Eugenics and Involuntary Sterilization: 1907–2015

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Abstract

In England during the late nineteenth century, intellectuals, especially Francis Galton, called for a variety of eugenic policies aimed at ensuring the health of the human species. In the United States, members of the Progressive movement embraced eugenic ideas, especially immigration restriction and sterilization. Indiana enacted the first eugenic sterilization law in 1907, and the US Supreme Court upheld such laws in 1927. State programs targeted institutionalized, mentally disabled women. Beginning in the late 1930s, proponents rationalized involuntary sterilization as protecting vulnerable women from unwanted pregnancy. By World War II, programs in the United States had sterilized approximately 60,000 persons. After the horrific revelations concerning Nazi eugenics (German Hereditary Health Courts approved at least 400,000 sterilization operations in less than a decade), eugenic sterilization programs in the United States declined rapidly. Simplistic eugenic thinking has faded, but coerced sterilization remains widespread, especially in China and India. In many parts of the world, involuntary sterilization is still intermittently used against minority groups.

ORIGINS

During the second and third decades of the twentieth century, the policies and practices premised on eugenics—the thesis that a progressive society may and should act to protect its gene pool, even to the extent of eliminating the reproductive rights of certain individuals—reached full flower. The nature of the early discourse on eugenics, now more than a century ago, was vastly different than it might be today, so a brief consideration of the origin of the idea is in order.

Francis Galton, a Victorian polymath, coined the term eugenics, derived from the Greek for "good birth," in 1883 (29). His central concern, which he had been investigating for more than a decade (28), was that the more talented British families were contributing proportionately fewer children to the next generation than were families whom he ranked far lower on various social measures, such as education, artistic talent, and wealth, and if left unchecked, this trend would cause humanity's demise.

The ideas of three men exerted considerable influence on Galton. The most immediate was his cousin, Charles Darwin, who published *On the Origin of Species* in 1859 (12). However, Darwin was cautious in applying his ideas about natural selection to humankind, and did not directly address that topic until he published *The Descent of Man* in 1871 (13). Thomas Malthus, the Oxford-educated English preacher who in 1798 published (originally under a pseudonym) *An Essay on the Principle of Population*, the first caution that the earth could not support unlimited population growth, provided the key intellectual rationale for Galton's views (59). In addition, Galton was influenced by the polemics of Herbert Spencer, an immensely important mid-nineteenth-century social thinker who abhorred social welfare programs and coined the phrase "survival of the fittest" in 1864 (79). Darwin borrowed the famous phrase from Spencer, first using it in 1869 in his fifth edition of *On the Origin of Species*. Spencer was much more influential in the United States than in England. The historian Richard Hofstadter wrote, "In the three decades after the Civil War it was impossible to be active in any field of intellectual work without mastering Spencer" (41, p. 33).

Less than a decade after Darwin published *On the Origin of Species*, Galton initiated multigenerational studies of the lives of eminent English families, work that, as it expanded to include other groups, led him to conclude that a social crisis loomed. Many upper-class persons in England were, no doubt, drawn to Galton's thesis (which he supported with extensive, albeit flawed, evidence) that England's preeminence was at risk because the lower classes were swamping society with large families. By approximately 1890, Galton had embraced "positive eugenics," the idea that society should adopt programs to encourage the more gifted and able to have larger families (24). Using a word that would echo through the generations, Galton wanted the "fit" to have more children.

This idea reached full flower in the American Midwest in the 1920s and 1930s, when county fairs regularly included "Fitter Family Contests" along with the traditional contests to judge which farmers had bred the best farm animals. This tradition grew out of a public health movement initiated prior to World War I that sought to ensure that every baby received health screening. One of the earliest of these contests occurred at the 1911 Iowa State Fair. After the war, the American Eugenics Society—especially one of its leaders, Mary Parsons—energetically supported such contests, which at their peak were held in approximately 40 states (10).

Beginning in 1935, the Nazi regime embraced an extreme version of positive eugenics known as *Lebensborn*, a program in which physicians and social workers called race examiners essentially matched young men and women who best satisfied Aryan ideals of health and beauty and sent them to special camps to conceive and care for large families in an idealized environment. The policy, which was embraced in part as a national response to the huge death toll of young German men during World War I, was designed both to increase and improve the quality of future German birth cohorts. Even before Hitler came to power, ideals of Teutonic purity were used to determine

eligibility for membership in the SS. After 1934, it fell to Heinrich Himmler, a member of Hitler's inner circle, to oversee the Lebensborn Society, which was launched on December 12, 1935 (40).

Although progressive thinkers in the United States considered proposals to drive positive eugenics, for several decades the notion was largely overshadowed by policies that came to be called negative eugenics—discouraging or preventing certain persons from tainting the "race." In the United States, the fullest and the most successful implementation of negative eugenics was the enactment of various laws to sharply limit the immigration of certain people into the United States. Restrictive immigration policy began with the Chinese Exclusion Act of 1877 and reached its zenith with the Immigration Restriction Act of 1924, which set national immigration quotas by country of origin (73). This law, heavily influenced by champions of negative eugenics, greatly favored immigration from northern and eastern Europe and sharply curtailed entry by citizens from southern and eastern Europe. It was the legislative cornerstone of US immigration policy for more than 40 years and was not substantially amended until 1968 (73).

More than a dozen books, hundreds of articles, and doubtless thousands of college term papers have probed almost every copse of the eugenics landscape in the United States and Europe, especially England and Germany. The vast majority of that scholarship has focused on an era that began in the last quarter of the nineteenth century and ended in 1945, that is, from the naive optimism that characterized Galton's work to the hideous atrocities of the Third Reich. As with any field, the quality of the scholarship has varied widely, from the fine work of historians such as Kenneth Ludmerer (58), Mark Haller (37), Daniel Kevles (47), and Paul Lombardo (56, 57) to the diatribes of conspiracy theorists (3, 75) (for a brief survey of key books from the past 50 years, see sidebar, A Historiography of Eugenic Sterilization in the United States). One of the attractions of social history is that as time passes, the persistence of certain ideas can be reexamined, often from new perspectives shaped by access to new information. Scholarly analysis of eugenic thinking has grown substantially over the last two decades.

