

MASS MEDIA Popular media influence teens by providing social scripts for sexual behavior. Media also affect peer perceptions: The more sexual content adolescents and young adults view or read (even when controlling for other predictors of early sexual activity), the more likely they are to perceive their peers as sexually active, to develop sexually permissive attitudes, to experience early intercourse, and to use condoms inconsistently (Escobar-Chaves et al., 2005; O'Hara et al., 2012; Parkes et al., 2013; Ward et al. 2018). Perceived peer norms influence teens' sexual behavior (Lyons, 2015; van de Bongardt et al., 2015).

DELAYING SEX What are the characteristics of teens who delay having sex?

- **High intelligence** Teens with high rather than average intelligence test scores more often delay sex, partly because they consider possible negative consequences and are more focused on future achievement than on here-and-now pleasures (Harden & Mendle, 2011).
- **Religious engagement** Actively religious teens more often reserve sexual activity for adulthood or long-term relationships (Hull et al., 2011; Schmitt & Fuller, 2015; Štulhofer et al., 2011).
- **Father presence** In studies that followed hundreds of New Zealand and U.S. girls from age 5 to 18, having Dad around has reduced the risk of teen pregnancy and of sexual activity before age 16 (Ellis et al., 2003). These associations held even after adjusting for other influences, such as poverty. Close family attachments—as in families that eat together and where parents know their teens' activities and friends—also predict later sexual initiation (Coley et al., 2008).
- **Service-learning participation** American teens volunteering as tutors or teachers' aides, or participating in community projects, have lower pregnancy rates than do comparable teens randomly assigned to control conditions (Kirby, 2002; O'Donnell et al., 2002). Researchers are unsure why. Does service learning promote a sense of personal competence, control, and responsibility? Does it encourage more future-oriented thinking? Or does it simply reduce opportunities for unprotected sex? (After-school activities and later school start times also reduced unplanned pregnancies [Bryan et al., 2016; Steinberg, 2015].)

ASK YOURSELF

What strategies could your community use to reduce teen pregnancy?

RETRIEVAL PRACTICE

RP-4 Which THREE of the following five factors contribute to unplanned teen pregnancies?

- | | |
|------------------------------|---|
| a. Alcohol use | d. Mass media models |
| b. Higher intelligence level | e. Participating in service-learning programs |
| c. Father absence | |

ANSWERS IN APPENDIX E

Sexual Orientation

LOQ 11-10 What do we know about sexual orientation?

To motivate is to energize and direct behavior. So far, we have considered the energizing of sexual motivation but not its *direction*, which is our **sexual orientation**—our sexual attraction toward members of the other gender (*heterosexual orientation*), our own gender (*same-sex orientation*), male and female genders (*bisexual orientation*), or to no one

Keeping abreast of hypersexuality An analysis of the 60 top-selling video games found 489 characters, 86 percent of whom were males (like most of the game players). The female characters were much more likely than the male characters to be “hypersexualized”—partially nude or revealingly clothed, with large breasts and tiny waists (Downs & Smith, 2010). Such depictions can lead to unrealistic expectations about sexuality and body ideals, and contribute to the early sexualization of girls (Karsay et al., 2018). The American Psychological Association suggests countering this by teaching girls to “value themselves for who they are rather than how they look” (APA, 2007).



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Father presence

sexual orientation the direction of our sexual attractions, as reflected in our longings and fantasies.

As explained in Chapter 4, sexual orientation is distinct from *gender identity* (including *transgender identity*).

Driven to suicide In 2010, Rutgers University student Tyler Clementi jumped off this bridge after his roommate secretly filmed, shared, and tweeted about Clementi's intimate encounter with another man. Reports then surfaced of other gay teens who had reacted in a similarly tragic fashion after being taunted. Since 2010, Americans—especially those under 30—have been increasingly supportive of those with same-sex orientations.



Splash News/Newscom



STAN HONDA/Getty Images

at all (*asexual orientation*). For some people, sexual attraction is not restricted to any sex or gender identity (*pansexual orientation*). We experience such attractions in our interests and fantasies (who appears in your imagination?).

