



Article

The New Eugenics: Black Hyper-Incarceration and Human Abatement

James C. Oleson

Department of Sociology, The University of Auckland, Level 9, HSB Building, 10 Symonds Street, Private Bag 92019, Auckland 1142, New Zealand; j.oleson@auckland.ac.nz; Tel.: +64-937-375-99

Academic Editor: Bryan L. Sykes

Received: 14 June 2016; Accepted: 20 October 2016; Published: 25 October 2016

Abstract: In the early twentieth century, the eugenics movement exercised considerable influence over domestic US public policy. Positive eugenics encouraged the reproduction of "fit" human specimens while negative eugenics attempted to reduce the reproduction of "unfit" specimens like the "feebleminded" and the criminal. Although eugenics became a taboo concept after World War II, it did not disappear. It was merely repackaged. Incarceration is no longer related to stated eugenic goals, yet incapacitation in prisons still exerts a prophylactic effect on human reproduction. Because minorities are incarcerated in disproportionately high numbers, the prophylactic effect of incarceration affects them most dramatically. In fact, for black males, the effect of hyper-incarceration might be so great as to depress overall reproduction rates. This article identifies some of the legal and extralegal variables that would be relevant for such an analysis and calls for such an investigation.

Keywords: eugenics; race; ethnicity; incarceration; prison; prophylactic effect

"[W]hen eugenics reincarnates this time, it will not come through the front door, as with Hitler's Lebensborn project. Instead, it will come by the back door..." ([1], p. x).

1. Introduction

At year-end 2014, more than 2.2 million people were incarcerated in US jails and prisons [2], confined at a rate of 698 persons per 100,000 [3]. This per capita rate of mass incarceration means that the US has the second-highest rate of recorded incarceration in the world, surpassed (for the moment) only by the tiny nation of the Seychelles [3]. The US is an incarceration nation. However, not all US citizens are equally likely to be incarcerated. For example, the poor are far more likely to go to prison than are the rich [4]; Males are far more likely to go to prison than are women [5]; and—in particular—minority males are much more likely to go to prison, and for longer periods of time [6], than are white males. Indeed, Hispanic males are incarcerated at more than twice the rate of non-Hispanic white males and black males are incarcerated at nearly six times the rate of non-Hispanic white males [5]. Such concentrated hyper-incarceration of minority males can, for example, strain already disadvantaged neighborhoods and drive up—not down—community crime rates [7]. Similarly, when refracted through felony disenfranchisement laws, the hyper-incarceration of minorities can also squelch democratic participation in civic government [8,9]. Furthermore, as explored in this article, the hyper-incarceration of minorities can also exert a prophylactic effect on human reproduction rates. Specifically, because US courts have held that reproductive rights are extinguished by incarceration [10–13], most of the 2.2 million individuals who are confined in US jails and prisons cannot have children (at least for the duration of their sentences). Nearly three in five (57.4%) of these prisoners are either Hispanic or black [5]. Because so many black men and women are incarcerated, especially during critical childbearing years, the prison as an institution may influence overall fertility rates [14]. Although the prophylactic effect of minority hyper-incarceration may not be

a stated goal of the modern prison, the prison might nevertheless produce that double effect, operating as a de facto new eugenics.

Section 2 of this article traces the development of eugenic ideology throughout the late nineteenth and early twentieth centuries, in the US and elsewhere, distinguishing positive eugenics (which encouraged the reproduction of "fit" human specimens) from negative eugenics (which discouraged the reproduction of "unfit" specimens). One "unfit" population, deemed worthy of extirpation by many, was the natural and incorrigible criminal [15], described in Section 3. By 1942, more than a dozen US states had enacted legislation that authorized the forcible sterilization of criminals [16]. Although the sterilization of offenders may sound like an archaic and discredited practice, it continues to this day in several US jurisdictions [17]. Of course, because US courts have held that "the right to procreate...is fundamentally inconsistent with incarceration" ([10], p. 623), surgical and chemical sterilization might be superfluous: mere incarceration can prevent offenders from reproducing. Section 4 examines the prophylactic effects of mass incarceration (the incarceration of wide swaths of the population) and minority hyper-incarceration (the incarceration of relatively large fractions of a minority population). Although this article cannot determine whether the hyper-incarceration of minorities—especially black males—is sufficient to depress overall minority fertility rates, Section 5 identifies some of the variables that might be relevant to such an analysis and explains why such an analysis is timely. Section 6 concludes by linking the history of US eugenics to the hyper-incarceration of minorities in contemporary prisons.

2. Applied Evolution: The Rise of Eugenics

Charles Darwin is regarded as one of the most influential scientists in history [18]. His demonstration of evolutionary principles revolutionized science, and—in a multitude of ways—also transformed the social world. For example, Darwin's cousin, Francis Galton [19], extrapolated the laws of genetic inheritance to arrive at the concept of human eugenics ("good birth"). Eugenics promised to equip humanity with the tools to shape its own evolution, thereby enhancing well-being and eradicating illness, crime, poverty, and vice. Such influence over genetics seemed to be imbued with almost divine power.

God is still doing the same thing. However, in our day, instead of using tables of stone, burning bushes, prophesies and dreams to reveal His will, He has given men the microscope, the spectroscope, the telescope, the chemist's test tube and the statistician's curve in order to enable men to make their own revelations. These instruments of divine revelation have not only added an enormous range of new commandments—an entirely new Decalogue—to man's moral codes, but they have supplied him with the technique for putting the old ones into effect ([20], pp. 17–18).

In both the United States and Britain, eugenics unified social radicals and stalwart conservatives, and became popular among white, middle class, educated people, including luminaries such as Havelock Ellis, Nikola Tesla, George Bernard Shaw, and Emma Goldman. Women, as well as men, participated in the eugenic movement, and professionals—physicians, clergy, social workers, writers, and professors—typically served as its leaders [21]. The movement had powerful backers: US philanthropists Andrew Carnegie and John D. Rockefeller Jr. funded the establishment and operation of the Eugenic Record Office in Cold Spring Harbor, New York between 1910 and 1940 [21,22]. Accordingly, the movement exerted enormous influence over US public policy [23]. Eugenics "shaped social policy governing crime control, education, liquor consumption, marriage and birth control, mental retardation, poor relief, and sterilization" ([24], p. 30). It did so through both positive and negative eugenics.

On one side of the coin, so-called positive eugenics sought to increase the reproductive rates of "fit" human specimens. In this context, "positive" merely implies the increase of a population, although the term also connotes normative qualities: desirable, favored, and good [25]. President

Theodore Roosevelt appealed to positive eugenics in his 1903 State of the Union address, stating that "willful sterility is, from the standpoint of the nation, from the standpoint of the human race, the one sin for which there is no atonement" (in [26], p. 61). Starting with Topeka's Kansas Free Fair in 1920, state fairs across the US featured "better baby" and "fitter family" contests, in which prizes were awarded for superior human husbandry [21,22,25]. Sinclair Lewis [27] lampooned eugenic pageants of this kind in his novel, *Arrowsmith*. Ivy League egg donors and the "genius" sperm bank [28] are other examples of positive eugenics.

On the other side of the coin, so-called negative eugenics sought to reduce the reproduction of "unfit" specimens, such as the physically handicapped, the mentally ill and mentally handicapped, or those with antisocial tendencies. Many eugenicists called for the lifelong quarantine of such individuals, but others—more radically—identified the killing of these individuals as "the surest, the simplest, the kindest, and most humane means for preventing reproduction" ([29], p. 188). Numerous eugenic family studies were conducted with poor, white families ("white trash") throughout the late nineteenth and early twentieth centuries [24], examining the intergenerational transmission of poverty, sloth, ignorance, and illness. At root, these studies were dysgenic assessments of low class, often immigrant, families. Robert Dugdale's [30] study of the Jukes, a family of New York hill people, is one of the best known of the eugenic studies. Dugdale concluded that both environmental and hereditary factors played key roles in the transmission of crime, deviance, and disease in the family. He calculated the cost of maintaining the Jukes on benefits and in institutions to exceed \$1.3 million, and urged policymakers to improve the social environment. Later, Arthur Estabrook [31] expanded the Jukes study and determined that, since 1800, the Jukes had cost the New York public at least \$2 million (\$45 million in 2016 dollars). Unlike Dugdale, Estabrook emphasized the hereditary causes of social problems and urged that such families should be prevented from reproducing. Social class was equated with human worth [24], and low-class, undesirable families—a drain upon the public coffers—were understood as a blight upon society, a burden to be relieved through mechanisms of human abatement.

Henry H. Goddard [32] arrived at similar conclusions. Goddard traced the Kallikak family (Kallikak is Goddard's neologism, combining the Greek words for beautiful, *kallos*, and bad, *kakos*) back to a revolutionary soldier, Martin Kallikak. The *kallos* in Goddard's account relates to the line of abstemious offspring that Kallikak produced when he married a "worthy girl" from a good family: 496 doctors, lawyers, educators, and merchants. This is a story of positive eugenics worthy of a fitter family contest. The *kakos* in Goddard's account, however, relates to a feebleminded son that Kallikak fathered with a feebleminded barmaid while on his way home from battle. That squalid line of 480 descendants included illegitimate children, sexually-immoral people, alcoholics, and brothel-keepers; 143 were feebleminded. In *The Kallikak Family*, Goddard argues that "segregation and colonization" ([32], p. 105) are promising interventions for negative eugenics, but "[t]he other method proposed of solving the problem is to take away from these people the power of procreation" ([32], pp. 106–7).

