



“But it’s not natural!”

A survey of the biology and sociology of homosexuality

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1. Introduction

A few weeks ago I was talking with an old friend about the General Assembly debate on civil partnerships and the marking of such relationships by clergy. We have often bantered about these issues. But as we were talking that evening I could tell that he was genuinely unsure about homosexuality. His uneasiness wasn't to do with the Biblical verses that some contend condemn homosexuality, it wasn't because he didn't have any contact with homosexual people - it was because, for him, "it just isn't natural."

Homosexuality is not natural. This is a common argument by some who see homosexuality as sinful. In order to see it as such, of course, it has to be a life-style choice. It must be a conscious decision: the 'natural' orientation is heterosexual, but certain people choose to be gay.

The anecdotal evidence I had personally heard seemed at odds with that common perception. For example, a colleague my wife once worked with remarked, "You think I would choose to be gay? You have to be kidding! It would be much easier for me to be straight. It has been so difficult for my parents to come to terms with. I would never do that to them by choice. It's not a choice, this is who I am."

So what is natural? In this article we will look at the current research on homosexuality from both the essentialist (i.e. biological factors) and constructionist (i.e. environmental factors) schools, looking at the studies into whether 'nature' or 'nurture' affect homosexual orientation.

2. Introduction to Scientific Studies

When looking at what the biological, psychological and sociological sciences have to say to those within the Church seeking to broaden their understanding of the issues involved in sexual orientation, it is worth remembering these points made in *Ordination Standards*¹:

1. The purpose of science is to help us better understand our world and to distinguish fact from fiction.
2. Scientific studies vary in quality and rigor, ranging from observational impressions to rigorously controlled trials. In general, studies that reflect well controlled designs are considered more credible or likely to be true than those based on anecdote. Researchers publish their findings in peer-reviewed scientific journals to ensure that the methods and results of studies are reported honestly and including that the limitations of each study are openly acknowledged.
3. In addition to considering whether a scientific result is statistically significant, it is important to consider the magnitude of the result and the limits of interpretation.
4. In human research, including research on homosexuality, ethical considerations are always paramount. The search for human knowledge must always be conducted within a framework that respects participant's rights, that it is considered warranted (the benefits outweigh the risks), and is just.

3. Sexuality and the Animal Kingdom

Inherent in the statement that homosexuality 'is not natural' are two assumptions. The first is that what is 'natural' is fundamentally good and moral. The second assumption is that homosexual behaviour is not seen anywhere else in the natural world - for such behaviour is assumed to be the conscious choice of sinful humans. This argument might carry some weight if there were no examples of homosexual activity and behaviour in other animals. This is not the case, however.

Bruce Bagemihl has trawled through many scientific journals, as well as respected naturalist's notebooks, to uncover a wealth of information on homosexual behaviour within the animal kingdom.

"Homosexuality in its myriad of forms has been scientifically documented in more than 450 species of mammals, birds, reptiles, insects and other animals worldwide. It is found in every major geographic region and every major animal group. Animals engage in all types of non-reproductive sexual behaviour. Same-sex sexual expression includes courtship, pair-bonding, sex and co-parenting - even instances of lifelong homosexual bonding in species that do not have lifelong heterosexual bonding."²

The examples Bagemihl cites indicate the great complexity that exists in the natural world for both gender distinctions and differences in sexual behaviour.

3.1 Gender Distinctions in the Animal Kingdom

We might assume that animals are either male or female, however some animals undergo a natural gender change during the course of their life. This phenomenon is found in invertebrates such as oysters which may undergo a complete sex reversal during their lives (sometimes more than once). Coral reef fish also provide examples. Over 50 species of such fish have been found to be

¹ North Como Presbyterian Church, *Ordination Standards: Biblical, Theological, and Scientific Perspectives* (New York: iUniverse, 2005), p. 285.

² Bagemihl, Bruce, *Biological Exuberance: Animal Homosexuality and Natural Diversity* (New York: St Martin's Press, 1999), p. 12.

transsexual. Working ovaries become working testes, and a fish that was once female is able to mate as a male.³

These gender complexities continue with gynandromorphic specimens. A gynandromorph is an animal that appears divided in half, one side male in appearance and the other female. There is usually a clear dividing line between the two halves. An example of a gynandromorphic butterfly is shown in the picture on the right and clearly shows the male/female difference from side to side.



One spider gynandromorph was observed to court and mate with females using its male organs, but also to build an egg case (which is typical female behaviour).⁴

Scientific American reported the case of a zebra finch that was gynandromorphic. The right side displayed the male red feathers around the eye and zebra striping, while the other side looked female. The bird had both male and female gonads, yet it acted male. The scientists found that one side of the brain was genetically male and the other side female.⁵

3.2 Same-Sex Behaviour in the Animal Kingdom

Turning to same-sex behaviour, the case of male Black Swans is worth telling in detail. Some male Black Swans “form stable, long lasting homosexual pairs. Like heterosexual mates, same-sex partners often remain together for many years.”⁶

These male partners have far more success in defending their territory (by pooling their strength), so same-sex partners often gain the best spots on the lake with far larger territories. Partially because of this, but also because of more evenly shared incubation duties, same-sex partners are more successful parents. They incubate eggs that have been abandoned or taken by stealth, as well as eggs resulting from a temporary ‘fling’ with a female swan. Same-sex partners have an 80% success rate in raising their chicks, whereas heterosexual Black Swan partners average 30%.⁷ The success rate is measured as the proportion of chicks that survive.