In this article, I focus predominantly on one important aspect of the eugenics movement—state-enabled involuntary sterilization of certain types of people carried out with the (quixotic) goal of protecting the "race." In using the term involuntary, I refer to the sterilization of humans who have not freely consented to the operation or whose consent is highly suspect owing to either mental incapacity or coercion. By the term movement, I suggest a sustained effort by activist citizens to influence their political leaders to implement government programs. There is no easy definition of a social movement, but surely the fact that, during the first third of the twentieth century, state legislatures annually introduced scores of bills favoring sterilization of certain persons for eugenic reasons, newspapers and magazines published hundreds of articles favoring eugenic programs, and eugenics became a standard topic in high school biology texts gives some basis for using the term (73).

In the United States, the beliefs that supported eugenic thinking began to change during the mid-1930s and continued to evolve after World War II. The original focus on negative eugenics—to prevent persons from transmitting defective genes—faded away. Two new trends emerged. First, physicians and other professionals began to argue that sterilization of women who were intellectually incapacitated would free them from institutions and allow them to live independently without fear of pregnancy—in effect, that the operation was to their advantage. Second, there was a substantial growth in the movement to provide all women with legal access to contraception. The most forceful proponent was Margaret Sanger, who opened the nation's first birth control clinic in New York in 1916 and who in 1932 imported a diaphragm from Japan in violation of a federal law so that she could challenge the law's constitutionality (9). Sanger and her protégées continued this battle for more than three decades, during which they created the organization today known as Planned Parenthood. It may seem difficult to believe, but as recently

A HISTORIOGRAPHY OF EUGENIC STERILIZATION IN THE UNITED STATES

During the two decades after World War II, few scholars focused on the history of eugenics or on its major policy objectives: immigration restriction and sterilization of the unfit. Mark Haller's book *Eugenics: Hereditarian Attitudes in American Thought* (37), published in 1963, is a seminal work that put scholars on notice that the history of eugenics in the United States merited attention. In 1972, Kenneth Ludmerer published *Genetics and American Society* (58), which explored the history of scientific eugenics. In 1981, Stephen Jay Gould, an evolutionary biologist, a supremely talented writer, and a leading public intellectual, published *The Mismeasure of Man* (32), in which he skewered as pseudoscience early experiments intended to prove the superiority of the white race.

Daniel Kevles, a historian of science at the California Institute of Technology, wrote the first widely acclaimed book in the field, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (47), published in 1985. He looked closely at the origins of eugenic thinking among intellectuals in nineteenth-century England but devoted little attention to the history of involuntary sterilization. In 1991, I published *The Surgical Solution: A History of Involuntary Sterilization in the United States* (73), an analysis of legally enabled, widespread, involuntary sterilization of institutionalized persons. In 1995, Diane Paul, an independent scholar writing from a feminist and leftist perspective, contributed *Controlling Human Heredity: 1865 to the Present* (67). Also in 1995, Edward Larson published *Sex, Race, and Science: Eugenics in the Deep South* (53), which garnered a well-deserved Pulitzer Prize.

Since about 2000, the number of scholarly works devoted to eugenics and sterilization in the United States has mushroomed. The ever-growing corpus now includes works that report in great detail on small but interesting local topographies of the larger historical landscape, such as eugenics in Vermont (27). A few works seem determined to discover vast conspiracy theories that never existed, but fine contributions continue to emerge. Paul Lombardo, currently a professor of law at Georgia State University and a leader in the scholarship on eugenics conducted during the last two decades, recently edited *A Century of Eugenics in America* (57), which contains three chapters on the history of sterilization.

as the mid-1960s, a few states had laws that adult married women could not undergo sterilization unless they had already borne two children and obtained the written permission of their husbands (50). On the other hand, efforts to curb childbearing through coerced sterilization of individuals thought likely to be poor parents continued in the United States long after World War II.

Space permits a brief overview of eugenic sterilization in Europe, especially Germany, where hundreds of thousands of persons were sterilized during a relatively brief period (1934–1944). After addressing events in Germany, I devote the balance of this review to the practice of involuntary sterilization around the world during the seven decades that have elapsed since the fall of the Third Reich. Although less eugenically driven, involuntary sterilization has been widely used in national programs to curb population growth. In some cases, the obvious focus on the poor and minority groups recalls Galton's original concerns, and overtones of racism are obvious. I conclude with a few thoughts on the possible course of eugenic thinking in future decades.

EUGENIC STERILIZATION IN THE UNITED STATES AND EUROPE: 1900–1945

The concerns that reified as the legislative authorization for state-enabled involuntary sterilization programs to curtail reproduction by the "unfit" can be readily traced to late nineteenth-century American thought, especially to the "progressives" in the northern states who, with the deep trauma of the Civil War fading into the past and a rapidly growing economy, energetically embraced the thesis that society could and should improve the lot of all its citizens (73). One of the earliest links

of this thinking to eugenics was a once famous book about a large extended family in upstate New York who disproportionately populated the state's prisons. In 1877, Richard Dugdale, a prison inspector who was charged with monitoring the treatment of incarcerated persons, published *The Jukes*, a study of that family, which focused on the extraordinary financial burden that its members placed upon the state (19). *The Jukes* was the first of dozens of such book-length studies published over the next four decades, each of which reiterated the initial theme. Many of those that followed were enabled or inspired by the Eugenics Record Office (ERO) at Cold Spring Harbor, Long Island, which from 1910 to approximately 1939 was the major intellectual center for eugenic policy, especially in regard to sterilization (10, 51, 87).