The recommendation to strip reproductive rights from the "unfit" was vindicated in the US Supreme Court decision, *Buck v. Bell* [33]. The case asked whether the state of Virginia could forcibly sterilize Carrie Buck, an eighteen-year-old feebleminded woman who, being "promiscuous", had given birth to an illegitimate and feebleminded daughter. History suggests that Carrie Buck actually was neither feebleminded nor promiscuous at all, but a victim, raped by the nephew of her adoptive mother, who then committed her to the Virginia State Colony for Epileptics and Feebleminded to conceal the crime. Indeed, Carrie's own lawyer might have colluded with the legal opposition in the case [34]. Nevertheless, the US Supreme Court said yes: Virginia's interest in public welfare did outweigh Carrie Buck's reproductive rights. Writing for the majority of the Court, Justice Oliver Wendell Holmes—a supporter of eugenics—famously reasoned:

We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the State for these lesser sacrifices, often not felt to be such by those concerned, in

order to prevent our being swamped with incompetence. It is better for all the world if, instead of waiting to execute degenerate offspring for crime or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. The principle that sustains compulsory vaccination is broad enough to cover cutting the Fallopian tubes. Three generations of imbeciles are enough ([33], p. 207).

Stephen Jay Gould describes the passage as "one of the most famous and chilling statements of our century" ([35], p. 335). Nevertheless, seven of the eight remaining Justices on the Court joined Holmes's opinion. The lone dissenter in the case, Pierce Butler, a Catholic, did not produce an opinion. Holmes's chilling statement in *Buck v. Bell* legitimated the forcible sterilization of 60,000+ people across the United States; and the Virginia sterilization law used the same model eugenic language that Hitler later invoked to sterilize millions [34].

Although the US eugenic movement initially focused on poor whites (particularly European immigrants), negative eugenic arguments were applied to blacks (particularly Southern blacks)—during and after the Great Depression of 1929–1939. The sterilization of people who might have children requiring public assistance was an attractive idea to many policy makers, and purportedly led to wide-scale round-ups of welfare recipient families in Virginia [26]. Eugenic concerns about the contamination of the Anglo-Saxon white race by blacks (and other "inferior" races) fueled the passage of anti-miscegenation laws across the United States; by 1940, 30 states had prohibited interracial marriage [26]. These laws were not rejected by the US Supreme Court as unconstitutional until 1967 [36]. Enduring associations between black ethnicity and eugenic conceptions of "feeblemindedness" can be glimpsed within biological explanations for gaps between black and white levels of academic achievement. For example, Arthur Jensen [37] famously stirred controversy when he argued that Project Head Start initiatives failed to boost African American IQ scores because 80% of IQ is biological. Psychologists have reported an American black-white IQ difference of approximately 15 IQ points [38,39]—one standard deviation—although the explanation for such a difference remains a matter of speculation.

In Hitler's Germany, the eugenic agenda was pursued with abandon. In terms of positive eugenics, under the Lebensborn scheme, unmarried "racially pure" women in Germany and occupied Norway were used to breed Aryan children [40]. In terms of negative eugenics, forced sterilizations of 400,000 people living "life unworthy of life" and the forced euthanasia of 70,000+ in the Action T4 program [41] paved the way for the mass extermination of 6 million Jews (and 5 million others) during the Holocaust. Some commentators suggest that the revelation of Nazism's atrocities closed the book on any credible form of eugenics. "[T]he revelations of the Holocaust had all but buried the eugenic ideal. After the Second World War, 'eugenics' became a word to be hedged with caveats in Britain and virtually a dirty word in the United States, where it had long been identified with racism" ([21], p. 251). But eugenics never really went away. Buck v. Bell [33] has never been overruled by the Supreme Court, which means it continues to operate as legal precedent. Several US states continued to forcibly sterilize citizens into the 1970s and 1980s [22]. The public policy arguments of negative eugenics still linger, played out in debates about whether welfare recipients could be incentivized to receive birth control [42]. "Hereditarianism...did not perish after World War II; it was repackaged" ([22], p. 3). As Troy Duster [1] has insightfully noted, contemporary social life has shifted to afford a much greater role for genetics, in the forms of prenatal diagnoses, genetic engineering to mitigate congenital problems, blood banks, sperm banks, and genetic screening for employees. Yet while the mapping of the human genome has increased the accuracy of genetic sciences, a map of the genome cannot answer questions about under what circumstances genetic interventions are appropriate. These questions are inherently social, political, and economic. Thus, although the word "eugenics" may not be mentioned explicitly in today's era of genomics and epigenetics, its concepts remain as relevant as ever.

Soc. Sci. **2016**, 5, 66 5 of 20

3. Tainted Meat: The Story of Eugenic Criminology

Eugenics is closely linked to criminology [24]. It always has been: the early roots of the two disciplines were tightly intertwined. The logic of negative eugenics that justified the forced sterilization of Carrie Buck and produced the Nazi's Action T4 program applied also to criminals. The pioneering Italian criminologist Cesare Lombroso [15] claimed that the natural criminal is an atavistic being, a product of reverse evolution who can be identified by physical stigmata such as powerful jaws, high cheekbones, supple hair, and handle-shaped ears. Although a few criminals might commit crime because of a bad environment, the natural criminal can be neither deterred nor rehabilitated. Lombroso declared war against this alien species:

Born criminals, programmed to do harm, are atavistic reproductions of not only savage men but also the most ferocious carnivores and rodents. This discovery should not make us more compassionate toward born criminals (as some claim), but rather should shield us from pity, for these beasts are members of not our species but the species of bloodthirsty beasts ([15], p. 348).

When Gertrude Davenport published "Hereditary Crime" in the *American Journal of Sociology* in 1907, she invoked the criminal anthropology of Lombroso when she wrote about "habitual criminals—criminals who are bred as race horses are bred, by the process of assortive mating. Such are outside the pale of beneficent environment. They can no more help committing crime than race horses can help going" ([24], pp. 66, 68). Eugenicists also invoked Lombroso's ideas of degeneration and atavism in Nazi Germany to justify racial hygiene laws and the extermination of undesirables [43]. Of course, later criminologists argued it is not atavism that distinguishes the criminal from the non-criminal, but low intelligence [44–47]. Indeed, feeblemindedness and criminality were regarded as interchangeable for much of the early twentieth century, or at least as closely linked categories. Lewis Terman, an early champion of IQ testing—the principal instrument for eugenic assessment—wrote that "not all criminals are feeble-minded, but all feeble-minded persons are at least potential criminals" ([48], p. 11). Like the feebleminded, criminals were also a drain upon society, and therefore an appropriate object for negative eugenics. The criminal law provided eugenicists with an excellent tool for limiting the reproduction of unfit criminals with antisocial thinking.

[T]he penal code is par excellence a group of eugenic measures... Hence the penal code is a eugenic instrument, although until today, it has been without consciousness of this function. And following the results of eugenic science, it can tomorrow widen or narrow the circle of crimes in the end of conducing to the physical and psychic improvement of the race ([49], p. 15).

By 1942, 29 of the 48 US states had enacted forcible sterilization laws, of which 13—California, Connecticut, Delaware, Idaho, Iowa, Kansas, Nebraska, North Dakota, Oklahoma, Oregon, Utah, Washington, and Wisconsin—authorized the sterilization of criminals [16]. These laws, it was believed, would prevent the transmission of criminogenic traits to the incorrigible criminal's offspring. However, in *Skinner v. Oklahoma* [50], a unanimous US Supreme Court struck down the Oklahoma law authorizing the forcible sterilization of habitual felons [51]. The constitutional flaw in the legislation was *not* that it permitted Oklahoma to sterilize Jack Skinner (who had stolen chickens and later committed two armed robberies), but that it excluded habitual white-collar felons from eligibility. This disparity violated the Equal Protection Clause of the Constitution. That being said, the majority was cognizant of the risks in allowing a state to sterilize its citizens. Writing for the majority, Justice William O. Douglas wrote, "The power to sterilize, if exercised, may have subtle, far-reaching and devastating effects. *In evil or reckless hands it can cause races or types which are inimical to the dominant group to wither and disappear*" ([50], p. 541, italics added). In his concurring opinion, Justice Robert H. Jackson—who three years later would serve in the Nuremberg Tribunals as Chief US Prosecutor—wrote, "There are limits to the extent to which a legislatively represented majority may conduct biological experiments at the expense of the

dignity and personality and natural powers of a minority—even those who have been guilty of what the majority defines as crimes" ([50], p. 546, italics added).

The forcible sterilization of criminals might sound like something out of the eugenic past, but the practice continues to this day. Between 2006 and 2010, 148 women in two California prisons received tubal ligation without the required state approvals; many of them reported being coerced [52]. James Heinrich, one of the physicians accused of pressuring women into the procedure acknowledged a underlying eugenic rationale for the sterilizations: "Over a 10-year period, that [the \$147,460 that contract doctors charged to perform a tubal ligation] isn't a huge amount of money, compared to what you save in welfare paying for these unwanted children—as they [women incarcerated in California prisons] procreated more" [52]. Because federal law—42 CFR §50.206—prohibits the sterilization of prisoners where federal funds are used, California used state funding for these sterilizations; even still, the California Department of Corrections and Rehabilitation failed to follow state authorization processes [52].

