

Teaching an Old Field New Tricks: Chinese Eugenics

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Abstract: This article evaluates the relationship between the Maternal and Infant Health Care Law of 1995 in China with continuing Chinese policies and scientific research based in eugenics. This article also explores the nature of western criticism and conception of eugenics in regards to Chinese eugenics-based science and medicine, with specific attention paid to the Maternal and Infant Health Care Law and recent Chinese feats in genetic engineering.

Eugenics: Introduction/Background:

In Europe and America, eugenics is associated with Nazi science and thus demonized; in China, it is a mainstay of the scientific establishment and political advancement. How do we understand these differences, and how do they relate to contemporary scientific and political climates? One of the most pervasive and influential social and scientific philosophies in modern China is something that originated in western society, quickly died out, and consequently became taboo in western culture because of its negative historical connotation. This philosophy is eugenics: the system under which Adolf Hitler was able to validate the holocaust of those he deemed subhuman. Eugenics, however, is a widely misunderstood concept; it is also the system that gave the modern world invaluable insight into the validity of genetic research, contraception, and birth screenings. This controversial topic continues to drive Chinese politics and social reforms, while western societies such as the United States look on with trepidation. Although complex, China's relationship with eugenics continues to be a driving force in the country's development and progress.

Eugenics officially began as a western construct that stemmed from the ideals of Social Darwinism, taking hold in the United States and other European societies; however, the idea of eugenics is neither new nor unique (Gillham 98). When Sir Francis Galton, the founder of eugenics, wrote *Natural Inheritance* in 1889, he was greatly influenced by Darwin's earlier *Origin of the Species* (Gillham 92). Eugenics, at its core, means "good stock," and advocates for selective breeding in order to better the human race (Gillham 98). While this concept may not seem particularly insidious or threatening at face value, it seems that eugenics really only is seen as problematic if it is explicitly employed by a state or system of authority, which we see evidence of in popular heated arguments about abortion laws where conservative religious groups call Planned Parenthood federally-supported organization that achieves "Eugenics by

abortion" (Jackson), while liberal, pro-choice advocates ardently offer discordance (Gandy).

This controversy of state-sponsored eugenics is a mainly westernized fear, due to its connotation with the Nazi party in Germany, which explicitly used eugenic philosophy and science in its holocaust programs. It is a reasonable cause for worry. As stated by the *Encyclopedia of Contemporary American Social Issues*, "In its day it was legitimate science, but today it haunts any discussion of controlling fertility or heredity" (1398); however, eugenics and politics are intricately linked, with Eugenics even becoming a political platform: "Eugenics was the popular science and associated political movement for state control of reproduction..." (*Encyclopedia of Contemporary American Social Issues*, 1398).

Since this is such a controversial topic, especially when dealing with any sort of reproductive laws in the West (such as the abortion debate mentioned above), we can use the experiences of Eurocentric societies in our consideration. Eurocentrism is a system in which European or Anglo-American societies define other societal experiences, demographics, and worldviews in terms of European or Anglo-American values. Often this system relies on a sense of western exceptionalism, which defines the European or Anglo-American traditions and cultural values as superior to the culture or society in question. We can use an evaluation of Eurocentrism and western exceptionalism to advance a discussion on the importance and influence that eugenics has had in China, as well as its effects worldwide and criticisms from western societies such as Europe, Canada, and the United States. For the sake of brevity, we will look specifically at the progression and effects of China's current Maternal and Infant Health Care Law, passed in 1995, and China's new advances in the fields of gene splicing and selective gene therapy. Throughout, we will evaluate these laws and programs in relationship to how the West portrays and interprets them, and whether these reactions are warranted or not.

The Chinese Maternal and Infant Health Care Law:

The Maternal and Infant Health Care Law of 1995 was enacted with the purpose of “ensuring the health of mothers and infants and improving the quality of the newborn population” (Maternal Infant H.C. Law Article 1). The law outlines the importance of China’s involvement in providing mothers and infants with sufficient health care (Article 2). There is a definite eugenics-inspired element to the law, which we will focus on: Articles 7-13 focus on “pre-marital health-care services” (Maternal Infant H.C. Law Article 7). Article 7 states that the State must provide services to pre-marital citizens, which includes sex education that focuses on reproduction and genetic disease; a health consultation with marriage and child development advice; and a medical examination for both partners (Maternal Infant H.C. Law Article 7, Items 1-3). This medical examination must be “conducted for both the male and female planning to be married to see whether they suffer from any disease that may have an adverse effect on marriage and child-bearing” (Maternal Infant H.C. Law Article 7, Item 3). The law continues to detail the nature of these examinations, which must include screenings for “genetic diseases of a serious nature; target infectious diseases; and relevant mental diseases” (Maternal Infant H.C. Law Article 8, items 1-3). In other words, couples must go through an examination process before they are married in order to be given a certificate of marriage by the state.