Cultures vary in their attitudes toward same-sex attractions. “Should society accept homosexuality?” Yes, say 88 percent of Spaniards and 1 percent of Nigerians, with women everywhere being more accepting than men (Pew, 2013a). Yet whether a culture condemns or accepts same-sex unions, heterosexuality is most common and same-sex attraction and other variations exist. In most African countries, same-sex relationships are illegal. Yet the ratio of lesbian, gay, or bisexual people “is no different from other countries in the rest of the world,” reports the Academy of Science of South Africa (2015). What is more, same-sex activity spans human history.

How many people have exclusively same-sex attractions? According to more than a dozen national surveys in Europe and the United States, about 3 or 4 percent of men and 2 percent of women (Chandra et al., 2011; Copen et al., 2016; Savin-Williams et al., 2012). But the percentages vary somewhat over time, with the percentage who feel comfortable self-reporting as lesbian, gay, or bisexual gradually increasing with increased social acceptance (Newport, 2018). Percentages are also slightly higher when reporting is anonymous (Copen et al., 2016). A larger number of Americans—17 percent of women and 6 percent of men—say they have had some same-sex sexual contact during their lives (Copen et al., 2016). Psychologists have only begun to research the experiences of those who identify as pansexual (Borgogna et al., 2019; Greaves et al., 2019).

In less tolerant places, people are more likely to hide their sexual orientation. About 3 percent of California men express a same-sex preference on Facebook, for example, as do only about 1 percent in Mississippi. Yet about 5 percent of Google pornography searches in both states are for gay porn. And Craigslist ads for males seeking “casual encounters” with other men tend to be at least as common in less tolerant states, where there are also more Google searches for “gay sex” and “Is my husband gay?” (MacInnis & Hodson, 2015; Stephens-Davidowitz, 2013).

What does it feel like to not be heterosexual in a majority heterosexual culture? If you are heterosexual, imagine that you have found “the one”—a perfect partner of the other sex. How would you feel if you weren't sure who you could trust with knowing you had these feelings? How would you react if you overheard people telling crude jokes about heterosexual people, or if most movies, TV shows, and advertisements showed only same-sex relationships? How would you like hearing that many people wouldn't vote for a political candidate who favors other-sex marriage? And how would you feel if children's organizations and adoption agencies thought you might not be safe or trustworthy because you're attracted to people of the other sex?

Facing such reactions, some people with same-sex attractions may at first try to ignore or deny their desires, hoping they will go away. But they don't. And these people may—particularly if they live in a region or a country that condemns same-sex attractions—conceal their orientation (Pachankis & Bränström, 2018). Especially during adolescence or when feeling rejected by their parents or peers, people may struggle against same-sex attractions. Without supportive parents and friends, gay and lesbian teens express greater anxiety and depression, often related to bullying, and a tripled risk of suicide (Caputi et al., 2017; di Giacomo et al., 2018; NAS, 2019; Ross et al., 2018). Some may try to change their orientation through psychotherapy, willpower, or prayer. But the feelings are typically enduring, as are those of heterosexual people—who are similarly unable to change (Haldeman, 1994, 2002; Myers & Scanzoni, 2005).

Some harmful anti-gay stereotypes have unfortunately persisted. One such stereotype is that people with same-sex attractions are more likely to molest children (Herek, 2016). Is this true? No. Measuring men's genital response to various sexual images indicates that sexual orientation is unrelated to pedophilia (Blanchard et al., 2009; Herek, 2016). A Canadian research team led by Ray Blanchard (2012; Dreger, 2011) outfitted 2278 men (mostly sex offenders) with a device that measured their sexual arousal when viewing nude photos of male and female adults and children, accompanied by sexual audio stories. Most of the men responded not to children, but to adult men (if gay) or to adult women (if straight). Some of the men—both straight and gay—exhibited pedophilia, by instead responding mostly to young boys or girls, and much less to adults.

Today's psychologists view sexual orientation as neither willfully chosen nor willfully changed. "Efforts to change sexual orientation are unlikely to be successful and involve some risk of harm," declared a 2009 American Psychological Association report. A consensus of British mental health organizations agreed that such attempts are "unethical and potentially harmful" (Gale et al., 2017). Recognizing this, in 2016, Malta became the first European country to outlaw the controversial practice of "conversion therapy," which aims to change people's *gender identity* or sexual orientation. An increasing number of U.S. states and cities have likewise banned conversion therapy with minors.