In the study population, 25% of successful Black Swan parents were homosexual pairs, despite the fact that the group of homosexual pairs made up only 13% of the total number of associations or breeding pairs.⁸

3.3 Summary

While it would be inappropriate to suggest that because it happens in the animal world, then it is fine for humans (for instance, many species are not monogamous and some notoriously practise cannibalism after sex!), this information about homosexuality in the animal kingdom is helpful:

- It tells us that homosexual behaviour has been documented in many different species throughout the natural world.
- It tells us that the belief that all life consists of two absolutely distinct sexes, male and female, is a simplification of what is actually the case in nature.
- It tells us that an assumption that homosexuality is not found in nature, and thus is unnatural, is not valid.

³ Ibid, p. 39.

⁴ Ibid, p. 236.

⁵ Scientific American, News, 25 March 2003, <http://www.sciam.com/article.cfm?articleID=000555BB-B737-1E7B-A98A809EC5880105&ref=sciama>, Online, 4 July 2006.

⁶ Bagemihl, 1999, p. 488.

⁷ Ibid, pp. 488-9.

⁸ Ibid, p. 174.

- It tells us that any theological position that depends upon this assumption is questionable.

4. Sexual Orientation

Before we turn to the specifically human data and to the evidence for biological factors (nature) and sociological factors (nurture) in the formation of homosexual orientation, it will be worthwhile to define sexual orientation.

The UK Government uses the figures of 5-7% as their guide for the proportion of gay, lesbian, and bisexual people within the population. This is an informed estimate. There is no conclusive data. Surveys that directly ask this information are understood to give a base-level figure as some individuals will, for instance, deny their orientation as they believe their feelings to be morally wrong.

Homosexuality was considered for many years to be a disorder or illness. The American Psychological Association (APA) classified it as such in their internationally respected *Diagnostic and Statistical Manual of Mental Disorders* (DSM). However, in 1973 following more extensive research this classification was removed from its list of diagnoses and disorders.⁹ In 1994 the APA went further by stating "...homosexuality is neither a mental illness nor a moral depravity. It is the way a portion of the population expresses human love and sexuality."¹⁰

What is sexual orientation? At its most obvious level, sexual orientation can be described as the direction of one's sexuality. Professor Simon Rosser gives a vivid description:

"Imagine you're walking down the street and you see somebody attractive to you. Immediately inside you say, 'Wow! That's a gorgeous person.' It seems to happen even without thinking - it's something way deep within us: something automatic or pre-conscious. I like to describe it as the 'Wow' in life. It would be a very sad thing if everyone walked down the street and didn't find anyone attractive. It would be a sadder, more impoverished world."¹¹

These attractions are instinctual. It is not a matter of choice.

4.1 Natural Law

The classical natural law argument uses the notion of procreation, and the obvious complementarity between male and female for conceiving children, to determine that a homosexual act, which cannot be procreative, is against nature and thereby a denial of the will of God, the Creator. However, many sexual acts performed by heterosexual couples do not and cannot result in procreation.

What also of couples who are unable to have children as one of them is infertile, or men who have had a vasectomy ('the snip'), or women who have had tubal ligation ('tubes tied') or a hysterectomy.

Furthermore, the argument from procreation roots the concept of sex between two people at the level of physical acts (the creation of children) and tends to dismiss the relational aspects of sex - the bond that it helps build between two loving people:

"to many Christians, if there is a God-given purpose of sex, it is to be found rather in the possibilities it offers for expressing and building love between the partners, so that

⁹ APA Online, [Answers to your Questions about Sexual Orientation and Homosexuality](http://www.apa.org/topics/orientation.html), <http://www.apa.org/topics/orientation.html>, Online, 5 July 2006.

¹⁰ American Psychological Association, [Statement on Homosexuality](#), July 1994.

¹¹ North Como Presbyterian Church, 2005, p. 295.

what we need is not a narrowly focused theory about sexual acts, but rather reflection on the role sex plays in the life of people, their development, and their love.”¹²

4.2 *The Kinsey Scale: The Sexuality Continuum*

The Kinsey Scale, devised after the work of Alfred Kinsey from the late 1930s onwards¹³, places everyone on a continuum from exclusively heterosexual orientation to exclusively homosexual. An individual person may have a sexual orientation at any point on that scale.

Despite that continuum, three classifiers are frequently used to simplify classification:

- Heterosexual or straight orientation: an exclusively heterosexual individual will only have “Wow!” experiences for members of the opposite sex.
- Bisexual orientation: those with a bisexual orientation will experience the “Wow!” moment when seeing a man as often as when they see a woman. Others may tend to be attracted more often to women, others to men – as you would expect if orientation exists on a continuum.
- Homosexual or gay and lesbian orientation: an exclusively homosexual individual will only feel “Wow!” towards people of the same sex.

The majority of the population falls at the heterosexual or straight end of the continuum. However, significant numbers of people, albeit small minorities in comparison to the heterosexual population, are spread across the rest of the spectrum with a gay, lesbian or bisexual orientation.

4.3 *Transgender People*

There is another classifier that should be mentioned, those people who are transgender. This is not a different orientation, however. Rather, this refers to people who have a gender identity different from their physical identity.¹⁴ They may feel that their identity is that of a man, but their body is that of a female, or vice versa.

4.4 *Intersex People*

It is also worth mentioning that while the Genesis account says unambiguously that God created them ‘male and female’¹⁵, our current understanding is more subtle. There are a significant number of children born as ‘intersex’. This means that the child’s reproductive or sexual anatomy does not fit as typically male or female. There are many different conditions that can result in a child being born intersex. The frequency is hard to determine as a result, but specialists are called in to help determine a child’s sex at approximately 1 in 1500 to 1 in 2000 births.¹⁶

¹² Moore, Gareth, *Homosexuality*, *The Oxford Companion to Christian Thought*, ed. Hastings, Adrian, et al, (Oxford University Press, 2000), p. 307.

