Concepts of Female Sexual Orientation

Chapter · January 2013

DOI: 10.1093/acprof:oso/9780199765218.003.0001

1 author:

Lisa Diamond
University of Utah
97 PUBLICATIONS **5,519** CITATIONS

SEE PROFILE

1

Concepts of Female Sexual Orientation

LISA M. DIAMOND

"The male model of sexual orientation has been rejected in women."

(Mustanski, Chivers, & Bailey, 2002, p. 127)

Sexual orientation has historically been conceptualized as a trait-like predisposition to experience sexual attractions for one sex or the other, akin to an erotic "compass" (Bailey, 2009). This compass is generally thought to have a biological basis, to operate in a stable fashion, and to channel all markers of erotic interest (sexual attractions, fantasies, behaviors, and even romantic affection) in the same direction over the life course. Numerous studies have supported this overall model by documenting a consistent set of early-developing behavioral and cognitive markers among individuals with same-sex orientations, such as childhood "feelings of differentness," gender atypicality, and same-sex attractions and fantasies (McClintock & Herdt, 1996; Phillips & Over, 1992; Savin-Williams, 1996, 1998). Additionally, researchers have amassed substantial evidence of genetic, endocrinological, and anatomical correlates of same-sex orientations (reviewed in Mustanski et al., 2002).

With the exception of Kinsey's seminal research on women (Kinsey, Pomeroy, Martin, & Gebhard, 1953), much of the foundational research in support of the "compass" model has been conducted with predominantly or exclusively male samples, given that openly identified gay/bisexual men have historically been easier to identify and sample (Sell & Petrulio, 1996). Originally, this was not considered a substantive problem, given that sexual orientation was implicitly presumed to operate similarly for women and men. For example, most early inquiries into the origin and basis of sexual orientation did not even bother to differentiate between its manifestations in men versus women, treating it instead as a superordinate phenomenon (Adler, 1967; de Cecco, 1981; Futuyma & Risch, 1983; Harry, 1984; Storms, 1980).

Yet over the years, research documenting pervasive gender differences in the development and expression of same-sex sexuality have called this presumption into question. To provide some of the most salient examples, adult women appear particularly likely to report sizable discrepancies among their attractions, romantic feelings, and sexual behaviors; to report a markedly late and abrupt onset of same-sex sexuality, often after heterosexual marriage (Cassingham & O'Neil, 1993; Walsh, 2010); and to report fluctuations in their attractions, behaviors, and identities over time, sometimes triggered by single relationships (see reviews in Bailey, Dunne, & Martin, 2000; Baumeister, 2000; Diamond, 2003b, 2007, 2008; Hyde, 2005; Mustanski et al., 2002; Peplau, 2001; Peplau & Garnets, 2000). Most, if not all, of these findings appear attributable to two core phenomena: Women's propensity for *nonexclusive* rather than exclusive same-sex sexual attractions and behavior and women's capacity for *fluidity* in their attractions over time and across different situations.

As these phenomena have emerged repeatedly in ever larger, more diverse, and more representative samples (Bailey et al., 2000; Garofalo, Wolf, Wissow, Woods, & Goodman, 1999; Kirk, Bailey, Dunne, & Martin, 2000; Laumann, Gagnon, Michael, & Michaels, 1994; Mosher, Chandra, & Jones, 2005; Remafedi, Resnick, Blum, & Harris, 1992; Savin-Williams, 2006; Wichstrom & Hegna, 2003), researchers have increasingly rejected the presumption that female and male sexual orientation are "two sides of the same coin," and have argued instead that female sexual orientation has fundamentally unique mechanisms and manifestations (Chivers, Rieger, Latty, & Bailey, 2004; Hyde, 2005; Mustanski et al., 2002). The specific

nature of these mechanisms and manifestations, however, remains unclear. Some have gone so far as to argue that female sexual orientation, as it is typically understood, might not even *exist* (Bailey, 2009), whereas others have argued that it unfolds and operates in a less rigidly deterministic fashion (Peplau, 2001), or interacts dynamically with a general propensity for erotic plasticity (Baumeister, 2000; Diamond, 2007). In essence, it is time to reconsider the nature and development of female sexual orientation: Do women really lack an erotic compass? Or do they simply have a different type of compass; or perhaps more than one? To answer these questions, we must carefully assess the distinctive features of female same-sex sexuality and consider their implications for modeling the nature and development of female sexual orientation. This is the aim of the present chapter. After reviewing the state of current research on these directions, I outline some of the most provocative and promising directions for future research.

NONEXCLUSIVE SEXUAL ATTRACTIONS

Arguably the most distinguishing feature of female sexual orientation is that women's sexual attractions are more likely to be nonexclusive (i.e., directed to both sexes, in varying degrees) than to be exclusively directed to the same sex (I use the term "nonexclusive" instead of "bisexual" because the latter term tends to connote equal degrees of attraction to each sex, whereas "nonexclusive" better captures the experiences of individuals who may be predominantly—but not exclusively—drawn to one sex or the other). This fact runs directly counter to the long-standing presumption (long known to be false among scientists, but stubbornly persistent at the level of conventional wisdom) that sexual orientation has only two forms: exclusive homosexuality and exclusive heterosexuality. Reflecting this view, researchers studying the nature of sexual orientation have historically excluded individuals claiming nonexclusive patterns of attraction, sometimes for the sake of methodological clarity and sometimes because such individuals were simply not considered to be the "prototypical types" of homosexuals (Burr, 1996; Rust, 2000; Whisman, 1993, 1996). Yet numerous surveys using large, random, representative samples have shown that the opposite is true when it comes to women: The prototypical type of woman with same-sex attractions *also* experiences other-sex attractions (Bailey et al., 2000; Garofalo et al., 1999; Kirk et al., 2000; Laumann et al., 1994; Mosher et al., 2005; Remafedi et al., 1992; Savin-Williams, 2006).