Sexual orientation in some ways is like handedness: Most people are one way, some the other. A smaller group experiences some form of ambidexterity. Regardless, the way we endure, especially in men (Dickson et al., 2013; Norris et al., 2015). Women's sexual orientation tends to be less strongly felt and, for some women, is more fluid and changing. Heterosexual women may experience genital arousal to either male or female sexual stimuli (Chivers, 2017). In general, men are sexually simpler. Men's lesser sexual variability is apparent in many ways (Baumeister, 2000). Across time, cultures, situations, and differing levels of education, religious observance, and peer influence, men's sexual drive and interests have been less flexible and varying than have women's. Women, for example, more often prefer to alternate periods of high sexual activity with periods of almost none (Mosher et al., 2005). Baumeister calls this flexibility *erotic plasticity*.

Origins of Sexual Orientation

So, if we do not choose our sexual orientation and (especially for males) cannot change it, where do these feelings come from? In an early search for possible environmental influences on sexual orientation, Kinsey Institute investigators in the 1980s interviewed nearly 1000 lesbian/gay and 500 heterosexual people. They assessed nearly every imaginable psychological cause of same-sex attraction—parental relationships, childhood sexual experiences, peer relationships, and dating experiences (Bell et al., 1981; Hammersmith, 1982). Their findings: Gay and lesbian people were no more likely than heterosexual people to have been smothered by maternal love or neglected by their father. And consider this: If "distant fathers" were more likely to produce gay sons, then shouldn't boys growing up in father-absent homes more often be gay? (They are not.) And shouldn't the rising number of such homes have led to a noticeable increase in the gay population? (It has not.) Most children raised by gay or lesbian parents display gender-typical behavior and are heterosexual (Farr et al., 2018; Gartrell & Bos, 2010). And they grow up with health and emotional well-being similar to (and sometimes better than) children with straight parents (Bos et al., 2016; Farr, 2017).

So, what else might influence sexual orientation? One theory has proposed that people develop same-sex erotic attachments if segregated by sex at the time their sex drive matures (Storms, 1981). Indeed, gay men tend to recall going through puberty somewhat earlier, when peers are more likely to be all males (Bogaert et al., 2002). But even in tribal cultures in which same-sex sexual behavior is expected of all boys before marriage, most men are still heterosexual (Hammack, 2005; Money, 1987). (As this illustrates, sexual behavior is not always indicative of sexual orientation.) Moreover, though peers' attitudes predict teens' sexual attitudes and behavior, they do not predict same-sex attraction. "Peer influence has little or no effect" on sexual orientation (Brakefield et al., 2014).

Environment likely contributes to sexual orientation—nature and nurture work together—but the inability to pin down specific environmental influences has led researchers to explore several lines of biological evidence. These include same-sex attraction in other species, brain differences, and genetic and prenatal influences.

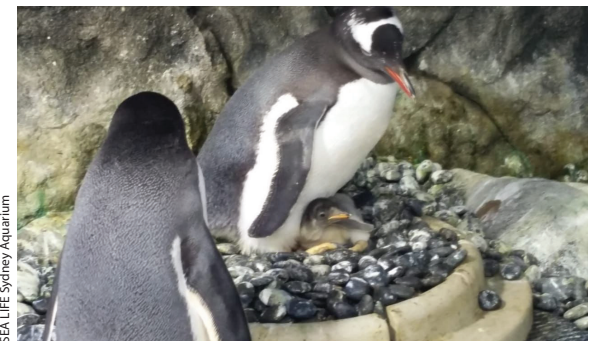
SAME-SEX ATTRACTION IN OTHER SPECIES In Boston's Public Gardens, caretakers solved the mystery of why a much-loved swan couple's eggs never hatched. Both swans were female. In New York City's Central Park Zoo, penguins Silo and Roy spent several years as devoted same-sex partners. Same-sex sexual behaviors have also been observed in several hundred other species, including grizzlies, gorillas, giraffes, monkeys, flamingos, and owls (Bagemihl, 1999). Among rams, for example, some 7 to 10 percent display same-sex attraction by shunning ewes and seeking to mount other males (Perkins & Fitzgerald, 1997). Same-sex sexual behavior seems a natural part of the animal world.

"There is no sound scientific evidence that sexual orientation can be changed."

