

The Lure of the Gay Gene

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THE FOLLOWING WORDS were published anonymously ten years ago in a pamphlet titled “The Gay Gene Will Not Protect You,” by a group of queer activists in New York City under the name Pink Tank: “The question isn’t whether we are gay. It’s whether we are out. We don’t have to figure out why we are queer. It doesn’t matter. History shows that genes will not save you when someone with power wants to keep you down or to eliminate you.”

As a gay teenager in the '90s and a twenty-something through the '00s, I experienced the nature-nurture debate that Pink Tank was dismissing as constant background noise to my sexual and political coming of age—particularly in my adopted home state of Maine, where non-discrimination laws for sexual orientation were overturned by referendum repeatedly from the early 90s until their eventual passage in the 2005 election. Now a bit older, perhaps a bit wiser—or at least well trained in the ways of academic scholarship—I’ve found it fascinating to look back on the heyday of the debate between “essentialism” and “social constructionism,” as well as the biological studies that tried to establish the etiology of homosexuality as genetic or biological in origin. I’m particularly interested in the ways in which scientific research is always situated within social, political, and economic frameworks despite the sciences’ historic claims to objectivity and cold truths.

Genetic Studies in Homosexual Etiology

What follows is a novice, philosophy of science account of genetic studies in homosexual etiology to date and a hypothesis about the waning scientific interest in the gay gene which occupied a central place in the queer political imagination just a decade ago. Let me start with a brief, chronologically organized overview of the major genetic studies conducted over the last 200 years, including the underlying essentialist hypotheses that predate the discovery of genes.

In the late 19th and early 20th centuries, psychiatrist Richard von Krafft-Ebing and emerging sexologist Magnus Hirschfeld, working separately, offered a rudimentary hypothesis for the heritability of homosexuality by observing that male homosexuals often clustered in families. Both offered what was essentially a pathologizing hypothesis, suggesting that homosexual men had the physiological and psychological make-up of women, but in a male body.

Building on the work of Krafft-Ebing and Hirschfeld, Ger-

man scientist Theo Lang hypothesized that homosexual men were actually women in men’s bodies. In his 1934 study of homosexual men that he located through criminal records of those persecuted under Germany’s anti-homosexual penal code paragraph 175, which took effect in 1871, he observed that the ratio of brothers to sisters was disproportionate in their families. Assuming that there should be an even ratio of men to women, he concluded that the extra homosexual men he found must be genetic women in men’s bodies.

In 1935, Aaron Rosanoff, a Russian-American psychiatrist, was the first to hypothesize a genetic model for sexual orientation in his article “Theory of Chaotic Sexuality.” Here he formulated a model of sexuality variation based on the concept of recessive genotypes. Although his hypothesis was merely speculative because the technology necessary to test such a claim was unavailable at that time, this hypothetical genetic framework for attributing sexuality to genes was groundbreaking. It was the first time homosexuality was hypothesized as a natural genetic variation as opposed to a genetic mistake or deterioration.

The discovery of a gay gene could lead to the disappearance of homosexuality through any number of scenarios.

In the 1940s and '50s Franz Kallmann, a German-born American psychiatrist, studied the sexual orientation of forty pairs of monozygotic (identical) and 45 pairs of dizygotic male twins in what was to be the first twin study of sexual orientation. He hypothesized that if homosexuality were inherited,

then homosexual concordance rates among monozygotic twins would be higher than that of dizygotic twins. His results supported his hypothesis, though his work was criticized for its methodological problems, notably the fact that he didn’t address the similar environmental factors present for identical twins within the same household.

Another heritability study, that of the British research team Eckert, Bouchard, Bohlen, and Heston, was completed in 1986 and studied the concordance rates of homosexuality between monozygotic and dizygotic twins raised separately. This study was one of the first to include homosexual women in heritability twin studies within homosexuality etiology research. Eckert and colleagues’ heritability hypothesis, primarily based on Kallmann’s work, was likewise verified, at least for homosexual men. Eckert went on to suggest that male homosexuality is probably inherited to a greater extent than is female homosexuality.

Richard Pillard, a professor of psychiatry, and James Weinrich, a psychologist and sexologist, also observed that male homosexuality appeared to cluster in certain families. In the 1980s Pillard and Weinrich conducted a study to test their prediction that if a family contained one homosexual sibling, the likelihood of other gay siblings would be higher than the general

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norm. The predicted surplus of gay siblings did in fact show up in their research, but Pillard and Weinrich could not discount the possibility that environmental factors were responsible. Also, they failed to produce similar results for lesbians. In the early 1990s, Richard Pillard, now working with Michael Bailey, repeated Kallmann's twin study, this time including female homosexuals and non-twin siblings in the mix. Their study had similar concordance outcomes for homosexual men as Kallmann's, and again women did not bear out the genetic hypothesis.

