

GAY SCIENCE AND POLITICS

INTRODUCTION

In a youth town hall meeting in 2010, US President Barack Obama was asked if he thought gay or transgendered people have a choice or are born that way. According to a CNN report, the President replied: 'I don't think it's a choice. I think people are born with a certain make-up'.¹ Most Americans seem to agree with their President. According to the results of a new Gallup Poll published on 20 May 2015, the majority of Americans believe that gay and lesbian people are 'born, not made'. Over 51 percent of those who participated in the survey maintain that same-sex orientation is genetic, a matter of birth and not the result of upbringing or the environment.²

We should not think that this is just the opinion of laypersons. A number of prominent scientists and medical professionals also believe that homosexuality is innate. They include the neurologist Simon LaVey,³ the Director of the Virginia Institute for Psychiatric and Behavioural Studies Kenneth S. Kendler,⁴ and Former Head of the Department of Psychology at Queen's University Vernon L. Quinsey.⁵

In this talk, I will examine some of the most important studies that have been conducted over the past twenty years to see if they show conclusively that homosexual orientation is determined solely by biological factors like the genes or the brain. I will evaluate the Kinsey proposals on sexuality in general, and homosexuality in particular. I will also discuss the circumstances that led the American Psychiatric Association to change the status of homosexuality, and examine if this change is warranted by conclusive scientific research or propelled by political pressure from gay activists. And finally, I will also discuss the various reparative therapies and evaluate their effectiveness in helping people with same-sex attraction.

TWIN STUDIES

We turn our attention firstly to the 'twin studies' conducted by John Michael Bailey and Richard Pillard in the late 1980s. Bailey was an American psychologist at Northwestern University, and Pillard was a professor of psychiatry at Boston

¹ 'Obama: Homosexuality is not a choice',

<http://edition.cnn.com/2010/POLITICS/10/14/obama.homosexuality/>, accessed 27 May 2016.

² Jeffrey M. Jones, 'Majority in US Now Says Gays and Lesbians Born, not Made',

<http://www.gallup.com/poll/183332/majority-say-gays-lesbians-born-not-made.aspx>, accessed 27 May 2016.

³ Andy Coghlan, 'Largest Study of Gay Brothers Homes in on "Gay Genes"', *New Scientist*, 17 November 2014, <https://www.newscientist.com/article/dn26572-largest-study-of-gay-brothers-homes-in-on-gay-genes/>, accessed 27 May 2016.

⁴ K.S. Kendler, L.M. Thornton, S.E. Gilman, R.C. Kessler, 'Sexual Orientation in a U.S. National Sample of Twin and Nontwin Sibling Pairs', *The American Journal of Psychiatry*, 157 (11), November 2000, 1843-1846.

⁵ Vernon L. Quinsey, 'The Etiology of Anomalous Sexual Preferences in Men', *Annals of the New York Academy of Sciences*, Volume 989, June 2003, 105-117.

University. The purpose of the twin study by Bailey and Pillard is to ascertain whether in a pair of twins if one twin has homosexual tendencies the other twin would also have similar tendencies. Bailey and Pillard studied fifty-four sets of monozygotic twins and forty-four sets of dizygotic twins. In a paper published in 1991 entitled 'A Genetic Study of Male Sexual Orientation', Bailey and Pillard reported that they have discovered a striking concordance rate of 52% among the identical twins, and 22% among the non-identical twins.⁶ This means that among the fifty-four sets of identical twins, half of the pairs were homosexuals while for other half one twin is homosexual and the other is heterosexual. Since identical twins have the same genetic make-up, Bailey and Pillard concluded that the high concordance rate shows that homosexual orientation must have a genetic basis.

It is important to note that the study by Bailey and Pillard has to do with statistics. They have not discovered – or claimed to have discovered – the 'gay' gene. But because their study took place in a context in which there is already considerable hype about genetics, both the public and the media accepted their conclusion uncritically.

A number of issues can be raised concerning the assumptions and methods used in the twin study, especially in the way the subjects were recruited. Some critics have noted that the study rests on the assumption that the social experiences of both the homosexual twins were similar.⁷ However, if this is not in fact the case, environmental contributions to the homosexual proclivities of the subjects must be taken into serious consideration. As was mentioned earlier, the way in which the participants of the research were recruited has also been heavily criticised. Bailey and Pillard recruited their research subjects by placing an advertisement in a gay magazine. As Jeffrey Satinover has rightly pointed out, 'A common problem in these kinds of studies is that concordant twins tend, in general, to respond to research advertisements more frequently than twins where one is a homosexual and the other a heterosexual'. '[R]eaders of homosexual magazines', he adds, 'are in no way representative of homosexuals'.⁸

In 1992, Michael King and Elizabeth McDonald conducted a similar study in Britain. In their paper entitled, 'Homosexuals Who Are Twins: A Study of 46 Proband', King and McDonald reported a much lower concordance rate for homosexuality compared to the study by Bailey and Pillard. There is a concordance of only 25% among identical twins in the King and McDonald study, compared to 52% in the study conducted by Bailey and Pillard. And among non-identical twins, King and McDonald reported a 12% concordance, compared to 22% in the Bailey and Pillard study. These findings have led King and McDonald to arrive at a very different conclusion. They state that:

Discordance for sexual orientation in the monozygotic pairs confirmed that genetic factors are insufficient explanation for the development of sexual orientation.⁹

⁶ J.M. Bailey and R.C. Pillard, 'A Genetic Study of Male Sexual Orientation', *Archives of General Psychiatry* 48 (1991): 1089-96.