— UK Royal College of Psychiatrists, 2014

In one British survey of 18,876 people (and in other surveys since), about 1 percent identified themselves as asexual, having "never felt sexually attracted to anyone at all" (Bogaert, 2004, 2015). People with an asexual orientation are, however, nearly as likely as others to report masturbating, noting that it feels good, reduces anxiety, or "cleans out the plumbing."

Two penguin dads At Sydney's SEA LIFE Aquarium, Sphe and Magic, a bonded same-sex pair, successfully raised a foster chick (appropriately named "Sphengic").



See the **Video: Naturalistic Observation** for a helpful tutorial animation.

BRAIN DIFFERENCES Might the structure and function of gay and straight brains differ? Researcher Simon LeVay (1991) studied sections of the hypothalamus taken from deceased gay and straight people. He found a cell cluster that was indeed reliably larger in straight men than in straight women and gay men.

It should not surprise us that brains differ with sexual orientation (Bao & Swaab, 2011; Savic & Lindström, 2008). Remember our maxim: *Everything psychological is simultaneously biological*. But when did the brain difference begin? At conception? During childhood or adolescence? Did experience produce the difference? Or was it genes or prenatal hormones (or genes activating prenatal hormones)?

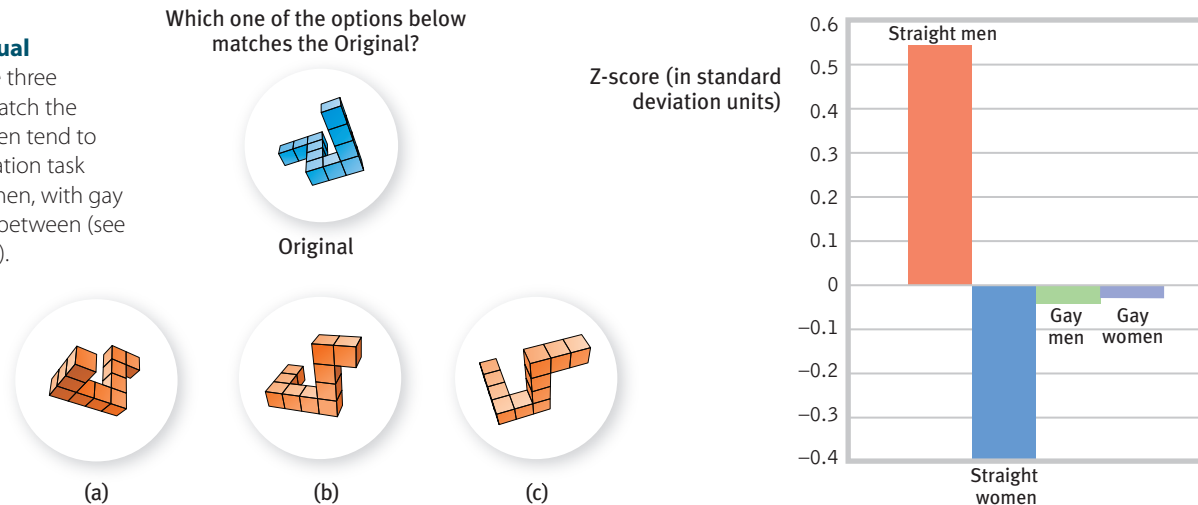
LeVay does not view the hypothalamus as a sexual orientation center; rather, he sees it as an important part of the neural pathway engaged in sexual behavior. He acknowledges that sexual behavior patterns may influence the brain's anatomy. In fish, birds, rats, and humans, brain structures vary with experience—including sexual experience, reports sex researcher Marc Breedlove (1997). But LeVay believes it is more likely that brain anatomy influences sexual orientation. His hunch seems confirmed by the discovery of a similar hypothalamic difference between male sheep that do and don't display same-sex attraction (Larkin et al., 2002; Roselli et al., 2002, 2004). Moreover, such differences seem to develop soon after birth, and perhaps even before birth (Rahman & Wilson, 2003).

Since LeVay's brain structure discovery, other researchers have reported additional differences in the way that gay and straight brains function. One is in an area of the hypothalamus that governs sexual arousal (Savic et al., 2005). When straight women were given a whiff of a scent derived from men's sweat, this area became active. Gay men's brains responded similarly to the men's scent. But straight men's brains showed the arousal response only to a female hormone derivative. In a similar study, lesbians' responses differed from those of straight women (Kranz & Ishai, 2006; Martins et al., 2005). Researcher Qazi Rahman (2015) sums it up: Compared with straight men and women, "gay men appear, on average, more 'female typical' in brain pattern responses and lesbian women are somewhat more 'male typical.'"