These studies show that researchers have historically underestimated the prevalence of nonexclusive attractions among both women and men, but the error is far larger among women, given that women are more likely than men to experience nonexclusive attractions. For example, one large-scale representative study of American adults (Mosher et al., 2005) found that 6% of American men and nearly 13% of American women were attracted to both sexes, whereas 1.5% of men and 0.8% of women were exclusively attracted to the same sex. Similar results have been found internationally: Analyses of the self-reported sexual attractions of 3000 twins in the Australian Twin Registry (Bailey et al., 2000) found that 8% of men and women reported some degree of same-sex attractions and of these individuals, 75% of men and over 90% of women *also* reported experiencing other-sex attractions. A random representative sample of New Zealanders (Dickson, Paul, & Herbison, 2003) found that approximately 6.8% of men and 18% of women reported some degree of attraction to the same sex, but only 1.2% of men and 0.8%, as above of women were exclusively attracted to the same sex. Hence, directly contrary to the conventional wisdom that lesbians represent the most common "types" of sexual minorities and bisexuals are unusual exceptions, the data show that *bisexuals* are the most common type of sexual minority women, and lesbians represent the exceptions.

The specific distribution of attractions to both sexes also warrants attention. In every large-scale representative study, the single largest group of women with same-sex attractions report predominant—but not exclusive—*other-sex* attractions. In the study by Laumann et al. (1994) these women accounted for 62% of all women reporting any same-sex attractions, whereas those with exclusive same-sex attractions constituted only 7% of women with same-sex attractions (in men these percentages were, respectively, 40% and 38%). We might think of such individuals as "Kinsey 1s" or "mostly heterosexuals." On the Kinsey scale, zero represents exclusive heterosexuality and 6 represents exclusive same-sex sexuality. Hence, individuals who consider themselves "Kinsey 1s" can be viewed as possessing the minimum degree of same-sex attraction that nonetheless rules out complete heterosexuality.

What is particularly interesting about the prevalence of these individuals from study to study is that they have historically been treated with the *most* skepticism and denigration from scientists and laypeople alike. When it comes time to eliminate questionable cases from research samples, Kinsey 1s are the first to go (e.g., Bos, Sandfort, de Bruyn, & Hakvoort, 2008; Rahman, 2005; Thompson & Morgan, 2008). To some degree, this reflects appropriate scientific skepticism about measurement. Self-report measures of same-sex attraction and desires are already notoriously vague, as discussed in more depth below. Hence, when individuals describe weak or inconsistent interest in the same sex (manifested as a "1" on the Kinsey scale or as the endorsement of an altogether vague and poorly operationalized category such as "mostly straight"), social scientists have well-placed reservations about interpreting these reports.

The problem, however, is that this vaguely defined category of "mostly, but not completely, straight" women appears to represent the *majority* of women with same-sex attractions. In the study by Mosher et al. (2005), for example, fully 10% of American women described their attractions as "mostly other-sex," whereas only 3.4% endorsed "both sexes," "only same-sex," or "mostly same-sex." Among men, this difference was not as stark (3.9% endorsing "mostly other-sex" compared to 3.2% endorsing the other categories). Similar gender differences have emerged from other studies. Fergusson and colleagues (2005) found in a large New Zealand birth cohort that 12% of women but only 4–5% of men described their attractions as predominantly other-sex and described their identity as "mostly heterosexual." In another survey using a New Zealand birth cohort, Dickson and colleagues' (Dickson et al., 2003) found that 14% of women but only 4% of men described themselves as currently attracted to the same sex (Dickson et al., 2003). In a random, representative survey of American adolescents, nearly 11% of young women described their romantic attractions as "mostly heterosexual but somewhat attracted to people of the same sex," whereas only about 4% of male adolescents endorsed this description (Udry & Chantala, 2006). In a sample of nearly 2000 Montréal high school students, over 9% described their sexual identity as either "unsure" or "heterosexual with same-sex attraction," and 69% of these students were female; in contrast, only 3% of students described themselves as gay, lesbian, or bisexual (Zhao, Montoro, Igartua, & Thombs, 2010). In one of the only systematic studies of "mostly straight" individuals, Thompson and Morgan (2008) found although "mostly straight" women show diverse patterns of current and prior attractions and behavior, they nonetheless appear to represent a distinct subtype of nonheterosexual women, with erotic profiles falling somewhere between bisexuality and exclusive heterosexuality.

Are such women really "gay enough" to include in studies of sexual orientation, or do they simply represent a group of unusually open-minded heterosexuals (sometimes called "heteroflexibles," Essig, 2000; Savage, 2002), whose high prevalence can be attributed to the growing visibility and cultural tolerance of same-sex sexuality over the past several decades? Does it matter whether they act on their attractions? Even if they *do* act on their attractions, how much should we parse their motives? These questions hearken back to a longstanding distinction between *constitutional* versus *facultative* same-sex sexuality (Bell, Weinberg, & Hammersmith, 1981). Constitutional same-sex sexuality is attributable to a stable and enduring same-sex orientation, whereas facultative same-sex sexuality is attributable to situational factors such as "play, exploration, lack of opposite-gender partners, hazing, initiation rituals, intoxication, sexual frustration, prostitution, boredom, opportunism, curiosity, and mistakes" (Muscarella, 1999, p. 9). For example, women who pursue same-sex activity in the safe and relatively tolerant environment of college, but resume exclusive heterosexual behavior afterward, have been called "LUGs," or "lesbians until graduation" (Davis, 1999; Kyrakanos, 1998; Rimer, 1993).