¹³ Kinsey, A.C., Pomeroy, W.B. & Martin, C.E., *Sexual Behavior in the Human Male*, (Philadelphia: Saunders, 1953).

¹⁴ Those who are not heterosexual often group themselves as ‘glbt’ (gay, lesbian, bisexual and transgendered).

¹⁵ Genesis 1: 27.

¹⁶ Intersex Society of North America, *How common is intersex?*, <http://www.isna.org/faq/frequency>, Online, 7 July 2006.

5. Biological and Natural Explanations and the Essentialist School

The Essentialist School looks to explain homosexual orientation by means of biology and nature.

For many years attempts have been made to alter sexual orientation. These have ranged from forced brothel trips through aversion (electric-shock or chemical) treatment, drugs and hormone injections, to castration of gay men and clitoridectomy of lesbian women. All these 'treatments' would be considered highly unethical today, and, indeed, they did not prove successful.

Sexual orientation appears to be highly resistant to change. This suggests to some that there must be a biological cause that is beyond personal control.

Studies have been done to assess this, but it should be noted from the outset that these are few in number. Research into sexuality is understandably not a high priority for funding providers in comparison with, for instance, diseases such as HIV/AIDS.

Nonetheless, instances of anatomical, genetic and endocrine (hormonal) evidence do support a biological component in sexual orientation.

5.1 Evelyn Hooker, 1957

The first test for biological determinism was undertaken in 1957 by Evelyn Hooker. A psychologist, Hooker conducted a series of evaluations using three projective tests (Rorschach, Thematic Apperception Test (TAT), and Make-A-Picture-Story (MAPS) Test) on 30 homosexual and 30 heterosexual males. The two groups had been cross-matched for age, intelligence quotient (IQ) and education. Expert psychologists performed a blind analysis of the results (they did not know from which group a set of results had been obtained) and could find no significant difference in the answers given by the two groups for any of the tests.

Hooker concluded that homosexuality was not a clinical entity and was not involved in psychopathology.¹⁷ This paved the way for the APA to change its stance on homosexuality in later years.

5.2 Hypothalamic Studies, 1990s

In 1990 the neurobiologist Professor D.F. Swaab of the University of Amsterdam started a controversy in the Netherlands with his research. He found that the suprachiasmatic nucleus, a small region of the hypothalamus, was larger in a group of homosexual men than in the control group. This, he suggested, may constitute evidence for a biological basis for homosexuality.¹⁸

Two years later Laura Allen and Roger Gorski made a similar discovery. In their study the anterior commissure of the hypothalamus was found to be significantly larger in homosexual subjects.¹⁹

Neither of these two areas of the hypothalamus are related to sexual behaviour. The behaviour is not driving these size differences. The differences are genetic and stem from subtle differences in neuroendocrinology (hormone levels) during brain development in foetal growth.

A third study by Simon LeVay, a neuroscientist at the Salk Institute, indicates that yet another region of the hypothalamus (the third interstitial notch of the anterior hypothalamus (INAH3)) was approximately half the size in homosexual men and heterosexual women than that found in

¹⁷ Hooker, Evelyn, The adjustment of the male overt homosexual, *Journal of Projective Techniques*, 21, 1957, pp. 18f.

¹⁸ Swaab, D.F. & Hofman, M.A., An Enlarged Suprachiasmatic Nucleus in Homosexual Men, *Brain Research*, vol. 537, 1990, pp. 141f.

¹⁹ Allen, Laura S. & Gorski, Roger A., Sexual Orientation and the Size of the Anterior Commissure in the Human Brain, *Proceedings of the National Academy of Sciences of the U.S.A.*, vol. 89, pp. 7911f.

heterosexual men.²⁰ Again, the suggestion was made that there may be a biological basis for sexual orientation.

It should be noted that there is criticism of these studies. For instance, all the homosexual subjects in LeVay's study had died of AIDS and there is a question over whether the drugs used in treating AIDS may affect brain size and shape. In addition, LeVay is himself gay, and some have questioned his objectivity.²¹ However, these criticisms are not wholly convincing. Some of the heterosexual subjects also had died of AIDS, for instance.

5.3 Twins Studies, 1991, 1993 & 2000

The same year that LeVay's study was published, a psychologist, J Michael Bailey, and psychiatrist, Richard Pillard, published the results of a twins study. They studied the sexual orientation of monozygotic (identical), dizygotic (fraternal) and non-related adopted brothers.

As identical twins share the same genetic makeup you would expect a strong concordance between the pairs of twins if sexuality has a genetic determiner. Some expect a perfect correlation. As David W. Torrance recently wrote, "...if sexual orientation is determined by genes, the figure should be 100% [correlation between both brothers being gay] because identical twins have identical genes."²²

That is, however, an overstatement. What you would expect is a higher concordance for identical twins, lesser for fraternal or siblings, lesser still for half-siblings, and the least for adopted children.

To take a few different examples: for diabetes mellitus there is a 50% concordance for identical twins and only 10% for fraternal. For cleft lip it is 40% and 4%. For Schizophrenia, 60% and 10%.²³ In other words, while the genetic component plays an important part, and these traits are inheritable (though not perfectly), the genes are not deterministic.