The genetic and biological research programs at Cold Spring Harbor were directed by a first-rate biologist named Charles Davenport (87). Although he should not be counted among the more passionate advocates of eugenics, Davenport, who was deeply influenced by the rediscovery of Mendel's laws of inheritance, strongly suspected that many forms of intellectual disability were driven by the inheritance of "defective" genes. His 1911 book *Heredity in Relation to Eugenics* (14), arguably the first textbook of clinical genetics, provided intellectual legitimacy to efforts to protect the human gene pool. Davenport recruited Harry Hamilton Laughlin, a Missouri teacher who was already a zealous advocate for negative eugenic policies, to direct the ERO. For more than 20 years, Laughlin was a major influence on government-enabled involuntary sterilization programs in the United States (47, 73).

Although the ERO rapidly became an intellectual center for those who promoted eugenic sterilization, efforts to enable such programs by legislation date back to at least 1897. Between 1895 and 1901, the legislatures in both Michigan and Pennsylvania debated sterilization bills. During the 1890s, several states enacted laws to limit the right of certain persons (such as the mentally disabled, the mentally ill, and men who had lived in homes for the indigent) to marry, essentially by refusing to issue marriage licenses to them (6). Of course, this was a largely symbolic act that had little practical effect.

In 1907, Indiana became the first government body in the world to enact an involuntary sterilization law (73). The details have been nicely recounted elsewhere, but in essence the bill codified an existing program that Dr. Harvey Sharp, the surgeon at the Jeffersonville prison, had initiated in 1905, partly with the conviction that a vasectomy would prevent the passage of defective "germ plasm" (the term gene had not yet been coined) and curb the sexual urges of the prisoners (73). A small body of medical literature from that era suggested that vasectomy quelled masturbation, a practice that was then thought to have harmful long-term psychological consequences.

The history of the Indiana law is typical of several other early state laws. Its focus on a specific class of persons raised concerns about the constitutional promise of due process and equal protection. Though enacted, it remained controversial, and in 1921 the Indiana Supreme Court overturned it (86). However, after the US Supreme Court upheld a more carefully crafted Virginia law in 1927 (7), Indiana officials enacted a new one, which established a modestly sized sterilization program that remained active until shortly after World War II. The Indiana legislature did not repeal the law until 1974.

Between 1907 and 1939, approximately 30 states enacted laws that permitted authorities who oversaw the operation of state homes for the mentally disabled and state hospitals for the mentally ill to sterilize individuals who they thought were unfit to be parents. After an initial period (1907–1918) in which some poorly drafted, quasi-compulsory laws did not survive judicial challenge in state appellate courts, Laughlin (who consulted with constitutional scholars) drafted a model sterilization law, which purported to attend to the due process rights of the persons it would target (37, 73). In addition to providing the template for many of the ensuing state laws, Laughlin's

bill helped to shape the content of the "racial hygiene" law enacted by the Nazi party in 1934. Later that year, the University of Heidelberg awarded him an honorary degree for his work (73).

From 1907 to 1927, sterilization of institutionalized persons, most of whom local officials believed were intellectually disabled or mentally ill owing to a dominantly or recessively acting condition, varied widely among the states. Prior to 1924, the midwestern states had the most active programs, which were focused mostly on men, perhaps in part because a vasectomy was easier and safer to perform than was a hysterectomy or the not yet perfected tubal ligation. California operated a large program that was most active at institutions for the mentally ill. For many years, it annually performed approximately 20% of the nation's eugenic operations. Detailed information on the history of eugenic sterilization in California is available in part because a self-made millionaire named Ezra Gosney became a zealous advocate. In 1929 he created the Human Betterment Foundation, an advocacy group that propagated eugenic ideals (73). Gosney hired Paul Popenoe, a sociologist, to study the sterilization programs. Within the year, the two men published a book written to generate more public support for state sterilization programs (31).

Although there are ample records concerning many state programs, in this short article I am able to offer only a couple of examples. One of the most informative is available thanks to the memoir of Mildred Thompson, who, reflecting on the more than three decades (1924–1957) she spent as supervisor of the Department for the Feebleminded and Epileptic in Minnesota, gave us an eyewitness account of the sterilization program in that state. In 1913, the legislature considered and rejected a bill proposing involuntary sterilization of institutionalized persons to prevent the birth of children with mental disorders. Twelve years later, as the state was developing plans to "deinstitutionalize" some longtime residents of the state schools, it enacted a carefully drafted permissive sterilization bill that attended to due process rights. The rationale was clear. Proponents no longer viewed sterilization as a weapon to protect the gene pool; instead, they argued that it would allow mentally disabled women (and men) to live in the community without fear of becoming burdened with the responsibilities of parenthood. In the first three years of its operation, the state program performed sterilizations on 157 women and 8 men (83).

The watershed event in the history of eugenic sterilization began in Virginia in 1924, when state officials decided deliberately to test the constitutionality of a recently enacted law. In essence, institutional leaders convinced an attorney to represent the interests of a young woman named Carrie Buck, whom they had determined to be mentally disabled and unfit for parenthood and thus eligible for sterilization, in order to challenge the legality of the law. The case, *Buck v. Bell*, was eventually argued before the US Supreme Court. Writing for a substantial majority, Oliver Wendell Homes Jr. unflinchingly upheld the power of the state to operate a sterilization program, concluding his opinion with the now famous phrase "three generations of imbeciles is enough" (7).