Additionally, under §645 of California's Penal Code, chemical castration—using the birth-control drug DMPA (Depo-Provera)—is voluntary for child molesters on parole for a first offense, but is *mandatory* for offenders on parole after a second offense involving child molestation with a victim under the age of 13 [17]. Florida law (794.0235) imposes a similar mandatory recidivist scheme. Chemical and/or surgical castration is authorized in seven other US states: Georgia, Iowa, Louisiana, Montana, Oregon, Texas, and Wisconsin. The purported goal of chemical castration is to curb the libido, thereby making it easier for sexual offenders to desist [53], but echoes of negative eugenics reverberate throughout the policy. Chemical castration has the double effect of blunting the sexual drive and interfering with the ability to procreate. That is, although the primary objective of chemical castration is public safety, it produces a secondary eugenic result: inhibiting the transmission of genetic material (at least for the duration of DMPA treatment). Of course, chemical castration is not the only criminal justice intervention that interferes with the right to procreate. Mere incapacitation in prisons and jails usually produces this same double effect.

Modern prisons are sex-segregated environments in which sexual contact between males and females is interdicted, extending correction control even over the bodies of non-incarcerated persons who visit their heterosexual partners [54–56]. This deprivation of heterosexual relationships, along with the deprivation of liberty, the deprivation of autonomy, the deprivation of goods and services, and the deprivation of security, is one of the recognized pains of imprisonment catalogued by Gresham Sykes [57]. The stripping of these rights within the prison is widely recognized; however, the deprivation of the right to procreate and to have a family, perhaps implicit within the deprivation of heterosexual relationships, has not (to date) been widely recognized as a pain of imprisonment. Women might arrive at a prison already pregnant, but there are, generally speaking, only five channels through which conception might occur while someone is incarcerated:

- Transgender prisoners: Although constituting a very small percentage of the overall prison population, pre-operative transgender prisoners could impregnate or be impregnated by another prisoner (e.g., [58])
- *Staff-inmate relationships*: Although all US states now prohibit sexual contact with prisoners by staff, making this a form of risky sex, sexual relationships *do* occur [59] and can result in pregnancy
- Conjugal visits: There is no constitutional right to conjugal visits; although 17 states administered conjugal visit programs in 1996, only 4—California, Connecticut, New York, and Washington—maintain such programs today [60]
- Furloughs: Prisoners are occasionally authorized to take short-term release from custody for funerals, work, or other officially-recognized activities; because furloughs are not supervised by law enforcement officers, it would be possible to conceive a child while on furlough
- Assisted reproductive technology: It is possible for a prisoner to remain in custody, but genetic material to be transported in or out of the prison facility; this could either be done through official channels or, as has sometimes occurred, through clandestine means [61].

In some jurisdictions, clandestine means might be the *only* way to procreate. When William Reno Gerber, a 42-year-old prisoner serving a 111-year sentence in a California prison sought to father a child via artificial insemination of his wife, the issue was considered by the district court and the court of appeals before reaching an *en banc* US Court of Appeals for the Ninth Circuit. In *Gerber v. Hickman*, the *en banc* panel rejected Gerber's request, holding that "the right to procreate...is fundamentally inconsistent with incarceration" ([10], p. 623). This is not an aberrational view. Several other US jurisdictions have reached the same conclusion: *Goodwin v. Turner* [11]; *Percy v. New Jersey Department of Corrections* [12]; and *State v. Oakley* [13]. The upshot of these cases is that, outside existing conjugal programs, prisoners cannot generally procreate.

Within this fact, the vestiges of a eugenic rationale might still be located. For example, in light of the dubious deterrent effect and the enormous financial costs associated with three-strikes laws [62–65], Debra Wilson asks why three-strikes laws for violent offenders are so popular, given that most of these offenders will have aged out of high-risk behavior long before the end of their 25 years-to-life sentence (see, e.g., [66,67]). To explain the three-strikes laws of today, Wilson turns to America's eugenic past:

The answer might be found in a combination of the *Buck* and *Skinner* cases. In *Buck*, women like Carrie were to remain in the colonies until they reached the age of natural infertility. In *Skinner*, the punishment of castration [*sic*] [*recte* vasectomy] for a third offence was unrelated to the crimes he had committed, but would have the effect of preventing him from having children and passing his criminal genes on to them. If a three-strikes law does not increase deterrence, and is financially unsustainable, there must be some justification for its enactment. A eugenics style policy might be one explanation. A prison sentence of 25 years to life would generally mean that if the person is released, he would no longer be biologically able to have children ([68], p. 21).

The notion that incapacitation and isolation might interrupt the transmission of bad blood is nothing new. Writing in 1916, eugenicist Mary Storer Kostir insisted, "Society has the right and the duty to save such ever increasing expense from increasing numbers of dependents...by *keeping the feeble-minded in custody while they are of child bearing and child be-getting ages*" (quoted in [24], p. 11; italics in original). But the prophylactic qualities of incapacitation assume much greater significance when, as under National Socialism, negative eugenics affect not hundreds, nor thousands, but millions of people. When exercised upon such a scale, quantitative increases in rates of imprisonment might produce qualitative changes in populations.

4. The Color of Mass Incarceration

The modern prison is a relatively recent invention, less than 200 years old [69]. Punishment [70], as such, is as old as the law, but for most of human history the prison was used to detain the offender while he awaited his actual punishment [71]. "Carcer enim ad continendos homines non ad puniendos haberi debet (prisons exist only in order to keep men, not to punish them)" ([17], p. 837). But between 1750 and 1850, progressive reformers succeeded in replacing corporal punishments with carceral ones, designed to reform the character of the offender [69,72]. The reinvention of the prison was a triumph of rehabilitative optimism and of modernity: the prison cells in Philadelphia's Eastern State Penitentiary featured flush toilets and central heating while the White House still relied on chamber pots and coal stoves [73].

The growth of the US prison system in the twentieth and early twenty-first centuries has been dramatic. In fact, the prison population has expanded so much that, at current levels of mass incarceration, it might—through its prophylactic effect on reproduction—have an impact on the populations of those who are incarcerated in the highest concentrations. For most of the twentieth century, the US enjoyed a relatively stable imprisonment rate of approximately 100 ± 25 persons per 100,000 population. It *did* fluctuate. From a rate of 79 per 100,000 in 1925, it gradually increased to 137 per 100,000 in 1939, declined to 98 per 100,000 in 1945, increased again to 119 per 100,000 in 1961, and

slipped back to below 100 per 100,000 between 1967 and 1973 [17]. In 1974, however, at about the same time Robert Martinson [74] published his seminal "What Works?" article, challenging the efficacy of rehabilitation, and at about the same time the "tough on crime" movement was launched ([75], p. 50), the US imprisonment rate began to ratchet upward at an unprecedented rate, reaching 478 per 100,000 by 2000. This figure, however, counts only people in state and federal prisons—not those confined in local jails. The addition of the jail population increases the year 2000 incarceration rate to 702 per 100,000 [17]. Of course, the prison boom did not stop in 2000. By 2008, one in 100 people was behind bars [76], and after adding the numbers of people on probation and parole to those who were in jail or prison, by 2009, one in 31 people was under some form of correctional control [77]. "If this population had their own city, it would be the second-largest in the country" ([78], p. 38). This represents more than a five-fold increase in imprisonment rates over the last 40 years [79]. The US incarceration rate dwarfs that of other industrialized nations.

Outside of the academic literature, there is little understanding of just how very out of step the United States is with the rest of the world in its reliance on incarceration...A far higher proportion of adults is imprisoned in the United States than in any other country in the entire world. Our incarceration rate, which is nearly 750 individuals per 100,000 in the population, is now roughly five to ten times the rate of most other Western industrialized nations. Jails and prisons in the United States house a collective 2.3 million inmates, representing an astonishing imprisonment rate of 743 per 100,000 Americans...[I]t is reported that the U.S. rate exceeds the rate of the top 35 European countries *combined* ([80], pp. 384–85; citations and punctuation omitted).

The US incarceration rate has declined from a high of 756 per 100,000 in 2007 [81], to approximately 698 per 100,000 as of October 2015 [3]. At latest count, the Seychelles reported the highest per capita incarceration rate in the world (799 per 100,000), prompting the US to fall—for the first time since 2001, when the US overtook Russia [82]—to second place. The reported 698 per 100,000 rate is very close to the year-end 2014 incarceration rate reported by the Bureau of Justice Statistics: approximately 690 per 100,000 [83]. But that rate is the rate per 100,000 US residents of all ages; if one calculates the rate per 100,000 adult (eighteen or older) US residents, it increases to approximately 900 per 100,000. And if one includes offenders under other forms of correctional control such as probation and parole, there are approximately 2780 per 100,000 adult US residents. That means that in 2014, one in every 36 adults was under the authority of the criminal justice system: in jail or prison, on probation or parole [83]. The US may have slipped to number two—for the moment—in the world rankings, but it is still clearly an incarceration nation.