It could be argued that if "LUGs" and "mostly straight" women represent examples of facultative same-sex sexuality, then we can legitimately exclude them from investigations of "constitutional" sexual orientation. The problem, however, is that we have no reliable basis on which to know what distinguishes "constitutional" from "facultative" forms of female same-sex sexuality (see also Savin-Williams, 2009), or whether this distinction even makes sense for women. In fact, it is not even clear what might constitute the definitive test of constitutional same-sex sexuality: One likely candidate is stability in same-sex attraction and behavior over time, yet even this remains ambiguous. How much consistency, and over how

long a period? The inconvenient reality (as noted by Kirkpatrick, 2000) is that social behaviors are *always* jointly determined by "a range of constitutional propensities interacting with a range of facultative opportunities" (2000, p. 390), rendering the entire consitutional/facultative distinction (and, of course, its implied basis in the familiar nature/nurture dichotomy) overly simplistic. Furthermore, if women's constitutional desires are typically nonexclusive, then this grants an even larger role to situational, environmental, and interpersonal factors in "pushing and pulling" her erotic profile in one direction or another (Diamond, 2006). Depending on life circumstances, two women might possess similar degrees of "constitutional" same-sex desires, but one might end up a "Kinsey 4" while the other ends up a "heteroflexible" Kinsey 1. Without knowing exactly *why* their sexual trajectories diverge, we have no basis to consider the latter "less authentically gay" than the former, or to exclude "mostly straight" women from research on female sexual orientation. Rather, a growing body of psychophysiological research on female sexual arousal suggests the critical importance of *including* such women in studies of same-sex and other-sex sexual arousal, as I review below.

Nonspecific Sexual Arousal

All of the aforementioned findings on women's nonexclusive attractions are based on self-report questionnaire data, which have known limitations when it comes to stigmatized topics such as same-sex desire. Perhaps, for example, the appearance of greater numbers of women than men with nonexclusive patterns of attraction is due to the fact that men perceive greater stigma attached to bisexuality than do women, and are therefore less likely to report nonexclusive attractions. The only way to rule out this possibility is to use measures of sexual attraction that do not rely on self-report. A fascinating series of studies has done just that (Chivers & Bailey, 2005; Chivers et al., 2004; Chivers, Seto, & Blanchard, 2007) and have provided robust evidence that women's capacity for nonexclusive patterns of attraction is also manifested in nonexclusive patterns of genital arousal. Chivers and colleagues call this pattern "nonspecific" arousal, and contrast it with the highly gender-specific patterns of genital arousal among men. The methodology for these studies involves continuous measurement of blood flow to the genitals (a well validated marker of sexual arousal) while participants view erotic film clips. Chivers' team compared four different groups: self-identified gay men, self-identified heterosexual men, self-identified lesbian women, and self-identified heterosexual women. Respondents viewed videos of women having sex with women, men having sex with men, and men having sex with women.

The results showed that gay men were most physiologically and subjectively aroused by the male–male videos, whereas heterosexual men were most physiologically and subjectively aroused by the female–female videos. Women, however, showed a completely different pattern. First, there was much lower correspondence between women's genital responses and their *self-reported ratings* of arousal, a finding that has emerged in other similar studies (reviewed in Chivers et al., 2007). Notably, these discrepancies take multiple forms: In some cases, women report much greater subjective than genital arousal. In other cases, they show the opposite pattern, and the direction of the discrepancies does not correspond systematically to women's self-described sexual identity (making it unlikely that such discrepancies simply represent self-presentation biases). Yet perhaps most importantly, on average women had roughly equivalent genital responses to the different sexual videos. Importantly, this was not equally true for each and every woman: Some lesbians showed substantially more arousal to the female–female videos and some heterosexual women showed substantially more arousal to the male–male videos. On average, however, women's responses were "nonspecific," in that they did not show high sensitivity to the gender of the actors. Notably, women's *self-reported* arousal, measured simultaneously using a continuous scale, was more in line with their self-described identities: lesbians *reported* the greatest arousal to the female–female video and heterosexual women *reported* the greatest arousal to the female–male video.

Notably, this was not the first psychophysiological evidence for nonspecific patterns of arousal (for a detailed review of this body of research, see Chivers & Bailey, 2007) but it was arguably the most rigorous to date, and since that time the findings have been replicated numerous times (Chivers et al., 2007; Suschinsky, Lalumiere, & Chivers, 2009). Furthermore, studies using other psychophysiological measures of sexual arousal, such as

electroencephalograms, functional magnetic resonance imaging, and the length of time that individuals look at erotic pictures have yielded parallel findings of gender-specific sexual interest and arousal in gay and heterosexual men but not in lesbian or heterosexual women (Costa, Braun, & Birbaumer, 2003; Costell, 1972; Hamann, Herman, Nolan, & Wallen, 2004; Wright & Adams, 1999).