The decision had an immediate impact; over the next few years, approximately a dozen additional states enacted laws to permit the sterilization of institutionalized persons. By 1930, laws were on the books in nearly 30 states and legislatures had funded programs in many, and the number of sterilizations per year grew rapidly throughout the decade. It was at about this time that the state programs that had clearly focused on sterilizing men began to tilt rapidly toward sterilizing mentally disabled women. Available data indicate that, by the late 1930s, officials in most states were selecting two to three women for sterilization for every man who was subjected to a vasectomy (45, 73).

Until after World War II, eugenic sterilization programs in the United States were conducted almost exclusively inside the walls of state institutions that housed "mentally defective" or "insane" individuals, often in large, rural, farm-like settings in which the inmates had much latitude in daily movement. For example, they might attend classes or work in agricultural settings, engaging in

activities that were thought to be salubrious. By 1890, leaders of these institutions, which had grown rapidly in number beginning in the 1870s, were corresponding frequently and meeting annually to discuss how to improve their "schools." Almost all the institutions churned out extensive annual reports, often written to justify annual requests to the legislatures to approve state budgets. These documents typically included statistics concerning the sterilization programs. Access to these reports permits historians to report confidently that in the United States in the decades before World War II, at least 60,000 institutionalized persons were sterilized. These reports sometimes note that sterilizations were performed on women because of concern that they were sexually active and likely to become pregnant, rather than for overtly eugenic reasons. This concern became increasingly important as the decades passed (73).

Although they were among the earliest of settings for such programs, sterilization never became widespread in prisons. This was in part because of decisions by federal appellate courts in Iowa (15) and Nevada (61) that sterilization of inmates violated the Eighth Amendment protection against cruel and unusual punishment. In addition, the prison population was composed almost entirely of men with no freedom of movement. California operated the only substantial prison-based sterilization program (at San Quentin), mostly after World War II (73).

Given this nation's troubled racial history, it is tempting to suppose that in some states, officials might have used involuntary sterilization laws to target institutionalized African Americans. This did not happen during the 1930s (although there is some evidence of racial discrimination in state sterilization programs, especially in North Carolina, in the decade after World War II) (90). In a few states, notably South Carolina, state officials operated sterilization programs for mentally deficient persons under the separate but equal doctrine. In South Carolina, such institutions were racially segregated, but available data suggest that officials performed sterilizations at approximately the same pace in both races (73).

Perhaps under the influence of activity in the United States, the province of Alberta in Canada adopted a eugenic sterilization law in 1928 that was very similar to laws in the United States. Over the next six decades, officials in Canada sterilized more than 2,800 persons. In 1995, a woman sued the government for sterilizing her without her consent in 1959. The case became a class-action lawsuit and resulted in a settlement in which 850 persons who had been sterilized without their informed consent were awarded C$142 million in damages (34).

Beginning in the late 1930s in the United States, eugenic sterilization programs began to decline. One important reason was that advances in genetics and medicine made it clear that the initial, simplistic eugenic argument that much mental illness and intellectual disability arose from single-gene disorders was wrong. But few scientists emerged as vocal critics. The vast majority of professional biologists never supported negative eugenics, but few ever attacked it as being based on scientifically flawed ideas. A more obvious reason for the decline was that during World War II, the surgeons working in most state-based sterilization programs were pulled into military service. Another blow to eugenic sterilization came in 1942, when the US Supreme Court overturned an Oklahoma statute that enabled the involuntary sterilization of some, but not all, kinds of "habitual criminals," ruling that it violated the Equal Protection Clause (78). However, the high court wrote a narrow opinion, declining an opportunity to overturn or limit its holding in *Buck v. Bell* (7).

In the spring of 1945 came the astounding news of the Nazi death camps, and in 1946 the Nuremburg trials revealed to the world the horrors of a eugenics movement run amok. The history of eugenic sterilization in Germany begins in 1934, when the new Nazi government enacted a "racial hygiene" law, one substantially based on the model law that Laughlin had drafted. Within the year, more than 200 new Hereditary Health Courts reviewed more than 84,000 applications for sterilization and approved more than 64,000, eclipsing the total performed in the United States over three decades (65, 71). In 1934, the German Supreme Court ruled that the new sterilization

law applied to non-Germans who lived in Germany. Records indicate that the law was applied equally to both genders (52). Those who have studied the history of the Nazi program have estimated that under the powers granted to the Hereditary Health Courts, between 1934 and 1944 (when the population was 73 million) German doctors sterilized at least 400,000 persons, including the mentally ill, the mentally disabled, the deaf, persons with tuberculosis, homosexuals, gypsies, and, of course, Jews (65, 71). One advocacy group has argued that the true figure may be tenfold higher (77). The exact number of persons who were sterilized during that era in Germany without their consent will never be known.

Support for eugenic sterilization in Germany did not arise suddenly when the Nazi regime came to power. Beginning around 1890, the immensely influential philosopher Friedrich Nietzsche advocated measures such as segregation to protect the Aryan bloodline. In 1895, the historian Otto Seeck published *History of the Downfall of the Ancient World*, a widely read work in which he argued that Greek culture had collapsed because of dysgenic influences. Perhaps the single most influential race theorist was Wilhelm Schallmayer, whose 1900 book *Inheritance and Selection in the Life of Nations* won a prize from the Krupp Foundation (55). Although he embraced eugenic ideals, Schallmayer stopped short of advocating for the sterilization of the unfit. By the early 1930s, German culture was enmeshed in the doctrine of Aryan racial superiority.

German physicians and scientists, including some early clinical geneticists, provided crucial intellectual justification for the doctrine of racial superiority and for eugenic sterilization programs. In 1895, the physician Alfred Ploetz published *Foundations of Eugenics*. He founded the first German eugenics society, the Society for Racial Hygiene, in 1905. In 1921, this society adopted a comprehensive eugenics program and lobbied for implementation. In 1923, Bavaria became the first German state to create a university chair in eugenics. In 1921, three prominent biologists, Erwin Bauer, Eugen Fisher, and Fritz Lenz, published a book on "race hygiene" that advocated sterilization of the unfit. In 1925, the publisher sent a copy of the second edition of the book to Adolf Hitler while he was serving a prison term. These were the months when he wrote *Mein Kampf*, in which he advocated the sterilization of defective persons. The book sold nearly 10,000 copies during the first year it was in print, and by 1934 German citizens had purchased millions of copies (69).

