



## **BORN OR BRED?**

### **Science Does Not Support the Claim That Homosexuality Is Genetic**

*By Robert Knight*

The debate over homosexual “marriage” often becomes focused on whether homosexuality is a learned behavior or a genetic trait. Many homosexual activists insist that “science” has shown that homosexuality is inborn, cannot be changed, and that therefore they should have the “right to marry” each other.

Beginning in the early 1990s, activists began arguing that scientific research has proven that homosexuality has a genetic or hormonal cause. A handful of studies, none of them replicated and all exposed as methodologically unsound or misrepresented, have linked sexual orientation to everything from differences in portions of the brain,<sup>1,2</sup> to genes,<sup>3</sup> finger length,<sup>4</sup> inner ear differences,<sup>5</sup> eye-blinking,<sup>6</sup> and “neuro-hormonal differentiation.”<sup>7</sup>

Meanwhile, Columbia University Professor of Psychiatry Dr. Robert Spitzer, who was instrumental in removing homosexuality in 1973 from the American Psychiatric Association’s list of mental disorders, wrote a study published in the October 2003 *Archives of Sexual Behavior*. He contended that people can change their “sexual orientation” from homosexual to

---

<sup>1</sup> D.F. Swaab and M.A. Hofman, *Brain Res.* 537 (1990): 141-48, as cited in Dennis McFadden and E.G. Pasanen, “Comparisons of the auditory systems of heterosexuals and homosexuals: Click-evoked otoacoustic emissions,” *Proceedings of the National Academy of Science USA* 95 (March 1998): 2709-13.

<sup>2</sup> Simon LeVay, “A Difference in Hypothalamic Structure Between Heterosexual and Homosexual Men,” *Science* Vol. 253 (1991): 1034-37.

<sup>3</sup> D.H. Hamer, S. Hu, V.L. Magnuson, N. Hu and A.M.L. Pattatucci, *Science* 261(1993): 321-27, as cited in McFadden.

<sup>4</sup> B.J. Sigismund, “Let Your Fingers Do the Talking,” *Newsweek* “Web Exclusive,” 31 March 2000.

<sup>5</sup> McFadden and Pasanen.

<sup>6</sup> “Sexual orientation ‘hard-wired’ before birth – startling new evidence revealed in the blink of an eye,” press release, University of East London (UEL), England, October 2, 2003, reporting on findings by the UEL’s Dr. Qazi Rahman, along with the Institute of Psychiatry’s Dr. Veena Kumari and Dr. Glenn Wilson. In terms of eye-blink reactions to sudden loud noises, “The team discovered significant differences in the response between male and female, and heterosexual and homosexual subjects.” Rahman: “The startle response is pre-conscious and cannot be learned.”

<sup>7</sup> Qazi Rahman, “Comments on the Neuroanatomy of Human Sexual Orientation and Proposed Neuroendocrine Hypotheses,” *Contemporary Neurology* (1999): Number 2A: <http://mitpress.mit.edu/jrnls-catalog/cont-neuro.html>.

heterosexual.<sup>8</sup> Spitzer interviewed more than 200 people, most of whom claimed that through reparative therapy counseling, their desires for same-sex partners either diminished significantly or they changed over to heterosexual orientation. Although still a proponent of homosexual activism, Spitzer has been attacked unmercifully by former admirers for this breach of the ideology that people are “born gay and can’t change.” Immutability is a central tenet of demands for “gay rights” and “gay marriage.”

Because no single study can be regarded as definitive, more research on people who have overcome homosexuality needs to be done. But a considerable body of previous literature about change from homosexuality to heterosexuality has been compiled, and the sheer number of exceptions to the “born gay” theory should be a warning to researchers and media to proceed with caution before declaring that science has “proved” that homosexuality is genetic.<sup>9</sup>

Other recent developments also suggest that homosexuality is not genetically determined. *The Washington Post* reported that bisexuality is fashionable among many young teen girls, who go back and forth from being “straight” to “gay” to “bi” to “straight” again.<sup>10</sup>

*Post* reporter Laura Sessions Stepp writes:

Recent studies among women suggest that female homosexuality may be grounded more in social interaction, may present itself as an emotional attraction in addition to or in place of a physical one, and may change over time.<sup>11</sup>

She cites one such study by Lisa M. Diamond, assistant professor of psychology and gender studies at the University of Utah, who in 1994 began studying a group of females aged 16 to 23 who were attracted to other females.<sup>12</sup> Over the course of the study, “almost two-thirds have changed labels,” Stepp reports.