⁷ William Byrne and Bruce Parsons, 'Human Sexual Orientation: The Biological Theories Reappraised', 50 *Archives of General Psychiatry* (1993), 228, 235.

⁸ Jeffrey Satinover, *Homosexuality and the Politics of Truth* (Grand Rapids: Baker Book House, 1996), 86.

⁹ M. King and E. McDonald, 'Homosexuals Who Are Twins: A Study of 46 Proband', *British Journal of Psychiatry* 160 (1992), 407-9.

But even if we accept the concordance rate reported by Bailey and Pillard, we must still challenge their conclusion. As we have seen, based on their findings Bailey and Pillard concluded that there must be a genetic basis for homosexuality orientation. This conclusion is somewhat puzzling because the results seem to indicate that the environment played a significant role in homosexuality. If homosexual orientation is in fact determined by genetic factors – the result of having a particular genetic code – why is it that not all the identical twins in the study are homosexual? Since identical twins have the same genetic make-up, why is there only a 50% concordance rate and not 100%? As Jeffrey Satinover has rightly pointed out, contrary to what Bailey and Pillard had suggested, the findings should lead to the conclusion that homosexuality is influenced by nongenetic factors. ‘This finding alone argues for the enormous importance of nongenetic factors influencing homosexuality’, writes Satinover, ‘because ... in order for something to be genetically determined, as opposed to merely influenced, the genetic heritability would need to approach 100 percent’.¹⁰

Many critics of the twin study by Bailey and Pillard concur with Satinover’s assessment. For example, William Byne, the Director of the Laboratory of Neuroanatomy and Morphometrics at Mount Sinai School of Medicine argues that ‘The study clearly challenges a simple genetic hypothesis and strongly suggests that environment contributes significantly to sexual orientation’.¹¹ And in their article in *Technology Review* entitled, ‘Born Gay?’ Paul Billings and Jonathan Beckwith note:

While the authors interpreted their findings as evidence for a genetic basis for homosexuality, we think that the data in fact provide strong evidence for the influence of the environment.¹²

Far from demonstrating convincingly that homosexual orientation can be attributed to the genes, the study by Bailey and Pillard in fact points to a more complex picture, one in which the environment and the experiences of the individual subjects play an important, if not critical, role.

Bailey realised that his original study was not representative and so conducted a follow-up study with M. P. Dunne and N. G. Martin in 2000, this time taking the sample from the Australian Twin Registry. In this second study, Bailey reported a much lower concordance rate: 20% for identical twins, compared to 52% in his earlier study. In other words, the results of Bailey’s second study correspond more closely to the findings reported by King and McDonald. In 2010, an impressive and large-scale study was conducted using the Swedish Twin Registry. The concordance rate among identical twins reported in that study is stunningly low, at only 9.8%.¹³ Clearly, the different concordance rates point to the important role that nongenetic factors like the environment, life experiences and relationships play in homosexual orientation.

¹⁰ Satinover, *Homosexuality and the Politics of Truth*, 85.

¹¹ William Byrne, ‘The Biological Evidence Challenged’, *Scientific America* (May 1994), 54.

¹² P. Billings and J. Beckwith, ‘Born Gay?’, *Technology Review*, July 1993, 60.

¹³ N. Långström, Q. Rahman, E. Carlström & P. Lichtensetin, ‘Genetic and Environmental Effects on Same-Sex Sexual Behaviour: A Population Study of Twins in Sweden’, *Archives of Sexual Behaviour*, 50 (2010), 75-80.

GAY GENE?

We turn next to a study conducted by Dean H. Hamer and his team of researchers at the National Cancer Institute in the United States in 1993. Unlike the study conducted by Bailey and Pillard, which has to do with statistics, the Hamer study sought to identify the biological basis of homosexuality by analysing the chromosome of homosexual men. Working with 40 pairs of homosexual brothers, Hamer and his team discovered that 33 pairs (83%) have the same sequence of markers in the X chromosome region known as Xq28. In a paper published in 1993 entitled, 'A Linkage Between DNA Markers on the X Chromosome and Male Sexual Orientation', Hamer states that 'One form of male homosexuality is preferentially transmitted through the maternal side and is generally linked to chromosomal region Xq28'.¹⁴ The press immediately publicized this 'discovery' by churning out articles with seriously misleading titles. For example, the *New York Times* has a front-page article entitled, 'Report Suggests Homosexuality is Linked to Genes'.¹⁵ And the *Wall Street Journal* headlined their report with 'Research Points Toward a Gay Gene'.¹⁶ Although the content of the articles was more nuanced, their sensational titles captured the imagination of the public, leading many to think that the genetic basis for homosexual orientation has been found.

Hamer's study is fraught with serious problems associated with methodology and sample size. One critical problem with the study is that there was no control group from the general population. For example, Hamer did not test the results against a heterosexual control group. If the same sequence that appear in the chromosomal region Xq28 of the homosexual men is also found in the heterosexual population, the presence of that sequence would be inconsequential. Furthermore, Hamer did not test the heterosexual brothers of the homosexual men to see if they have the same gene. Four months after Hamer published his paper in *Science*, critical commentaries began to appear in the same publication. For example, in a paper entitled 'Male Sexual Orientation and Scientific Evidence' published in the December 1993 issue of *Science*, Neil Risch and his co-authors state that Hamer's study is

... not consistent with any genetic model. ... Neither of these differences [between homosexuality in maternal versus paternal uncles or cousins] is statistically significant.¹⁷

On June 25 1995, reports surfaced that Hamer had come under investigation conducted by the National Institute of Health's Office of Research Integrity due to allegations that he ignored or suppressed evidence that contradicted his hypothesis. Although NIH did not publish the results of the inquiry, Hamer was transferred to another section.¹⁸

¹⁴ Dean Hamer et al, 'A Linkage Between DNA Markers on the X Chromosome and Male Sexual Orientation', *Science* 261 (1993): 321-327.