On several traits, the average gay man and gay woman fall midway between the average straight man and straight woman. Consider the gay-straight difference in spatial abilities. On mental rotation tasks such as the one in **FIGURE 11.8**, straight men tend to outscore straight women, and the scores of gay men and gay women fall in between (Boone & Hegarty, 2017). But straight women and gay men have both outperformed straight men at remembering objects' spatial locations in memory game tasks (Hassan & Rahman, 2007).

"Gay men simply don't have the brain cells to be attracted to women." — Simon LeVay, *The Sexual Brain*, 1993

FIGURE 11.8 **Spatial abilities and sexual orientation** Which of the three figures can be rotated to match the Original figure?¹ Straight men tend to find this type of mental rotation task easier than do straight women, with gay men and women falling in between (see graph) (Rahman et al., 2004).



GENETIC INFLUENCES Studies indicate that "about a third of variation in sexual orientation is attributable to genetic influences" (Bailey et al., 2016). A same-sex orientation does tend to run in families. And identical twins are somewhat more likely than fraternal twins to share a same-sex orientation (Alanko et al., 2010; Långström et al., 2010). But

See the **Video: Twin Studies** for a helpful tutorial animation.

¹Answer: Figure (c).

because sexual orientations differ in many identical twin pairs, especially female twins, we know that other factors besides genes are also at work—including, it appears, *epigenetic marks* that help distinguish gay and straight twins (Balter, 2015; Gavrillets et al., 2018).

By altering a single gene in fruit flies, experimenters have changed the flies' sexual orientation and behavior (Dickson, 2005). In search of genes that influence human sexual orientation, researchers have analyzed the genomes of 409 pairs of gay brothers, 1231 straight men, and 1077 gay men. They found links between sexual orientation and two genes on chromosomes 13 and 14. The first of those chromosome regions influences a brain area that varies in size with sexual orientation. The second influences thyroid function, which has also been associated with sexual orientation (Sanders et al., 2015, 2017). But we should also recall a familiar lesson: Human traits are influenced by *many genes having small effects*. Indeed, a giant study of nearly 500,000 peoples' genes confirmed that "Same-sex behavior is influenced by not one or a few genes but many" (Ganna et al., 2019).

Researchers have speculated about possible reasons why "gay genes" might exist in the human gene pool, given that same-sex couples cannot naturally reproduce. One possible answer is *kin selection*. Recall from Chapter 4 the evolutionary psychology reminder that many of our genes also reside in our biological relatives. Perhaps, then, gay people's genes live on through their supporting the survival and reproductive success of their relatives.

A *fertile females theory* suggests that maternal genetics may also be at work (Bocklandt et al., 2006). Around the world, gay men tend to have more gay relatives on their mother's side than on their father's (Camperio-Ciani et al., 2004, 2009, 2012; VanderLaan et al., 2012; VanderLaan & Vasey, 2011). And the relatives on the mother's side also produce more offspring than do the maternal relatives of heterosexual men. Perhaps the genes that dispose some women to conceive more children with men also dispose some men to be attracted to men (LeVay, 2011). Thus, the decreased reproduction by gay men appears to be offset by the increased reproduction by their maternal extended family.

PRENATAL INFLUENCES Recall that in the womb, sex hormones direct our male and female development. In animals and some human cases, prenatal hormone conditions have altered a fetus' sexual orientation, most clearly so for females (Breedlove, 2017). When pregnant sheep were injected with testosterone during a critical period of fetal development, their female offspring later showed same-sex sexual behavior (Money, 1987). A critical period for the human brain's neural-hormonal control system may exist during the second trimester (Ellis & Ames, 1987; Garcia-Falgueras & Swaab, 2010; Meyer-Bahlburg, 1995). Exposure to the hormone levels typically experienced by female fetuses during this time may predispose females later to become attracted to males. And female fetuses most exposed to testosterone appear most likely later to exhibit gender-atypical traits and to experience same-sex desires.