As we find in Therese Hesketh’s piece, this process is conducted by a doctor. She states, “Inquiry is made about hereditary illness and problems that might jeopardise parenting abilities, such as learning disorders and psychiatric problems” (Hesketh 277–279). Beyond psychological screenings, people are also given the standard physical screening: “The physical examination includes the obvious—height, weight, and blood pressure—and the rather less obvious—colour and distribution of hair” (Mao 139). The inclusion of the color and distribution of hair is exceptionally interesting, since this analysis of hair color and distribution was used in early Eugenic research in western societies such as the United States (Ayob and Messenger 412–413). Even more interesting is the special attention paid to sexual or hormonal conditions: “special (perhaps obsessive) emphasis is given to secondary sexual characteristics. In men these are feminisation of breasts, pubic hair... and so on. In women the pelvic examination is supposed to include palpation of the uterus and ovaries” (Hesketh 277). This suggests that these screenings are present to prevent more than just mental illness in babies, but also hormonal and physical defects that might otherwise hinder the child’s full quality of life or societally contrived normalcy; furthermore, this evidence suggests that while screening for the health of the next generation, these doctors are also screening people to determine if they are

going to be effective and healthy parents (emotionally, mentally, and physically).

While these tests are potentially very useful in the context of childbirth and child-rearing, they serve the purpose of establishing the couple as “fit” or “unfit,” as defined by local or provincial criterion (Maternal Infant H.C. Law Article 13), for marriage; in other words, the couple must “pass” the premarital tests in order to become married—“fit” couples are rewarded with the certificate of health required for marriage (Hesketh 277). If the couple does not pass, they must seek therapy or health care in order to be married: “in other cases the marriage must be postponed to allow for some form of treatment or counselling,” (Hesketh 277). The law states that any member of the partnership who is still unable to pass the examination because of a serious condition, “which is considered to be inappropriate for child-bearing from a medical point of view” (Article 10), can only be married when they are no longer able to bear children, after “taking long-term contraceptive measures or performance of litigation operations” (Maternal Infant H.C. Law Article 10). In other words, couples with severe enough conditions or who are deemed “unfit” for child-bearing by a doctor are forced to agree to permanent contraception (Hesketh 277).

While this law may seem cumbersome and problematic to some westerners, it is not a new or foreign concept, as many people who want children consider their health and the possible subsequent health of their offspring. For instance, 94% of non-invasive prenatal testing clinics offer fetal screening to prospective parents in the United States; such clinics screen for birth defects and certain incurable, debilitating conditions such as Down’s syndrome (Allyse et. al.). It seems the only difference is that China’s screenings are mandated by the state. While the law does not explicitly require all marriages to be conducted this way, providing a provision for prospective parents to challenge the results of the examination (Maternal Infant H.C. Law Articles 11-12), this means little in a one-party system known for imprisoning or institutionalizing people who do not conform to what the party wants; furthermore, “the coercive implementation of birth control programmes so far indicates that eugenic legislation will be carried out with little regard for individual choice” (Dikotter 175). It should be noted that many other (even western) countries employ extensive mandatory premarital screenings in order to guard against infections such as “syphilis, rubella immunity, haemoglobinopathies, Tay-Sachs disease, hepatitis B, and, most recently, HIV” (Dikotter 175). These countries include Taiwan, Turkey, Egypt, Spain, Portugal, Italy, and Brazil, which employ some mandated pre-screenings (Hesketh 277). Here, we should also consider the many state-sponsored campaigns in the United States, Canada, and other western European

countries for voluntary testing and screening before choosing a sexual partner (Hesketh 277–279).

From a public health standpoint, this law is extremely useful. Its effects can “include diagnosis and treatment of unrecognised diseases” (Hesketh 278) such as psychological illness, sexually transmitted infections, and potential epidemics. It can also result in “reduced transmission of disease to partners and offspring” in order to widely prevent any hereditary illness that could be debilitating and devastating, such as Tay-Sachs disease (Hesketh 278). Additionally, this law provides “a forum for health education, and a convenient means of collecting information on the health of the population for epidemiological and planning purposes,” both of which provide invaluable population data as well as widespread education for the Chinese populace, therefore preventing further diseases from spreading (Hesketh 278).