¹⁵ Natalie Angier, 'Report Suggests Homosexuality Is Linked to Genes', *New York Times* 16 July 1993, <http://www.nytimes.com/1993/07/16/us/report-suggests-homosexuality-is-linked-to-genes.html?pagewanted=all>, accessed 19 May 2016.

¹⁶ 'Research Points Towards a Gay Gene', *Wall Street Journal*, 16 July 1993.

¹⁷ N. Risch, E. Squires-Wheeler, B. J. Keats, 'Male Sexual Orientation and Genetic Evidence', *Science* 262 (1993): 2063-5.

¹⁸ Concern Women For America, 'Born or Bred? Science Does not Support the Claim that Homosexuality is Genetic', <http://www.cwfa.org/born-or-bredscience-does-not-support-the-claim-that-homosexuality-is-genetic/>, accessed 20 March 2016.

In April 1999, George Rice and his associates tried to replicate Hamer's study by examining the same marker in fifty-two gay siblings pairs. They concluded, in agreement with Risch, that the marker in question is statistically insignificant. In a report published in *Science* in 1999, they wrote: 'our data does not support the presence of a gene of large effect influencing sexual orientation at position Xq28'.¹⁹

In response to these criticisms, Hamer made the following qualifications about his conclusions:

We did not say that Xq28 'underlies' sexuality, only that it contributed to it in some families. Nor have we said that Xq28 represents a 'major' gene, only that its influence is statistically detectable in the population that we studied.²⁰

In the same article, Hamer admits that it is problematic to ascertain the significance of the statistics he had obtained from his study in relation to a trait as complex as sexual orientation. Thus, he writes, quite honestly that:

... the question of the appropriate significance level to apply to a non-Mendelian [that is, polygenic, multiple factors influencing expression] trait such as sexual orientation is problematic.²¹

Hamer was therefore never as sanguine about his findings as the media that exaggerated them. In a book co-authored with Peter Copeland entitled *The Science of Desire* (1994) Hamer states, again quite honestly, that 'The pedigree study failed to produce what we originally hoped to find: simple Mendelian inheritance. In fact, we never found a single family in which homosexuality was distributed in the obvious sort of pattern Mendel observed in his pea plants'.²² In the same book Hamer admits that the role played by the environment in human sexual orientation cannot be ignored. He writes:

We knew also that genes were only part of the answer. We assumed the environment also played a role in sexual orientation, as it does in most if not all behaviours. To most people, the environment means nonbiological factors such as family upbringing, life experiences, and religion ...²³

In 2014, J. Michael Bailey and Alan Sanders of NorthShore University Health System conducted a study along similar lines taken by Dean Hamer twenty years ago on 409 pairs of brothers, making it the largest study to date.²⁴ They were surprised to find the same linkages between homosexuality and the chromosomal region Xq28 suggested

¹⁹ G. Rice, C. Anderson, N. Risch, G. Ebers, 'Male Homosexuality: Absence of Linkage to Microsatellite Markers at Xq28', *Science*, 284 (1999): 665-7.

²⁰ D. H. Hamer et al., 'Response to N. Risch et al.', *Science* 262 (1993): 2065.

²¹ Ibid.

²² D. H. Hamer and P. Copeland, *The Science of Desire* (Simon and Schuster, 1994), 104.

²³ Ibid., 85.

²⁴ A. R. Sanders, E.R. Martin, G.W. Beecham, S. Gou, K. Dawood, G. Rieger, J.A. Badner, E. S. Gershon, R.S. Krishnappa, A.B. Kolundzija, J. Duan, P.V. Gejman and J.M. Baily, 'Genome-wide Scan Demonstrates Significant Linkage For Male Sexual Orientation', *Psychological Medicine*, 45(7), May 2015: 1379-1388.

earlier by Hamer. Hamer was delighted with the result. ‘Twenty years is a long wait for validation’, he is reported to have said, ‘but now it’s clear the original results were right. It’s very nice to see it confirmed’.²⁵ Equally pleased is the neuroscientist Simon LeVay, whose 1991 study we shall be turning to shortly. LeVay reportedly said that ‘This study knocks another nail into the coffin of the “chosen lifestyle” theory of homosexuality’.²⁶

Does this mean that scientists have finally found the genetic determinant for homosexual orientation? No. Although the Sanders study is significantly larger than the one conducted by Hamer, the findings fail to conclusively identify a gene or a cluster of genes responsible for determining homosexual orientation. Behavioural geneticists have found the results of the Sanders study unconvincing.²⁷ The method that Sanders and his associates used to establish genetic linkage has been superseded by other techniques, for example, the genome-wide association (GWA). Sanders himself acknowledged that GWA is superior to linkage studies, but felt that he had to use the latter in order to replicate Hamer’s study. Neil Risch, who criticised the Hamer study, also found the findings of the Sanders study to be statistically insignificant. In fact, even Sanders admitted that the linkage to Xq28 in his study has failed to cross the threshold of significance as delineated by scientific practice.²⁸ Although he believes that the chromosomal region Xq28 may have something to do with homosexual orientation, Sanders insisted that complex traits like sexual orientation always depends on many factors, both genetic and environmental.²⁹