The mother's immune system may also play a role in the development of sexual orientation. In 35 of 36 samples studied (an amazingly reliable finding), men with older brothers have been somewhat more likely to be gay, reports Ray Blanchard (2004, 2018, 2019)—about one-third more likely for each additional older brother (see also Bogaert, 2003). The odds of same-sex attraction are roughly 2 percent among first sons, and they rise to about 2.6 percent among second sons, 3.5 percent for third sons, and so on for each additional older brother (Bailey et al., 2016). This is called the *older-brother* or *fraternal birth-order effect* (see FIGURE 11.9).

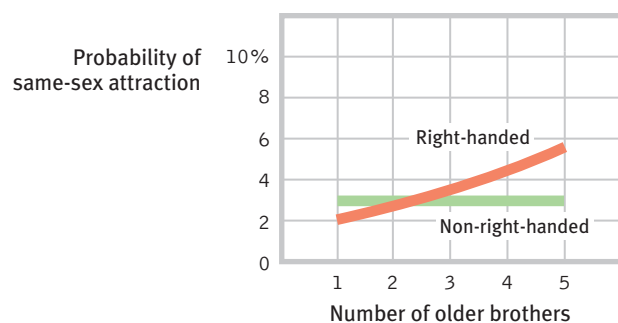


FIGURE 11.9
The older-brother effect These approximate curves depict a man's likelihood of same-sex attraction as a function of the number of biological (not adopted) older brothers he has (Blanchard, 2008a; Bogaert, 2006a). This correlation has been found in several studies, but only among right-handed men (as about 9 in 10 men are).

"Modern scientific research indicates that sexual orientation is . . . partly determined by genetics, but more specifically by hormonal activity in the womb." — Glenn Wilson and Qazi Rahman, *Born Gay: The Psychobiology of Sex Orientation*, 2005

Note that the scientific question is not “What causes same-sex orientation?” (or “What causes heterosexual orientation?”) but “What causes differing sexual orientations?” In pursuit of answers, psychological science compares the backgrounds and physiology of people whose sexual orientations *differ*.

The reason for this curious phenomenon is unclear. Blanchard suspects a defensive maternal immune response to foreign substances produced by male fetuses. With each pregnancy with a male fetus, the maternal antibodies may become stronger and may prevent the fetus’ brain from developing in a male-typical pattern (Bogaert et al., 2018). Consistent with this biological explanation, the fraternal birth-order effect occurs only in men with older brothers born to the same mother (whether raised together or not). Sexual orientation is unaffected by adoptive brothers (Bogaert, 2006a). The birth-order effect on sexual orientation is not found among women with older sisters, women who were womb-mates of twin brothers, and men who are not right-handed (Rose et al., 2002).

Gay-Straight Trait Differences

Comparing the traits of gay and straight people is akin to comparing the heights of men and women. The average man is taller than most women, but many women are taller than most men. And just as knowing someone’s height doesn’t specify their gender, neither does knowing someone’s traits tell you their sexual orientation. Yet on several traits, the average gay female or male is intermediate between straight females and males (TABLE 11.3; see also LeVay, 2011; Rahman & Koerting, 2008; Rieger et al., 2016).

The point to remember: Taken together, the brain, genetic, and prenatal findings offer strong support for a biological explanation of sexual orientation, especially for men (LeVay, 2011; Rahman & Koerting, 2008). Our increasing understanding of the greater sexual fluidity of women suggests the need for more research on biopsychosocial influences (Diamond et al., 2017).

* * *

Still, some people wonder: Should the cause of sexual orientation matter? Perhaps it shouldn’t, but people’s assumptions matter. Those who believe sexual orientation is a lifestyle choice often oppose equal rights for people who are lesbian or gay. For example, in 2014 the president of Uganda signed a bill that made some same-sex sexual acts punishable by life in prison. To justify this, he declared that same-sex attraction is not inborn but rather is a matter of “choice” (Balter, 2014; Landau et al., 2014). Those who understand the inborn nature of sexual orientation—that it is shaped by the biological and prenatal influences outlined in this chapter—more likely favor “equal rights for homosexual and bisexual people” (Bailey et al., 2016).