Against increasing evidence that homosexual behavior is neither inevitable nor impossible to resist, a number of studies have been widely publicized as “proof” of a genetic component. But they are either poorly constructed or misreported as to their significance.

In 1993, Columbia University psychiatry professors Drs. William Byne and Bruce Parsons examined the most prominent “gay gene” studies on brain structure and on identical twins, and published the results in the *Archives of General Psychiatry*. They found numerous methodological flaws in all of the studies, and concluded that:

---

<sup>8</sup> Robert L. Spitzer, “Can Some Gay Men and Lesbians Change Their Sexual Orientation?”, *Archives of Sexual Behavior*, Vol. 32, No. 5, October 2003: 403-417.

<sup>9</sup> See, for instance, Charles Socarides, *A Freedom Too Far: A Psychoanalyst Answers 1,000 Questions About Causes and Cure and the Impact of the Gay Rights Movement on American Society* (Phoenix, Arizona: Adam Margrave Books, 1996), pp. 115-155, particularly pp. 151-152.

<sup>10</sup> Laura Sessions Stepp, “Partway Gay? For Some Teen Girls, Sexual Preference Is a Shifting Concept,” *The Washington Post*, January 4, 2004, p. D-1.

<sup>11</sup> *Ibid.*

<sup>12</sup> Lisa M. Diamond, “Was it a phase? Young women’s relinquishment of lesbian/bisexual identities over a 5-year period,” *Journal of Personality & Social Psychology* (in press as of 2004).

There is no evidence at present to substantiate a biologic theory. ... [T]he appeal of current biologic explanations for sexual orientation may derive more from dissatisfaction with the present status of psychosocial explanations than from a substantiating body of experimental data.<sup>13</sup>

After he was roundly attacked by homosexual activists, who accused him of providing ammunition for conservatives to challenge the gay rights/civil rights comparison based on immutability, Byne denounced the “false dichotomy: Biology or Choice?” and stated that he was also skeptical of environmental theories of sexual orientation. He wrote: “There is no compelling evidence to support any singular psychosocial explanation,” and that he would never “imply that one consciously decides one’s sexual orientation.”<sup>14</sup> But the fact remains that Dr. Byne has poked gaping holes in the most influential studies purporting to prove that homosexuality is inborn.

In May 2000, the American Psychiatric Association issued a Fact Sheet, “Gay, Lesbian and Bisexual Issues,” which includes this statement:

“Currently, there is a renewed interest in searching for biological etiologies for homosexuality. However, to date there are no replicated scientific studies supporting any specific biological etiology for homosexuality.”

Beyond the false comfort that homosexuals need not seek to alter their behavior in any way, there may be another motive behind the release and enthusiastic reporting of these studies: political advantage. As Natalie Angier wrote in *The New York Times* on September 1, 1991:

[P]roof of an inborn difference between gay and heterosexual men could provide further ammunition in the battle against discrimination. If homosexuality were viewed legally as a biological phenomenon, rather than a fuzzier matter of “choice” or “preference,” then gay people could no more rightfully be kept out of the military, a housing complex or a teaching job than could, say blacks.<sup>15</sup>

Simon LeVay, whose brain study in 1991 “jumped from the pages of the periodical *Science* to *The New York Times* and *Time*, then to CNN and *Nightline*, and from there to the dinner tables and offices of the country,” according to writer Chandler Burr, was quite open in his assessment of the possible impact of his work. “[P]eople who think gays and lesbians are born that way are also more likely to support gay rights.”<sup>16</sup>

---

<sup>13</sup> William Byne and Bruce Parsons, “Human Sexual Orientation: The Biologic Theories Reappraised,” *Archives of General Psychiatry*, Vol. 50, March 1993: 228-239.

<sup>14</sup> Letter from William Byne to Dean Hamer, 2 July 1993, as quoted in Chandler Burr, *A Separate Creation: The Search for the Biological Origins of Sexual Orientation* (New York, New York: Hyperion, 1996), p. 81.

<sup>15</sup> Natalie Angier, quoted in Charles W. Socarides, “A Freedom Too Far,” (Phoenix, Arizona: Adam Margrave Books, 1995), p. 94.

<sup>16</sup> Simon LeVay, quoted in A. Dean Byrd, Ph.D., Shirley E. Cox, Ph.D., and Jeffrey W. Robinson, Ph.D., “The Innate-Immutable Argument Finds No Basis in Science,” 2002, the National Association for the Research and Therapy of Homosexuality, <http://www.narth.com/docs/innate.html>.