In many ways, these attempts to discover the genetic basis for homosexual orientation have repeatedly confirmed what many scientists, philosophers and theologians have held for some time. The distinction must be made between the genotype, which is the set of genes in our DNA that may be associated with a particular trait, and the phenotype, which has to do with the actual expression of that trait. The relationship between the genotype and the phenotype is not always clear and mostly never straightforward. That is why scientists have always cautioned against a form of ‘genetic determinism’ which in fact collapses the phenotype into the genotype, ignoring nongenetic factors. In fact, the general consensus is that the genotype underdetermines the phenotype. John Maddox expresses this well when he writes:

The link between genotype and phenotype is not always unambiguous. A genotype may be a necessary, but not a sufficient, condition for the phenotype ...³⁰

The relationship between gene expression, the environment and behaviour is so complex that a new field has emerged called ‘epigenetics’ whose focus is to study this relationship. Epigenetics looks into the way in which genes react to their own

²⁵ Andy Coghlan, ‘Largest Study of Gay Brothers Homes in on “Gay Genes”’, *New Scientist*, 17 November 2014, <https://www.newscientist.com/article/dn26572-largest-study-of-gay-brothers-homes-in-on-gay-genes/>, accessed 25 May 2016.

²⁶ Ibid.

²⁷ Kelly Servick, ‘Study of Gay Brothers May Confirm X Chromosome Link to Homosexuality’, *Science*, November 17, 2014, <http://www.sciencemag.org/news/2014/11/study-gay-brothers-may-confirm-x-chromosome-link-homosexuality>, accessed 25 May 2016.

²⁸ Ibid.

²⁹ Coghlan, ‘Largest Study of Gay Brothers’.

³⁰ John Maddox, ‘Has Nature Overwhelmed Nurture?’ *Nature*, 366 (November 11, 1993), 107.

immediate physical or cellular environment as well as the way in which they respond to the external environment and life experiences of the subject. Genes have the ability to switch on and off as circumstances dictate. And many have found that gene expression and behaviour are especially influenced by early social experiences. 'Social experiences throughout life influence gene expression and behaviour, however, early in development these influences have a profound effect', writes Frances Champagne of Columbia University.³¹

This means that many important questions are still left unanswered by the findings of the Sanders study. If there is in fact a link between Xq28 and sexual orientation (and it is still a big 'If'), to what extent does it influence or determine sexual behaviour? How do the other genes in the immediate environment interact with the gene in question? And what about the external environment? How might this have contributed to sexual preferences? Sanders himself acknowledges the gravity of these questions. In an interview conducted by LGBT Science – an organisation dedicated to exploring the origins of sexual orientation – Sanders quite honestly said:

When people say there is the 'gay gene' it's an oversimplification. We don't think there is just one gene involved. There are a number of genes. We also don't think genetics is the whole story. It is not.³²

HARDWIRED?

While Hamer, Sanders and their associates focused on the genetic determination of homosexual orientation, others have turned to neuroscience to see if sexual orientation is hardwired in the human brain. In 1991, Simon LeVay of the Salk Institute for Biological Studies in San Diego conducted an important study that aims to discover if there is a neurological basis for homosexual orientation. LeVay, who is an openly gay man, studied the brains of two groups of men: (1) homosexual men, and (2) men he presumed to be heterosexual. He claimed to have discovered 'subtle but significant differences' in the brains of homosexual and heterosexual men that may be responsible for homosexual orientation.³³

LeVay focused his study on the area of the brain called the hypothalamus. This is the section of the brain that is responsible for the production of the body's essential hormones that control the different cells and organs. The hypothalamus also governs important psychologic functions such as thirst, hunger, sleep and sex drive. LeVay further narrowed his focus on a cluster of cells in the hypothalamus called the third interstitial nucleus of the anterior hypothalamus (INAH-3). He found that this cluster of cells is smaller in homosexual men than in heterosexual men, and concluded that this has significant bearing on male homosexual orientation. As to be expected, the media hastily announced that homosexuality is hardwired in the brains of some men.

There were some serious problems with LeVay's study. In the first place, he worked with a very small sample – only 19 homosexual men and 16 allegedly heterosexual men.

³¹ F. A. Champagne & J. P. Curley, 'How Social Experiences Influence the Brain', *Current Opinions in Neurobiology* 15(6), 704.

³² LGBT Science, <http://www.lgbtscience.org/alan-sanders/>, accessed 26 May 2016.

³³ Simon LeVay, 'A Difference in Hypothalamic Structure Between Heterosexual and Homosexual Men', *Science* 253 (1991):1034-7.