This trend is precisely what Bailey and Pillard found. Of 167 homosexual men 52% had gay identical twins, 22% had gay fraternal twins and 11% had adopted brothers who were gay.²⁴ Bailey and Pillard later carried out a similar study on homosexual women and found a similar pattern.²⁵

The Bailey and Pillard study has been criticised however because of sample bias. Its subjects were recruited in such a way that it may have drawn individuals who were particularly keen to see a positive result; for example, homosexuals who had a homosexual twin may have been more likely to take part.²⁶

Bailey himself has produced a more recent study with somewhat different conclusions. By sending a questionnaire to everyone on the Twin Registry in Australia his results produced a figure of 20% concordance of homosexual orientation for identical male twins, and 0% for fraternal twins. The figures were 24% and 10% respectively for female homosexual identical and fraternal twins.²⁷

²⁰ LeVay, Simon, *A Difference in Hypothalamic Structure Between Heterosexual and Homosexual Men*, *Science*, vol. 253, 30 August 1991, pp. 1034f.

²¹ North Como Presbyterian Church, p. 328.

²² Torrance, David W., contribution to *Civil Partnerships Debate*, *Ministers' Forum*, Is. 285, July 2006.

²³ Snustad, D. Peter & Simmons, Michael J., *Principles of Genetics*, 3rd ed. (New York: John Wiley & Sons, 2002), p. 94.

²⁴ Bailey, J. Michael and Pillard, Richard C., *A Genetic Study of Male Sexual Orientation*, *Archives of General Psychiatry*, 48, December 1991, pp. 1089f.

²⁵ Bailey, J. Michael and Pillard, Richard C., *Heritable Factors Influence Sexual Orientation in Women*, *Archives of General Psychiatry*, 50, March 1993, pp. 217f.

²⁶ Jones, Stanton L. & Yarhouse, Mark A., *Homosexuality: The Use of Scientific Research in the Church's Moral Debate* (Downers Grove: InterVarsity Press, 2000), pp. 73f.

²⁷ Bailey, J. Michael, Dunne, Michael P. & Martin, Nicholas G., *Genetic and Environmental Influences on Sexual Orientation and Its Correlates in an Australian Twin Sample*, *Journal of Personality and Social Psychology*, 78.3, March 2000, pp. 524f.

These new figures are approximately half those in the previous studies which, the authors suggest, may be due to the previous work having inflated concordances as a result of possible sample bias. Nonetheless the same general pattern found in the earlier studies is retained, as one would expect if there was a genetic component in homosexual orientation.

5.4 *The 'Gay Gene' Studies: Xq28*

Dean Hamer looked at the possibility of homosexual orientation being linked to the X chromosome. He noted by studying the family trees of openly gay men that there may be a maternal link. He found that 13.5% of the homosexual men's brothers in the study were also homosexual. The figure for the general population is around 2%.

Hamer took DNA samples from 40 pairs of homosexual brothers and found a concordance in 33 pairs of brothers for 5 molecular markers on a section of the X chromosome called Xq28.²⁸ This was statistically significant. The study became known as the 'gay gene study' in the press. A follow-up study in 1995 confirmed these results.²⁹ However, a third study in 1999 has not been able to support these results, finding only three shared markers which is approximately what you would expect by chance.³⁰ More study is needed before anything definitive can be concluded.

5.5 *UCLA Study, 2002*

The final study that has provided intriguing evidence comes not from humans, but from experiments with rats and mice. In all species the average male and female brains are different, wired in different ways. Initially, however, embryos are neither male nor female. Sex characteristics develop gradually. The view for the past 30 years has been that the body and brain differentiate as a result of secretions of the steroidal hormones testosterone and oestrogen. With respect to brain development, testosterone induces a masculine pattern of development while inhibiting feminine neural and behavioural patterns of differentiation. This process is triggered by the testis-determining gene (SRY) which is located on the Y chromosome.

In the case of brain development, this view has been brought into question by a study from the University of California Los Angeles (UCLA).³¹

The UCLA study identified over 50 candidate genes that are expressed differently in male and female mice brains *before* the gonads have differentiated, and thus before what was thought to be the stage at which sex differentiation occurred. "This suggests that there are functional differences between male and female brains, which occur independently from hormonal influence. Moreover, these differentially expressed genes are good candidates for a role in brain sexual differentiation and sexual behaviour."³²

What does this mean? Eric Vilain has suggested that this study raises the possibility that sexual identity and physical attraction is 'hard-wired' by the brain.³³

²⁸ Hamer, D.H., et al, A linkage between DNA markers on the X chromosome and male sexual orientation, *Science*, 261, 1993, pp. 321f.

²⁹ Hu, S., et al, Linkage between sexual orientation and chromosome Xq28 in males but not in females, *Natural Genetics*, 11, 1995, pp. 248f.

³⁰ Rice, G.C., et al, Male homosexuality: absence of linkage to microsatellite markers at Xq28, *Science*, 284, 1999, pp. 665f.

³¹ Vilain, Eric, Anomalies of Human Sexual Development, *The genetics and biology of sex determination*, Novartis Foundation Symposium 244, Wiley, Chichester, USA, 2002, pp. 43f and

Dewing, Phoebe, et al, Sexually dimorphic gene expression in mouse brain precedes gonadal differentiation, *Molecular Brain Research*, 118.1-2, 21 October 2003, pp. 82f.

³² Dewing, et al, 2003, p. 87.

³³ UCLA Press Release, 2003, quoted in North Como Presbyterian Church, 2005, p. 333.

The study could also help to explain the phenomenon of transgenderism. In some cases the brain of an embryo might develop, for instance, male, whereas the body could develop female. People could feel that their true gender was not consistent with their bodies.