Of course, genital and neurobiological measures do not necessarily provide "truer" measures of sexual orientation than do individuals' own subjective feelings: In fact, discrepancies between physiological and self-reported arousal have generated considerable research and debate in their own right (Chivers & Bailey, 2007; Chivers, Seto, Lalumiere, Laan, & Grimbos, 2010; Laan & Janssen, 2007; Suschinsky et al., 2009). But such findings dovetail with the extensive evidence reviewed above: Regardless of whether they identify as heterosexual, lesbian, or bisexual, women appear to possess a greater propensity to experience sexual attraction and arousal for both sexes than do men. Intriguingly, as pointed out by Chivers and colleagues (Chivers et al., 2007), Goy and Goldfoot noted over 30 years ago (1975) that in many different mammalian species, bisexuality is an intrinsically dimorphic trait that develops (through prenatal hormonal pathways) in *either* the male or the female of a species, but never both. This suggests the provocative possibility that in humans, women are "the more bisexual sex," whereas males are more likely to be exclusively heterosexual or homosexual (see also Bailey, 2009; Rieger, Bailey, & Chivers, 2005). Of course, numerous cultural factors might produce the very same phenomenon, such as the greater cultural acceptability of female–female intimacy more generally (reviewed in Diamond, 2003b), but the animal data suggest the possibility that there might *also* be a biological component to this gender difference. We revisit the potential implications of this notion toward the end of the chapter.

CHANGE OVER TIME

Historically, researchers have presumed that sexual orientation shows fundamental continuity in its expression over time (reviewed in Diamond, 2008). Although this is generally true for most individuals, some studies have found that a number of individuals—more often women than men—report notable shifts in same-sex attractions, behaviors, and identities over time (Golden, 1996; Kinnish, Strassberg, & Turner, 2005; Kitzinger & Wilkinson, 1995; Weinberg, Williams, & Pryor, 1994). The most convincing evidence comes from longitudinal data. For example, Pattatucci and Hamer (1995) collected 18-month follow-up data from 175 lesbian, bisexual, and heterosexual women recruited from lesbian/gay/bisexual organizations. The authors averaged respondents' Kinsey ratings of sexual attraction, fantasy, behavior, and found that over the 18-month assessment period, about 20% changed their Kinsey classification. Stokes and his colleagues (Stokes, Damon, & McKirnan, 1997; Stokes, McKirnan, & Burzette, 1993) followed 216 bisexual men over a 1-year period, and found that over 45% changed Kinsey ratings. Longer follow-ups were conducted by Weinberg and colleagues (1994), who assessed change over a 5-year interval among, gay, lesbian, bisexual, and heterosexual men and women; approximately two-thirds reported changes of one point or more in their sexual attractions, and 85% reported changes of one point or more in their sexual behavior. Dickson, Paul, and Herbison (2003) sampled a cohort of approximately 1000 New Zealanders born in the early 1970s. They found that over a 5-year period, nearly 30% of the men and 45% of the women who reported *ever* having experienced same-sex attractions underwent a shift in their attractions between age 21 and 26. My own longitudinal research has found that over a 10-year period, approximately two-thirds of sexual-minority women changed their sexual identity labels, with between 25% and 30% changing labels within each 2- to 3-year period (Diamond, 2008). A similar percentage of respondents (in this case, a sample of 156 urban, predominantly ethnic-minority youth) reported identity changes over an 18-month period (Rosario, Schrimshaw, Hunter, & Braun, 2006).

Such findings concord with the evidence for shifts in same-sex and other-sex sexuality among individuals in other cultures (Blackwood, 2000; Herdt, 1984; Murray, 2000), suggesting that some degree of flexibility in sexual desire and behavior may simply represent a general property of human nature [Freud, (1905) 1962; Money, 1990]. Notably, however, studies consistently find larger and more frequent changes in self-reported sexual attractions and behavior among women than among men (e.g., Diamond, 2003a, 2005b; Kinnish et al., 2005; Savin-Williams & Ream, 2007; Weinberg et al., 1994). In light of the consistent gender differences, several researchers have argued that women's

sexuality may be intrinsically more "plastic" or "fluid" than men's (Baumeister, 2000; Diamond, 2008; Peplau, 2001), meaning that women's desires are particularly sensitive to situational or interpersonal factors, making it possible for a woman to develop sexual desires and to enjoy sexual behaviors that run counter to her overall orientation. It bears noting that these models presume that such changes are *not* artifacts of distorted reporting (potentially brought about by force or social pressure), but are experienced by women themselves as authentic erotic experiences. In essence, sexual fluidity suggests that women's orientation provides less of a constraint on her lifetime pattern of desire and behavior than is the case for men.

Female sexual fluidity provides a possible explanation for the fact that women have historically been more likely than men to ascribe a role for choice, circumstance, chance, and change in their sexual orientation and identity over the life course (Golden, 1996; Whisman, 1996). Gagnon (1990), for example, observed over many years of research on female and male sexuality that women's participation in same-sex sexuality sometimes appeared to come about "by accident," significantly shaped by nonsexual factors. Beginning with the feminist movement of the 1970s and extending decades afterward, researchers have observed that women's immersion in feminist politics, coupled with the development of strong same-sex friendships and exposure to lesbian–gay–bisexual peers, often proved to be powerful triggers for new and unexpected same-sex attractions and fantasies (Cass, 1990; Golden, 1987, 1994; Shuster, 1987). The contemporary context provides an altogether different set of gender-specific environments that provide potential triggers for same-sex sexuality. In particular, the past decade has witnessed a notable increase in television and film portrayals of heterosexually identified women engaging in experimental same-sex behavior, usually with few negative social consequences (reviewed in Diamond, 2005a; Thompson, 2007). The phenomenon has become common enough to give rise to its own descriptor: *heteroflexibility* (Essig, 2000; Savage, 2002). Along the same lines, Morgan and Morgan–Thompson (Morgan & Thompson, 2007; Thompson & Morgan, 2008) have noted that many contemporary young women use the identity term "mostly straight" or "bicurious" to denote the fact that they are open to the possibility of same-sex contact, even if they consider their basic orientation to be heterosexual.