It seems that components of this law are something that many westerners would support; after all, raised awareness and public education of disease through prenatal screening is certainly something that medical scientists and researchers in Europe, Canada, and the United States are striving for, as we can see in popular campaigns to encourage sexually active citizens to be tested for sexually-transmitted infections. Unfortunately, however, the fact that these Chinese screenings are state-mandated suddenly incites criticism. The goals of such screenings are founded on principles of eugenics, but the initiative is not called a eugenics-based program until it is mandated or backed by the state; therefore, we can safely say that eugenics is more than a philosophy or science, in fact, its existence as a science or philosophy seems to be completely dependent on its ties to politics and national health measures. In order to be widely considered as a system of eugenics-based science or philosophy, the set of policies must first be politically influenced.

Chinese Eugenic Policies - Ethics, Methods, Goals, and Criticism:

The Maternal and Infant Health Care Law had widespread support as of 1997 from Chinese geneticists (although we should consider that these statistics were compiled in the context of a highly controlling political climate) with many supporting the validity of eugenics-based research and legislation (Mao 139). An astounding 90% of Chinese scientists, however, were in favor of the introduction of a code of ethics in genetic practices and research, which indicates that while the law was not widely criticized, many called for standardized methodology to enforce or ensure that people were getting the care, as well as the premarital and prenatal screenings in a safe and ethical way, in order to provide prospective parents with effective choices and treatments while leaving them in control of their own progeny (Mao 139).

There has been even more outcry and call for reform from western societies such as the United States of America. It is a popularly-held belief that only “Totalitarian states are attracted to eugenics,” and that these programs must always, without fail, be harmful to the preservation of individual rights, which is arguably the most coveted, sacred concept to Americans and the American way of life (“Western Eyes on Chinese Eugenics Law”). There were even calls in the 1990s for American geneticists to publically boycott any scientific relationships with Chinese geneticists (Mao 139). While this exclusion did not completely happen, the threat of such a measure is enough to give grounds to evaluate the American response as a specifically sensitive reaction to any sort of mention of eugenics, likely based in ideals of western exceptionalism. While American scientists were hostile to this law twenty years ago (Mao 139), they have since seemed to become at least complacent in it, especially when it comes to Chinese genetic research and the progress facilitated by eugenics-based research, as there are little indications of a continuing call for cutting of scientific discourse between the United States and China.

The Chinese government seems to be more focused on using these aforementioned scientific and genetic advancements in the 2010s to eradicate disease, rather than introducing new eugenics-based laws for population control. While the Maternal and Infant Health Care Law is still in effect, such population controlling policies seem to be experiencing a relative decline. The One Child Policy was revoked in October of 2015, and in 2010, China ratified the United Nations Convention on the Rights of Persons with Disabilities in order to give more personal freedom and empowerment to those with disabilities (including the right to marry and bear children) (Petersen 85). Since these changes have happened so recently, it is still too early to tell how these new rights and legislative changes will be reconciled with the Maternal and Infant Health Care Law. Some may argue that these legal and political changes signal a decline in eugenics-based policies in China, but I would argue that the efforts of eugenic legislature and political philosophy are simply being redirected towards genetic research and other fields that could be advanced through a eugenics-based approach.

Eugenics-Based Research – Advances, Effects and Discussion:

The recent genetic research in China is astounding. It seems that Chinese scientists’ acceptance of eugenics has allowed them to focus less on ethical quandaries of the West and more on scientific progress in order to compete with western leaders in the field, such as the United States. China is increasingly becoming a leading global power in the field of genetic research and

modification. By embracing eugenic principles, Chinese politicians have created a climate in which scientists are free to explore the human genetic code and its possibilities without immediate fear of rebuke based on Eurocentric ideologies. These advances are both celebrated and criticized by westerners, but I would argue that this criticism is ill-placed and based out of Eurocentric ideals, not out of a supposed moral high ground. We see examples of this criticism when we evaluate different reactions to world-changing scientific advancements coming from the East, such as the first recorded report of “editing the genomes of human embryos” coming from China (Cyranoski and Reardon, 2015). Many western scientists cite this as an invaluable advancement in the field of biological research, stating that “gene editing in embryos could have a bright future because it could eradicate devastating genetic diseases before a baby is born” (Cyranoski and Reardon, 2015). The opportunity to enact such widespread benefit should be enough to seriously consider Chinese geneticists’ research as valuable. Furthermore, it could be beneficial for western medicine to consider the wide-ranging positive effects of genetic modification not only in embryos, but in adults and living children if gene splicing is found to be capable of erasing diseases such as cancer, psychological illness, or hereditary disease such as sickle cell anemia.

