positions biological factors over social influences. Social factors are often conceptualized as mere mediators that come afterwards to ameliorate or worsen the initial effect of one's biological makeup. In some studies, the point of departure returns to characteristics tied to intellect. Following the evolutionary logic proposed by Lee Ellis (1988, 704), a hierarchical arrangement criminality is constructed that aligns with a natural order of racial intelligence: "Asian > white > black". African Americans are placed biologically inferior to white and Asian people in terms of intelligence; but in optimal social conditions, they can manage to attain similar achievements as normal (white) or superior (Asian) races. The attention to "Asian" sub-groups operates as a rhetorical tool to downplay, if not negate altogether, the force that social inequality plays in structuring incarceration rates by racial groups. Thus, for different reasons, both African Americans and Asian Americans are treated as peculiar, exotic groups that require further investigations and comparison with the white standard.

Researchers like Walsh and Yun (2011) have operationalized this discourse about race and intelligence into a theory about MAOA levels and violence. In this article, social factors, such as living in homes contaminated by lead and other deleterious substances, become inscribed in biology. Poverty is equated with reduced serotonin and MAOA levels, which are themselves used to justify alleged higher criminal tendencies by African Americans. Walsh and Yun (2011, 1290) explain this stance this way:

> No one seriously doubts that African Americans score about one standard deviation below the white mean on IQ, but the environmental contribution to this gap is elusive. One such environmental factor is exposure to lead. Exposure to lead decreases IQ about 0.5 points per one unit increase of lead. Toxic levels of lead distort enzymes, interfere with the development of the endogenous opiate system, disrupt the dopamine system, and reduce serotonin and MAOA levels. Blacks tend to reside in the poorest neighborhoods and live in the oldest houses, where the main source of lead exposure today is lead dust from lead-based paint.

Hence, social and environmental influences are de-contextualized from their dynamic social meaning and rendered subsequent to biological factors. At the very least, poverty loses its social meaning. It is transformed into condition that acts first at the biological level to worsen decision making and exacerbate the role of MAOA on criminal behaviour. Thus, poverty is not simply a risk factor for crime, it is biology. Our intention is not to undermine the role poverty can have on the way society thinks about crime or criminal activities. However, poverty and violence impact all racial groups in the US, yet these researchers enacted a very specific interpretation of poverty, a flawed biologic reading that transparently focused on African Americans, and their believed (innate) weakness in intelligence, to justify the biological significance of MAOA on crime. This move undermines socio-economic informed solutions to crime and paves a path for medical and therapeutic interventions that undoubtedly will harden existing policing and criminal justice practices that already disproportionally impact African American communities.

In contrast to other biosocial criminologists, J.C. Barnes's (2017) take on the utility of race for biosocial criminology and emphasizes the need to better address racial inequalities in crime. Barnes calls for a more critical assessment of studies that use specific genetic variants thought to be related to the function of race, in order to link environment and crime. The idea of providing a more "complete" picture of race is understandable and enticing given the continued salience of racial stratification and the tenacity of racial inequities in US society. Yet, the crux, and what we see as the flaw, of Barnes's argument is the contention that elucidating the *genetic variants of race* will provide a more complete understanding of racial inequalities in crime. Indeed, according to Barnes, race represents a "noisy proxy for ancestry" (2017, 3).

This argument is viable only if race is stable genetic trait. Race, however, is not biological nor is it the cause of inequality. Racial inequalities in health are the outcomes of sociopolitical processes that structure and stratify social resources and life chances (Williams and Sternthal 2010; Kaufman et al. 2015). Though epidemiologists and biomedical researchers have also argued that assumed genetic variances in racial makeup provide a better understanding of health inequities (Burchard et al. 2003), attempts to augment social constructionist understandings of race with genetic ancestry research have overstated

the relationship between genetic clusters and societal notions of self-identified race, often conflating population level genealogies with a priori racial classifications (Fujimura et al. 2014; Morning 2014a). Racial classifications do not reflect a natural ordering of human populations, thus neither genetic clusters nor "clinal classes" capture a biological (or biosocial) reality, but reflect the dynamic sociopolitical processes that make and reinforce race (Duster 2006a; Roberts 2011; Morning 2014a; Fujimura et al. 2014b).