In his book *Homosexuality and the Politics of Truth*, Dr. Jeffrey Satinover writes:

We will see later the falsity of activists' repeated assertions that homosexuality is immutable. They seek to create the impression that *science* has settled these questions, but it most certainly has not. Instead, the changes that have occurred in both public and professional opinion have resulted from politics, pressure, and public relations.<sup>17</sup>

Despite critical examination, as well as comments by the studies' own authors that the "gay" research has been distorted or exaggerated, some of the studies are often cited as "proof" that "gays are born that way." A few other studies have arisen in more recent years with as many flaws or have been misreported in similar fashion. Here is a brief overview of some of the studies:

### **UCLA's Study on Genes and Mice Brains**

In October 2003, the journal *Molecular Brain Research* published a study by UCLA researchers indicating that sexual identity is genetic.<sup>18</sup> Reuters reported it this way: "Sexual identity is wired into the genes, which discounts the concept that homosexuality and transgender sexuality are a choice, California researchers reported."<sup>19</sup> A number of other media outlets picked up on this theme, creating the impression that this study was yet one more piece of evidence for a genetic theory of homosexuality.

The trouble is, the study doesn't say anything about homosexuality. All it does is support a widely accepted theory about hormones and gender. Here is Princeton Professor Dr. Jeffrey Satinover's assessment:

The research is a decent piece of basic science and confirms what geneticists have long known must be the case: That the hormonal milieu that causes sexual differentiation between males and females is itself determined by genes, in mice as in men. This comes as no surprise.

But this research says absolutely nothing about homosexuality or transsexualism and any who claim it does are either ill-informed about genetics, or if not, are deliberately abusing their scientific knowledge and or credentials in the service of politics – in precisely the same way that Soviet-era geneticists such as Lysenko did – either in the naïve hope that distortion of the truth can produce a better society or out of fear for their career prospects. In either case they should be roundly rebuked for doing so.<sup>20</sup>

---

<sup>17</sup> Jeffrey Satinover, M.D., *Homosexuality and the Politics of Truth* (Grand Rapids, Michigan: Hamewith Books, Baker Books, 1996), p. 38.

<sup>18</sup> Phoebe Dewing, Tao Shi, Steve Horvath and Eric Vilain, "Sexually dimorphic gene expression in mouse brain precedes gonadal differentiation," *Molecular Brain Research*, Vol. 118, Issues 1-2, 21 October 2003: 82-90.

<sup>19</sup> Reuters, "Study says sexual identity is genetic," 20 October 2003.

<sup>20</sup> E-mail correspondence, 21 October 2003.

## The Hypothalamus

The first widely publicized claim for a “gay gene” came in 1991 when Salk Institute researcher Dr. Simon LeVay published a study in the journal *Science* noting a difference in a brain structure called the hypothalamus when evaluating 35 men – 19 homosexuals and 16 heterosexuals.<sup>21</sup> LeVay found that the hypothalamus was generally larger in heterosexual men than in homosexual men. He concluded that the findings “suggest that sexual orientation has a biologic substrate.”<sup>22</sup>

The media splashed the study on front pages and TV and radio broadcasts from coast to coast, despite the fact that LeVay himself cautioned:

“It’s 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. ... Since I looked at adult brains, we don’t know if the differences I found were there at birth, or if they appeared later.”<sup>23</sup>

The study also had major problems, which LeVay himself readily admits. First, all 19 of his homosexual subjects died of complications associated with AIDS. The difference in the hypothalamus might have been caused by chemical changes in the brain as a response to AIDS.

Dr. Byne argued in *Scientific American* that “[LeVay’s] inclusion of a few brains from heterosexual men with AIDS did not adequately address the fact that at the time of death virtually all men with AIDS have decreased testosterone levels as the result of the disease itself or the side effects of particular treatments. ... Thus it is possible that the effects on the size of the INAH3 [hypothalamus] that he attributed to sexual orientation were actually caused by the hormonal abnormalities associated with AIDS.”<sup>24</sup>

In addition, six of the “heterosexual” men died of AIDS. LeVay admitted later that he didn’t actually know whether the subjects in his heterosexual sample were, indeed, heterosexual; all of these subjects were simply “presumed heterosexual.” Given that very few straight men in San Francisco were contracting AIDS at the time (and still aren’t), this was a wildly unscientific assumption.