The notion of Aryan superiority was not much different from the belief in white supremacy, which was widely articulated and embraced in the American South as far back as the eighteenth century and provided an important intellectual rationale for slavery. In the decades before the Civil War, Southern thinkers had adopted a finely tuned doctrine of racial superiority, including biblical references that were aligned with scientific findings (66). In the first third of the twentieth century, belief in the superiority of the white race was common at the top of the nation's upper socioeconomic ladder throughout the United States (33).

What of other countries? In England, interest in eugenics as a tonic for the British people reached its zenith before World War I. Galton was at the forefront of what was, comparatively speaking, an enlightened approach to human betterment, one premised on education and rational choice. In 1905, he endowed a Eugenics Records Office that was housed for decades in a building owned by the University of London, and he lectured frequently on the topic to the lay public (24). But despite being the birthplace of modern eugenic thought, England never legislatively implemented a eugenic sterilization program (39). Advocates for these programs did occasionally put bills before the House of Commons. In 1931, the House commissioned the Brock Report (named for its chairman), which came out against involuntary sterilization to further eugenic goals, but cautiously accepted limited use of voluntary sterilization for family planning (5). Not unexpectedly, staunchly Catholic nations such as France and Italy never developed state-based sterilization programs. In the decades before World War II, however, programs premised on

the same ideas that flourished for several decades in the United States took hold in many other countries, including Sweden (4, 81), Norway (4, 36), Denmark (4, 46), and Finland (4).

INVOLUNTARY STERILIZATION IN THE UNITED STATES: 1945–2015

After World War II, most state-based eugenic sterilization programs in the United States quietly ended. In 1950, institutions reported sterilizing 1,526 persons, far short of the 2,500 operations reported in 1939. In addition to revulsion evoked by Nazi practices, the thesis that intellectual disability and mental illness were largely products of single-gene disorders became untenable. Also, during the late 1940s and 1950s leaders within the Catholic Church frequently spoke out against local programs. In some states, programs declined rapidly. In 1945, officials at San Quentin State Prison in California sterilized 145 men; in 1946, they performed only 7 such operations; and in 1950, the chief surgeon wrote that the "Department of Corrections is entirely adverse to sterilization" (73, p. 135).

In 1949, officials in California institutions for the mentally ill reported sterilizing 381 persons, but just three years later the total dropped to 39. During the late 1940s and early 1950s, officials in South Dakota, Missouri, and Virginia were among those who reported that they found little scientific justification for sterilizing women to curb the inheritance of faulty genes (73). Before the war, officials in Minnesota had sterilized more than 200 persons each year at Faribault State Hospital. During 1951 and 1952, they reported only 17 operations (15 women and 2 men). After 1954, no sterilizations were officially reported, but officials continued to authorize a few (largely on intellectually disabled woman who had given birth to children or who were thought highly likely to become pregnant) (83).

The overall decline in state-enabled sterilizations would have been even more dramatic but for new activity in a few southern and midwestern states. These programs arose in no small part from the energetic activities of a single organization. During the 1940s, a New Jersey–based not-for-profit organization called Birthright, led by Dr. Clarence Gamble, the wealthy scion of a founder of Procter & Gamble, began to campaign in favor of offering sterilization to young, poor, rural women. His effort flowered first in Orange County, North Carolina, and then more broadly. Birthright reported that in 1948, welfare workers in North Carolina provided sterilization services to more than 150 young, mostly black women who were neither mentally deficient nor institutionalized (30). This program continued well into the 1970s, annually providing sterilization service to dozens of young, poor women, even though North Carolina ceased operating its institutionally based programs in the 1950s. The state repealed its original sterilization law in 1974, and in 2002 the governor issued a public apology for the state's earlier participation in eugenic sterilization programs (85). In so doing, he followed in the footsteps of governors in Virginia (68) and Oregon (48). Nevertheless, in 1976 a federal district court upheld a law that permitted the sterilization of certain noninstitutionalized persons (73).

During the late 1940s and 1950s, Birthright supported the creation of state-based Human Betterment Leagues. The Iowa chapter was particularly active, reporting that from 1947 to 1951 it had annually fostered an average of 145 sterilizations, mostly among poor, rural women (73). These programs were not intended to prevent the birth of children with genetically caused intellectual disability, but they did seek to convince young women who Birthright staff thought were unlikely to provide for children to forgo further pregnancies.

Another group that underwent deceptive, clandestine, and possibly coerced sterilization in the United States after World War II was young Native American women (72). By deceptive, I mean a situation either in which a woman was told that sterilization was needed to preserve her health or (probably more commonly) in which she consented to one surgical procedure without knowing

that a second would also be performed. In one not uncommon scenario, surgeons performed tubal ligations incidental to appendectomies. During the 1930s in some state institutions in which sterilizations were permitted, the annual number of appendectomies was much greater than one might reasonably anticipate in a population of that size (73).

Most of the sterilizations of Native American women were performed in the 1960s and 1970s by physicians employed by the federal Indian Health Service bureau. In an era in which there were approximately 150,000 Native American women of childbearing age in the United States, estimates of the number of possibly involuntary female sterilizations range from 3,406 by the US General Accounting Office to a much higher figure offered by a few Native American scholars (54). There is little evidence to support a larger number and none to support occasional assertions of a clinical conspiracy. To the contrary, during the period 1960–1990, the population of Native Americans in the United States grew at an annual rate of 4.3% (far greater than the rates for other, larger groups).