Moreover, in Barnes' argument, race serves as a connection between biological and social variables. Criminologists Nicolas Carrier and Kevin Walby (2014, 2015) have been critical of biosocial criminology's new found turn to the "social", illustrating its shortcomings as an empirical weakness of the programme's vision of "environment". Accordingly, these biosocial models of crime produce normative articulations of sociality that both impoverish the social by reducing it to simplistic quantifiable measures for "environment", and draw attention away from the highly variable and multidirectional ways social practices and bodily experiences act upon each other to produce their effects and ascribe meaning. To synthetize, Barnes's proposed *sociogenomic* fix for inequality is a more progressive racial stance than most of his peers, but it still uncritically privileges genetics as a more productive, and neutral, explanation of racial inequalities in crime.

Conclusion

Biocriminology's troublesome history illustrates the false hopes, dangers, and racist origins of biological conceptions of violence. Our analysis elucidates the biopolitical dimension of biocriminology, particularly how the dexterous flow and use of biological science can fuel biopolitical mechanisms that legitimate, either implicitly or overtly, societal hierarchies of racial value. The fact that race is *imperfect*, in a sense, permits different social values, traits, and politics to be read into the concept, and therefore it works as a powerful unifier of divergent, and in many ways nonsensical, affiliation and characteristics. Biological explanations of sociality, as Ruha Benjamin (2015) argues, do not require explicit racial or racist connation, yet such practices do necessitate a diagnostic appeal that empowers authoritative conjecture about group dynamics, boundaries, and values. Therefore, biological understandings can reduce race to a stable and immutable identifier that capitulates an inherent understanding of human difference and simultaneously sanitizes the political and social power of the concept.

Biosocial criminologists' partial constructionism is problematic as well. Haslanger (2003, 308) challenges constructionists to push beyond the question of causality, and instead focus on the equally important question of, "what justifies us in our ongoing commitment of a theory [or] classification scheme"? The important question here is not an origin story of race, but an

analysis of its function and how we come to *know* its usefulness in society. Therefore, approaching race through partially social constructed terms surrenders its most useful sociological analytic, that race is not simply a social construct, but is a *social process* in itself. Moreover, it is important to underline that biosocial criminologists' biological evolutionary framing of race directly conflicts with modern genetics. Contemporary geneticists, while still focused on differences between groups, have tried to abandon the well-worn biological conceptualizations of race that are clearly perceptible in writings of biosocial criminology (Fujimura and Rajagopalan 2011; Bliss 2012; Shim et al. 2014). Thus, it is not *because* of biosocial criminologists' use of genetics that they adopt an antiquated biological perspective on race and crime, but *despite* and *against* it.

This attempt to re-inscribe race into evolutionary terms is particularly salient in the US, where racialization is intimately tied to the question of crime justification for disparate policing tactics, and the criminalization of race itself relies upon a faulty idea that race is bounded by innate biological differences that more accurately explain, and rationalize, inequalities in US society. At best, biosocial criminology's current approach to race does little to protect against racial essentialism, which will implicitly advance a natural, and normative, explanation for a greater propensity toward criminality for certain racial groups. At worst, biosocial criminology is a conspicuous *racial project* (Omi and Winant 1994) that actively refuels and rationalizes the *bio*-criminalization of race through a guise of a progressive biosocial stance.

Notes

1. A more detailed discussion of this methodology can be found in Larregue (2017a).
2. Carrier and Walby (2014, 2015) aptly demonstrate that criminology's hesitation to biosocial perspectives of crime has little to do with ideological or political inflexibility of social scientists, but the paucity of this paradigm's assertions and its own political purposes.

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References

Anderson, Elijah. 2000. *Code of the Street: Decency, Violence, and the Moral Life of the Inner City*. Reprint edition. New York, NY: W. W. Norton & Company.

Anderson, Gail S. 2006. *Biological Influences on Criminal Behavior*. Boca Raton, FL: CRC Press.

Barnes, J. C. 2017. "A Constructivist View of Race in Modern Criminology." *Journal of Criminal Justice*, 1–6. doi:10.1016/j.jcrimjus.2017.07.005.

Beaver, Kevin M., J. C. Barnes, and Brian B. Boutwell. 2014. "The 2-Repeat Allele of the MAOA Gene Confers an Increased Risk for Shooting and Stabbing Behaviors." *Psychiatric Quarterly* 85 (3): 257–265. doi:10.1007/s11126-013-9287-x.