Another weakness of LeVay’s study is that his sample included major “exceptions.” Three of the homosexuals had larger clusters of neurons than the mean size for the heterosexuals, and three of the heterosexuals had clusters smaller than the mean size for the homosexuals. LeVay

---

<sup>21</sup> LeVay, op cit.

<sup>22</sup> Ibid.

<sup>23</sup> Quoted in David Nimmons, “Sex and the Brain,” *Discover*, Vol. 5, No. 3 (March 1994): 64-71 and cited in A. Dean Byrd, Ph.D., Shirley E. Cox, Ph.D., and Jeffrey W. Robinson, Ph.D., “The Innate-Immutable Argument Finds No Basis in Science,” National Association of Research and Therapy for Homosexuality Web site, <http://www.narh.com/docs/innate.html>, downloaded 12 January 2004.

<sup>24</sup> E. Byne, “The Biological Evidence Challenged,” *Scientific American* (May 1994): 50-5.

acknowledged that these exceptions “hint at the possibility that sexual orientation, although an important variable, may not be the sole determinant of INAH3 [hypothalamus] size.”<sup>25</sup>

LeVay is an open homosexual, and some comments he made to *Newsweek* suggest he had an agenda from the outset of the research. He said he believes that America must be convinced that homosexuality is biologically determined. “It’s important to educate society,” he said. “I think this issue does affect religious and legal attitudes.”<sup>26</sup>

Since LeVay released his study, other researchers have found that life experiences can alter brain structures, so it is premature to assume inborn origins for behavioral differences. In 1997, for example, University of California at Berkeley psychologist Marc Breedlove released a study that showed that sexual activities of rats actually changed structural aspects of the brain at the base of the spinal chord. Breedlove said:

These findings give us proof for what we theoretically know to be the case—that sexual experience can alter the structure of the brain, just as genes can alter it. You can’t assume that because you find a structural difference in the brain, that it was caused by genes. You don’t know how it got there.<sup>27</sup>

Breedlove is not an activist out to prove homosexuality is not biological. In fact, he said he believes that a genetic component exists somewhere and is doing his own research in this area.

## **The X Chromosome**

In 1993, a group of medical researchers at the National Cancer Institute (NCI) led by Dr. Dean H. Hamer released a study of 40 pairs of brothers that linked homosexuality to the X chromosome. The research, published in *Science*, reported that 33 of the pairs of brothers had DNA markers in the chromosome region known as Xq28.

The study won an enormous amount of media attention, and Hamer’s own activities as a homosexual activist within NCI were ignored when Hamer offered interviews only when reporters agreed not to identify him as a homosexual.

But even Hamer tempered his enthusiasm about the research results.

We knew that the genes were only part of the answer,” he said in a speech given in Salt Lake City. “We assumed the environment also played a role in sexual orientation, as it does in most, if not all behaviors.”<sup>28</sup>

---

<sup>25</sup> LeVay.

<sup>26</sup> D. Gelman, D. Foote, T. Barrett, M. Talbot, “Born or Bred,” *Newsweek*, 24 February 1992, 46-53.

<sup>27</sup> Pat McBroom, “Sexual Experience May Affect Brain Structure,” *Berkeleyan* campus newspaper (University of California at Berkeley), 19 November 1997 (<http://www.urel.berkeley.edu/berkeleyan/1997/1119/sexexp.html>).

<sup>28</sup> Dean Hamer, *The Science of Desire* (New York, New York: Simon & Schuster, 1994), p. 82.

In a later interview, Hamer said, “Homosexuality is not purely genetic. ... [E]nvironmental factors play a role. There is not a single master gene that makes people gay. ... I don’t think we will ever be able to predict who will be gay.”<sup>29</sup>

Hamer’s results are often misunderstood. Many believe that the study found an identical sequence (Xq28) on the X chromosome of all homosexual brothers in the study. In reality, what it found was matching sequences in each set of brothers who were both homosexual. Dr. Byne argues that in order to prove anything by this study, Hamer would have had to examine the Xq28 sequence of homosexual men’s heterosexual brothers. Hamer insisted that such an inclusion would have confounded his study. Byne responds: “In other words, inclusion of heterosexual brothers might have revealed that something other than genes is responsible for sexual orientation.”<sup>30</sup>

In the same edition of *Science* that carried the Hamer study, Elliot Gershon, chief of the clinical neurogenetics branch of the National Institute of Mental Health, said, “There’s almost no finding that would be convincing by itself in this field. We really have to see an independent replication.”<sup>31</sup>

The National Cancer Institute sponsored the “gay gene” research. This study alone cost \$419,000 of the institute’s taxpayer-backed funds, according to *The Washington Times*.<sup>32</sup>

The National Institutes of Health’s Office of Research Integrity investigated Hamer over allegations by a colleague that he ignored evidence that conflicted with his hypothesis. NIH never released the results of the inquiry, but Hamer was shortly thereafter transferred to another section. He had done the “gay gene” research under a grant to work on Kaposi’s Sarcoma, a skin cancer that inordinately afflicts homosexual men.

