

Genetically Based: The Search for the Gay Gene

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Introduction

The scientific community always has and always will strive to explain the unknown. Since the first publication in 1993, buzzwords such as the “gay gene” and the genetic basis for homosexuality have been prevalent in scientific research. The general public raised the question of how people become homosexual and scientists have taken it upon themselves to search for an answer. The original “marker” for homosexuality is the gene Xq28. In 1993, Hamer et al found a correlation between the genetic marker Xq28 and homosexuality in males [1]. Once the public heard news of this correlation the talks of there being a direct link to homosexuality exploded. One must remember that correlation does not mean causation. Furthermore, not a single study has been released that definitively proves or disproves the existence of a gay gene. Researchers continue to attempt to shed light on this seemingly anti-Darwinian act.

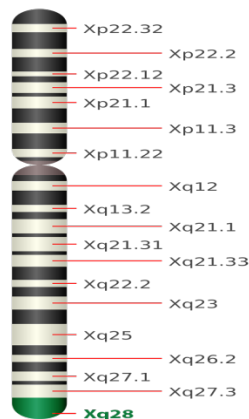


Figure 1: The X-chromosome with the Xq28 region shaded in.

Darwinian Fitness

The Darwinian model of natural selection states that traits that give a reproductive advantage will be selected for in a population. Similarly, Darwinian fitness is the ability of an organism to pass along its genes to the next generation. Assuming that there is in fact a “gay gene”, this idea drastically clashes with Darwin’s. If this gene exists and people

are genetically coded to be homosexual they are in essence reducing their level of fitness to zero, for it is impossible for a same sex couple to pass along their own genes naturally. This could drastically change how the scientific community views not only natural selection but also fitness. However, one possible explanation exists that would allow for a “gay gene” to be evolutionarily beneficial. As the population of the world continues to increase the resources required to sustain such a population increase. Eventually the population will reach its carrying capacity and growth curve will plateau. In order for this to happen the death rate needs to equal the birth rate. A natural way for this to happen is the prevalence of a gay gene. If this subset of individuals cannot reproduce the birth rate will begin to decrease. The gay gene could be nature’s answer to reducing the population size of humans. This explanation relies on the assumption that a gay gene does exist, and this explanation is one of pure speculation and has no scientific backing to it.

The Problems

The study conducted by Hamer *et al.* is not the problem. Hamer reported that to a “99.5% certainty that there is a gene or genes in this area of the X chromosome that predisposes a male to become a heterosexual” [2]. Hamer was careful in the wording of his response because he knew the weight that his paper carried. He never indicated a direct causation he used words like “suggests” and “seems to indicate”, and he claimed that there were hundreds of genes in this region which makes it impossible to claim that this was the region for the “gay gene”. The problem occurred when the media caught his study. They broadcast to the world that scientists had discovered the gene that causes homosexuality without questioning any of the findings in the study. They disregarded all questions that Hamer had raised in his study, and published the story as fact.

Within two years it appeared that there was another problem. In 1995, the validity of Hamer’s study was brought into question. The Federal Office of Research Integrity had charged him with research

improprieties due to him excluding data that was contradictory to his findings and hypothesis. This is common theme shared by many of the research attempts to prove the existence of the gay gene. Researchers either disregard bad data or have improper research methods that in turn render their work meaningless. Sample sizes have been too small, correlations too weak, and causations claimed without support. While it is possible that there is a genetic link to homosexuality, scientists are yet to find it. An article released in the *International Business Times* less than a month ago is bringing the Xq28 gene back into the spotlight. The article quotes Michael Bailey, the head researcher from Northwestern University saying, "Sexual orientation has nothing to do with choice. Our findings suggest there may be genes at play, and we found evidence for two sets that affect whether a man is gay or straight," [3]. Bailey is also clear in stating that there can be other factors influencing homosexuality other than a strict genetic basis. The study has not been published yet, but should be released this year.

A final problem that is consistent throughout all studies is that researchers treat being homosexual as a disease. Homosexuality can be searched for in OMIM, Online Mendelian Inheritance in Man. Typically OMIM is used as a biomedical journal that shows the genetic component of most diseases if there is one. With homosexuality being listed here, it implies that being homosexual is comparable to having Huntington's disease, a daring connection to make. If one treats being homosexual as a biomedical condition, the same must then be done for being heterosexual or bisexual. Treating homosexuality like a disease is a demeaning way of looking at the subject. Yes it is controversial, but diagnosing it as a disease is radical.

Conclusion

Many studies have been conducted to prove the existence of a gay gene. None have succeeded in doing so. Correlation data exists but no direct causation. Furthermore, many researchers treat being homosexual like a disease and that it is something that can be cured. The answer to the cause of homosexuality may lie in one gene, it may lie in many genes, or it may be the combination of a genetic predisposition coupled with the upbringing of the individual.

References

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