The claim that the second group comprises solely heterosexual men has been called to question. LeVay admitted later that he was not entirely sure if all the men in the second group were heterosexual because he did not investigate their sexual histories.³⁴ In addition, six of the 'heterosexual' men died of AIDS. Given the statistical fact that very few heterosexual men in San Francisco contracted AIDS in the early 1990s, it is not improbable that some of the men in LeVay's second group are either homosexuals or bisexuals. The brains of these men were examined post-mortem, which explains why it is impossible to obtain their sexual histories. In their evaluation of LeVay's study William Byne and Bruce Parsons concluded that 'LeVay's study can be faulted for a number of technical flaws, such as variable method of tissue fixation, inadequate sexual histories, and small sample sizes'.³⁵

LeVay himself recognised the limitations and inadequacies of his study. In *Queer Science*, which was published in 1996, LeVay quite honestly admitted to a significant methodological problem in his study. He explains:

But it is important to stress limitations of the study. First, the observations were made on adults who had already been sexually active for years. To make a really compelling case, one would have to show that these neuroanatomical differences existed early in life, preferably at birth ...³⁶

In other words, the study is unable to answer questions about the etiology (the origination and development) of these neuroanatomical differences. But there is another very serious problem with LeVay's samples. Most of the homosexual men whose brains LeVay studied died of AIDS. In the same book, LeVay writes:

Another limitation arises because most of the gay men whose brains I studied died of complications of AIDS. Although I am confident that the small size INAH3 in these men was not an effect of the disease, there is always a possibility that gay men who died of AIDS is not representative of the entire population of gay men.³⁷

LeVay says that he is confident that the 'small size INAH3 in these men are not the effect of' AIDS. This statement is unpersuasive because LeVay does not offer the reasons for his confidence. Neither has he offered any reasons why we should rule out the possibility that the abnormality is the result of AIDS.

Hypothetically speaking, even if LeVay has shown irrefutably and conclusively that there is a connection between a smaller size INAH3 and homosexuality, he has not established that it is responsible for this sexual orientation. The distinction between causality and correlation is an important issue in neuroscience. Perhaps an example can illustrate this. Take psychopathology. There have been many studies conducted on psychopaths, especially the relationship between brain abnormality and

³⁴ Robert H. Knight, 'Born or Bred? Science Does not Claim that Homosexuality is Genetic', Concerned Women for America, May 2005, <http://www.cwfa.org/born-or-bredscience-does-not-support-the-claim-that-homosexuality-is-genetic/>, accessed 27 May 2016.

³⁵ William Byne and Bruce Parsons, 'Human Sexual Orientation: The Biologic Theories Reappraised', 235, http://borngay.procon.org/sourcefiles/Byne_Study.pdf, accessed 27 May 2016.

³⁶ Simon LeVay, *Queer Science* (Mass.: MIT, 1996), 143.

³⁷ *Ibid.*, 144.

psychopathological behaviour. With the help of state-of-the-art neuroimaging technology, scientists are able to establish the link between dysfunctions of the amygdala and frontal lobe with psychopathy.³⁸ But although many agree that there is a correlation between these brain abnormalities and psychopathic behaviour, there is no agreement as to whether such behaviours are caused by the brain abnormalities. Thus, in his discussion on the diagnostic significance of neuroimaging, Walter Glannon maintains that although such studies 'can show correlations between normal and abnormal brain states and mental states, it cannot provide a causal explanation of the etiology and pathogenesis of neurological and psychiatric diseases'.³⁹ Neuroplasticity suggests that it could very well be the other way around. (Neuroplasticity postulates that behaviour can change the structure of the brain.)⁴⁰ This means that the size of INAH3 in homosexual men could well be the result of their sexual habits and behaviour. An instructive analogy would be an important NIH study which shows that the part of the brain that controls the reading finger of a Braille reader is larger than the part that controls the non reading finger.⁴¹

LeVay was initially quite cautious with his conclusions. In an interview with David Nimmons in March 1994, LeVay qualified his conclusions and findings in this way:

It is important to stress what I didn't find. I did not prove that homosexuality is genetic, or find a genetic cause for being gay. I didn't show that gay men are born that way, the most common mistake people make in interpreting my work. Nor did I locate a gay center in the brain.⁴²

However, LeVay gradually became more convinced that it is the genes that determine sexual orientation. Thus, in response to the Sanders study LeVay could say: 'This study knocks another nail into the coffin of the "chosen lifestyle" theory of homosexuality'. He adds, rather dogmatically: 'Yes, we have a choice in life, to be ourselves or to conform to someone else's idea of normality, but being straight, bisexual or gay, or none of these, is a central part of who we are, thanks in part to the DNA we are born with'. By making such a statement, LeVay is being thoroughly un-scientific, ignoring the many studies whose results repeatedly and overwhelmingly demonstrate the crucial contributions of the environment and life experiences to homosexual behaviour. Stanton L. Jones exposes LeVay's dogmatism when he writes:

The problem with Simon LeVay's argument for an exclusively biological understanding of causation is not only that he overestimate the power of identifiable biological etiological variables, but that he refuses to engage all the considerable evidence for psychosocial contributors, and that he

³⁸ B.J.R. Blair, K.S. Peschardt, S. Buddhani, D.G.V. Mitchell and D.S. Pine, 'The Development of Psychopathy', *Journal of Child Psychology and Psychiatry* 47 (3/4) 2006, 262-275.

³⁹ Walter Glannon, *Bioethics and the Brain* (New York: Oxford University Press, 2007), 47.

⁴⁰ See Bryan Kolb, Robbin Bibb, and Terry Robinson, 'Brain Plasticity and Behaviour', *Current Directions in Psychological Science*, <http://www.psy.cmu.edu/~rakison/plasticity%20and%20the%20brain.pdf>, accessed on 27 May 2016; Russell D. Fernald, 'How Does Behaviour Change the Brain? Multiple Methods to Answer Old Questions', *Integrative and Comparative Biology*, 43(6) 2003:771-779; B. Kolb and I.Q. Whislaw, 'Brain Plasticity and Behaviour', *Annual Review of Psychology* 49, 1993: 43-64.