One of Hamer’s researchers told the *Times* that homosexuality is “not the only thing we study,” but it is “a primary focus of study.” Hamer reportedly stated he has pushed for an Office of Gay and Lesbian Health inside the National Institutes of Health, and he testified in opposition to Colorado’s Amendment 2, which sought to keep homosexual activists from winning minority class status. Then-Sen. Robert C. Smith (R-New Hampshire) accused the doctor of “actively pursu[ing] ... a gay agenda.”<sup>33</sup>

Another fact that casts doubt on Hamer’s conclusions is that other researchers tried to replicate his study but failed. In 1999, Drs. George Rice, Neil Risch and George Ebers published their findings in *Science* after attempting to replicate Hamer’s Xq28 study. Their conclusion: “We were not able to confirm evidence for an Xq28-linked locus underlying male homosexuality.”

---

<sup>29</sup> From speech in Salt Lake City in Lili Wright, “Science of Desire Is Topic for ‘Gay Gene’ Finder,” *Salt Lake Tribune*, 28 April 1995.

<sup>30</sup> Byne.

<sup>31</sup> “Evidence for Homosexuality Gene,” *Science*, Vol. 261, 16 July 1993: 291.

<sup>32</sup> Joyce Price, “Federal Cancer Lab Hunts for Gay Gene,” *The Washington Times*, 3 April 1994.

<sup>33</sup> Ibid.

Moreover, they added that when another group of researchers (Sanders, et al.) tried to replicate Hamer's study, they too failed to find a genetic connection to homosexuality.<sup>34</sup>

## The Twins Study

In 1991, J. Michael Bailey and Richard C. Pillard published a study that examined identical and fraternal twin brothers and adopted brothers in an effort to establish a genetic link to homosexuality. Fifty-two percent of the identical twins were reportedly homosexual, while only 22 percent of fraternal twins fell into the same category. But since identical twins have identical genetic material, the fact that nearly half of the identical twins were heterosexual effectively refutes the idea that homosexuality has a genetic basis.<sup>35</sup>

“This finding alone argues for the enormous importance of *nongenetic* factors influencing homosexuality,” writes Dr. Jeffrey Satinover, “because ... in order for something to be genetically *determined*, as opposed to merely influenced, the genetic heritability would need to approach 100 percent.”<sup>36</sup> Satinover, a psychiatrist, notes that “*identical* twins reared together share more significant environmental influences than *nonidentical* twins reared together,” and that narcissism, a key component of homosexuality, is more likely among identical twins who “grow up with mirror images of themselves.”<sup>37</sup> (Italics in original.)

In his analysis of the medical evidence purportedly supporting a biological cause of homosexuality, Dr. Byne noted other twin studies:

Without knowing what developmental experiences contribute to sexual orientation ... the effects of common genes and common environments are difficult to disentangle. Resolving this issue requires studies of twins raised apart.<sup>38</sup>

Other physicians have also criticized the study for overvaluing the genetic influence.<sup>39</sup>

Dr. Byne's arguments might lead some activists to label him a “homophobe.” He is, in reality, quite the contrary. Byne readily advocates societal acceptance of homosexuality and “gay rights,” but nevertheless concludes, “Most of the links in the chain of reasoning from biology to social policy [regarding homosexuality], do not hold up under scrutiny.”<sup>40</sup>

Bailey conducted another study in 1999, published in the March 2000 issue of the *Journal of Personality and Social Psychology*, which actually showed less possible genetic influence on homosexuality than the first twins study. He sent a questionnaire to the entire Australian Twin Registry. Only three pairs of identical male twins were both homosexual out of a total of 27 in

---

<sup>34</sup> Dean H. Hamer, George Rice, Neil Risch, and George Ebers, et al. “Genetics and Male Sexual Orientation” (Technical Comment), *Science* 285 (6 August 1999): 803a.