Having said that, there is much more study required, particularly to understand the interplay between these genes and the steroidal hormones.

5.6 A Personal Story

Before summarising this section, a short story. An old friend of ours in America was born and raised as a girl. Her family didn't suspect anything was wrong until she hit puberty. When all the other girls at school were beginning to menstruate, she did not. Her period never came.

Subsequent trips to the doctor found that this girl had an inherited condition called Androgen Insensitivity Syndrome (AIS). This condition occurs in approximately 1 in 20,000 individuals. This girl had X and Y chromosomes and thus was genetically male. Her body, however, was insensitive to androgen, so her external genitalia appeared female, rather than male. Yet because she was genetically male, she had no female reproductive organs.

Feeling that she was a woman, she married and she and her husband have adopted children. Yet genetically, she is male. Is she living in a homosexual relationship?

The complexities of sexuality are brought to mind clearly by such cases.

5.7 Summary of the Essentialist Evidence

There is a growing number of studies that provide interesting correlations between biological factors and human sexual orientation. However, none of them show a direct causation.

Devising an experiment that would be able to show direct causation would involve gene splicing in embryos so as to provide a control group. It would be highly unethical to do so, and so any studies undertaken will by necessity deal only with correlations between biological factors and sexual orientation.

There are also ethical concerns raised by devoting too much research into the area of human sexuality. As mentioned earlier, many judge that other areas of research are more pressing at the moment, such as the need to combat diseases. There are other ethical concerns, however. What if a genetic marker was definitively found, for instance? Would someone who is positive for that marker be discriminated against? Would some parents choose to abort if they knew their child had homosexual biological factors?

In summary, the biological data accrued through these studies indicates above all that "the biology of sexuality is very complicated, including many genes, pre-natal hormones, and post-natal hormones. This complexity makes conclusive studies difficult to perform."³⁴

It is, thus, highly unlikely that a simple biological test to determine one's sexual orientation will be forthcoming for many years, if at all. That is not the same, however, as saying that biological factors do not play a role in determining sexual orientation. The evidence indicates that they probably do, but the evidence is not definitive and it may never be, as a result of the ethical limitations on the experimental methods that can be used.

³⁴ North Como Presbyterian Church, 2005, p. 335.

6. Nurture and Social Explanations and the Constructionist School

Sociobehaviourists are not convinced by the essentialist biological argument. They believe that environmental factors play the dominant role in determining sexual orientation. The Constructionist School claims that homosexuality is a modern construction that did not even exist some one hundred years ago.³⁵

Social theorists usually see environmental factors during childhood as most influential. These factors may include "childhood play patterns, early peer interactions and relations, differences in parental behaviour toward male and female children, and the role of gender constancy in the household."³⁶

One of the first things to note is that the term "homosexual" only came into use fairly recently. The expression was first coined in German by Karl-Maria Kertbeny in 1868 in a private letter to Karl Heinrich Ulrichs. The first known use of the term in English was in 1892.³⁷ And it was 1906 before the term became more widely known.³⁸

6.1 Societal Homosexuality

There are two cases where society seems to have a causative affect on homosexuality. In New Guinea, young boys (8-15) in some tribes are inseminated orally by the male warriors of the tribe on a daily basis. In ancient Crete, as a rite of passage, every adolescent boy had to form a homosexual relationship.³⁹ One must question whether these are transitory homosexual acts, rather than orientation, in the same way that some prisoners perform homosexual acts to relieve their sexual tension (or to impose power hierarchies) while their orientation remains heterosexual.

The occurrence of homosexual acts within ancient Greek society is well documented. Interestingly, Plato, through Aristophanes, in the *Symposium* gives an explanation of three sexual orientations which appear to have a lot in common with today's gay, lesbian and straight. Aristophanes is clear that he believes that men who desire men do so because it is part of their nature. They will prefer males all their lives, even though they may, for societal reasons, marry and have children.⁴⁰

6.2 Sigmund Freud

Freud, in the early years of the twentieth century, produced a number of articles which addressed homosexuality. His statements are fascinating. While he thought that homosexual orientation was caused by arrested development, a failure to resolve Oedipal issues as a teenager, he nonetheless did not see this as a problem. Indeed he considered it an abuse of psychoanalysis to try to force a person to change. And he acknowledged that he did not know of a successful way to achieve a conversion from homosexual to heterosexual orientation.⁴¹

In a letter written to the mother of a gay son Freud wrote, "Homosexuality is assuredly no advantage, but it is nothing to be ashamed of, no vice, no degradation, it cannot be classified as an

³⁵ Halperin, David, One Hundred Years of Homosexuality: And Other Essays on Greek Love, (Routledge, imprint of Taylor & Francis Books, 1990).

³⁶ Johnson, Ryan D., Homosexuality: Nature or Nurture, *AllPsych Journal*, 30 April 2003, <http://allpsych.com/journal/homosexuality.html>, Online, 6 July 2006.

³⁷ In C.G. Chaddock's translation of Krafft-Ebing's *Psychopathia Sexualis*, 3.225, quoted in Rogers, Jack, Jesus, the Bible, and Homosexuality, (Louisville: Westminster John Knox Press, 2006), p.138n.

³⁸ As a result of the Harden-Eulenburg Affair: a series of trials and courts-martial with accusations of homosexuality in Kaiser Wilhelm II's cabinet.

³⁹ Thorp, John, The Social Construction of Homosexuality, *Phoenix*, 46.1, 1992, <http://www.fordham.edu/halsall/med/thorp.html>, Online, 6 July 2006.