The US incarceration rate of 690 per 100,000 is an aggregate statistic, counting both those held in local jails—principally defendants awaiting trial and those serving sentences of less than one year—and those confined in state and federal prisons for sentences of one year or more. The 2014 *imprisonment* rate (counting only those serving sentences of more than one year) is 471 per 100,000 US residents, or 612 per 100,000 adult US residents [5]. However—and this is where matters of eugenics re-enter the discussion—not everyone in the United States is equally likely to go to prison. Socioeconomic status influences incarceration to a very large degree. Poor people, for example, are far more likely to be incarcerated than the wealthy [4]. And while people with college degrees are incarcerated in low numbers, people from the bottom of the educational distribution are incarcerated in far greater numbers [84–86]. The incarceration of high school dropouts echoes the early eugenic segregation of the feebleminded, as these individuals have the highest fertility rates and the highest rates of incarceration. Becky Pettit, Bryan Sykes, and Bruce Western examined incarceration rates of men (black, Latino, and white) under the age of 35 in 1980, near the beginning of the prison boom, and in 2008, near its peak. While they found that incarceration rates for men with college degrees "have barely increased since 1980" ([87], p. 10), incarceration rates soared at the bottom of the educational distribution:

Most of the growth in incarceration rates is concentrated at the very bottom, among young men with very low levels of education. In 1980, around 10 percent of young African American men who dropped out of high school were in prison or jail. By 2008, this incarceration rate had climbed to 37 percent, an astonishing level of institutionalization given that the average incarceration rate in the general population was 0.76 of 1 percent. Even among young white dropouts, the incarceration rate had grown remarkably, with around one in eight behind bars by 2008. The significant growth of incarceration rates among the least educated reflects increasing class inequality in incarceration through the period of the prison boom ([87], p. 10).

Males are incarcerated in far greater numbers than females. Approximately 90% of the people in US prisons and jails are male. Even though the rate of male imprisonment per 100,000 adult US residents *decreased* by 1.7% between 2013 and 2014 and even though the corresponding rate of female imprisonment *increased* by 1.1% during that same time period, the male imprisonment rate was still 13.9 times that of the female rate: 1169 per 100,000 adult US residents versus 84 per 100,000 adult US residents [5].

Yet it is only when imprisonment rates are disaggregated by sex, age, and race that the most glaring disparities can be identified. Table 1, below, displays the number of US prisoners under state or federal jurisdiction with a sentence of more than one year per 100,000 US residents of corresponding age, sex, and race or Hispanic origin. White, in this table, indicates non-Hispanic whites. Other indicates Native Americans, Asians, Pacific Islanders, and those reporting more than one race. The total age group includes those who are younger than 18 and who are sentenced to more than one year.

Table 1. Rates of US imprisonment in 2014, by age, sex, and race. Reproduced from Table 10 of <i>Prisoners</i>
in 2014 [5].

		Male						Female				
Age	Total	All Male	White	Black	Hispanic	Other	All Female	White	Black	Hispanic	Other	
18–19	169	317	102	1072	349	542	14	8	32	17	12	
20-24	746	1365	584	3868	1521	1755	96	72	152	94	109	
25-29	1055	1912	958	5434	2245	2022	170	150	244	165	208	
30-34	1161	2129	1111	6412	2457	2193	185	163	264	174	225	
35-39	1067	1982	1029	6122	2272	1878	155	138	229	137	189	
40-44	904	1689	942	5105	1933	1619	132	119	213	107	174	
45-49	758	1417	815	4352	1602	1444	111	90	203	94	161	
50-54	567	1081	633	3331	1320	1112	72	57	128	67	124	
55-59	358	698	400	2178	978	832	37	27	72	42	63	
60-64	212	422	252	1265	680	483	20	15	37	25	37	
65+	72	158	109	418	299	208	5	4	8	7	12	
Total	471	890	465	2724	1,091	968	65	53	109	64	93	

Across all age groups, for males and females alike, Hispanics and those from other racial groups were imprisoned at higher rates than those of non-Hispanic whites; and blacks were imprisoned at higher rates again. Overall, black females were imprisoned at twice the rate of white females. Black males were imprisoned at nearly six times the rate of white males. US prisons are filled—in fact they are overcrowded beyond capacity within the federal system and in 18 states [5]—but they are not filled in the proportions that correspond to the US Census. Rather, they are filled with young, poor, black and brown men [84–87]. In 1997, a decade before the prison boom peaked, Thomas Bonczar and Allen Beck [88] calculated the lifetime likelihood of going to prison in the US by sex, age, and race/ethnicity. Table 2, below, reproduces the cumulative percentage of the population expected to go to state or federal prison for the first time. Once again, white, in this table, indicates non-Hispanic whites.

Table 2. Lifetime percentage likelihood of going to US state or federal prison, by sex, race, and age. Reproduced from *Lifetime Likelihood of Going to State or Federal Prison* [88].

	25	35	45	55	65	Lifetime
Race/Ethnicity						
White	0.9%	1.7%	2.1%	2.4%	2.5%	2.5%
Male	1.7%	3.0%	3.7%	4.1%	4.3%	4.4%
Female	0.2%	0.4%	0.5%	0.5%	0.5%	0.5%
Black	8.4%	13.6%	15.4%	15.8%	16.0%	16.2%
Male	15.9%	24.6%	27.4%	28.0%	28.3%	28.5%
Female	1.1%	2.7%	3.3%	3.5%	3.6%	3.6%
Hispanic	3.6%	6.3%	8.2%	9.1%	9.4%	9.4%
Male	6.3%	10.7%	13.9%	15.4%	15.9%	15.9%
Female	0.4%	0.9%	1.3%	1.5%	1.5%	1.5%
Sex						
Male	4.3%	7.0%	8.2%	8.7%	9.0%	9.0%
Female	0.3%	0.8%	1.0%	1.0%	1.1%	1.1%
Total	2.4%	4.0%	4.7%	5.0%	5.1%	5.1%

As did Table 1, Table 2 shows that aggregate rates obfuscate very high and very low numbers. For example, stating that 5.1% of US residents will likely go to prison at some point in their lives presents a different impression than noting that while only half of 1% of white females will go to prison, more than one in four—28.5%—of black males will. And these data are from a decade before the US prison boom banged loudest. Yet it was not always this way. At the end of World War II, US prisons were 70% white and 30% "other"; yet by 2000, the racial demographics had inverted: US prisons were 70% black and Hispanic and just 30% non-Hispanic white. Accordingly, Loïc Wacquant rejects the label of *mass incarceration*.

Mass incarceration suggests that confinement concerns large swaths of the citizenry (as with the mass media, mass culture, mass unemployment, etc.). But the expansion and intensification of the activities of the police, courts, and prison over the past quarter-century have been finely targeted by class, ethnicity, and place, leading to what is better referred to as the *hyper*-incarceration of one particular category: lower-class black men in the crumbling ghetto. The rest of society—including middle-class blacks—is practically untouched (quoted in [89], p. 59; italics in original).

Although this article focuses upon the biological effects of incarceration of lower-class black and brown males, it is worth noting that at least three social mechanisms perpetuate and amplify hyper-incarceration [78]. First, wide-scale drug arrests with felony penalties ensnare many young minority males and saddle them with felony convictions. These convictions then make it difficult to rejoin one's community upon release from prison. A comprehensive overview of the re-entry literature lies beyond the scope of this article, but scholars [90–92] have identified a number of structural barriers to successful community reintegration that are imposed when one has a felony record: public criminal records and sex offender registries; prohibition against adoption or foster parenting; difficulties in finding employment, including deliberate legal restrictions on jobs, bonding, and licensing; ineligibility for public housing for certain offenders (e.g., drug and sex offenders); ineligibility for public assistance and food stamps for drug offenders; ineligibility for federal student aid for certain offenders (e.g., drug and sex offenders). Felony convictions also usually result in voter disenfranchisement. "Forty-eight states and the District of Columbia prohibit inmates from voting while incarcerated for a felony offense. Only two states—Maine and Vermont—permit inmates to vote" ([8], p. 153). In 2002, 10 states—Alabama, Florida, Iowa, Kentucky, Mississippi, Nevada, Tennessee, Virginia, Washington, and Wyoming—permanently denied people convicted of a single felony the right to vote [90]. Felon disenfranchisement of this kind produces real-world consequences. According to Christopher Uggen

and Jeff Manza [9], if ex-felons in Florida had been allowed to vote, the 2000 presidential election would have gone to Al Gore instead of George Bush. If we had the same disenfranchisement laws in place in 1960, John F. Kennedy would not have become president.

A second mechanism that perpetuates hyper-incarceration of young minority males relates to the concentration of criminal justice enforcement in particular urban neighborhoods. Todd Clear [7] has argued that when enough members of a disadvantaged neighborhood are removed and incarcerated, the neighborhood itself is destabilized and can begin to disintegrate. Family networks are strained and disrupted, economic and political infrastructures are undermined, and collective efficacy is attenuated. Concentrated incarceration in disadvantaged neighborhoods thereby produces more—not less—crime. For some populations, in some disadvantaged neighborhoods, prison is the norm. "Once we disaggregate the general population into smaller and smaller groups, by race and gender and place of residence and concentration of poverty and household type, we now know...that there are groups for which the probability of being arrested for a nontrivial crime by age eighteen is 80 percent or more" ([93], p. 139). Ernest Drucker reports an even more incredible statistic. "An estimated 50 percent of all the black and Hispanic families in the United States by now have had a member incarcerated in the last thirty-five years; for the poorest in both groups, that number approaches 100 percent. For example, in Washington, D.C., more than 95 percent of African American men have been in prison in their lifetimes" ([78], p. 45; italics added). Donald Braman [94] suggests a lifetime rate of 75% in Washington DC, but notes that this is not a local phenomenon: many other cities have similar rates of incarceration.