<sup>35</sup> J. Michael Bailey, Richard C. Pillard, “A Genetic Study of Male Sexual Orientation,” *Archives of General Psychiatry* 48 (1991): 1089-96.

<sup>36</sup> Satinover, *Homosexuality and the Politics of Truth*, p. 85.

<sup>37</sup> Ibid.

<sup>38</sup> Byne.

<sup>39</sup> T. Lidz, “A Reply to ‘A Genetic Study of Male Sexual Orientation’” [letter], *Archives of General Psychiatry* 50 (1993): 240.

<sup>40</sup> Ibid.



which at least one was homosexual. Of the 16 fraternal male twins, none of the pairs was both homosexual. Bailey found similar results for lesbians.<sup>41</sup>

## **Hormones**

In 1998, Dennis McFadden and Edward G. Pasanen published a study that evaluated auditory systems. Specifically, the study considered differences in echo-like waveforms emitted from an inner ear structure of people with normal hearing. These waves are higher in women than in men, a factor often attributed to the level of a person's exposure to androgen (a male hormone) in his or her early development as a fetus.<sup>42</sup>

In self-acknowledged lesbians, the waveforms ranged between those of men and those of heterosexual women. The researchers concluded that this suggests that female homosexuality could result from larger exposure to the male hormone androgen in the womb (homosexual men did not show the same variation).<sup>43</sup>

The media eagerly jumped on this bandwagon. But even the researchers themselves did not draw definitive conclusions. In the published study, they pointed out that exposure to "intense sounds, certain drugs, and other manipulations" can lower the level of these auditory waveforms. "Thus, it may be that something in the lifestyles of homosexual and bisexual females leads them to be exposed to one or more agents that have reduced the [waveforms], either temporarily or permanently."<sup>44</sup>

Moreover, even if the hearing differences were caused by an increased exposure to androgen in the womb, scientists would still be far from proving that this exposure is a cause of homosexuality—especially since the difference was not apparent in the male homosexual sample.

## **Finger Length**

In March 2000, the media publicized a finger length study that indicated that lesbians had longer fingers than other women, perhaps because of greater exposure in the womb to androgen.

Typically, both sexes' index finger is slightly shorter than the ring finger—a difference that is seen more clearly on the right hand. In females, the ring finger and index finger are almost the same size, but in men the index finger is more noticeably shorter.

In this study, Berkeley's Dr. Breedlove, who had in 1997 shown how sexual activity can change brain structure, found that homosexual women's finger length had a tendency to follow the male pattern. But Breedlove cautioned about reading too much into the finding:

---

<sup>41</sup> Stanton L. Jones, "The Incredibly Shrinking Gay Gene," *Christianity Today*, 4 October 1999, p. 53.

<sup>42</sup> McFadden.

<sup>43</sup> *Ibid.*, 2709.

<sup>44</sup> *Ibid.*, 2712.

“There is no gene that forces a person to be straight or gay,” he told CNN. “... I believe there are many social and psychological, as well as biological, factors that make up sexual preference.”<sup>45</sup>

Dr. Jeffrey Satinover commented as follows on the study:

A girl who develops before and into puberty with a “masculinized habitus” (the result of excess maternal intrauterine androgen stimulated by a genetic condition in the *fetus*)—a stocky physique, facial hair, powerful muscles, a square jaw *and long fingers*—may suffer so much teasing and rejection by family and peers that she comes to think of herself as “not feminine” and so will seek solace in the arms of women. Indeed, this an all-too-common pattern in the lives of “lesbians” and illustrates exactly how a strong genetic “association” can imply literally zero genetic causation whatsoever. It’s rather remarkable that the authors failed to remark on the support their study provided not for any genetic association with lesbianism, but rather for the genetic association to secondary sexual expression in *homo sapiens* that Vilain et al were only able to demonstrate in *mus musculus*. The attention paid to homosexuality in both cases, while ignoring straightforward sex, reflects the distinctly Orwellian effect that political correctness has on science: We now treat the differences between male and female as socially constructed and those between heterosexuality and homosexuality as innate and genetic.<sup>46</sup>

## Eye Blinking

In October 2003, a team of English researchers announced that they had found “powerful new evidence that sexual orientation is ‘hard-wired’ in the human brain before birth.”<sup>47</sup>

Dr. Qazi Rahman of the University of East London and Dr. Veena Kumari and Dr. Glenn Wilson of the Institute of Psychiatry said they found sex differences in the startle response – the eye blink in response to loud noises.<sup>48</sup>

The authors found that women had a lesser “prepulse inhibition of the human startle response (PPI),”<sup>49</sup> that is, they blinked more readily than men, and that lesbians blinked less readily than other women. They used small samples, and, more significantly, found no difference between homosexual men and heterosexual men. Yet they gave the impression that their findings indicated that homosexuality is a pre-born condition.