Beaver, Kevin M., J. C. Barnes, and Brian B. Boutwell. 2015. "Introduction: Why We Need a Nature/Nurture Book in Criminology." In *The Nurture Versus Biosocial Debate in Criminology: On the Origins of Criminal Behavior and Criminality*, edited by Kevin M. Beaver, J. C. Barnes, and Brian B. Boutwell, 1–8. Thousand Oaks: SAGE Publications.

Beaver, Kevin M., Matt DeLisi, John Paul Wright, Brian B. Boutwell, J. C. Barnes, and Michael G. Vaughn. 2013. "No Evidence of Racial Discrimination in Criminal Justice Processing: Results From the National Longitudinal Study of Adolescent Health." *Personality and Individual Differences* 55 (1): 29–34.

Beaver, Kevin M., Joseph A. Schwartz, Joseph L. Nedelec, Eric J. Connolly, Brian B. Boutwell, and J. C. Barnes. 2013. "Intelligence is Associated with Criminal Justice Processing: Arrest through Incarceration." *Intelligence* 41 (5): 277–288.

Beaver, Kevin M., John Paul Wright, and Anthony Walsh. 2008. "A Gene-Based Evolutionary Explanation for the Association Between Criminal Involvement and Number of Sex Partners." *Biodemography and Social Biology* 54 (1): 47–55.

Becker, Peter, and Richard F. Wetzell, eds. 2006. *Criminals and Their Scientists: The History of Criminology in International Perspective*. 1st ed. Cambridge, UK: Cambridge University Press.

Benjamin, Ruha. 2015. "The Emperor's New Genes Science, Public Policy, and the Allure of Objectivity." *The ANNALS of the American Academy of Political and Social Science* 661 (1): 130–142.

Bliss, Catherine. 2012. *Race Decoded: The Genomic Fight for Social Justice*. Stanford: Stanford University Press.

Bliss, Catherine. 2018. *Social by Nature: The Promise and Peril of Sociogenomics*. Stanford: Stanford University Press.

Bonilla-Silva, Eduardo. 2006. *Racism Without Racists: Color-Blind Racism and the Persistence of Racial Inequality in America*. 2nd ed. Lanham: Rowman & Littlefield Publishers.

Buckholtz, Joshua W., and Andreas Meyer-Lindenberg. 2014. "MAOA and the Bioprediction of Antisocial Behavior: Science Fact and Science Fiction." In *Bioprediction, Biomarkers, and Bad Behavior: Scientific, Legal, and Ethical Challenges*, edited by Ilina Singh, Walter P. Sinnott-Armstrong, and Julian Savulecu, 131–152. New York: Oxford University Press.

Burchard, Esteban González, Elad Ziv, Natasha Coyle, Scarlett Lin Gomez, Hua Tang, Andrew J. Karter, Joanna L. Mountain, Eliseo J. Pérez-Stable, Dean Sheppard, and Neil Risch. 2003. "The Importance of Race and Ethnic Background in Biomedical Research and Clinical Practice." *New England Journal of Medicine* 348 (12): 1170–1175. doi:10.1056/NEJMsb025007.

Burt, Callie H., Gary Sweeten, and Ronald L. Simons. 2014. "Self-Control Through Emerging Adulthood: Instability, Multidimensionality, and Criminological Significance." *Criminology; An interdisciplinary Journal* 52 (3): 450–487. doi:10.1111/1745-9125.12045.

Carrier, Nicolas, and Kevin Walby. 2014. "Ptolemizing Lombroso: The Pseudo-Revolution of Biosocial Criminology." *Journal of Theoretical and Philosophical Criminology* 6 (1): 1–45.

Carrier, Nicolas, and Kevin Walby. 2015. "For Sociological Reason: Crime, Criminalization, and the Poverty of Biosocial Criminology." *Journal of Theoretical and Philosophical Criminology* 7 (1): 73–82. http://www.jtpcrim.org/January-2015/For-sociological-reason.pdf.

Dumit, Joseph. 2014. "How (Not) to Do Things with Brain Images." In *Representation in Scientific Practice Revisited*, edited by Catelijne Coopmans, Janet Vertesi, Michael E. Lynch, and Steve Woolgar, 291–313. Boston: MIT Press.

Duster, Troy. 2003. *Backdoor to Eugenics*. 2nd ed. New York: Routledge.

Duster, Troy. 2006a. "Behavioral Genetics and Explanations of the Link Between Crime, Violence, and Race." In *Wrestling with Behavioral Genetics: Science, Ethics, and Public Conversation*, edited by Erik Parens, and Audrey R. Chapman, 150–175. Baltimore: Johns Hopkins University Press.