⁴¹ A. Pascuel-Leone and F. Torres, 'Plasticity of the Sensorimotor Cortex Representation of the Reading Finger in Braille Readers', *Brain*, Feb 1993: 39-52.

⁴² LeVay, cited in David Nimmon, 'Sex and the Brain', *Discover* 15(3): 64-71.

attributes the unexplained remainder that his biological factors cannot explain only to chance and various types of biological static.⁴³

THE KINSEY STUDIES

One of the most influential studies that brought about the sexual revolution in the West, especially in America, is the study conducted by Alfred C. Kinsey and his associates published in 1948 as *Sexual Behaviour in the Human Male*.⁴⁴ In a FAQs on Sexuality published on its website in November 2014, the Health Promotion Board of Singapore based its understanding of human sexuality substantially, although not exclusively on Kinsey's work.⁴⁵ Alfred C. Kinsey was an Indiana zoologist, an expert on the gall wasp. In the middle of the twentieth century, Kinsey and his associates focused their attention on the study of human sexuality and sexual habits, resulting in two reports⁴⁶ that rocked conservative American society and that turned American sexual mores and morality upside down.

Here are some shocking findings in the Kinsey Reports: 85% of men and 45% of women had premarital sex; 50% of men and 40% women had been unfaithful in marriage; 69% of men had been with prostitutes; and 17% of farm boys had sex with animals. The Male Study received raved reviews from the media: *Life*, *Time*, *Newsweek* and the *New Yorker* carried sensational articles on the Report.

The Kinsey Reports on sexuality are seriously flawed because of the outrageously skewed samples that were used. In the Male Study of 1948, Kinsey surveyed numerous men to study their sexual habits, making it one of the most extensive surveys on male sexuality conducted. The problem, however, is that a significant percentage of the men surveyed (about 30%) were prison inmates, many of whom sex offenders. One of Kinsey's collaborators, Wardell B. Pomeroy, reported that they took histories of 1,400 imprisoned sex offenders. And out of this group, 317 were sexually abused as children.⁴⁷ In addition, 75% of Kinsey's male subjects volunteered to give their sexual histories. The use of volunteers in any study on sexuality is highly problematic because the result is seldom representative of the general population. Volunteers also generally tend to exaggerate their sexual prowess and activities. The volunteers in the Kinsey studies were two or four times more sexually active than the average male, which means that the results are outside the mainstream. W. Allen Wallis notes that 'the entire method of collecting and presenting the statistics underlie Dr Kinsey's conclusions ... There are six major aspects of any statistical research, and Kinsey fails four'.⁴⁸

⁴³ Stanton L. Jones, 'Sexual Orientation and Reason: On the Implications of False Beliefs About Homosexuality', www.christianethics.org, accessed 27 May 2016.

⁴⁴ A.C. Kinsey, W.B. Pomeroy, C.E. Martin, *Sexual Behaviour in the Human Male* (Philadelphia: W.B. Saunders Company, 1948).

⁴⁵ FAQs on Sexuality, Health Promotion Board, <http://www.hpb.gov.sg/HOPPortal/gamesandtools-article/HPBo55647>, accessed 28 May 2016.

⁴⁶ The second report is A.C. Kinsey, W.B. Pomeroy, C.E. Martin, P.H. Gebhard, *Sexual Behaviour in the Human Female* (Philadelphia: W.B. Saunders Company, 1953).

⁴⁷ W. B. Pomeroy, *Dr Kinsey and the Institute for Sex Research* (New York: Harper and Row, 1972), 208.

⁴⁸ W. Allen Wallis, *New York Times*, December 11, 1949, quoted in Sue Ellin Browder, 'Kinsey's Secret: The Phony Science of the Sexual Revolution', <https://www.catholicculture.org/culture/library/view.cfm?recnum=6036>, accessed 28 May 2016.

The statistics in the Kinsey Reports do more than simply present the brute facts about the sexual behaviour of Americans in the 1940s and 1950s. The Reports are unreliable because they seriously distort the sexual habits of Americans. In reality, the Kinsey Reports attempt to promote a certain philosophy and outlook that claims that the sexual behaviours that were once considered deviant are in fact 'biologically' normal. They carry a message that says that human beings should not feel inhibited or guilty for acting on their 'natural' impulses, and that whatever inhibitions or feelings of guilt that might have arisen are due to social conventions which 'science' is now challenging. As Paul Robinson puts it: '[Kinsey] evaluated every form of sexual activity in terms of its role in the sexual lives of the lower species, and he frequently concluded that outlawed sexual practices were entirely natural because they conformed to "basic mammalian patterns"'.⁴⁹ Thus, in the Male Report Kinsey argues that it is society that imposes artificial distinctions such as 'right and wrong, licit and illicit, normal and abnormal, acceptable and unacceptable in our social organisation'.⁵⁰

Kinsey also introduced a novel approach to understanding human sexuality. Before Kinsey, people are generally thought to be either heterosexual or homosexual, with heterosexuality being the dominant orientation. Kinsey rejected this binary approach and presented a view of human sexuality as fluid or elastic. According to Kinsey, people are rarely strictly heterosexual or homosexual. Rather human sexuality is on a continuum. Kinsey developed a way of gauging sexual preferences and behaviour. He presented what is now called the Kinsey Scale:

