# What Scientists Know—And Don’t Know—About Sexual Orientation

April 25, 2016

Over the last 50 years, political rights for lesbian, gay, and bisexual (LGB) individuals have significantly broadened in some countries, while they have narrowed in others. In many parts of the world, political and popular support for LGB rights hinges on questions about the prevalence, causes, and consequences of non-heterosexual orientations.

In a comprehensive report, a team of researchers bring the latest science to bear on these issues, providing a review of the scientific research on sexual orientation.

“We wanted to write a comprehensive review that was ‘state of the art’—in doing so, we also wanted to correct important misconceptions about the link between scientific findings and political agendas,” explains psychology researcher and lead author J. Michael Bailey of Northwestern University.

The report is published in *Psychological Science in the Public Interest*, a journal of the Association for Psychological Science, and is accompanied by a commentary by psychological scientist Ritch Savin-Williams of Cornell University.

Based on their review of the latest science, Bailey and colleagues draw several conclusions about the nature of sexual orientation:

- Across cultures, a “small but nontrivial” percentage of people have non-heterosexual feelings. The specific expression of sexual orientation varies widely according to cultural norms and traditions, but research suggests that individuals’ sexual feelings are likely to develop in similar ways around the world.
- Men’s and women’s sexual orientations manifest in different ways: Men’s sexual orientation is more closely linked to their patterns of sexual arousal than women’s sexual orientation is.

- Various biological factors—including prenatal hormones and specific genetic profiles—are likely to contribute to sexual orientation, though they are not the sole cause. Scientific evidence suggests that biological and non-social environmental factors jointly influence sexual orientation.
- Scientific findings do not support the notion that sexual orientation can be taught or learned through social means. And there is little evidence to suggest that non-heterosexual orientations become more common with increased social tolerance.

Despite these points of consensus, some aspects of sexual orientation are not as clear-cut. While Bailey and colleagues describe sexual orientation as primarily falling into categories—lesbian, gay, or bisexual—Savin-Williams argues that considerable evidence supports a sexual continuum. He notes that the label 'bisexual' serves as a catchall for diverse sexual orientations that fall in between heterosexual and homosexual. As a result, his estimate of the prevalence of the nonheterosexual population is double that of Bailey and colleagues.

From their review, the authors also conclude that gender nonconformity in childhood—behaving in ways that do not align with gender stereotypes—predicts non-heterosexuality in adulthood. According to Savin-Williams, the degree to which this is true could be a consequence of how study participants are typically recruited and may not be accurate among more representative samples of nonheterosexual individuals.

The report authors and Savin-Williams agree on most issues, including that a major limitation of existing research relates to how sexual orientation is measured. Most researchers view sexual orientation as having several components—including sexual behavior, sexual identity, sexual attraction, and physiological sexual arousal—and yet, the majority of scientific studies focus solely on self-reported sexual attraction. The decision to use these self-report measures is typically made for pragmatic reasons, but it necessarily limits the conclusions that can be drawn about how different aspects of sexual orientation vary by individual, by culture, or by time.

Additionally, individual and cultural stigma likely results in underreporting of non-heterosexual behaviors and orientations across the board.

Perhaps the most prominent question in political and public debates is whether people can "choose" to have non-heterosexual orientations. Because sexual orientation is based on desire and we do not "choose" our desires, the authors argue, this question is illogical.

The fact that issues related to sexual orientation continue to be hotly debated in the public arena underscores the need for more and better research.

"Sexual orientation is an important human trait, and we should study it without fear, and without political constraint," Bailey argues. "The more controversial a topic, the more we should invest in acquiring unbiased knowledge and science is the best way to acquire unbiased knowledge."

Co-authors on the report include Paul L. Vasey (University of Lethbridge), Lisa M. Diamond (University of Utah), S. Marc Breedlove (Michigan State University), Eric Vilain (University of California, Los Angeles), and Marc Epprecht (Queen's University).

The full report and the accompanying commentary are available online.