Duster, Troy. 2006b. "Lessons From History: Why Race and Ethnicity Have Played a Major Role in Biomedical Research." *The Journal of Law, Medicine & Ethics* 34 (3): 487–496.

Duster, Troy. 2006c. "Comparative Perspectives and Competing Explanations: Taking on the Newly Configured Reductionist Challenge to Sociology." *American Sociological Review* 71 (1): 1–15. doi:10.1177/000312240607100101.

Ellis, Lee. 1988. "Criminal Behavior and r/K Selection: An Extension of Gene-Based Evolutionary Theory." *Personality and Individual Differences* 9 (4): 697–708.

Fujimura, Joan H., Deborah A. Bolnick, Ramya Rajagopalan, Jay S. Kaufman, Richard C. Lewontin, Troy Duster, Pilar Ossorio, and Jonathan Marks. 2014. "Clines Without Classes: How to Make Sense of Human Variation." *Sociological Theory* 32 (3): 208–227.

Fujimura, Joan H., and Ramya Rajagopalan. 2011. "Different Differences: The Use of 'Genetic Ancestry' Versus Race in Biomedical Human Genetic Research." *Social Studies of Science* 41 (1): 5–30.

Fullwiley, Duana. 2008. "The Biologistical Construction of Race 'Admixture' Technology and the New Genetic Medicine." *Social Studies of Science* 38 (5): 695–735. doi:10.1177/0306312708090796.

Haslanger, Sally. 2003. "Social Construction: The 'Debunking' Project." In *Socializing Metaphysics: The Nature of Social Reality*, edited by Frederick F. Schmitt, 301–325. Lanham, MD: Rowman & Littlefield Publishers.

James, Angela. 2008. "Making Sense of Race and Racial Classifications." In *White Logic, White Methods: Racism and Methodology*, edited by Tukufu Zuberi, and Eduardo Bonilla-Silva, 31–47. Lanham, MD: Rowman & Littlefield.

Jasanoff, Sheila. 2004. *States of Knowledge: The Co-Production of Science and the Social Order*. London: Routledge.

Kaufman, Jay S., Lena Dolman, Dinela Rushani, and Richard S. Cooper. 2015. "The Contribution of Genomic Research to Explaining Racial Disparities in Cardiovascular Disease: A Systematic Review." *American Journal of Epidemiology* 181 (7): 464–472. doi:10.1093/aje/kwu319.

Knorr-Cetina, Karin. 2009. *Epistemic Cultures: How the Sciences Make Knowledge*. Cambridge: Harvard University Press.

Larregue, Julien. 2017a. *Décoder la génétique du crime. Développement, structure et enjeux de la criminologie biosociale aux États-Unis*. Doctoral dissertation, Aix-en-Provence: Aix-Marseille Université.

Larregue, Julien. 2017b. "La criminologie biosociale à l'aune de la théorie du champ. Ressources et stratégies d'un courant dominé de la criminologie états-unienne." *Déviance et Société* 41 (2): 167–201.

Lopez, Ian F. Haney. 1994. "The Social Construction of Race: Some Observations on Illusion, Fabrication, and Choice." *Harvard Civil Rights-Civil Liberties Law Review* 29: 1–62.

Martin, John Levi, and King-To Yeung. 2003. "The Use of the Conceptual Category of Race in American Sociology, 1937–99." *Sociological Forum* 18 (4): 521–543.

Morning, Ann. 2014a. "And You Thought We Had Moved Beyond All That: Biological Race Returns to the Social Sciences." *Ethnic and Racial Studies* 37 (10): 1676–1685. doi:10.1080/01419870.2014.931992.

Morning, Ann. 2014b. "Does Genomics Challenge the Social Construction of Race?" *Sociological Theory* 32 (3): 189–207. doi:10.1177/0735275114550881.

Muhammad, Khalil Gibran. 2010. *The Condemnation of Blackness: Race, Crime, and the Making of Modern Urban America*. 1st ed. Cambridge, MA: Harvard University Press.

Omi, Michael, and Howard Winant. 1994. *Racial Formation in the United States*. 2nd ed. New York: Routledge.

Panofsky, Aaron, and Catherine Bliss. 2017. "Ambiguity and Scientific Authority: Population Classification in Genomic Science." *American Sociological Review* 82 (1): 59–87.