- 0 Exclusively heterosexual with no homosexual
- 1 Predominantly heterosexual, but more incidentally homosexual
- 2 Predominantly heterosexual, but more than incidentally homosexual
- 3 Equally heterosexual and homosexual
- 4 Predominantly homosexual, but incidentally heterosexual
- 5 Predominantly homosexual, but more than incidentally heterosexual
- 6 Exclusively homosexual⁵¹

If you study the Scale carefully, you will notice that only at 0 is there no homosexual inclination at all. Anyone falling between 1-6 (which for Kinsey would be the majority) would have different degrees of homosexual inclination. In this way, the Kinsey Scale has done much to normalise homosexuality. The Kinsey Scale is widely used as the standard for evaluating sexuality. It is used by the Health Promotion Board of Singapore to explain sexuality. The Kinsey Scale is nothing but conjecture based on skewed research and biased data. Like all of Kinsey's work, the Scale attempts to impose his understanding of human sexuality. It is therefore dangerously misleading.

Besides the Kinsey Scale, the assertion in the Male Report that 10% of men between the ages of 16 and 55 were homosexual is also extremely problematic. Although this statistics originally have to do with American society, it was soon taken to be representative of many countries and societies. This idea that homosexuals make up 10% of every population, however, is a myth. And it must be exposed as such. According to the National Health Statistics Reports published in July 2014, only 1.6% of the 43,557 American adults surveyed are identified as gay or lesbian, and 0.7% as

⁴⁹ P. Robinson, *The Modernization of Sex* (New York: Harper & Row, 1976), 56.

⁵⁰ Kinsey et al, *Sexual Behaviour in the Human Male*, 678.

⁵¹ *Ibid.*, 638.

bisexual. 96.6% are heterosexual.⁵² From 1990 to 2010 about thirty surveys have been conducted in Europe based on representative samples. The results show that homosexuality and bisexuality constitutes only 2-3% of the population. Neil and Briar Whitehead present a useful summary of the findings of these surveys: About 1% of the adult male population is exclusively homosexual, and 0.6% of the population is exclusively lesbians. If bisexuals are included the figure rises to $2.9 \pm 2.0\%$ for men and $1.8 \pm 1.3\%$ for women. This means that only around 2.4% of the total population is homosexual, lesbian or bisexual.⁵³

It is interesting to note that even some gay and lesbian activists reject the 10 percent figure proposed by Kinsey. For example, in his book *City of Friends* Simon LaVey states that 'Kinsey's sampling and interviewing procedures would not be considered scientifically valid today. More recent studies have consistently produced figures lower than 10 percent'.⁵⁴ In similar vein, Camille Paglia, who identifies herself as a libertarian and lesbian woman, writes: 'The 10 percent figure, servilely repeated by the media, was pure propaganda, and it made me, as a scholar despise gay activists for their unscrupulous disregard for the truth'.⁵⁵

GAY POLITICS

I would like now to turn very briefly to the story of how the American Psychiatric Association (APA) changed its diagnosis of homosexuality. In 1974, the APA removed homosexuality from the list of pathological psychiatric conditions published in the *Diagnostic and Statistical Manual of Mental Illness* (DSM) II. Its revised verdict states that 'homosexuality per se is one form of sexual behaviour and, like other forms of sexual behaviour which are not themselves psychiatric disorders, is not listed in the nomenclature of mental disorders'.⁵⁶ However just 10 years before this publication, in 1963, the Committee on Public Health of the New Academy of Medicine quite clear and categorically stated that:

... homosexuality is indeed an illness. The homosexual is an emotionally disturbed individual who has not acquired the normal capacity to develop satisfying heterosexual relations ...⁵⁷

What happened in the intervening years that led the medical community to change its mind about homosexuality in such a radical way? One would have thought that such a

⁵² B. W. Ward, J. M. Dahlhamer, A.M. Galinsky, S.S. Joestl, 'Sexual Orientation and Health Among U.S. Adults: National Health Interview Survey, 2013', National Health Statics Reports, 77, July 15, 2014.

⁵³ Neil Whitehead and Briar Whitehead, *My Genes Made Me Do It: Homosexuality and the Scientific Evidence* (Whitehead Associates, 3rd Edition, 2013), 44-45.

⁵⁴ S. Lavey and E. Nonas, *City of Friends: A Portrait of the Gay and Lesbian Community in America* (Cambridge: MIT Press, 1995), 102.

⁵⁵ C. Paglia, *Vamps and Tramps: New Essays* (New York: Penguin, 1994), 74.

⁵⁶ "Homosexuality and Sexual Orientation Disturbance". Proposed Change in DSM II, 6th Printing, page 44', APA Document Reference No. 730008. http://www.torahdec.org/Downloads/DSM-II_Homosexuality_Revision.pdf, accessed 6 April 2014.

⁵⁷ Cited in C. W. Socarides, 'Sexual Politics and Scientific Logic: The Issue of Homosexuality', *The Journal of Psychohistory* 10 (3) 1992: 308.

change would only be warranted if science has proved conclusively that homosexual orientation is innate. However, what forced the APA to change its position on homosexuality was not science but gay politics.