A third mechanism that perpetuates the hyper-incarceration of young minority males is the removal and incarceration of their parents. The denial of custody rights and the involvement of child protective services agencies in prisoners' homes attenuate familial bonds. Approximately 55% of all male prisoners and 65% of female prisoners in state facilities have children under 18 [91]. Similar to Todd Clear's argument about disadvantaged communities, described above, family social structures become weakened when a parent is removed from the home and incarcerated. Children of incarcerated parents are "affected both psychologically and socially, including being placed at extremely high risk themselves of becoming prisoners later in life" ([78], p. 80). The hyper-incarceration of young minority males also means that there is a deficit of these males in the community. "The incarceration of large numbers of parent-age males restricts the number of male partners available in the neighborhood. This means that mothers find more competition for intimate partners and to serve as parents for their children" ([7], p. 104).

More African American adults are under correctional control today—in prison or jail, on probation or parole—than were enslaved in 1850, a decade before the Civil War began. The mass incarceration of people of color is a big part of the reason that a black child born today is less likely to be raised by both parents than a black child born during slavery. The absence of black fathers from families across America is not simply a function of laziness, immaturity, or too much time watching Sports Center. Thousands of black men have disappeared into prisons and jails, locked away for drug crimes that are largely ignored when committed by whites ([8], p. 175).

Donald Braman [94] found that in Washington DC neighborhoods with a 2% rate of male incarceration, fathers were missing in more than 50% of the families, while in neighborhoods that had even higher rates of male incarceration—about 12%—fathers were missing in more than 75% of the families. This dimension of mass incarceration is worthy of closer examination. The imprisonment rates listed in Table 1 reveal that blacks and Hispanics are imprisoned at high rates—sometimes very high rates—during peak childbearing years. This is especially important for women, whose ability to conceive and carry a fetus to term is sharply diminished after age of 35 [95]. Bruce Western [84] analyzed the rate of fatherhood among Hispanic, white, and Black men, both those who were incarcerated and those who were not. He found that for Hispanics, incarcerated men reported higher rates of fatherhood (81%) than non-incarcerated Hispanic men (76%); for whites, however, more

non-incarcerated men were fathers (67%), while only 64% of incarcerated white men were; and for blacks, 73% of non-incarcerated men were fathers while only 70% of incarcerated men were fathers.

Could disparate rates of imprisonment, when multiplied across the US prison population of 1.56 million [5], and when concentrated in pockets of disadvantaged urban communities, be sufficient to depress reproductive rates in the African American male population and to operate as a de facto form of eugenics? A proper answer to this question would require a detailed US data set and sophisticated demographic technique, both of which currently lie beyond the author's reach. But the following section will outline the logic of such an inquiry and identify some of the variables that might prove relevant in such an analysis.

5. A Prolegomenon to a New Eugenics

Now is the time for a study of the eugenic effect of black hyper-incarceration. The criminal justice system sometimes exerts a very direct effect upon reproductive rights, such as when sex offenders are chemically castrated [53] or when women (usually poor black women) are prosecuted for using drugs (usually crack) while pregnant. As Dorothy Roberts notes, "The prosecution of women who use drugs during pregnancy...is the punishment of reproduction. Women are punished, in essence, for having babies" ([42], p. 1968). Roberts suggests that prosecution of this kind is not formally eugenic, but operates upon a parallel logic.

These reproductive punishments are not strictly eugenic because they are not technically based on the belief that crime is inherited; that is, their goal is not to prevent the passing down of crime-marked genes. They are based, however, on the same premise underlying the eugenic sterilization laws—that certain groups in our society do not deserve to procreate ([42], p. 1969).

However, the view that criminal propensity is determined (at least in significant part) by heredity endures to this day [96–98]; and although the criminal law no longer specifies explicit eugenic goals, the law still operates as an effective tool to realize negative eugenic ends [49]. The prison, itself, might satisfy these eugenic ends.

The modern prison, like exile or execution, satisfies the eliminative end of the criminal law [99]. It banishes the criminal to quarantine zones within the state's own boundaries. It is widely understood that while incarcerated in prisons and jails, offenders are incapacitated from committing offenses against the public [17]. But it is perhaps less widely understood that incarceration—particularly incarceration in prisons, where prisoners typically serve long-term sentences—also incapacitates prisoners reproductively. Unless the prisoner happens to be confined in one of the four state jurisdictions that still maintain conjugal visits [60], there is typically no lawful means by which to procreate while in custody. In the words of the Ninth Circuit Court of Appeals, "[T]he right to procreate...is fundamentally inconsistent with incarceration" ([10], p. 623). Rachel Roth notes that prohibitions against reproductive rights for prisoners "have a disproportionate impact on the reproductive possibilities of black and Latino men, who are over-represented in the nation's prisons" ([100], p. 398).

The prophylactic nature of the prison (preventing the reproduction of sexually segregated prisoners) exerts a direct effect on prisoner offspring, reducing their numbers, but the prison also exerts *indirect* effects on reproduction. Using state-level data, Christopher Wildeman [101] found that recent parental incarceration increases the risk of early infant death by 29.6%. His statistical model suggests that if prison populations had remained at 1973 levels (the beginning of the prison boom), the 2003 US infant mortality rate would have been 7.8% lower and the Black-white gap in the infant mortality rate would have been 14.8% lower. As an institution, the prison also exercises an indirect effect on prisoner offspring by reducing health and life expectancy. It is well understood that, for a variety of reasons (including violence, poverty, substance abuse, and years of poor health care), "prisoners as a group are much less healthy than average Americans" ([102], p. 402). While in custody, people generally

have lower mortality rates than non-incarcerated individuals matched for age, sex, and race [103]. This appears to be especially true for black males [104]. After release, however, the apparent protective effect of incarceration disappears, and prior incarceration is associated with higher rates of infectious and stress-related diseases [105,106]. Evelyn Patterson [107] found that in New York, every year spent in prison resulted in a 15.6% increase in the odds of death for parolees, translating to a two-year decline in life expectancy for each year served in prison. In California, life-expectancy has declined among California prisoners since 1980 [108]. Indeed, in *Brown v. Plata* [109], the US Supreme Court found that dramatic overcrowding in California's prisons prevented access to health care for mental and physical problems, leading in 2006 and 2007 to a preventable or possibly-preventable death every five or six days. Although it appears to be incidental, not intentional, the effect of the prison in terms of inhibited reproduction rates and increased mortality rates operates as an additional mechanism for abating an undesirable population (prisoners and their families).

Poor black males bear the brunt of the prison. At the end of 2014, there were 516,900 black males (36.9% of all male prisoners) and 22,600 black females (21.3% of all female prisoners) incarcerated in US state and federal prisons [5]. These numbers represent approximately 3.94% of all 13,118,000 non-institutionalized black males who are 18 years or older, and 0.14% of all 15,929,000 non-institutionalized black females who are 18 years or older, using 2013 US Census data [110]. As a point of comparison, the 453,500 white male prisoners incarcerated in US state and federal prisons represent only 0.60% of the 76,013,000 non-institutionalized white males who are 18 years or older, and the 53,100 white female prisoners represent only 0.07% of the 80,340,000 non-institutionalized white females who are 18 or older. Thus, black women are imprisoned at twice the rate of white women, and black men are imprisoned at approximately seven times the rate of white men.

Blacks are also sentenced to longer prison terms. The mean sentence length for black prisoners sentenced in state courts for felony crimes is 63 months while the corresponding sentence length for white prisoners is 58 months [6]. Given that most (51.8%) people who are imprisoned will return to prison within three years [111], release might be better conceived of as an interlude between likely terms of incarceration.

In light of black rates of hyper-incarceration and in light of the prison's effects on reproduction and life expectancy, the modern prison might operate as a eugenic institution. It might not *deliberately* set out to prevent the reproduction of prisoners, but—just as a physician cannot ethically engage in euthanasia by providing drugs to a terminally-ill patient but can, under the doctrine of double effect, provide palliative drugs for the relief of pain and suffering (even if it is known that this will hasten death) [112]—the prison might, while pursuing the legitimate goals of incarceration [17], exert a negative reproductive effect on prisoners and their families.

5.1. Variables with a Potential Eugenic Effect

A full analysis of the eugenic effects of the prison would compare the rates of successful biological reproduction (i.e., live birth rates) for individuals who have been incarcerated (the index group) and individuals who have never been incarcerated (the control group). To accurately examine this dependent variable, two kinds of independent variables would need to be included in the analysis: legally-relevant variables and extralegal variables. Although legal variables such as offense type and criminal history principally determine sentence lengths—and therefore prophylactic inhibitions on reproduction—extralegal variables such as race, sex, and age influence sentencing outcomes as well [113]. They also bear on reproductive capacity.

In terms of legal variables, a thorough study of the eugenic effect of hyper-incarceration on the index group must include the total length of incarceration in months—whether served in jail or prison—as this period of sex segregation would generally preclude reproduction. The analysis should also indicate whether the state maintains (or did maintain) a program of conjugal visits (since this would facilitate reproduction during active confinement), and should indicate whether the state imposes (or did impose) chemical or surgical castration on any of its ex-prisoners (as this could prevent

reproduction post-release across affected populations). Other legal variables that might be included in an analysis include criminal history, offense type, sentence type (custodial or non-custodial), sentence length imposed, state/federal jurisdiction (since mean federal sentence lengths are longer than state sentence lengths), whether parole was granted (yes or no), sentence length served prior to parole, and state of conviction:

States like Maine, Massachusetts, New Hampshire, and Minnesota have incarceration rates very similar to those in the UK, Spain, Hungary, and Turkey (between 150 and 200 inmates per 100,000 residents). Others, by contrast, such as Louisiana, Mississippi, Oklahoma, and Texas boast rates of incarceration that well exceed any other country on record ([79], p. 187).