Raine, Adrian. 1993. *The Psychopathology of Crime: Criminal Behavior as a Clinical Disorder*. 1st ed. San Diego, CA: Academic Press.

Raine, Adrian. 2008. "From Genes to Brain to Antisocial Behavior." *Current Directions in Psychological Science* 17 (5): 323–328.

Roberts, Dorothy. 2011. *Fatal Invention: How Science, Politics, and Big Business Re-Create Race in the Twenty-First Century*. New York: The New Press.

Rollins, Oliver E. 2014. "Unlocking the Violent Brain: A Sociological Analysis of Neuroscience Research on Violent and Aggressive Behaviors." *Dissertation*, San Francisco: University of California.

Shim, Janet K., Katherine Weatherford Darling, Martine D. Lappe, L. Katherine Thomson, Sandra Soo-Jin Lee, Robert A. Hiatt, and Sara L. Ackerman. 2014. "Homogeneity and Heterogeneity as Situational Properties: Producing – and Moving Beyond? – Race in Post-Genomic Science." *Social Studies of Science* 44 (4): 579–599.

Simons, Ronald L., and Ashley B. Barr. 2014. "Shifting Perspectives: Cognitive Changes Mediate the Impact of Romantic Relationships on Desistance From Crime." *Justice Quarterly* 31 (5): 793–821. doi:10.1080/07418825.2012.704388.

Simons, Ronald L., Man Kit Lei, Eric A. Stewart, Gene H. Brody, Steven R. H. Beach, Robert A. Philibert, and Frederick X. Gibbons. 2012. "Social Adversity, Genetic Variation, Street Code, and Aggression: A Genetically Informed Model of Violent Behavior." *Youth Violence and Juvenile Justice* 10 (1): 3–24. doi:10.1177/1541204011422087.

Vaske, Jamie, Matthew Makarios, Danielle Boisvert, Kevin M. Beaver, and John Paul Wright. 2009. "The Interaction of DRD2 and Violent Victimization on Depression: An Analysis by Gender and Race." *Journal of Affective Disorders* 112 (1): 120–125. doi:10.1016/j.jad.2008.03.027.

Walsh, Anthony, and Kevin M. Beaver. 2008. *Biosocial Criminology: New Directions in Theory and Research*. New York: Routledge.

Walsh, Anthony, and Kevin M. Beaver. 2009. "Biosocial Criminology." In *Handbook on Crime and Deviance*, edited by Marvin D. Krohn, Alan J. Lizotte, and Gina Penly Hall, 79–101. New York: Springer.

Walsh, Anthony, and John Paul Wright. 2015. "Rage Against Reason: Addressing Critical Critics of Biosocial Research." *Journal of Theoretical and Philosophical Criminology* 7: 61–72.

Walsh, Anthony, and Ilhong Yun. 2011. "Race and Criminology in the Age of Genomic Science." *Social Science Quarterly* 92 (5): 1279–1296. doi:10.1111/j.1540-6237.2011.00818.x.

Williams, David R., and Michelle Sternthal. 2010. "Understanding Racial/Ethnic Disparities in Health: Sociological Contributions." *Journal of Health and Social Behavior* 51 (Suppl.): S15–S27. doi:10.1177/0022146510383838.

Wright, John P. 2009. "Inconvenient Truths: Race and Crime." In *Biosocial Criminology: New Directions in Theory and Research*, edited by Anthony Walsh and Kevin M. Beaver, 137–157. New York: Routledge.

Wright, John Paul, and Mark Alden Morgan. 2015. "Human Biodiversity and the Egalitarian Fiction." In *The Nurture Versus Biosocial Debate in Criminology: On the Origins of Criminal Behavior and Criminality*, edited by Kevin Beaver, J. C. Barnes, and Brian Boutwell, 55–74. Thousand Oaks: SAGE.

Yudell, Michael, Dorothy Roberts, Rob DeSalle, and Sarah Tishkoff. 2016. "Taking Race out of Human Genetics." *Science* 351 (6273): 564–565. doi:10.1126/science.aac4951.

Zuberi, Tukufu. 2000. "Deracializing Social Statistics: Problems in the Quantification of Race." *The Annals of the American Academy of Political and Social Science* 568: 172–185.

Zuberi, Tukufu, Evelyn J. Patterson, and Quincy Thomas Stewart. 2015. "Race, Methodology, and Social Construction in the Genomic Era." *The ANNALS of the American Academy of Political and Social Science* 661 (1): 109–127. doi:10.1177/0002716215589718.