In the early 1990s, Dean Hamer, a geneticist at the National Cancer Institute at the time, studied forty families with two gay brothers in search of evidence for a homosexual gene passed on through the X chromosome. Observing that gay men tended to have more homosexual male relatives on the maternal side of their family tree, Hamer hypothesized that homosexuality is probably carried by the mother. He also reported a genetic marker on the Xq28 part of the X chromosome that was present in homosexual men significantly more often than in heterosexual men.

In 1991, Simon LeVay, a British neuroscientist, reported that homo- and heterosexual men differed with respect to a particular structure in the brain, a part of the hypothalamus, which was on average twice as large in the straight men as in the gay men in his sample. The brains of the gay men, as luck would have it, looked more like those of women. While widely discussed, the study's validity was questioned, because LeVay used the brains from cadavers of men who had died from AIDS. Their sexual orientation was assumed posthumously because of their cause of death. LeVay has defended his hypothesis and maintains that this area of the brain may be associated with atypical sexual behavior in gay men, the implication being that gay men's brains are in some way feminized. In his 1996 book, *Queer Science*, LeVay suggested that the inconclusive results of genetic studies, including his own work in neuroendocrinology, point to the existence of multiple factors explaining the origins of male homosexuality.

William Byne and Mitchell Lasco, both researchers in neuro-anatomy at Mount Sinai Medical Center, make a similar declaration about the inconclusiveness of genetic studies. In a 1997 co-authored piece called "The Origins of Sexual Orientation," they reflect specifically on the numerous twin studies that have been conducted, noting that their most interesting and consistent finding is that, despite sharing genes and social environments, nearly half of monozygotic twins do not share a sexual orientation.

Psychotherapist Vernon Rosario [who has a piece on a related topic in this issue] offers a comparable reading of the heritability studies conducted by Dean Hamer and his team. He points out that Hamer never found a specific gay gene responsible for influencing the sexual orientation of his research subjects and commends Hamer for having "recognized that a complex trait like homosexuality is probably influenced by several genes and has environmental, experiential, or cultural factors." Philosopher Frederick Suppe is especially critical of etiology studies. In a 1997 article titled "Explaining Homosexuality, and Who Cares Anyway?" he writes: "The conceptual crudity with which the etiological problem is conceived and the inadequate research designs that follow are unacceptable under

the standards routinely achieved in the social and biological sciences." Suppe later dismisses the etiology studies as "a virtual encyclopedia of methodologically unsound research."

Byne and Lasco note the complexity of the connection between genes and behavior and challenge the research to date: "Genes alone cannot directly specify any particular behavior or psychological phenomenon. Instead, genes direct a particular pattern of RNA synthesis that in turn specifies the production of a particular protein that in turn may influence behavior." This assertion undermines the entire body of work done in search of a genetically determinate origin for same-sex desire by claiming that a subject's genetic makeup cannot be definitively fixed to sexual behavior or psychology.

Matters of Interpretation

Despite the weaknesses of the genetic research to date, the continued interest in this project raises two major ethical issues. First, the interpretation of data from these studies has been argued to the benefit of GLBT rights, but it also creates a clear pathway to the possibility of eugenic manipulation to wipe out sexual minorities. The following passage was published in 1958 in *One* magazine, in an article titled "It is Natural After All," by Christopher Wicks:

That sex itself is determined by genes is common knowledge. Why is it so unreasonable to believe that sexual deviation is also a matter of genetics? Indeed it is not unreasonable. It is simply that our society does not wish to accept the fact. To do so would be to plead guilty to decades of persecution both physical and mental on a portion of the population the exact counting of which would startle even the most optimistic homophile.

What's interesting is that Wicks not only advances a genetic argument for the origins of homosexuality but sees the potential for "homophiles" to use this fact as an argument in their struggle for equal rights and legal protections.

Theologian and ethicist Ted Peters explains the logic of tolerance in his 1997 book *Playing God?*, a lengthy reflection on genetic determinism and human freedom. He explains that if we can prove that genes determine sexual orientation, then the latter is just another natural variation akin to traits like eye or hair color. To discriminate on the basis of naturally varying traits like eye or hair color would be considered immoral in our society, so it follows that discriminating against someone with the gay gene would be equally immoral. In fact, this framework of what might be termed biological innocence—a lack of choice with respect to one's sexual orientation—is at the core of the modern movement for GLBT equality. If it can be proven that same-sex desire is genetically predisposed, then anti-gay politicians and conservative activists can no longer frame sexual behavior as a matter of choice.