The key extralegal variables include sex, race and ethnicity, and age. Age at the time(s) of incarceration is an essential variable for any such analysis. Since 1980, fertility rates have increased by 60% for females aged >35 years, and fertility rates have increased by 21% for males in their 30s and by nearly 30% for males aged >40 years [95]. Women experience a mild decrease in fertility during their late 20s, with more pronounced decreases in their 30s, and sharp declines after age 35. Per cycle fecundity drops from 25% to 30% per month at age 25 to <5% at age 40. Age-related decreases in fertility are particularly important, given the overrepresentation of black women between the ages of 18 and 40 in US prisons, as indicated in Table 1, above. Age-related declines in fertility, however, are not strictly an issue for females. "The idea that robust fertility for a man will continue well past a woman's decline in fertility is untrue" ([95], p. e185). Older males tend to engage in sexual activity with older female partners, but—as they age—males also experience increases in erectile dysfunction, acquired health conditions, DNA fragmentation, and time to pregnancy (even with <25-year-old partners), as well as decreases in sexual activity, semen quality, sperm motility, and testicular mass. Male fertility is not as time-dependent as female fertility, but it is an issue. Accordingly, the months of incarceration during peak childbearing years (e.g., 18 to 35 for females, 18 to 40 for males) would be especially important. It is impossible to account for all of the relevant extralegal variables, but some that might prove germane include sexual orientation (since homosexual sexual activity does not produce offspring—of course, in practice, accurate measurement of sexual orientation might prove challenging), marital status (to operate as a proxy variable for available sexual partnership post-release, and which might—assuming marital fidelity—indicate decreased reproduction rates for the non-incarcerated partner while the partner is incarcerated), contraceptive use, and rates of miscegenation. Measures of global health would be relevant, as would access to health care, history of pelvic infections, disparities in obstetric outcomes, infant mortality, and the number of living children and the age at which they were conceived. Measures of IQ, education, employment, and income would all be relevant, as well, as all of these variables are negatively correlated with fertility. Finally, neighborhood measures of social disorganization, collective efficacy [114], and gender ratio [94] would be important in order to assess local concentrations of disadvantage [7].

5.2. The Need for a Study of the New Eugenics

A careful study of legal and extralegal variables might allow investigators to measure the de facto eugenic effect of the prison. Although rates of mass incarceration have declined slightly from their peak [79], the US still imprisons 471 persons per 100,000—a rate that, while itself worrying, obfuscates the stunning statistic that 2724 black males per 100,000 are imprisoned in the US [5]. Given that statistic, the possibility that segments of the US population are being reproductively undermined—"withered" to invoke the language of *Skinner v. Oklahoma* [50]—by hyper-incarceration is quite real. Researchers should attempt to understand if the prison operates as a eugenic institution. Under the old eugenics, the state attempted to eliminate dependency of the unfit by sterilizing out of existence the degeneracy of pauperism, feeblemindedness, and criminality; under the new eugenics, the state seeks to isolate those who are "unfit" for the purposes of neoliberal capitalism: the uneducated and poor, disproportionately black and brown men who dwell in what remains of the urban ghetto (cf., [115]).

Now is the time for such inquiry. Especially after the mapping of the human genome was completed in 2003, genetics assumed a greater prominence in daily life. Within criminology, advances in population genetics, neural imaging, epidemiology, and biochemistry have reinvigorated biological explanations for crime. The brain is back [47]. Matthew Robinson wrote, "[T]he biological sciences have made more progress in advancing our understanding about behavior in the past 10 years than sociology has made in the past 50 years" ([116], p. 4). Neuroscientist Adrian Raine has concluded, "I think there's no longer any question, scientifically, that there's an association between the brain and criminal behavior. We're beyond the point of debating that" [117]. Genetics, too, have returned to criminology. The association between the monoamine oxidase A (MAOA) genotype—the so-called "warrior gene"—and antisocial behavior has stirred tremendous controversy, and in the words of a recent review, "There is no evidence that research on the warrior gene is slowing down" ([118], p. 184). Nearly 20 years ago, Nicole Rafter wrote:

Today, biological explanations are once again leading in efforts to account for human behavior, and biological theories of crime have once again begun to attract serious attention. Moreover, genetic screening, new reproductive technologies, and the promise of gene therapies have restored eugenics to respectability. Some people hope that we are posed on the brink of a brave new world, free of chronic and inherited diseases and in control of a multitude of social problems. Others fear a return to "scientific" racism, the evils of Nazism, and dangerous fantasies of escaping the human condition ([119], p. 237).

The effect of mass incarceration should be studied because it exists on a scale that affects millions of US residents and disproportionately affects racial and ethnic minorities. Given felony disenfranchisement laws [8], it is obvious that racial disparities in imprisonment can silence ethnic communities and bar them from democratic participation. But, less obviously, it is also possible that, in some states and some communities, the incarceration of young black males has become so concentrated that reproductive rates are themselves depressed. The reality of that possibility, and the consequences of that possibility for affected populations, should be examined carefully. The dangers of negative eugenics, even a new eugenics that does not claim human abatement as its goal but accepts it as a collateral consequence, are compelling. Buck v. Bell [33] and the Holocaust are less than 100 years old and serve as its poignant warnings. Perhaps less clear, but equally dangerous, however, is the corresponding danger of rejecting legitimate forms of knowledge that are dismissed because they smack of eugenics. For example, Steven Pinker [120] has observed that, fearing inequality, imperfectability, determinism, and nihilism, many social scientists continue to cling to the belief that the human being is a blank slate. In reality, our genetic inheritance plays a substantial role in shaping our personalities and influencing our behaviors [98]. To deny altogether the role of biology and genetics is just as benighted and just as dangerous as assuming that biology—and nothing else—is destiny. To successfully understand the reproductive consequences of mass incarceration, researchers must carefully look at both individual-level differences and community-level influences.

6. Conclusions

The modern phenomenon of black hyper-incarceration has much in common with the eugenic policies of America's past. Incapacitation isolates prisoners and it prevents reoffending (at least against the general public) for the duration of their sentences, but it also (with rare exceptions) impedes their ability to procreate. Because black males are hyper-incarcerated at the rate of 2724 per 100,000 [5] and because blacks serve longer average felony sentences than whites for most crimes [6], overall black reproduction rates in the non-incarcerated general population could be depressed. Dorothy Roberts explains that an examination of reproduction is necessary in order to understand black incarceration (and vice versa): "A concern for the incarceration rate of black men, for example, without attention to the control of black women's reproduction, will miss a critical technique of racial

subordination" ([42], p. 1977; cf. [121]). Black hyper-incarceration operates as a contemporary iteration of an earlier eugenic logic:

Thus, the enormous racial disparity in the imposition of social exclusion, civic ex-communication, and lifelong disgrace has come to seem legitimate, even necessary: we fail to see how our failures as a collective body are implicated in this disparity. We shift all the responsibility onto their shoulders, only by irresponsibly—indeed, immorally—denying our own. And yet, this entire dynamic has its roots in past unjust acts that were perpetrated on the basis of race ([89], p. 36).

There is a good—and growing—scholarly literature on the collateral consequences of imprisonment [84,85,94], especially the prison's impacts on family organization [54–56] and physical health [101–108], but there has been little effort, hitherto, to measure the prison's impact on biological reproduction. To ascertain whether hyper-incarceration is sufficient to inhibit the reproductive capacity of affected minority populations, researchers should draw upon data from demography, public health, sociology, criminology, and related fields to measure the prophylactic effect of the prison. Although the US prison system is no longer explicitly eugenic in its goals, hyper-incarceration of affected populations could exert a eugenic double effect, preventing reproduction (unintentionally, but perhaps knowingly) as a corollary of modern penal incapacitation.

Conflicts of Interest: The author declares no conflict of interest.

References and Notes

- 1. Duster, Troy. Backdoor to Eugenics. New York: Routledge, 1990.
- 2. Oleson, James C. "HOPE springs eternal: New evaluations of correctional deterrence." *Criminology & Public Policy*, 2016, in press.
- 3. Walmsley, Roy. World Prison Population List, 11th ed. London: Institute for Criminal Policy Research, 2016.
- 4. Taibbi, Matt. The Divide: American Injustice in the Age of the Wealth Gap. New York: Spiegel and Grau, 2014.
- 5. Carson, E. Ann. *Prisoners in 2014*. Washington: Bureau of Justice Statistics, 2015.
- 6. Bureau of Justice Statistics. "Table 2.7: Mean Length of Felony Sentences Imposed in State Courts, by Offense and Race of Felons." 2004. Available online: http://www.bjs.gov/content/pub/html/scscf04/tables/scs04207tab.cfm (accessed on 17 October 2016).
- 7. Clear, Todd R. *Imprisoning Communities: How Mass Incarceration Makes Disadvantaged Neighborhoods Worse.* New York: Oxford University Press, 2007.
- 8. Alexander, Michelle. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: The New Press, 2010.
- 9. Uggen, Christopher, and Jeff Manza. "Democratic contraction? Political consequences of felon disenfranchisement in the United States." *American Sociological Review* 67 (2002): 777–803. [CrossRef]
- 10. Gerber v. Hickman, 291 F.3d 617 (9th Cir. 2002).
- 11. Goodwin v. Turner, 702 F. Supp. 1452 (W.D. Mo., 1988).
- 12. Percy v. New Jersey Department of Corrections, 651 A.2d 1044 (N.J. Super. Ct. 1995).
- 13. State v. Oakley, 629 N.W.2d. 200 (Wis. 2001).
- 14. Sykes, Bryan, and Evelyn Patterson. "Mass Incarceration and Quantum-Tempo Effects in American Fertility, 1990–2006." Paper presented at the Annual Meeting of the Population Association of America, Boston, MA, USA, 1–3 May 2014.
- 15. Lombroso, Cesare. *Criminal Man*. Translated by Mary Gibson, Nicole Hahn Rafter, and Mark Seymour. Durham: Duke University Press, 2006.
- 16. H. R. C. "The Sterilization Laws and Their Relation to Criminal Law Administration." *Virginia Law Review* 29 (1942): 93–102. [CrossRef]
- 17. Oleson, James C. "The Punitive Coma." California Law Review 90 (2002): 829–901. [CrossRef]
- 18. Hart, Michael H. The 100: A Ranking of the Most Influential Persons in History. Secaucus: Citadel Press, 1987.
- 19. Galton, Francis. Inquiries into Human Faculty and Its Development. London: Macmillan, 1883.
- 20. Wiggam, Albert E. The New Decalogue of Science. Indianapolis: Bobbs-Merrill, 1923.