In fact, many heterosexually identified women have been observed to pursue (and to report enjoying) such contact, just as many *lesbian*-identified women have been observed to pursue (and to report enjoying) sporadic other-sex contact (Bell et al., 1981; Diamond, 2003a, 2005b, 2008; Rust, 1992; Weinberg et al., 1994). Of course, such "cross-orientation" behaviors are sometimes observed among gay and heterosexual men as well (reviewed in Kirkpatrick, 2000), yet among men they are typically attributed to sexual release or the unavailability of preferred partners. Among women, in contrast, a common impetus for these encounters is an intense emotional bond (see Diamond, 2003b), and in fact numerous sexual-minority women have reported that their feelings for women are triggered or enhanced by feelings of emotional connection (Blumstein & Schwartz, 1990; Cass, 1990; Esterberg, 1994; Gramick, 1984; Nichols, 1987; Weinberg et al., 1994). In extreme examples of this phenomenon, some women report having fallen in love with one—and only one—woman, and experiencing same-sex desires for her alone (Blumstein & Schwartz, 1990; Cass, 1990; Diamond, 2000). Other women report that their desires are not so much directed toward *women* at all, but rather to "the person and not their gender" (Diamond, 2002, 2008; Golden, 1987).

Over the past 30 years, many researchers have invoked generalized notions of female sexual fluidity in attempting to explain such phenomena (Blumstein & Schwartz, 1990; Golden, 1996; Kitzinger & Wilkinson, 1995; Rich, 1980), and in recent years the possibility of a fundamental gender difference in sexual fluidity has received increasingly rigorous theoretical and empirical attention (Baumeister, 2000; Diamond, 2007, 2008). Given that changes in same-sex and other-sex sexuality have also been observed in men (Dickson et al., 2003; Kinnish et al., 2005; Rosario et al., 2006; Savin-Williams & Ream, 2007; Stokes et al., 1997; Stokes et al., 1993; Weinberg et al., 1994), the degree to which fluidity is a particularly distinctive feature of *female* sexuality remains a topic of active debate (Hyde & Durik, 2000). For example, Blumstein and Schwartz argued that "there are few absolute differences between male and female sexuality. What differences we observed are primarily the result of the different social organization

of women's and men's lives in various cultural contexts" (Blumstein & Schwartz, 1990, p. 307). Other researchers, similarly, have argued that the appearance of a distinctively female capacity for fluidity might reflect the influence of female sexual socialization. For example, the pervasive social and cultural forces that have long controlled and suppressed female sexuality may have distorted women's awareness of their own sexual feelings and identities, channeling them rigidly toward heterosexuality with few opportunities to express and experiment with same-sex desires (Baumeister & Twenge, 2002; Fine, 1988; Laumann & Mahay, 2002; Tolman & Diamond, 2001; Ussher, 1993; Welles, 2005). These social and cultural influences certainly complicate our task of understanding and modeling female sexual orientation, and must be taken into account as we embark on the next generation of research on these questions.

RETHINKING FEMALE SEXUAL ORIENTATION

With these complexities in mind, how might we begin the task of building new models of female sexual orientation? One provocative possibility suggested by Bailey (2009) is that women might not *have* sexual orientations (to the degree that sexual orientation is defined as a fixed, gender-specific pattern of sexual arousal). This notion provides a compelling (if rather sweeping) explanation of the extant data on women's propensity for nonexclusive and fluid sexual attractions, and concords with Goy and Goldfoot's (1975) aforementioned observation that many mammalian species have one "bisexual" (or "unoriented") sex. At the same time, however, the extant data (reviewed earlier) on women's sexual fluidity have revealed considerable *variation* among women regarding the degree of nonexclusivity and/or nonspecificity in their attractions and behaviors. If women have no sexual orientation, then why do some women seem so much more "oriented" than others? Bailey's resolution to this problem is to argue that the majority of women (i.e., heterosexual and bisexual women) lack a sexual orientation, and that lesbians (who appear to have more gender-oriented patterns of desire) represent an exception.