Still, there are researchers criticizing these findings, citing ethics and western-based morality: “Researchers have also expressed concerns that any gene-editing research on human embryos could be a slippery slope towards unsafe or unethical uses of the technique” (Cyranoski and Reardon, 2015). It seems that whenever a new controversial topic comes along, western moralists claim that it is somehow a slippery slope towards unethical behavior, as featured in the Department of Philosophy at Texas State University in defining a slippery slope argument (Texas State University). This “slippery slope” argument has been used by politicians, particularly in the United States, to advocate for the outlawing of interracial and homosexual marriage (Volokh 102), the disapproval of evolution taught as science (Nieminen and Mustonen 1), and the restricting of women’s access to reproductive health care (Thomson 1). These types of fallacious arguments are widely considered to be based on beliefs of moral or religious superiority, rather than scientific facts; the “slippery slope” argument against genetic research on humans features the same rhetoric and is arguably of the same trend. Furthermore, I would argue that the potential benefits of genetic research would greatly outweigh the risk of unethical behavior; perhaps gene splicing might not seem so unethical as a means if we achieve the “ethical” ends of eradicating cancer or writing out genetic disease.

The genetic modification of human embryos was not completed with insidious goals in mind. In fact, this

genetic modification of embryos focused on modifying the gene responsible for thalassaemia, a fatal blood disorder (Knapton). Several critics condemned this advancement of science, calling it a precursor to “designer babies” (Knapton). This criticism is made even more questionable as the method used to do the genetic modification, called CRISPR, was discovered, developed, and established by scholars at MIT in the United States (Knapton). This is not to say that the Chinese are using genetic modification for solely disease-eradication purposes; they have also used gene-editing to create miniature pigs called “micropigs” to be sold as pets in China (Cyranoski). This practice, however, has not received the same backlash from westerners. It seems the arguments about “playing god” do not become so incensed regarding whether or not these findings are useful or can benefit humanity; instead, they seem to revolve only around whether or not these possibly unethical practices are performed on humans.

The western use of the assertion of “unethical” behavior does not depend on whether or not something benefits the human race, but only if it tries to modify the human race in any way through genetics. Simply put, unethical behavior in this context is employed by European, Canadian, and U.S.-American critics in connection with eugenics. This moral ground is shaky at best and hypocritical at worst, especially since so many western societies triumph at the eradication of disease through medication, vaccination, and other pharmaceutical research, but remain abhorrent to the thought of seeking to eradicate disease through genetic modification. This western sentiment of a moral high ground is not founded on science; it is based on Eurocentric fears of eugenics. Arguments for and against genetic modification are based in eugenics; the Chinese seek to write out diseases for the betterment of the human race and western critics condemn the process as seeking to unethically write out differences.

While it is still not entirely clear whether these new genetic tests will be as advantageous as they seem, as they have been conducted recently and we cannot yet see their long-term effects on individuals or populations, we can quantify the effects of other, older eugenics programs in China and their effects on the population from a social and cultural standpoint. First of all, there has been a sexual revolution in China that has been attributed to the availability of contraception that was provided as a result of population-controlling measures (Kleinman). This sexual revolution created the climate for a more vibrant youth culture, as well as increased advocacy for women’s reproductive rights (Kleinman). Global-social effects also include the recognition of China as a scientific power. Recently, and perhaps partially as a result of the acknowledgment of Chinese medicine as a viable and worthwhile pursuit, a Chinese woman was awarded the

first Nobel Prize in China because of her contribution of an herbal-based cure for certain strains of malaria (Cyranoski). While this is not directly eugenics-based, I would argue that China's inclusion in the global sphere of science is due to its widely known eugenics programs which put it on the map as a candidate in the competitor of global science.

Conclusion:

From genetically modified "micropigs" to curing hereditary disease, China's relationship with eugenics is explicit and intricate. The field of eugenics has provided China with avenues to control their population, as well as curb an epidemic of disabilities and illnesses through prenatal screening. Researchers hoping to see the long-term effects of these advancements must now wait and see what Chinese eugenics and related programs have in store for the rest of the world, especially now that China has established itself as a serious global player in the field of science. There will always be outcries against genetic modification from western society, but that is mostly due to our troubled connections to eugenics. It seems that in order to allow China to advance, we should approach these research possibilities with an open mind and a cautious but supportive attitude. The Chinese future will be in part determined by its eugenics programs, and regardless of what these effects turn out to be, they will definitely influence the trajectory of science and politics for the rest of the world, since China is a burgeoning scientific world power. Even though China's relationship with eugenics is complex and controversial, it has been and continues to be an ever-present driving force in Chinese politics, culture, and society. It will certainly be interesting to see how this old field grows as it is instilled with new methods, principles, and discoveries.

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