---

<sup>45</sup> “Male hormone levels in womb may affect sexual orientation, study says,” CNN.com, health, 29 March 2000, (<http://www.cnn.com/2000/HEALTH/03/29/gay.fingers/index.html>).

<sup>46</sup> Private communication with the author.

<sup>47</sup> “Sexual Orientation ‘hard-wired’ before birth – startling new evidence revealed in the blink of an eye,” press release, University of East London, England, 2 October 2003.

<sup>48</sup> Qazi Rahman, Veena Kumari, and Glenn D. Wilson, “Sexual Orientation-Related Differences in Prepulse Inhibition of the Human Startle Response,” *Behavioral Neuroscience*, Vol. 117 (5): 1096-1102.

<sup>49</sup> *Ibid*, p. 1096.

“Because the startle response is known to be involuntary rather than learned, this strongly indicates that sexual orientation is largely determined before birth,” said a press release from the University of East London.<sup>50</sup>

Dr. Rahman said in the release, “These findings may well affect the way we as a society deal with sexuality and the issues surrounding sexual orientation.”

But the researchers themselves introduce some cautionary notes in the study:

Although prenatal factors may be possible precursors to the neurobehavioral profiles observed in lesbians and gay men, whether neural differences underlie sexual orientation per se, or are a consequence of homosexual or heterosexual behavior, is yet to be determined.<sup>51</sup>

They also write: “Neuroanatomical and neurophysiological variations between heterosexuals and homosexuals may be due either to biological factors or to the influence of learning.”<sup>52</sup>

The team concluded that: “Our results show, for the first time, that PPI relates to sexual orientation and that homosexual women show a robust cross-sex shift. Homosexual women showed a masculinized PPI that was no different from that of heterosexual men. ... Homosexual men did not differ from heterosexual men.”<sup>53</sup>

Dr. Halstead Harrison, an associate professor emeritus in the Atmospheric Science Department of the University of Washington, reviewed the study, noted the small sizes of the test groups (14 lesbians and 15 heterosexual women, and 15 each of homosexual and heterosexual men) and the statistical methods, and concluded: “Data presented by Rahman *et al.* do not confidently support their finding that homosexual women exhibit a male-type startled-blink reflex.”<sup>54</sup>

Harrison further stated that “no significant differences were detected.”

As far as the blink reflex being utterly innate or somewhat trainable, he responded to an interviewer, “Now, that’s an open question.”<sup>55</sup> Dr. Harrison also said he would have liked to have seen the complete data on the series of tests to see whether the subjects’ responses would change with repetition. This would indicate whether the PPI is entirely innate.

In his conclusion, he said: “This Comment should not be construed as falsifying the hypothesis that homosexual and heterosexual women display different prepulse startle-inhibition reflexes. That conjecture may turn out to be so, but the present data do not confidently support it.”

---

<sup>50</sup> Press release, “Sexual orientation ‘hard-wired’ before birth.”

<sup>51</sup> *Ibid.*, p. 1097.

<sup>52</sup> *Ibid.*, p. 1099.

<sup>53</sup> *Ibid.*, p. 1098.

<sup>54</sup> Halstead Harrison, “A Technical Comment on the paper, ‘Sexual Orientation-Related Differences in Prepulse Inhibition of the Human Startle Response,’” University of Washington Web site, 15 December 2003, <http://www.atmos.washington.edu/~harrison/reports/rahman.pdf>.

<sup>55</sup> Telephone interview with Patrick Henry College senior and Culture & Family Institute intern Jeremy Sewall, 8 March 2004.

## Neuroendocrine Hypotheses

In 1999, Dr. Qazi Rahman compiled a brief review of several studies purporting to show a link between neuroanatomy and sexual orientation.<sup>56</sup>

He wrote: “The emerging neuroanatomical account suggests that, in some key neural substrates, homosexual men show a trend toward female-typical neuroanatomy as compared to heterosexual men.”<sup>57</sup>

Rahman also said, “Lesbians excel at some tasks which favor heterosexual males.”