But there might be a way to revise models of sexual orientation to account for *both* "oriented" and "unoriented" women. Specifically, we might imagine that female sexual orientation is comprised of two orthogonal dimensions: One dimension represents the degree of "genderedness" of a woman's desires (i.e., the degree to which a woman's desires are oriented to one gender over the other) and the other dimension represents the direction of this targeting (same-sex versus other-sex). Hence, the appropriate question to ask when assessing a woman's sexual orientation might not be "Heterosexual, lesbian, or bisexual?," as is currently presumed, but instead "First, how much does gender matter?" (*gender* denoting, in this case, an individual's observable presentation as male versus female). Second, to the degree that gender matters, which gender is preferred? Historically, scientific conceptualizations of sexual orientations have focused only on the second question, assuming that the answer to the first question was uniformly "yes" and that sexual desire is always "about" gender. Yet the experiences of women who claim to be attracted to "the person, not the gender" suggest that we should revisit this assumption. Some of the variability in women's sexual fluidity may be attributable to variability in the degree to which gender organizes and directs women's desires on a basic level. For some women, sexuality might be "gender neutral," in which case a host of other factors (emotional intimacy, sex drive, mood, personality similarity or difference) might determine the partners she finds most attractive and the sexual encounters she finds most appealing. This is certainly not a new notion. Ross and Paul (1992) argued that gender-neutrality in sexuality might explain bisexuality more generally. For Weinberg et al. (1994), gender-neutrality represented a subtype of bisexuality, rather than a defining feature. They described a subset of their bisexually identified respondents as possessing an "open gender schema," meaning that they were capable of responding sexually to a broad range of traits and characteristics, regardless of gender. Interestingly, they observed that men with "open gender schemas" were typically heterosexually identified men who sought periodic same-sex contact for purposes of sexual release, whereas women with "open gender schemas" reported that their desires were typically sparked by their emotional connection with a specific individual. Of course, this gender difference is sure to exhibit considerable variability: Some men with open gender schemas may be strongly motivated to seek sexual contact for reasons of emotional connection, whereas some women with open gender schemas may be strongly motivated to seek sexual contact for reasons of

sexual release, novelty, and variability. Yet extant findings suggest that the latter pattern is generally more characteristic of men, and the former pattern is more characteristic of women.

The fact that women's sexual desires are frequently triggered by emotional factors was also noted by Blumstein and Schwartz (1990), who argued that conventional models of sexual orientation failed to account for the experiences of women "whose fundamental sexual desire seems to be produced within the context of a relationship, rather than by an abstract preference for women or men" (p. 356). They concluded that these women's sexuality was less focused on physical, bodily characteristics, and more frequently triggered by love, admiration, affection, and companionship. Although Blumstein and Schwartz's study focused on bisexuality, it bears emphasizing that not all individuals with "gender-neutral"patterns of attraction characterize themselves as bisexual (Diamond, 2008; Savin-Williams, 2005). To the contrary, some explicitly reject conventional sexual identity labels, or adopt alternative labels such as "queer" or "pansexual," in an attempt to better represent the gender-neutral nature of their attractions (Berenson, 2002; Bower, Gurevich, & Mathieson, 2002; Hollander, 2000; Horner, 2007; Savin-Williams, 2005).

This raises the inevitable question of why some women experience their nonexclusive attractions as gender-neutral, whereas others do not. We know remarkably little about the gradual "gendering" of children's erotic impulses more generally (Gagnon, 1990). Although children engage in both solitary self-stimulation and partnered sex play from an early age (reviewed in Diamond & Savin-Williams, 2009), "gender of partner" does not appear to emerge as a discernible preference until 9 or 10 (McClintock & Herdt, 1996). As Gagnon argued (1990, p. 199), "During the ages of 12 to 17 the gender aspects of the 'who' in the sexual scripts that are being formed are not fixed.... A deeper complication is that it is not obvious whether it is the gender aspects of the 'who' that have provoked the nascent desire or even if the desire is linked to a 'who' at all." Perhaps then, an orientation toward person-centered attractions represents a more substantiated form of this gender-neutrality, in which our sexual scripts remain fundamentally open with regard to the "gender aspects of the 'who.'" Notably, Liben and Bigler (2008) have argued that there is considerable variation in children's degree of gender salience (i.e., the degree to which they reflexively attend to gender more generally), and that children with low levels of gender salience may be less likely to exhibit a rigidly homosexual or heterosexual orientation. According to this framework, low gender salience (as an individual difference dimension) might facilitate the development of an open gender schema with regard to sexual desires.

Another (albeit speculative) possibility is that most individuals begin life with a relatively open gender schema, but that this schema becomes increasingly gender targeted as a function of normative gender socialization (toward greater gender saliency, in Liben and Bigler's terms) and especially during sexual maturation (as a function of the individuals' underlying sexual orientation). Perhaps for males, then, the most common deviation from the standard heterosexual pathway is the substitution of a same-sex "compass" for the standard other-sex "compass." For females, instead, the most common deviation from the standard heterosexual pathway might be *the failure of a gender-based compass to develop*. In such cases, women's patterns of sexual arousal might remain fundamentally nonspecific, and their patterns of conscious, subjective *attraction* might come to depend on a host of nongendered cues, such as emotional intimacy and personality.

This need not suggest that *all* women with same-sex attractions follow such a trajectory. Lesbians with relatively exclusive same-sex attractions might follow a developmental trajectory more similar to that of gay men (i.e. the development of a same-sex compass rather than the failure of a compass to develop). Several studies suggest that lesbians are qualitatively distinct from both bisexual and heterosexual women in that they show more male-typical patterns of "gender specificity" (i.e., consistent and exclusive targeting toward one gender) and stability in their sexual arousal and attractions (Chivers & Bailey, 2007; Chivers et al., 2007; Diamond, 2005b; Diamond & Fagundes, 2012; Suschinsky et al., 2009; Worthington & Reynolds, 2009). Perhaps, then, there may be four forms of sexual orientation in women, with different underlying causes and developmental trajectories: Heterosexual, Bisexual, Lesbian, and *Nongendered*. Women in the latter group might resemble women in *any of the other groups* at different stages of the life course, depending on a variety of cultural, situational, and interpersonal circumstances. This

may be why "Kinsey 1s" who identify as heterosexual are not necessarily misrepresenting themselves when they profess their heterosexuality. As Chivers and colleagues cautioned, we cannot presume that a woman with a nonspecific pattern of sexual arousal is fundamentally bisexual; making such a simplistic and erroneous presumption "overlooks the complexity and multidimensionality of female sexuality" (2007, p. 1119).