During the late 1960s and early 1970s, there were occasional reports that surgeons working in federally funded medical facilities occasionally performed involuntary (unconsented) sterilizations of young, poor black women. The most famous of these, which was widely reported in the press, arose in Alabama in 1973 and asserted that a surgeon had sterilized a mildly intellectually disabled 12-year-old black girl named Minnie Relf. In July of that year, the National Welfare Rights Organization joined with her to file a class-action lawsuit to ban the use of federal funds for sterilization procedures. Although the federal government moved quickly to issue guidelines to sharply restrict use of funds for this purpose, the case continued. In 1974, a federal district court ruled that the federal government had no authority to provide sterilization services to any person who under state law would be incompetent to consent to the procedure (74).

There is also substantial evidence that during the early 1970s, several obstetricians in California who worked in federally funded family planning programs sterilized immigrant Mexican women without obtaining their consent. Such operations were typically performed incidental to Caesarean sections. In preparation for filing a class-action lawsuit against these physicians and programs, activists secured statements from 140 Mexican women saying they had been sterilized without their consent. The plaintiffs lost the case, but their action drove California to adopt guidelines (including a Spanish-language consent form and a three-day waiting period) to reduce the risk of such events (80). Some lawsuits were settled by the payment of a negotiated damage claim. These incidents likely reflected the prejudices of particular surgeons rather than the policies of a welfare clinic (49).

During the 1980s and 1990s, a new debate emerged. With increasing frequency, state courts were asked to rule on petitions in which young, intellectually disabled women (acting through their guardians) asserted a *right* to be sterilized as a means of birth control. By this time, sterilization to control family size was widely practiced, so why should intellectually disabled women not also have this right? These cases (in two of which I acted as an expert witness) were often resolved in a family court, where a judge heard evidence concerning what constituted the "best interests of the woman" who lacked the capacity to decide. Court-appointed guardians usually argued in favor of sterilization, but sometimes they did not.

In reflecting on the history of involuntary sterilization in the United States after World War II, it is well to remember that this era also included a widespread and sustained drive by women to expand and secure their reproductive rights. It may seem bizarre that as recently as the 1960s, in a few states married women with several children could not legally obtain elective sterilization without the written consent of their husbands, the sale of contraceptive devices was illegal, and access to abortion services was extremely limited. In a string of decisions from 1965 to 1973, the US Supreme Court struck down laws that restricted such access (35), culminating, of course, with

Roe v. Wade, which ruled that a constitutional right to privacy included the right (balanced against the state's interest in protecting human life) to terminate pregnancies (76).

Today, no US state operates a eugenic or social sterilization program targeting either institutionalized or noninstitutionalized persons. Each year there are a few petitions in state courts to approve the sterilization of young women of limited mental capacity who have already given birth to children or who family members feel are likely to become pregnant. These cases proceed as arguments about what constitutes the best interests of the young woman.

Although eugenic thinking no longer drives efforts to limit childbearing, there have always been those who argue that various state-based services, especially Medicaid, should place a ceiling on the support available to women with a large number of children (89). Family caps, as they are called, place limits on family welfare payments after families have reached a certain number of children. Social debate over this policy reached its zenith in the United States in 1970, when the Supreme Court was asked to rule on the constitutionality of a Maryland law that shut off benefits after a woman had given birth to six children. The court held that the law was a reasonable effort to limit costs (for it did not prevent further childbearing, but merely refused to pay support beyond a certain level) and did not violate the Equal Protection Clause (11).

As of 2015, at least 24 states have family caps built into their welfare programs. Given that such programs are well entrenched, it should be no surprise that even more radical steps to limit the costs of Medicaid programs are widely embraced by ultraconservative groups. As recently as September 6, 2014, Russell Pearce, vice chairman of the Arizona Republican Party, resigned after he provoked a furor by stating on a radio talk show that if he were in charge of the state's Medicaid program, "the first thing [he would] do is get Norplant, birth-control implants or tubal ligations" (60, p. A20).

STERILIZATION TO CURB POPULATION GROWTH

In the late 1970s, nearly two centuries after Malthus wrote his prescient essay, the leaders of the Chinese Communist Party, confronting runaway population growth and growing ever more concerned about their ability to feed the population, instituted a one-child policy that was rigorously implemented across most sectors of Chinese society. In the ensuing three decades, this policy, surely one of the most far-reaching societal experiments in human history, dramatically reduced the fertility rate in the world's largest country. According to one Chinese writer, since 1971 there have been 222 million sterilizations and 336 million abortions performed in China. The vast majority of the sterilizations have been performed on women. Wealthy couples can circumvent the law by paying a "social compensation fee" that varies between 3 and 10 times the median annual income of a Chinese family (42).

Although the policy was made in Beijing, population control in China was implemented and enforced in thousands of local jurisdictions, where the workers who were charged with the task used economic incentives and disincentives in pursuit of national goals. In some regions, all women of reproductive age who already had a child were forced to undergo placement of intrauterine devices. Women who gave birth to a second child after the one-child initiative was in place were urged to undergo tubal ligation. If they refused, the local officials imposed harsh economic penalties and denied school entry certificates for their children. Such aggressive measures were most rigorously enforced in cities, such as Huizhou in Guangdong Province, where in some years officials fell significantly short of the targeted reduction in annual births. In 2013, Amnesty International reported that officials in Puning City (which has a population of more than 2 million) planned to sterilize some 9,559 persons over a *three-week* period, and that they had achieved half of that quota in the first four days (1).

In 2002, China adopted a new Population and Family Planning Law that was intended to curb population growth without resorting to coercion, a goal yet to be fully realized. Many analysts believe that forced sterilizations are still frequently implemented by local officials who are pushed by higher-level officials to meet target fertility rates, even if it means violating the law. I could find no evidence that zealous local officials who violate official policy are or ever have been prosecuted for their misdeeds.