In his 1981 book, *Homosexuality and American Psychiatry: The Politics of Diagnosis* Ronald Bayer describes how gay activists had forced APA to overturn its position on homosexuality. Ronald Bayer is Professor of Socio-Medical Sciences at the Columbia University's Mailman School of Public Health. Bayer reported that in 1970, gay activists were determined to disrupt the annual meetings of the American Psychiatric Association.⁵⁸ Bayer relates an incident when gay activists disrupted and challenged a prominent psychoanalyst Irving Bieber while he was presenting his paper at an APA meeting. He reports:

[Bieber's] efforts to explain his position ... were met with derisive laughter ... [One] protester ... called him a m.....r. I've read your book, Dr Bieber, and if that book talked about black people the way it talks about homosexuals, you'd be drawn and quartered and you'd deserve it.⁵⁹

To cut the long story short, the gay activists managed to get an audience with the APA's committee on Nomenclature and convinced the committee to concede that homosexuality is not a sign of psychiatric disorder. In addition, the National Gay Task Force sent letters to 30,000 members of the APA to get support for the change. Under pressure, the majority of the members voted in favour of the new classification of homosexuality. In his book, Ronald Bayer chillingly states that this triumph was not the result of science but of ideology and prevailing cultural sensibilities:

The result was not a conclusion based upon an approximation of the scientific truth as dictated by reason, but was instead an action demanded by the ideological temper of the times.⁶⁰

Albert Dean Byrd and Stony Olsen offer the same assessment when they wrote:

Thus, the only official communication, on the vote, a supposed search for the truth, came from the activists, who later even admitted that they rammed the change through. The result was inevitable, and the headlines announced that homosexuality has been cured. The stigma of a disease was gone due to politics.⁶¹

Assessing the whole incident, the American psychiatrist, psychoanalyst, physician and author Charles W. Socarides states that the decision:

... remains a chilling reminder that if scientific principles are not fought for, they can be lost – a disillusioning warning that unless we make no exceptions to science, we are subject to the snares of political factionalism and the propagation of untruths to an unsuspecting and uninformed

⁵⁸ Ronald Bayer, *Homosexuality and American Psychiatry: The Politics of Diagnosis* (New Jersey: Princeton University Press, 1987), 102.

⁵⁹ *Ibid.*, 102-3.

⁶⁰ *Ibid.*, 3-4.

⁶¹ Dean Byrd and Stony Olsen, 'Homosexuality: Innate or Immutable?' *Regent University Law Review* 14:513 2002:542.

public, to the rest of the medical profession and to the behavioural sciences.⁶²

Now, once homosexuality is no longer an illness, it must no longer be treated as a taboo. And once homosexuality is no longer a taboo, a new taboo emerges. It is now taboo to postulate that homosexuality is a disorder that can be treated or cured. To make such an assertion is to discriminate against gays and lesbians whose sexual orientation must now be seen to be innate or genetic and not the result of psychological pathology. New neologisms are then introduced to justify clinical practices. Ego-syntonic homosexuals are those who are at peace with their homosexuality, while ego-dystonic homosexuals are those who struggle with their homosexuality. According to APA both forms of homosexuality are not disorders, but the latter form – the ego-dystonic variety – of homosexual should undergo ‘treatment’.

Treatment, however, does not have to do with helping them overcome their same-sex attraction. Rather it has to do with helping them to accept their homosexuality, and to cope with and overcome what has been described as their ‘internalised homophobia’. Accompanying this trend, gay activists have introduced a very powerful narrative that attempts to reverse homosexuality through reparative therapies have been largely unsuccessful. This narrative is so powerful that it has almost become mainstream dogma: homosexuality is natural; therefore it is irreversible. Homosexuality is irreversible because it is natural.

But this simply goes against the facts. Here is a table of the success rates of reparative therapies offered by secular psychiatrists and psychologists. Let’s look at them randomly. In the Bieber study, out of the 106 homosexuals who were treated, 44 or 42% were successful in overcoming their homosexual attractions. The Hatterer study, which surveyed a higher number of homosexuals who have undergone therapy, produced similar results: out of 143 that were treated, 67 or 47% successfully overcame their same-sex attraction. The highest score in the table – at 82% - is the study conducted by Freeman and Meyer, although they worked with much fewer cases. If we look at the composite numbers, we find that the results are quite encouraging. Out of 504 homosexuals who underwent therapy, 262 successfully overcame their homosexual tendencies. This is 51.98%. The results clearly point to that fact that it is simply not true to say that homosexuality is irreversible.

CONCLUSION

Let me conclude. The many studies that have been conducted over more than twenty years have all failed to show convincingly, much less conclusively, that a gene or a cluster of genes are directly responsible for homosexuality. As Jeffrey Satinover has put it: ‘hard science is far from providing an explanation of homosexuality, let alone one that reduces it to genetic determinism’. Instead, these studies have shown that homosexual behaviour is a multifactorial phenomenon. Biological factors influence same-sex attraction only in a predisposing way. Other factors such as intrauterine and extrauterine influences, familial and environmental conditions and social experiences make significant contributions. In addition, given the fact that reparative therapies

⁶² C. W. Socarides, ‘Sexual Politics and Scientific Logic: The Issue of Homosexuality’, *Journal of Psychohistory* 10(3) 1992: 316-7.

have enjoyed some success, it is not unreasonable to say that non-genetic factors appear to play a critical role in homosexuality. Neil and Briar Whitehead summarise our discussion well when they write:

Here is a very basic truth. There is nothing fixed or final about the homosexual orientation and its natural expression, homosexual behaviour. No one has to stay homosexual or lesbian, in orientation or behaviour ... Homosexuality is not inborn, not genetically dictated, not immutable.⁶³

⁶³ Neil and Briar Whitehead, *My Genes Make Me Do It!*, 9.