The complication is that *arousal* and *desire* are not equivalent constructs, despite the fact that they are often used interchangeably in discussions of sexual orientation. A woman who becomes genitally *aroused* in response to both same-sex and other-sex stimuli may not necessarily experience conscious sexual *desires or fantasies* for both men and women. Should we consider her bisexual on the basis of her genital responses, or should we grant greater weight to her subjective experiences of desire and attraction? At the present time, there is no empirical basis on which to make this determination. Bailey (2009) argues that sexual arousal is the most reliable indicator of sexual orientation (at least among men), while acknowledging that many others researchers would grant a broader role for subjective desire and/or romantic affection. A major problem in discerning which aspect of sexual experience provides the most reliable indicator of sexual orientation is the lack of research on how different components of sexual experience (arousal, desire, attraction, motivation, fantasy, etc.) relate to one other, both at a single moment in time and also over the life course (Chivers & Bailey, 2007; Chivers et al., 2010; Diamond, 2008; Igartua, Thombs, Burgos, & Montoro, 2009; Laan & Janssen, 2007; Laumann et al., 1994; Savin-Williams & Ream, 2007; Suschinsky et al., 2009). Hence, a recurring obstacle for our understanding of the nature of female and male sexual orientation is our limited conceptualization of *sexual desire* more generally.

THE DESIRE PROBLEM

The twin constructs of sexual desire and sexual attraction require far more scientific attention from scholars of sexual orientation than they have received to date. Although these constructs are fundamental to defining and modeling sexual orientation, there has been little attempt to validate individuals' self-reports of these experiences and to determine which types of experiences should be considered the most reliable indices of sexual orientation. It is somewhat surprising that although researchers studying sexual orientation have taken great pains to carefully assess how often individuals experience same-sex versus other-sex attractions, the relative balance between them, and the age at which they first emerged, they rarely ask respondents *what they mean* by the word "attraction" or "desire," and the full range of thoughts, feelings, and physical experiences that comprise an individual's erotic phenomenology (for an exception, see Tolman, 2002). Contrary to the notion that desire is a relatively straightforward experience, individuals describe startlingly diverse experiences when asked to provide examples of "desire/attraction" (Tolman, 2002). In my own longitudinal research (Diamond, 2008), I found that women's descriptions of sexual desire and attraction ranged from specific genital sensations (*tightness in my groin; wetness*) to full-body physical sensations (*warm all over; high energy, fluttery feeling in my belly; a sort of chemical connection*) to psychological states (*liking to look at their face or body; longing for nearness; not caring about their personality; wanting to have sex).* It is not clear whether these experiences reference the same underlying phenomenon, whether they have similar origins, and whether any of them constitute reliable or valid indicators of a women's sexual "compass." On this point, it bears noting that my respondents expressed their own doubts about what constituted desire or attraction, especially in cases in which they experienced differences between the subjective quality of their desires for women versus men. Some women described attractions to one gender as more/less "automatic;" "clear," "all-encompassing," "cognitive," "fleeting," "intimidating," "motivating," "intimate," "lasting," "powerful," "emotional," "pleasurable," "heartfelt," or "electrifying" (Diamond, 2008). One possibility is that such phenomenological differences correspond to differences between "constitutional" and "facultative" desires, such that desires that indicate an individual's erotic "compass" are experienced as relatively more "automatic," "powerful," and "motivating," whereas facultative desires (emanating from one's capacity for sexual fluidity) are experienced as relatively more "fleeting," "heartfelt," or "emotional." Yet at the present time, there is no empirical evidence for such a distinction, and also no empirical or theoretical basis for understanding *why* certain attractions have a different subjective phenomenology than do others.

We know that both biological and environmental factors contribute to the subjective experience of sexual desire (reviewed in Tolman & Diamond, 2001), but we do not yet know how to reliably disentangle these influences. As Laumann and Mahay pointed out, "We must all *learn* what to regard or understand as being sexual or nonsexual" (Laumann & Mahay, 2002, p. 44, emphasis added). Biological factors (such as pubertal maturation) give rise to certain physical sensations, but environmental factors give meaning to these experiences, both on a cognitive and physical level. In other words, culture and society teach us not only what "sexual" *means*, but what it feels like, and these determinations will vary widely as a function of norms, expectations, socialization practices, opportunities for different types of intimate experiences, etc. Without understanding the intersection between all of these factors, we cannot distinguish between women whose same-sex desires emanate from a stable, biologically driven erotic "compass," and those whose same-sex desires emanate from a broad female capacity for sexual fluidity.

Is such a distinction worth making? Earlier, I noted that although there is a long history of distinguishing between "constitutional" and "facultative" forms of same-sex sexuality (Bergler, 1954; Defries, 1976; Goode & Haber, 1977), going back even to Freud [(1905) 1962, p. 138], this distinction is overly simplistic and problematic. This does not mean, however, that we should treat all women with same-sex attractions as equivalent. Perhaps, instead, we need to explore new typologies of same-sex sexual orientation that rely *not* on notion of "constitutional/authentic" and "facultative/inauthentic" desire, but seek to chart more rigorously the relative influence of different factors on a woman's same-sex and other-sex desires. Consider, for example, the aforementioned findings of Chivers and her colleagues (2004). Although all women showed relatively "nonspecific" genital responses, the self-identified lesbians emerged as a distinct group, showing more gender-specificity in their sexual arousal than did the heterosexual women, although less than was observed among men. My own longitudinal research has found that women who *consistently* identified as lesbian over the course of many years were less likely to report that their desires were based on "the person and not the gender," and less likely to report sizable changes in their attractions, than lesbians who eventually switched to bisexual or unlabeled identities (Diamond, 2005b).