Clearly many gay rights activists from the 1980s on believed that proof for the biological argument would make a number of political legal goals easier to attain. Some activists in the '90s have even argued for continued genetic studies in homosexual etiology so that the resulting data can be used in court cases on behalf of supporting the rights of homosexual teachers, parents, and service members.

Robert A. Brookie makes similar observations in his 2002

book *Reinventing the Male Homosexual: The Rhetoric and Power of the Gay Gene*. He notes that during the late '90s the debate over gay rights has moved away from a question of equality and liberty and toward a battle between biological innocence (deserving of rights) and choice (undeserving of rights). Vernon Rosario argues that biological explanations of homosexuality are superfluous to the fundamental question of equal human rights, pointing out that many societies choose to protect religious freedom even though religion is not biologically determined. Conversely, societies throughout history have not hesitated to discriminate against people on the basis of factors, such as race and sex, that clearly are genetically determined.

Bioethicist Edward Stein opposes the use of homosexual etiology research to support equal rights. He believes the reliance on this kind of research is misguided, citing the moral, not scientific, terms on which the debate should be founded. In a 1994 article, "The Ethical Relevance of Scientific Research on Sexual Orientation," he argues that the "arguments for lesbian and gay rights, protection for lesbians and gay men against discrimination, respect for queer relationships, and so on, should be cast in terms of justice, rights, privacy, equality, liberty and the like," and not whether homosexuality is a choice or biologically innate.

And there could be a serious downside to the discovery of clear genetic links to homosexuality. Simon LeVay, among others, has raised the specter of eugenics and the possibility that people may attempt to eliminate homosexuality through selective abortion or genetic engineering. The discovery of a gay

gene (or suite of genes) could lead to the disappearance of homosexuality altogether through any number of scenarios, including everything from parental choice to state coercion in some future dystopian society.

Dean Hamer, a geneticist and fierce opponent of eugenics, argues that discriminating against someone based on their genetic makeup is wrong, whether we're talking about skin color, eye color, or other genetically variable traits. Terminating a pregnancy based on genetic screening is something he finds unacceptable. Hamer goes so far as to suggest that if his genetic studies in homosexual etiology research ever lead to the creation of a genetic test for sexual orientation, he would patent it to prevent such a test from making it onto the market.

Theologian Ted Peters and psychiatrist Vernon Rosario have raised similar concerns about the specter of eugenics that remains unaddressed by GLBT activists who invoke a biological argument for gay rights. Both worry that the discovery of a gay gene could allow parents to seek prenatal screenings that could lead to either genetic manipulation or selective abortion of "fetuses at risk of developing into homosexuals." Indeed, the research of contemporary feminist bioethicists Tereza Hendl and Barbara Katz Rothman is helpful in framing the possible consequences of a gay gene. They estimate that to date there are an estimated 200 million women missing globally due to the practice of sex selection for gender preference. Why would anyone think that homosexuals would fare better than females in this respect?

As noted by Martha McCaughey, the genetic and neuro-anatomical research in homosexual etiology studies may "mess with the minds of many homophobes ... but it fails to challenge the position of science as an authoritative arbiter of political conflicts." If GLBT activists are successfully to challenge the moral and political issues of our times, it may be more useful to refute than to embrace the role of scientific research as the determining factor in who is worthy of basic rights and legal protections.

While the search for genetic linkages to homosexuality continues apace—part of the vast industry unleashed by the Human Genome Project—findings from these studies, which are of a rather technical nature, rarely find their way into the mass media. For the record, current research seems to be focusing on "epigenetic" effects whereby genetic traits are switched on or off by environmental factors.

Reflecting on the media fervor over gay gene discourse in the 1990s and the low level of interest today, I have to suspect that the shift is due to the changing political tides, specifically the waning political motivations that originally fueled these studies. Homosexual acts have been decriminalized among consenting adults, homosexuality has been depathologized by the American Psychiatric Association, many states now have basic non-discrimination protections for gay people in housing, employment, and accommodations, federal hate crimes protections based on sexuality and gender have been enacted, "Don't Ask, Don't Tell" has been struck down, and gay marriage is now the law of the land. With many of the major gay and lesbian rights issues no longer fueling the nature versus nurture debate, the relevance of gay gene discourse and the scientific research behind its hypothetical existence is no longer necessary in today's political climate.

"Another **winner** from the collaborative pen of Dee and Devon."
—Ami, *ARC Review Blog & Goodreads*

SUMMER DEVON
and
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When a storm is brewing, taking shelter could be the most dangerous move of all.

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