- 21. Kevles, Daniel J. In the Name of Eugenics, 2nd ed. Cambridge: Harvard University Press, 1995.
- 22. Stern, Alexandra Minna. *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America*. Berkeley: University of California Press, 2005.
- 23. Haller, Mark H. *Eugenics: Hereditarian Attitudes in American Thought*. New Brunswick: Rutgers University Press, 1963.
- 24. Rafter, Nicole, ed. White Trash: The Eugenic Family Studies, 1877–1919. Boston: Northeastern University Press, 1988.
- 25. Pernick, Martin S. "Taking better baby contests seriously." *American Journal of Public Health* 92 (2002): 707–8. [CrossRef] [PubMed]
- 26. Roberts, Dorothy E. Killing the Black Body: Race, Reproduction, and the Meaning of Liberty. New York: Vintage, 2014.
- 27. Lewis, Sinclair. Arrowsmith. New York: New American Library, 1980.
- 28. Plotz, David. *The Genius Factory: The Curious History of the Nobel Prize Sperm Bank.* New York: Random House, 2005.
- 29. McKim, W. Duncan. Heredity and Human Progress. New York: G.P. Putnam's Sons, 1900.
- 30. Dugdale, Robert Louis. *The JUKes: A Study in Crime, Pauperism, Disease and Heredity*. New York: Knickerbocker Press, 1910.
- 31. Estabrook, Arthur H. The JUKes in 1915. Washington: Carnegie Institution of Washington, 1916.
- 32. Goddard, Henry H. *The Kallikak Family: A Study in the Heredity of Feeblemindedness*. New York: Macmillan, 1912.
- 33. Buck v. Bell, 274 US 200 (1927).
- 34. Lombardo, Paul A. "Three Generations, No Imbeciles: New Light on *Buck v. Bell." New York University Law Review* 60 (1985): 30–62. [PubMed]
- 35. Gould, Stephen Jay. The Mismeasure of Man. New York: W.W. Norton & Company, 1981.
- 36. Loving v. Virginia, 388 US 1 (1967).
- 37. Jensen, Arthur R. "How Much Can We Boost IQ and Scholastic Achievement?" *Harvard Educational Review* 39 (1969): 1–123. [CrossRef]
- 38. Gottfredson, Linda S. "Mainstream science on intelligence: An editorial with 52 signatories, history, and bibliography." *Intelligence* 24 (1997): 13–23. [CrossRef]
- 39. Neisser, Ulric, Gwyneth Boodoo, Thomas J. Bouchard Jr., A. Wade Boykin, Nathan Brody, Stephen J. Ceci, Diane F. Halpern, John C. Loehlin, Robert Perloff, Robert J. Sternberg, and et al. "Intelligence: Knowns and unknowns." *American Psychologist* 512 (1996): 77–101. [CrossRef]
- 40. MacKinnon, Catharine A. "Genocide's Sexuality." Nomos 46 (2005): 313-56.
- 41. Proctorm, Robert N. Racial Hygiene: Medicine under the Nazis. Cambridge: Harvard University Press, 1988.
- 42. Roberts, Dorothy E. "Crime, Race, and Reproduction." Tulane Law Review 67 (1993): 1945–77. [PubMed]
- 43. Rafter, Nicole. "Criminology's darkest hour: Biocriminology in Nazi Germany." Australian & New Zealand Journal of Criminology 41 (2008): 287–306. [CrossRef]
- 44. Goring, Charles. The English Convict, abridged ed. London: H.M.S.O, 1919.
- 45. Hirschi, Travis, and Michael J. Hindelang. "Intelligence and delinquency: A revisionist review." *American Sociological Review* 42 (1977): 571–87. [CrossRef] [PubMed]
- 46. Herrnstein, Richard J., and Charles Murray. *The Bell Curve: Intelligence and Class Structure in American Life.* New York: The Free Press, 1994.
- 47. Oleson, James C. Criminal Genius: A Portrait of High-IQ Crime. Oakland: University of California Press, 2016.
- 48. Terman, Lewis M. *The Measurement of Intelligence*. New York: Houghton Mifflin, 1916.
- 49. Battaglini, Giulio, and Robert W. Millar. "Eugenics and the criminal law." *Journal of the American Institute of Criminal Law and Criminology* 5 (1914): 12–15. [CrossRef]
- 50. Skinner v Oklahoma, 31 US 535 (1942).
- 51. Nourse, Victoria F. *In Reckless Hands: Skinner v. Oklahoma and the Near Triumph of American Eugenics*. New York: W.W. Norton & Co., 2008.
- 52. Johnson, Corey G. "Female Inmates Sterilized in California Prisons without Approval." Available online: http://cironline.org/reports/feMale-inmates-sterilized-california-prisons-without-approval-4917 (accessed on 17 October 2016).

53. Saleh, Fabian M. "Pharmacological treatment of paraphilic sex offenders." In *Sex Offenders: Identification, Risk Assessment, Treatment, and Legal Issues*. Edited by Fabian M. Saleh, Albert J. Grudnizskas, John M. Bradford and Daniel J. Brodsky. New York: Oxford University Press, 2009, pp. 189–207.

- 54. Comfort, Megan, Olga Grinstead, Kathleen McCartney, Philippe Bourgois, and Kelly Knight. "You can't do nothing in this damn place': Sex and intimacy among couples with an incarcerated Male partner." *Journal of Sex Research* 42 (2005): 3–12. [CrossRef] [PubMed]
- 55. Comfort, Megan. *Doing Time Together: Love and Family in the Shadow of the Prison*. Chicago: University of Chicago Press, 2007.
- 56. Braman, Donald. *Doing Time on the Outside: Incarceration and Family Life in Urban America*. Ann Arbor: University of Michigan Press, 2004.
- 57. Sykes, Gresham M. *The Society of Captives: A Study of a Maximum Security Prison*. Princeton: University Press, 1958.
- 58. Herald, Sydney Morning. "Did Hall Get Fellow Prisoner Pregnant?" Available online: http://www.smh. com.au/news/national/did-hall-get-fellow-prisoner-pregnant/2006/09/21/1158431837244.html (accessed on 17 October 2016).
- 59. Santo, Alysia. "Preying on Prisoners." Available online: https://www.themarshallproject.org/2015/06/17/preying-on-prisoners#.nfOYzf070 (accessed on 17 October 2016).
- 60. Goldstein, Dana. "Conjugal Visits." Available online: https://www.themarshallproject.org/2015/02/11/conjugal-visits#.njaoxK6YI (accessed on 17 October 2016).
- 61. ABC News. "Con's Wife Faces Sperm-Smuggling Charges." Available online: http://abcnews.go.com/2020/story?id=123680 (accessed on 17 October 2016).
- 62. Chen, Elsa Y."Impacts of 'three strikes and you're out' on crime trends in California and throughout the United States." *Journal of Contemporary Justice* 24 (2008): 345–70. [CrossRef]
- 63. Kieso, Douglas W. *Unjust Sentencing and the California Three Strikes Law*. New York: LFB Scholarly Publishing, 2005.
- 64. Oleson, James C. "Habitual criminal legislation in New Zealand: Three years of three-strikes." *Australian and New Zealand Journal of Criminology* 48 (2015): 277–92. [CrossRef]
- 65. Zimring, Franklin, Gordon Hawkins, and Sam Kamin. *Punishment and Democracy: Three Strikes and You're Out in California*. New York: Oxford University Press, 2001.
- 66. Farrington, David P. "Age and crime." In *Crime and Justice: An Annual Review of Research*. Edited by Michael Tonry and Norval Morris. Chicago: University of Chicago Press, 1986, pp. 189–250.
- 67. Carson, E. Ann, and William J. Sabol. *Aging of the State Prison Population*, 1993–2013. Washington: Bureau of Justice Statistics, 2016.
- 68. Wilson, Debra. *Genetics, Crime and Justice*. Northhampton: Edward Elgar, 2015.
- 69. Foucault, Michel. Discipline and Punish. Translated by Alan Sheridan. New York: Pantheon, 1977.
- 70. Hart, Herbert Lionel Adolphus. Punishment and Responsibility. New York: Oxford University Press, 1968.
- 71. Peters, Edward M. "Prison before the prison: Ancient and medieval worlds." In *The Oxford History of the Prison: The Practice of Punishment in Western Society*. Edited by Norval Morris and David J. Rothman. New York: Oxford University Press, 1995, pp. 3–43.
- 72. McKelvey, Blake. American Prisons: A History of Good Intentions. Montclair: Patterson Smith, 1977.
- 73. Eastern State Penitentiary. "History of Eastern State Penitentiary, Philadelphia." Available online: https://www.easternstate.org/sites/default/files/pdf/ESP-history6.pdf (accessed on 17 October 2016).
- 74. Martinson, Robert. "What works?—Questions and answers about prison reform." *The Public Interest* 35 (1974): 22–54.
- 75. Mauer, Marc. Race to Incarcerate. New York: New Press, 1999.
- 76. Pew Center on the States. One in 100: Behind Bars in America 2008. Washington: Pew Charitable Trusts, 2008.
- 77. Pew Center on the States. *One in 31: The Long Reach of American Corrections*. Washington: Pew Charitable Trusts, 2009.
- 78. Drucker, Ernest. *A Plague of Prisons: The Epidemiology of Mass Incarceration in America*. New York: The New Press, 2011.
- 79. Phelps, Michelle S., and Devah Pager. "Inequality and punishment a turning point for mass incarceration?" *The Annals of the American Academy of Political and Social Science* 663 (2016): 185–203. [CrossRef]