⁴⁰ Ibid. Though within Greek culture many would argue that pederasty was at the root of the same-sex relationships. These tended to involve older men and young boys.

⁴¹ North Como Presbyterian Church, 2005, p. 355.

illness..."⁴² He then goes on to explain that many prominent historical figures were homosexuals. Freud himself signed a statement in the 1930s both in Austria and Germany seeking an end to the criminalisation of homosexual acts.⁴³

6.3 The Foundation for Conversion Theories: Irving Bieber, 1962

The first major study giving data to support a psychoanalytic model for homosexual orientation was produced in 1962 by Irving Bieber.⁴⁴ This replicated the hypotheses of an earlier study in Britain by D.J. West.⁴⁵ Bieber asserted that homosexuality was a sign of mental illness, directly refuting Hooker's earlier work, cited above.

Bieber identified 106 homosexual and 100 heterosexual men undergoing psychological treatment and asked their psychiatrists to fill out a questionnaire. From the 70 surveys that were returned Bieber concluded that the homosexual men had fathers who were emotionally distant and less loving and mothers who were smothering or too intimate.

Bieber goes on to report that psychoanalysis had a 29% success rate in changing homosexuals to heterosexuals.

The influence of this study cannot be underestimated. It forms the foundation of all conversion therapies. These may take the form of a formal group offering conversion or reparative therapy such as NARTH⁴⁶, or groups providing advice for fathers to 'inoculate' their child against homosexuality.⁴⁷

Bieber's study has been criticised on numerous grounds. There may have been both treatment bias due to all the subjects being in psychoanalysis, as well as therapist bias, as the data was second-hand interpretation by psychoanalysts who believed that homosexuality was a result of disturbed parent-child relationships.⁴⁸

Bieber may also have confused cause and effect. In other words, a tendency for gay males to bond more with their mothers than fathers could be a result of their homosexual orientation rather than a cause of it.

6.4 Bieber Challenged: Alan Bell et al, 1981

In 1981 Alan Bell, Martin Weinberg and Sue Hammersmith reported the results of an extensive study lasting many years of the family dynamics experienced by homosexual and heterosexual persons.⁴⁹ Specially trained interviewers interviewed 1456 people who were drawn as volunteers from the general public. The results of these interviews, based on 200 standard questions, were analysed using path analysis to uncover the causes of sexual orientation.

The conclusions published showed that the mother-daughter and father-daughter relationships had no influence on whether women were lesbian. For sons, the mother-son relationship had no bearing

⁴² Freud, personal letter, 9 April 1935, reprinted in *American Journal of Psychiatry*, 107, 1951, p. 786, quoted in North Como Presbyterian Church, 2005, p. 354.

⁴³ in Drescher, Jack, I'm your handyman: A History of Reparative Therapies, *Journal of Gay & Lesbian Psychotherapy*, 5.3/4, 2001, pp. 7f.

⁴⁴ Bieber, Irving, et al, Homosexuality: A Psychoanalytic Study of Male Homosexuals, (New York: Basic Books, 1962).

⁴⁵ West, D.J., Parental Figures in the Genesis of Male Homosexuality, *International Journal of Social Psychiatry*, 5, 1959, pp. 85f.

⁴⁶ National Association for Research & Therapy of Homosexuality, <http://www.narth.com>, Online, 7 July 2006.

⁴⁷ see, for instance, <http://www.bible.ca/s-homo-vaccine.htm>, Online, 6 July 2006.

⁴⁸ North Como Presbyterian Church, 2005, p. 357.

⁴⁹ Bell, Alan P., Weinberg, Martin S. & Hammersmith, Sue Kiefer, Sexual Preference: Its Development in Men and Women, Bloomington: Indiana University Press, 1981.

on whether the son was gay, although there was a slight correlation with the father-son relationship:

“Our findings thus accord with theoretical speculations insofar as they suggest that a father perceived as relatively cold by his son is less likely to get along well with him and offers a less-appealing figure for identification. The influence of paternal traits, however, seems limited to familial relationships; their ultimate effect on a son’s adult sexual preference is at best tenuous.”⁵⁰

6.5 A New Approach to Conversion Therapies: Elizabeth Moberly, 1983

Two years later Elizabeth Moberly proposed a refined version of Bieber’s theory on the cause of homosexual orientation.⁵¹ She later became a counsellor with the conversion group Exodus International⁵², and Moberly’s work is held in high regard by those involved in conversion / reparation therapy.

Moberly does not equate a homosexual orientation with an abnormal mental illness as Bieber had done. Neither does she accept that the mother-son relationship affects sexual orientation.

“However, if there is a defensive detachment from the father, the only remaining channel for attachment is that to the mother... The reparative drive [of the homosexual] seeks to fulfil needs that are normally met through the medium of the child’s attachment to the parent of the same sex. In this sense, the homosexual love-need is essentially a search for parenting.”⁵³

Like Freud, Moberly proposed that all children go through a homosexual phase until they settle into the gender and sexual identity that is appropriate for their sex. She suggested that homosexual men and women spend time with heterosexual people of the same sex to build friendships and learn appropriate behaviour from them.