Given the widespread cultural desire to have a son, the one-child policy has had a hugely disparate impact on the birth and well being of girls. During the last two decades of the twentieth century, the illegal use of ultrasound for sex selection, followed by widespread female feticide and infanticide, led to what is probably the greatest sex-ratio imbalance ever experienced in human society. In China today, among persons under age 30 there are approximately 118 males for every 100 females, which means that there are many millions more men than women. This will almost certainly foster much social unrest (23). In recent years, the one-child policy has come under much criticism, but as of 2014, the official party line has not altered, despite a national fertility rate that is well below replacement level.

In contrast to the fantasies of racial or ethnic purity that motivated Nazi eugenic policies in the 1930s, the leaders of the Communist Party in China today foster interethnic marriages. Given that China has at least 55 recognized minorities, some of which have been in sharp and sustained regional conflicts with the nation's Han majority, the central government has advocated intermarriage as a long-term approach to smoothing ethnic relations. In 2014, officials in Qiemo, a county in Xinjiang in western China, were offering 10,000 renminbi annually for five years and 20,000 renminbi annually over the same period in health and education benefits to couples formed by the marriage of a Turkic-speaking Uighur and a member of the Han (88). Although China's president, Xi Jinping, has asserted that such marriages further the dream of a universal Chinese motherland that embraces all groups, many Uighurs view the policy as a crass attempt to destroy their culture and assimilate them into a Han-dominated culture. The policy forces the question, why should the pursuit of social harmony be premised on the dilution of certain ethnic minorities?

The population of India—which, with more than 1.2 billion people, is the world's second-largest nation—increased by approximately 18 million in 2013. Total fertility rates vary widely among the 28 states in India, and these rates are highly correlated with the health of the regional economy (38). In the poorest and most rural regions, women on average give birth to five children, whereas in rich states such as Kerala, the fertility rate is approximately the same as that in the United States.

Just five years after it became a sovereign nation (1947), India created its first commission on population. Beginning in the mid-1950s, the national government introduced multiple programs to reduce the birth rate, with modest success. In 1975, Prime Minister Indira Gandhi, having concluded that population growth constituted a great threat to India's future, introduced what many believe to be the most aggressive effort to reduce family size ever undertaken. Among other measures, the government declared that men who had fathered two children should undergo sterilization. By some estimates, during the period known as "the Emergency" (1975–1977), 10 million persons in India underwent sterilization, often under coercive circumstances (38). Although the government soon relented from its most extreme policies, for decades India has pursued a policy to curb population growth by providing financial incentives for poor couples of reproductive age to undergo sterilization (18). Today, in this male-dominated society, more than 90% of all sterilizations are performed on women. Most operations are performed in small rural clinics. The women who "agree" to be sterilized are typically among the poorest in society, for whom an incentive of approximately $10 offers significant help for feeding their existing children. The government-employed physicians who perform the surgery, sometimes in "sterilization camps" that are set up

for a few weeks in a particular town and then move on to another, are expected to meet certain quotas. If they exceed a quota, they receive a bonus for sterilizations that they perform above the regional target figure (20).

In 2011 in Bihar, the state with the lowest per-capita income and the lowest literacy rate, the government planned to operate 13,000 camps and set a target goal of sterilizing 650,000 women and 12,000 men. In 2012, approximately 4.6 million women were sterilized in India; most operations were performed under conditions that fall far short of the deliberative, voluntary, and consensual nature of such a decision in the United States and Europe (38).

Despite an aggressive, incentivized, coercive population control policy, India continuously falls short of its fertility target goals. There are few data to support the claim that female sterilization is the major contributor to the fertility reductions that have been achieved. In the rich southern state of Kerala, where the female literacy rate is approximately 92%, the fertility rate is approximately 1.7, significantly lower than that in the United States. The population of Kerala rate grew by less than 5% over the last decade, and government-supported coercive sterilization programs are nonexistent. In Bihar, where the female literacy rate is only 53%, the population grew by more than 25% during the last decade. Nowhere else in the world is there a tighter correlation between economic status and fertility than in India, and the sterilization of poor, often illiterate women is a core element of the government's population control program.

It should be no surprise that sustained efforts to sterilize unusually large numbers of poor women have occurred close to home. The history of sterilization of young women in Puerto Rico over several decades calls into question whether even cursory attention was paid to obtaining their informed consent (70).

Even though the Russian government has pursued an aggressive pronatalist policy for many decades, Russia currently has one of the world's lowest fertility rates. On average, women bear 1.7 children, well below replacement level. Currently, the major government incentive is to award the equivalent of $13,000 to women who bear a second child. Thus far, the various pronatalist incentives have had minimal success (26). Yet in at least one region of the former USSR, Uzbekistan, the government has aggressively used female sterilization for more than a decade to sharply reduce its fertility rate. In 2007, the United Nations Committee Against Torture reported that the government in Uzbekistan was coercing women with two or more children to undergo sterilization. Its investigation found that Uzbek leaders had been using sterilizations as a tool to curb population growth since the mid-1990s (62). In 2005, the minister of public health acknowledged that state-employed physicians were ordered to achieve targeted reductions in national fertility. In May 2012, Uzbek president Islam Karimov publicly stated to Russian president Vladimir Putin that Uzbekistan sought a fertility rate of 1.2–1.3, far below replacement level (62).