80. Oleson, James C. "A decoupled system: Federal criminal justice and the structural limits of transformation." *Justice System Journal* 35 (2014): 383–409. [CrossRef]

- 81. Walmsley, Roy. World Prison Population List, 8th ed. London: Institute for Criminal Policy Research, 2008.
- 82. Walmsley, Roy. World Prison Population List, 3rd ed. London: Institute for Criminal Policy Research, 2001.
- 83. Kaeble, Danielle, Lauren Glaze, Anastasios Tsoutis, and Todd Minton. *Correctional Populations in the United States*, 2014. Washington: Bureau of Justice Statistics, 2016.
- 84. Western, Bruce. Punishment and Inequality in America. New York: Russell Sage Foundation, 2006.
- 85. Pettit, Becky. *Invisible Men: Mass Incarceration and the Myth of Black Progress*. New York: Russell Sage Foundation, 2012.
- 86. Sykes, Bryan, and Becky Pettit. "Mass Incarceration, Family Complexity, and the Reproduction of Childhood Disadvantage." *The Annals of the American Academy of Political and Social Science* 654 (2014): 127–49. [CrossRef]
- 87. Western, Bruce, and Becky Pettit. "Incarceration & social inequality." Daedalus 139 (2010): 8–19. [PubMed]
- 88. Bonczar, Thomas P., and Allen J. Beck. *Lifetime Likelihood of Going to State or Federal Prison*. Washington: Bureau of Justice Statistics, 1997.
- 89. Loury, Glenn C. Race, Incarceration, and American Values. Cambridge: MIT Press, 2008.
- 90. Petersilia, Joan. When Prisoners Come Home: Parole and Prisoner Reentry. New York: Oxford University Press, 2003.
- 91. Travis, Jeremy. *But They All Come Back: Facing the Challenges of Prisoner Reentry*. Washington: Urban Institute Press, 2005.
- 92. Travis, Jeremy, and Christy Visher, eds. *Prisoner Reentry and Crime in America*. New York: Cambridge University Press, 2005.
- 93. Tonry, Michael. *Limalign Neglect: Race, Crime, and Punishment in America*. New York: Oxford University Press, 1995.
- 94. Braman, Donald. "Families and Incarceration." In *Invisible Punishment: The Collateral Consequences of Mass Imprisonment*. Edited by Marc Mauer and Meda Chesney-Lind. New York: New Press, 2002, pp. 117–35.
- 95. Harris, Isiah D., Carolyn Fronczak, Lauren Roth, and Randall B. Meacham. "Fertility and the aging male." *Reviews in Urology* 13 (2011): e184–90. [PubMed]
- 96. Mednick, Sarnoff A., William F. Gabrielli, and Barry Hutchings. "Genetic influences in criminal convictions: Evidence from an adoption cohort." *Science* 224 (1984): 891–94. [CrossRef] [PubMed]
- 97. Tiihonen, Jari, M. R. Rautiainen, H. M. Ollila, E. Repo-Tiihonen, M. Virkkunen, A. Palotie, O. Pietiläinen, K. Kristiansson, M. Joukamaa, H. Lauerma, and et al. "Genetic background of extreme violent behavior." Molecular Psychiatry 20 (2015): 786–92. [CrossRef] [PubMed]
- 98. Rowe, David C. The Limits of Family Influence: Genes, Experience, and Behavior. New York: Guilford Press, 1994.
- 99. Rutherford, Andrew. "Criminal policy and the eliminative ideal." *Social Policy & Administration* 31 (1997): 116–35. [CrossRef]
- 100. Roth, Rachel. "No new babies: Gender inequality and reproductive control in the criminal justice and prison systems." *American University Journal of Gender, Social Policy, and the Law* 12 (2004): 391–425.
- 101. Wildeman, Christopher. "Imprisonment and infant mortality." Social Problems 59 (2012): 228-57.
- 102. Gibbons, John J., and Nicholas de Belleville Katzenbach. "Confronting confinement: A report of the Commission on Safety and Abuse in America's Prisons." Washington University Journal of Law and Policy 22 (2006): 385–62. [CrossRef]
- 103. Mumola, Christopher J. *Medical Causes of Death in State Prisons*, 2001–2004. Washington: Bureau of Justice Statistics, 2007.
- 104. Patterson, Evelyn J. "Incarcerating death: Mortality in U.S. state correctional facilities, 1985–1998." *Demography* 47 (2010): 587–607. [CrossRef] [PubMed]
- 105. Rosen, David L., Victor J. Schoenbach, and David A. Wohl. "All-cause and cause-specific mortality among men released from state prison, 1980–2005." *American Journal of Public Health* 98 (2008): 2278–84. [CrossRef] [PubMed]
- 106. Massoglia, Michael. "Incarceration as exposure: The prison, infectious disease, and other stress-related illnesses." *Journal of Health and Social Behavior* 49 (2008): 56–71. [CrossRef] [PubMed]
- 107. Patterson, Evelyn J. "The dose-response of time served in prison on mortality: New York State, 1989–2003." *American Journal of Public Health* 103 (2013): 523–28. [CrossRef] [PubMed]

108. Sykes, Bryan, Richard McCleary, Evelyn Patterson, Anjuli Verma, and Brad Bartos. "Changing Patterns of Life-Expectancy among State and Federal Inmates, U.S. 1983–2013." Paper presented at the Annual Meeting of the Academic and Health Policy Conference on Correctional Health, Baltimore, MD, USA, 17–18 March 2016.

- 109. Brown v. Plata, 563 U.S. ___ (2011).
- 110. United States Census. "Race: The Black Alone Population in the United States: 2013. " Available online: http://www.census.gov/population/race/data/ppl-ba13.html (accessed on 17 October 2016).
- 111. Langan, Patrick A., and David J. Levin. *Recidivism of Prisoners Released in 1994*. Washington: Bureau of Justice Statistics, 2002.
- 112. Kamm, Frances M. "Physician-assisted suicide, the doctrine of double effect, and the ground of value." *Ethics* 109 (1999): 586–605. [CrossRef] [PubMed]
- 113. Oleson, James C., Marie VanNostrand, Christopher T. Lowenkamp, Timothy P. Cadigan, and John Wooldredge. "Pretrial detention choices and federal sentencing." *Federal Probation* 78 (2014): 12–16.
- 114. Sampson, Robert J., Stephen W. Raudenbush, and Felton Earls. "Neighborhoods and violent crime: A multilevel study of collective efficacy." *Science* 277 (1997): 918–24. [CrossRef] [PubMed]
- 115. Wacquant, Loïc. *Punishing the Poor: The Neoliberal Government of Social Insecurity*. Durham: Duke University Press, 2009.
- 116. Robinson, Matthew. Why Crime? An Integrated Systems Theory of Antisocial Behavior. Upper Saddle River: Prentice Hall, 2004.
- 117. Fischman, Josh. "Criminal minds." *Chronicle of Higher Education*, 12 June 2011. Available online: http://chronicle.com/article/Can-This-Man-Predict-Whether/127792 (accessed on 17 October 2016).
- 118. Holland, Nicholas R., and Matt Delisi. "The warrior gene: MAOA genotype and antisocial behavior in Males." In *The Routledge International Handbook of Biosocial Criminology*. Edited by Matt DeLisi and Matthew G. Vaughn. New York: Routledge, 2015, pp. 179–89.
- 119. Rafter, Nicole. Creating Born Criminals. Chicago: University of Illinois Press, 1997.
- 120. Pinker, Steven. The Blank Slate: The Modern Denial of Human Nature. New York: Viking, 2002.
- 121. Ross, Loretta J., Sarah L. Brownlee, Dázon Dixon Diallo, Luz Rodriguez, and Latina Roundtable. "The Sistersong Collective: Women of color, reproductive health and human rights." *American Journal of Health Studies* 17 (2001): 79–88.



© 2016 by the author; licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (http://creativecommons.org/licenses/by/4.0/).