The APA (American Psychological Association) has strongly criticised both Bieber’s and Moberly’s approaches. Indeed they have criticised the entire reparative movement based on the constructionist theories of homosexual development:

“Some therapists who undertake so-called conversion therapy report that they have been able to change their clients’ sexual orientation from homosexual to heterosexual. Close scrutiny of these reports however show several factors that cast doubt on their claims. For example, many of the claims come from organizations with an ideological perspective which condemns homosexuality. Furthermore, their claims are poorly documented. For example, treatment outcome is not followed and reported over time as would be the standard to test the validity of any mental health intervention.”⁵⁴

6.6 Evidence for Efficacy of Conversion Therapy: Robert Spitzer, 2000

The Guardian published an account of the movement to ‘cure’ homosexuality in 2004 that helpfully personalises the issues.⁵⁵ The article dealt with a recent 2000 study in which Robert Spitzer, who was involved in the 1973 campaign to remove homosexuality from the APA DSM list of disorders, found that there may be some change in those who have undergone ‘therapy’ for their homosexual

⁵⁰ Ibid, p. 58.

⁵¹ Moberly, Elizabeth R., *Homosexuality: A New Christian Ethic*, (Cambridge: James Clarke & Co, 1983).

⁵² see <http://www.exodus-international.org>, Online, 6 July 2006.

⁵³ Moberly, 1983, p. 8-9.

⁵⁴ APA Online, *Answers to your Questions about Sexual Orientation and Homosexuality*, <http://www.apa.org/topics/orientation.html>, Online, 5 July 2006.

⁵⁵ The Guardian, *Going Straight*, 3 April 2004, <http://www.guardian.co.uk/weekend/story/0,3605,1183596,00.html>, Online, 7 July 2006.

orientation.⁵⁶ Spitzer's study, to his surprise and to the delight of those involved in therapeutic programmes for homosexuality (or "same-sex attraction disorder", as it is referred to by NARTH), showed that there was some movement towards the heterosexual end of the sexuality scale.

Spitzer's study has raised many questions, particularly in relation to the subjects he interviewed (by phone). Spitzer found it difficult to recruit volunteers, and it was revealed that conversion ministries themselves forwarded a significant proportion of the "converted" subjects to Spitzer. Of these many were directly involved in leading conversion ministries themselves. It is, of course, in their best interest to say that the therapy has worked. There is also a question as to how 'gay' the subjects were before the therapy. In other words, perhaps the subjects would have been placed towards the middle of the sexuality scale in the first place (with a bisexual orientation), and thus would have been more open to a relationship with someone of the opposite sex. The success of the therapy would thus be more about repressing one side of a person's sexual identity, rather than actual conversion.

6.7 Common Questions About Homosexuality

Other social questions that are raised by some who consider homosexuality sinful include whether homosexuals are more likely to abuse children, or whether they can parent effectively. It is also asked whether children raised by homosexual parents are more likely to become homosexual, and whether they are in some way under-developed psychologically and socially.⁵⁷

6.7.1 *Do gay men and lesbian women abuse children more than straight people?*

Not everyone who considers homosexuality sinful makes the link to child abuse. However, some do, with comments such as the following made on the Church of Scotland discussion board during the General Assembly 2006: "Don't you care for the future of Scotland? Don't you care for the future of our children (obviously some do care for the future of our male children)? What perverts. How can this be? How can this be? God have mercy on us. God have mercy on those in charge for allowing these vulgar deviants inside the door of your church buildings."⁵⁸

The recent case of two gay men sent to prison for a combined 11 years for abusing children in their care lends fuel to this righteous fire.⁵⁹ But one case proves nothing. What do the statistics tell us?

The American Psychological Association and National Association of Social Workers prepared an extremely useful *amici curiae* brief for a case (Boswell vs Boswell) in which the life-partner of a gay father was banned from being present when the child was with its father. The brief was used to overturn the trial verdict. It contains the results of numerous studies that answer concerns such as these.⁶⁰

In a study undertaken over a year in a large Denver hospital, only 0.7% of the children who received treatment for abuse had been abused by an adult offender identified as gay or lesbian. In detail, 1 girl out of 219 who had been abused was abused by a lesbian, and 1 boy out of 50 was abused by a gay man. On the other hand, 88% of the abusers had documented heterosexual relationships, and

⁵⁶ Spitzer, Robert, [Can Some Gay Men and Lesbians Change Their Sexual Orientation? 200 Participants Reporting a Change from Homosexual to Heterosexual](#), *Archives of Sexual Behaviour*, October 2003, pp. 403f (note that the publication of this study is a story in itself with one member of the association that sponsors the publishing journal resigning in protest at its inclusion, particularly due to the suspect selection methods of the sample subjects).

⁵⁷ North Como Presbyterian Church, 2005, p. 371.

⁵⁸ David X., entry on 25 May 2006, Church of Scotland Discussion Board, <http://www.churchofscotland.org.uk/discussion/discarchive0506.htm>, Online, 7 July 2006.

⁵⁹ BBC News, [Foster carers jailed over abuse](#), <http://news.bbc.co.uk/1/hi/england/bradford/5109518.stm>, Online, 7 July 2006.

⁶⁰ *amici curiae* brief for the American Psychological Association and National Association of Social Workers for the case of Boswell vs Boswell, September 1998, <http://www.apa.org/psyclaw/boswellbrief.html>, Online, 7 July 2006.

most of the abuse (77% for girls and 74% for boys) was attributable to someone in a heterosexual relationship with a member of the child's family.⁶¹

6.7.2 *Can a gay or lesbian couple be good parents?*

On parenting by homosexual couples, a number of studies have been performed. In one study of gay and straight fathers the researchers found

"...no differences between homosexual and heterosexual fathers in their degree of involvement with their children or in the level of intimacy they had with their children. The difference the study did find were that homosexual fathers were more likely to set and enforce limits on their children's behaviour, were more responsive to their children's needs, and were more likely to explain the reasons for rules."⁶² They concluded that there was no difference in overall abilities or skills.