As in the eye-blinking study, Rahman struck a cautionary note: “But is neuroendocrine differentiation a cause or a consequence of behavior? ... In addition, the differential development posited may not be causal but correlational.”

Rahman noted that, “Differential reinforcements from inputs in the psychosocial milieu to these sex-atypical behaviors makes the ‘pre-homosexual child’ view the same sex as ‘exotic’ (i.e., different from one’s self), which later in puberty becomes the object of eroticization.”<sup>58</sup>

As some developmental psychologists have observed, some children may be less inclined to exhibit classic gender role differences, and this may set them up for the type of reactions from peers (or even parents), such as rejection or teasing, that make them vulnerable to developing same-sex attraction.<sup>59</sup>

One glaring problem with Rahman’s article is that he uncritically cites many of the studies that were thoroughly debunked by researchers such as Columbia’s Byne and Parsons. These include studies by LeVay, Hamer, Allen, Gorski, Bailey and others.

Rahman wraps up his piece this way:

To conclude, it is important to illustrate that neurobiological differences between homosexuals and heterosexuals are by no means decisive. Nonetheless, the several independent findings of neuroanatomical differences in sex-atypical directions are not easily refutable. [*Editor’s note: Yes, they are. Byne and Parsons, among others, saw to that.*] Unfortunately, evidence currently available is limited and largely correlational in nature. Owing to this, it is not possible for alternative developmental processes associated with sexual orientation to be excluded.<sup>60</sup>

---

<sup>56</sup> Qazi Rahman, “Comments on the Neuroanatomy of Human Sexual Orientation and Proposed Neuroendocrine Hypotheses,” *Journal of Contemporary Neurology*, The MIT Press, Vol. 1999, No. 2A.

<sup>57</sup> *Ibid.*, p. 2.

<sup>58</sup> *Ibid.*, p. 3.

<sup>59</sup> Numerous references to this phenomenon are reported throughout Joseph Nicolosi, Ph.D., *Reparative Therapy of Male Homosexuality* (Northvale, New Jersey: Jason Aronson, Inc., 1991).

<sup>60</sup> Rahman, *op. cit.*, p. 3.

## Conclusion

Determining whether something has a biological cause is difficult, and locating a specifically genetic link is even more so. The handful of studies that purportedly add up to incontestable “proof” that homosexuals are “born that way” are inconclusive at best and, as Dr. Rahman notes, “largely correlational in nature.” In some cases, such as the twins studies, the evidence strongly indicates that early environment is more likely the dominant factor to have produced homosexual desires.

As Dr. Satinover emphasizes, correlation does not mean something is causative. Basketball players are tall, so height correlates with playing basketball, he notes. But there is no “basketball-playing gene.” Efforts to turn some interesting correlations into causal factors have not been successful and yet have been misused to advance a political agenda.

Perhaps the best way to describe the situation is this, as paraphrased from Dr. Satinover: Some people may be predisposed because of genetic, prenatal hormonal influences or other physical or brain differences to have personalities that make them vulnerable to the environmental factors that can elicit homosexual desires. So is homosexuality biological? Not in the way that popular media and homosexual activists have presented it.

Extremely shy and artistic young boys, for instance, who are not affirmed in their masculinity by a caring father, might be at risk for homosexuality. It’s not because of a homosexual “gene,” but because of an interrupted process of achieving secure gender identity. This can make some boys who crave male affirmation an easy mark for seduction into homosexuality. A similar pattern can be seen in girls who don’t fit classic gender profiles, need feminine affirmation, and are targeted by lesbians who play upon the girls’ emotional needs.

Such children’s vulnerability is all the more reason to protect them from early exposure to homosexual influences. The Boy Scouts of America, for instance, is right to screen out as troop leaders those men who desire other males sexually. The Scouts do so not out of bigotry, or a belief that all homosexual men molest boys. They do so out of genuine concern for the health and well-being of the boys in their charge, including those who might be sexually vulnerable.

Americans for too long have been pummeled with the idea that people are “born gay.” The people who most need to hear the truth are those who mistakenly believe they have no chance themselves for change. It is both more compassionate and truthful to give them hope than to serve them up politically motivated, unproven creations like the “gay gene.”

*Robert Knight is director of the Culture & Family Institute, an affiliate of Concerned Women for America. This paper is a revised and updated version of “Born & Bred: The Debate Over the Cause of Homosexuality” (last updated in June 2000) by former Concerned Women for America staff writer Trudy Chun.*