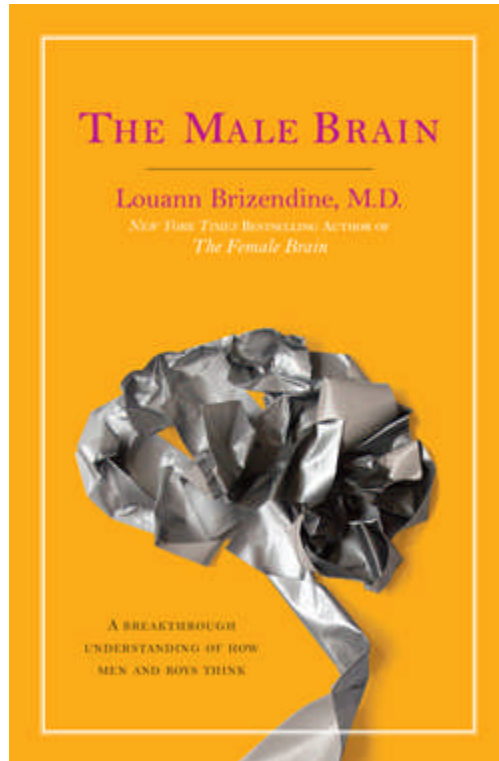


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From the author of the groundbreaking New York Times bestseller *The Female Brain*, is the eagerly awaited powerful book that demystifies the puzzling male brain.

Join Dr. Louann Brizendine as she turns her attention to the male brain, showing how, through every phase of life, the "male reality" is fundamentally different from the female one. Exploring the latest breakthroughs in male psychology and neurology with her trademark accessibility and candor, she reveals that the male brain:

- is a lean, mean, problem-solving machine. Faced with a personal problem, a man will use his analytical brain structures, not his emotional ones, to find a solution.
- thrives under competition, instinctively plays rough and is obsessed with rank and hierarchy.
- has an area for sexual pursuit that is 2.5 times larger than the female brain, consuming him with sexual fantasies about female body parts.
- experiences such a massive increase in testosterone at puberty that he perceives others' faces to be more aggressive.

The Male Brain finally overturns the stereotypes. Impeccably researched and at the cutting edge of scientific knowledge, this is a book that every man, and especially every woman bedeviled by a man, will need to own. LOUANN BRIZENDINE, MD, neuropsychiatrist, educator, clinician, writer, is an endowed professor of clinical psychiatry at the University of California, San Francisco/Langley Porter Psychiatric Institute. She is the founder and director of the Women's and Teen's Mood and Hormone Clinic and author of *The Female Brain* and the newly released *The Male Brain*. She received her BS from the University of California, Berkeley, in Neurobiology, her MD from Yale and residency at Harvard. She has served as faculty at both Harvard and UCSF.

**From the Appendix:
"The Male Brain and Sexual Orientation"**

Are men gay because their brains are different? Studies have been conducted for two decades in order to answer this question. Some of them have found evidence of anatomical or functional differences between gay and straight brains. Others have established that genes play a part in determining gender orientation, which implies the existence of brain differences.

One of the early studies, by Dick Swaab, found that a part of the hypothalamus called the suprachiasmatic nucleus (SeN) is twice as large in gay males as in straight males. This difference was later shown to be caused by a difference in the way testosterone reacts with the developing brain. Other researchers showed that the anterior commissure - a bundle of superfast cables that connects the brain's two hemispheres-is

larger in gay males than in straight males. This structure, which is also larger in women than in men, is believed to be involved in sex differences related to cognitive abilities and language, and fits with the finding that gay males, like females, have better verbal abilities than straight males.

Recently Ivanka Savic and other Swedish researchers reported that an anatomical asymmetry in the size of the two brain hemispheres that is characteristic of straight male brains is not observed in gay male brains. Instead, their magnetic resonance imaging studies showed that in this respect gay male brains were more like female brains. With PET scans, the researchers also found that the connectivity of the amygdala of the gay male brain is more like that of the straight female brain than of the straight male brain. These studies suggest that there are differences between gay and straight male brain areas that are not directly involved in sexual attraction.

Savic has also reported a different pattern of activation in gay male brains in response to a pheromone that is excreted in male perspiration. She found that the hypothalamus in gay male brains is stimulated by the scent of male sweat, but in straight male brains it is not. This suggests that a difference in the brain's hypothalamic circuits for response to pheromones may attract gay males to the scent produced by the sweat glands of men and that this plays a role in their sexual orientation. Other studies have found anatomical differences in the structure of the hypothalamus in gay and straight men.

There is also evidence of differences between gay and straight men in performance on certain spatial tasks. It has been consistently shown that straight men outperform straight women on tasks requiring navigation. Recent studies have shown that gay men perform more like straight women on such tasks.

Brain scans have also been used to measure activity changes in the gay and straight male brain when pictures of men and women were shown. Viewing a female face produced a strong reaction in the thalamus and medial prefrontal cortex of straight men but not of gay men. In contrast, the gay male brains reacted more strongly to the face of a man.

Genetic studies have also contributed some evidence of innate differences between gay and straight males. In a recent study, Dr. Niklas Langstrom estimated the part that genes play in gay male behavior by studying sexual orientation in adult male twin pairs. He found that identical twin pairs, who have all the same genes, are more likely to share sexual orientation than fraternal twin pairs, who share only half of their genes. Based on this comparison, he concluded that about 35 percent of sexual orientation is attributable to genetic influences, whereas the rest is due to as yet unidentified factors.

So far, none of the specific genes that influence sexual orientation have been identified, and researchers believe that the combined actions of many genetic and environmental factors will be involved. Furthermore, research on the brain circuits and on hormonal effects related to sexual orientation in humans is only just beginning. Nevertheless, the evidence we already have does show that some human brain differences are related not only to gendered behavior, but also to sexual orientation.