

New Genetics Study Undermines Gay Gene Theory

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By Warren Throckmorton, Ph.D., & Durwood Ray, Ph.D.

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A study to be published in the March 2005 issue of the journal *Human Genetics*, and available online now, actually undermines the commonly held view that homosexual orientation is determined by genetic factors.

The study's lead author, Brian Mustanski from the University of Illinois at Chicago, said in a news release: "There is no one 'gay' gene. Sexual orientation is a complex trait, so it's not surprising that we found several DNA regions involved in its expression."

However, a thorough examination of the actual report reveals no statistically significant findings for any of these DNA regions.

The authors describe in the article three non-X chromosomal "new regions of genetic interest" (7q36, 8p12, and 10q26). In the authors' view, a noteworthy aspect of the study is as follows: "Our strongest finding was on 7q36 with a combined mlod score of 3.45 and equal distribution from maternal and paternal allele transmission. This score falls just short of Lander and Kruglyak's (1995) criteria for genomewide significance." They go on to say "two additional regions (8p12 and 10q26) approached the criteria for suggestive linkage"- again pointing out that neither was statistically significant.

Thus, even the author's "strongest finding" was not statistically significant by widely accepted scientific criteria.

The study also re-examined potential genetic contributions on the X chromosome from region Xq28. This is the region first identified by Dean Hamer as associated with homosexual orientation. However, this study re-analysis, to quote the authors, "did not find linkage to Xq28 in the full sample."

The regions hypothesized as relating to sexual orientation by the research team appear to relate to developmental precursors to temperamental factors that have been associated with environmental theories of same-sex attractions. For instance, one region identified is associated with hormones that impact sexual development. Another is linked to hemispheric development in the brain. Such genes may impact the temperamental traits of activity level and aggressiveness. Lower preferences for aggressive activities have been linked to the development of same-sex attractions in men. However, currently there is no research evidence in the Mustanski study or any other of a direct pathway from genes to sexual attractions that does not involve environment interacting with individual temperamental differences.

Consistent with an environmental explanation of same-sex attraction is the work of Daryl Bem. In a 2000 study, Dr. Bem demonstrated that there is no relationship between genotype and sexual orientation in men unless environmental interaction with the temperamental trait of gender nonconformity is taken in account. In other words, exploring individual temperamental factors lived out within certain environments may provide more precise areas for research into the action of potential genetic factors in the development of sexual attractions.

In summary, *the Mustanski study finds no significant relationship between DNA regions and self-reported sexual orientation.* Available evidence suggests that genes may be expressed via the interaction of temperament

with certain environments. Practically, then, at present, one cannot know with any degree of certainty that a gene or combination of genes will distinguish why one man is homosexual and another is not.

To learn more on the claim that homosexuality is genetic, read Concerned Women for America's paper, Born or Bred: Science Does Not Support the Claim That Homosexuality is Genetic by Robert Knight. [Click here.](#)

Warren Throckmorton, Ph.D., is associate professor of psychology and Durwood Ray, Ph.D. is professor of biology at Grove City College (Pennsylvania).

References:

Bem, D.J. (2000). "Exotic Becomes Erotic: Interpreting the Biological Correlates of Sexual Orientation." *Archives of Sexual Behavior*, 29, 531-548.

Mustanski, B.S., DuPree, M.G., Nievergelt, C.M., Bocklandt, S., Schork, N.J. & Hamer, D.H. (2005). "A genomewide scan of male sexual orientation." *Human Genetics*, http://mypage.iu.edu/~bmustans/Mustanski_etal_2005.pdf.