The same is found for lesbian mothers. In the *amici curiae* brief for *Boswell vs Boswell* it states:

"These studies consistently demonstrate a 'remarkable absence of distinguishing features between the life-styles, child-rearing practices, and general demographic data' of lesbian mothers and heterosexual mothers. This research provides additional support for the conclusion that sexual orientation is not an important variable in predicting parenting ability."⁶³

6.7.3 *Do the children of a gay or lesbian couple end up as gay or lesbian?*

On the question of whether the child of homosexual parents is more likely to have a homosexual orientation than if a straight couple raised them: this does not appear to be the case. A study of 82 boys (all 17 or over) to 55 gay or bisexual fathers showed that only 7 were either gay or bisexual themselves.⁶⁴ A study of sons and daughters of 40 gay fathers found 1 of 21 sons and 3 of 27 daughters had a homosexual orientation.⁶⁵

Similar studies with lesbian mothers have found that there is no statistically significant difference in the sexual orientation of the children they raise and those raised by heterosexual parents.⁶⁶ Researchers conclude, "The truth is that most children of homosexual men and women turn out to be heterosexual."⁶⁷

The proportions of children who have a sexual orientation towards the middle or homosexual end of the sexuality scale in these and many other studies fall within the normal range for the proportion of non-heterosexual individuals within society as a whole.⁶⁸

6.7.4 *Do children raised by gay or lesbian parents turn out different?*

The final question is whether children raised by gay parents would be psychologically healthy and socially adjusted. Most of the studies have been on lesbian mothers, but the few studies on gay fathers seem to correspond to those of lesbian mothers. The studies have shown no appreciable difference between children raised by homosexual parents and those raised by heterosexual parents.

⁶¹ Jenny, Carole, et al, *Are Children at Risk for Sexual Abuse by Homosexuals?*, *Pediatrics*, 94, 1994, p. 41.

⁶² Bigner, Jerry J. & Jacobsen, R. Brooke, *Parenting Behaviours of Homosexual and Heterosexual Fathers*, *Journal of Homosexuality*, 18.1/2, 1989, pp. 179-180.

⁶³ *amici curiae* brief, *Boswell vs Boswell*, September 1998.

⁶⁴ Bailey, Michael J., et al, *Sexual Orientation of Adult Sons of Gay Fathers*, *Developmental Psychology*, 31, January 1995.

⁶⁵ Miller, Brian, *Gay Fathers and their Children*, *Family Coordinator*, 28, 1979.

⁶⁶ Gottman, Julie S., *Children of Gay and Lesbian Parents*, *Marriage & Family Review*, 177, 1989.

⁶⁷ Barret, Robert L. & Robinson, Bryan E., *Gay Fathers*, (Lanham: Lexington Books, 1990), p. 40.

⁶⁸ Taking into account the error margins involved in these small samples, and also the possible biases introduced as a result of the recruitment methods.

"The most striking feature of the research on lesbian mothers, gay fathers, and their children is the remarkable absence of pathological findings. The second most striking feature is how similar the groups of gay and lesbian parents and their children are to the heterosexual parents and their children that were included in the studies."⁶⁹

6.8 Summary of the Constructionist Evidence

The evidence for the role of environmental factors indicates that these have a smaller impact on sexual orientation than has theoretically been expected.

The classical psychoanalytical approach to 'blame it on the parents' either with an overbearing mother or distant father seems to have no or very little basis in reality despite influential research from the 1960s.

Studies have failed to establish any link between homosexual orientation and mental illness, and additionally, studies have shown that "children of homosexual parents and children from same-sex partnerships appear to be as well-adjusted as other children, and no more likely to be homosexual than children of heterosexual partnerships."⁷⁰

Finally, numerous studies have also contradicted the principles underlying current conversion therapies for gay and lesbian people.

7. Conclusions

The starting point for this paper was the statement made about a homosexual orientation: "But it's not natural!" This paper has sought to look at a spread of evidence to help determine what response is appropriate to that statement, or to the question "Is homosexuality natural?"

Evidence has been studied that is biological and sociological. No one piece of evidence leads us to a definitive answer. It seems likely that as with many things, sexual orientation, whether gay, straight or bisexual, or indeed a transgender identity, is a result of a complex interaction of multiple factors, some biological, some environmental, some cognitive, all working to shape an individual person from their conception through to adulthood.

A friend shared that the picture he kept in mind to help understand this was of an aircraft flight deck with myriad gauges, switches and buttons.⁷¹ The range of different settings across the flight deck is almost limitless, but a particular combination of needle positions, dial settings, switch positions - representing genetic, hormonal, hypothalamic, and social conditions - determines how the plane flies, or, in the case of one's sexuality, where on the scale of sexuality an individual may find themselves.

It seems clear that homosexuality cannot be simply termed a "life-style choice" made by gay, lesbian or bisexual individuals. There are many factors outwith an individual's conscious control that appear to play a part in determining sexual orientation. This applies as much to heterosexual men and women as to gay, lesbian or bisexual individuals.

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⁶⁹ Green, Dorsey G. & Bozett, Frederick W., *Lesbian Mothers and Gay Fathers, Homosexuality: Research Implications for Public Policy*, eds. Gonsiorek, J.C. & Weinrich, J.D. (Newbury Park: Sage, 1991), pp. 197 & 213.

⁷⁰ North Como Presbyterian Church, 2005, p. 376.

⁷¹ Dickson, Graham, personal correspondence, 7 July 2006.