It is disheartening to contemplate the breadth and depth of the ethnic hatred that is still so painfully apparent around the planet. Although the current favorite weapons in the worst of such conflicts—such as suicide bombings—are designed to kill outright, in regions where one group has near total control over a small, unwanted minority, involuntary sterilization continues to be used intermittently as a subtle form of state-sponsored terrorism. Coerced sterilization—almost always of women—advances "ethnic cleansing" in a less visible way than do murders. Involuntary sterilization of despised ethnic groups is not common, but the fact that any modern government condones or advances such programs is cause for deep discontent. As there is no international effort to corroborate the allegations that emerge from time to time and no registry reliably counts instances of abuse, one is forced to draw inferences from secondary sources. Unfortunately, there are many. Several examples follow.

Starting in 1973, the government of Czechoslovakia initiated a program that offered small social benefits to poor Romani (gypsy) women in exchange for their agreement to undergo tubal

ligation. In 1977–1978, dissident Czechs denounced the practice as genocide, but it continued after the Velvet Revolution of 1989. In 2005, an independent counsel appointed by the government of the Czech Republic identified "dozens" of coercive sterilizations that were performed between 1979 and 2001 and called for the investigation and prosecution of several health care officials (17).

During Alberto Fujimori's presidency in Peru (1990–2000), his regime operated a program of forced sterilizations against indigenous peoples (Quechuas and Aymaras) in that nation (2). In 1995, this program was officially recognized as part of the national public health program, one that was funded in part by financial aid from the United States and the United Nations Population Fund. In September of that year, despite vigorous opposition from the Catholic Church, Fujimori offered to the legislature a "General Law of Population" that explicitly legalized sterilization for family planning purposes, which was enacted. Members of activist groups in Peru have estimated that hundreds of thousands of poor women have been sterilized without their informed consent.

In Brazil, there have been numerous reports of the involuntary sterilization of indigenous women. Most notorious is the work of a physician and politician named Ronald Lavigne, who has been accused of sterilizing 80 young women of the Pataxuh-he tribe in Bahia without their consent. Brazilian activists have charged that this practice is widespread and constitutes state-sponsored genocide intended to remove indigenous peoples from vast tracts of valuable land (43). Even Israeli authorities have been accused of giving birth control to minorities without their consent (16).

Historically, few persons have suffered more social opprobrium than those with leprosy. For more than a century across the globe, the public health response to leprosy was to incarcerate affected individuals for the remainder of their lives. In parts of Europe, Japan, and the United States, governments enacted laws to create so-called leper colonies. In the United States, the government funded such institutions in Louisiana and Hawaii for decades. Japan enacted Leprosy Prevention Laws in 1907, 1931, and 1953 that included provisions for indefinite containment. In Japan, many physicians thought there could be a genetic predisposition to contracting leprosy, and involuntary sterilization of patients, especially women, was initiated around 1915 (63). Japan also may be the only nation to have enacted a Eugenic Protection Law after World War II. This law, under which approximately 16,500 persons were sterilized, most without their informed consent, was largely applied to women living in residential institutions. The text of the law is reminiscent of the early American state laws, but it also specifically called out several monogenic disorders, including hemophilia and albinism (84). It was repealed in 1996.

In South Africa, many women with AIDS have alleged that they were sterilized without their consent. Most of the relevant reports refer to years in which a fetus being carried by an HIV-positive mother was at high risk for becoming infected with the virus during parturition (22).

The examples above do not constitute a complete accounting of the practice of coercive sterilization. They serve instead as a reminder that the practice has not yet been extirpated.

THE FUTURE OF EUGENICS

In 2015, state-enabled programs to deprive people of fertility for eugenic reasons no longer operate. The eugenic thesis that most forms of mental illness, mental disability, criminality, and social deviance are driven by single-gene disorders is scientifically untenable. The idea that there are certain universal human rights (including the right to reproductive freedom), which has been widely embraced (including by the United States and the European Union), is ascendant. It was first formally embraced by the United Nations in 1968 (25). I cannot imagine a scenario in which a state moves to deprive large groups of women or men of their reproductive freedom for eugenic reasons.

Yet I also think that in technologically advanced nations in the near future (within ten years), there could be a dramatic reduction in the incidence of children born with chromosomal and genetic disorders. One can anticipate a scenario in which couples in wealthy nations use DNA-based carrier testing to assess reproductive risk and whole-exome sequencing to determine fetal status (64). In the United States, it is already the standard of care to offer screening for fetal aneuploidy to all pregnant women. Positive test results will lead to the termination of a significant majority of such pregnancies. In a world in which women and couples prefer small families, in which an increasing number of women will delay pregnancy while building a career (already a clear trend in the United States) (82), and in which affordable, highly accurate tests can search for a large number of severe, essentially untreatable single-gene disorders, this change is inevitable. In some parts of the world, we have already seen a marked reduction in the birth of children with specific recessive disorders, including beta-thalassemia (8) and disorders that are relatively common to the Ashkenazim (44), and that trend is broadening (21). If researchers establish that some of the relatively common copy-number variants are strongly associated with risk for significant behavioral and/or cognitive disorders, it is likely that they will be added to the list of targets screened during prenatal diagnosis. Perhaps Laughlin's dream of reducing the numbers of persons born with genetic conditions that predispose to behavioral disorders and social deviance will be realized without any need for state intervention.

I do fear that coerced or involuntary sterilization to limit family size could have a more dystopian future. One need only reflect on the dramatic success China achieved in sharply reducing its fertility rate over just two decades to imagine what programs governments in some third-world countries might eventually undertake to restrain population growth in the coming decades. A world in which the human family has soared past 10 billion and in which much of the annual world population growth is concentrated in a few countries might well accept deeply interventionist policies to curb that growth. Sadly, I also think that small coercive sterilization programs targeting indigenous peoples will recur. In these instances, I think it likely that the central governments will be quietly complicit as local officials move against relatively powerless people, using money and persuasion as weapons against fertility. It will be exceedingly difficult to expose all such programs. Perhaps the best hope is that the physicians who perform these operations demand that they operate only after obtaining the voluntary informed consent of the patient.

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