TABLE 11.3 Biological Correlates of Sexual Orientation

Gay-straight trait differences

Sexual orientation is part of a package of traits. Studies—some in need of replication—indicate that gay people and straight people differ in the following biological and behavioral traits:

- spatial abilities
- fingerprint ridge counts
- auditory system development
- handedness
- occupational preferences
- relative finger lengths
- gender nonconformity
- age of onset of puberty in males
- face structure and birth size/weight
- sleep length
- physical aggression
- walking style

On average (the evidence is strongest for males), results for gay men and gay women fall between those of straight men and straight women. Three biological influences—brain, genetic, and prenatal—may contribute to these differences.

Brain differences

- One hypothalamic cell cluster is smaller in women and gay men than in straight men.
- Gay men’s hypothalamus reacts as does straight women’s to the smell of men’s sex-related hormones.

Genetic influences

- Shared sexual orientation is higher among identical twins than among fraternal twins.
- Sexual attraction in fruit flies can be genetically manipulated.
- Male same-sex attraction often appears to be transmitted from the mother’s side of the family.

Prenatal influences

- Altered prenatal hormone exposure may lead to same-sex attraction in humans and other animals.
- Men with several older biological brothers are more likely to be gay, possibly due to a maternal immune-system reaction.

Our discussion of concepts such as “nonbinary gender identity” (Chapter 4) and “pan-sexual” may challenge your understanding. Do these new terms indicate that people have changed? Actually, scientists believe that gender identity and sexual orientation have always varied. In all places and times, some people have not fit neatly into binary male/female or gay/straight categories.

ASK YOURSELF

How has learning more about what contributes to sexual orientation and gender identity influenced your views? How might your new knowledge influence your interactions with people who identify as lesbian, gay, bisexual, transgender, or questioning/queer (LGBTQ)?

RETRIEVAL PRACTICE

RP-5 Which THREE of the following five factors have researchers found to have an effect on sexual orientation?

- | | |
|--|---|
| a. A domineering mother | d. A distant or ineffectual father |
| b. The size of a certain cell cluster in the hypothalamus | e. For right-handed men, having multiple older biological brothers |
| c. Prenatal hormone exposure | |

ANSWERS IN APPENDIX E

Sex and Human Relationships

LOQ 11-11 What role do social factors play in our sexuality?

Scientific research on sexual motivation does not aim to define the personal meaning of sex in our own lives. You could know every available fact about sex—that the initial spasms of male and female orgasm come at 0.8-second intervals, that female nipples expand 10 millimeters at the peak of sexual arousal, that systolic blood pressure rises some 60 points and respiration rate reaches 40 breaths per minute—but fail to understand the human significance of sexual intimacy.

Sexual desire motivates people to form intimate, committed relationships, which in turn enable satisfying sex (Birnbaum, 2018). In one national study that followed participants to age 30, later first sex predicted greater satisfaction in one’s marriage or partnership (Harden, 2012). Another study asked 2035 married people when they started having sex (while controlling for education, religious engagement, and relationship length). Those whose relationship first developed to a deep commitment, such as marriage, not only reported greater relationship satisfaction and stability but also better sex (Busby et al., 2010; Galinsky & Sonenstein, 2013). For both men and women, but especially for women, sex is more satisfying (with more orgasms and less regret) for those in a committed relationship, rather than a brief sexual hook-up (Armstrong et al., 2012; Benidixen et al., 2017; Dubé et al., 2017). Partners who share regular meals are more likely than one-time dinner companions to understand what seasoning touches suit each other’s food tastes; so, too, with the touches of loyal partners who share a bed.

Sex is a socially significant act. Men and women can achieve orgasm alone, yet most people find greater satisfaction—and experience a much greater surge in *prolactin*, the hormone associated with sexual satisfaction and satiety—after intercourse and orgasm with their loved one (Brody & Tillmann, 2006). Among newlyweds in one study, the “sexual afterglow” (lingering satisfaction after sex) lasted 48 hours and increased marital satisfaction (Meltzer et al., 2017). Thanks to their overlapping brain reward areas, sexual desire and love feed each other (Cacioppo et al., 2012). Sex at its human best is life uniting and love renewing.

Increased sex ≠ more happiness

Among married couples, more frequent sex correlates with happiness (Muisse et al., 2016). So, would systematically increasing sexual frequency *cause* people to be happier? Alas, heterosexual married couples randomly assigned to double their intercourse frequency over three months became slightly *less* happy (Loewenstein et al., 2015).