Might this suggest that there is something fundamentally different—and perhaps, more essentially "oriented"—about the most exclusive and stable lesbians (i.e., those who experience practically all of their attractions for women, and who have experienced little change in this pattern), compared to women with more nonexclusive patterns of same-sex attraction? In one attempt to answer this question, Kim Wallen and I examined whether women with different histories of lesbian and bisexual identification showed different patterns of change in their motivation to act on same-sex desires as a function of ovulation (Diamond & Wallen, 2010). It has been well documented that women's sexual motivation shows different degrees of biological and environmental influence across the menstrual cycle. Specifically, researchers (going back to Beach, 1976) have distinguished between female *proceptivity* (i.e., motivation to initiate sexual activity) and female *arousability* (i.e., capacity to become aroused to sexual stimuli). As reviewed by Wallen (1995), proceptivity peaks around the time of ovulation, when women are most likely to conceive, and is manifested in increased sexual initiation, sexual activity, and orgasms; these changes are directly tied to the increased estrogen levels that accompany ovulation.

Evolutionarily speaking, an ovulatory increase in proceptivity makes sense, as it ensures that women are motivated to seek out sexual activity when they are most likely to conceive. In contrast, arousability is independent of hormonal status, and depends instead on situational factors such as exposure to sexual stimuli or direct sexual solicitation (reviewed by Wallen, 1995). We reasoned that because proceptivity specifically motivates reproductive behavior, it should be highly sensitive to "gender of target." Hence, to the degree that sexual orientation represents an early-developing, biologically based "compass" targeting sexual motivation toward partners of a particular gender, this compass should specifically target proceptivity. In contrast, arousability ought to be a more variable system, with the consequence that women may experience a range of sexual desires and behaviors with a variety of partners. Perhaps, then, women with "fluid" patterns of same-sex sexuality (such as "mostly straight" women) are those whose same-sex desires are primarily due to arousability, whereas women

with stable, near-exclusive same-sex desires (i.e., long-standing lesbians) are those whose same-sex desires stem from a same-sex oriented proceptivity. On a day-to-day basis, these two types of women might be indistinguishable from one another. But during ovulation, when proceptivity increases as a function of changing estrogen levels, women with a robust same-sex "compass" should experience significantly *greater* motivation for same-sex contact. This should not be the case for women who lack such a compass, and whose same-sex desires are primarily attributable to arousability.

This was exactly what we found. We measured women's same-sex and other-sex sexual motivation and their estrogen levels over a 10-day period, and we found that during women's peak estrogen levels (around which time of ovulation is most likely to occur) women who had consistently identified as lesbian since 1995 reported a significant increase in their motivation to act on same-sex desires. This increase was significantly larger than that observed among women who had consistently identified as bisexual since 1995, and among women who had given up their lesbian or bisexual identities in favor of unlabeled or heterosexual identities since 1995. This pattern of findings is consistent with the notion that there are distinct (and potentially biologically based) subtypes of sexual-minority women whose same-sex desires might be influenced by different processes. At the same time, it bears noting that this was a preliminary study with numerous limitations. The sample is small and relatively self-selected, comprising a group of women who have been long-term participants in a longitudinal study of sexual identity development and who were willing to endure the intrusive, time-intensive nature of the study procedures. Another limitation is our inability to identify the specific mechanism through which a gender-specific form of sexual motivation would increase as a function of rising estrogen levels. Although the linkage between estrogen levels and sexual motivation has long been established (reviewed in Wallen, 2001), the specific biopsychological processes through which a *gender-targeted* form of sexual desire might be linked to changes in estrogen levels is as yet unknown. These questions call for more substantive attention in future studies conducted with larger and more diverse sample of sexual-minority *and* heterosexual women. Nonetheless, these findings suggest that closer investigation of cyclic variation in women's same-sex and other-sex desires may provide a new way to consider whether different subtypes of lesbian, bisexual, and "mostly heterosexual" women have different "types" of same-sex desire, with different underlying determinants. Investigating this possibility may prove important in developing more accurate models of female sexual orientation.

CONCLUSIONS

Much work remains to be done in understanding the nature and dynamics of female sexual orientation. Scientists now have at our disposal an increasingly reliable body of data charting the diverse manifestations and developmental trajectories of same-sex sexuality, in our own culture as well as others (Bailey et al., 2000; Dickson et al., 2003; Garofalo et al., 1999; Kirk et al., 2000; Laumann et al., 1994; Mosher et al., 2005; Remafedi et al., 1992; Savin-Williams & Ream, 2006; Wichstrom & Hegna, 2003). Of all of the preconceptions about sexual orientation that we have come to question and revise over the years, one of the most important is the presumption that female and male sexual orientation are parallel phenomena, with the same origins and outcomes. To the contrary, women's greater propensity for nonexclusive, fluid patterns of attraction suggests the possibility that the underlying determinants of female same-sex sexuality may be quite different from those for men, requiring different explanatory models. This is not to suggest that men's sexuality is fundamentally rigid—as noted earlier, there is considerable evidence that some men exhibit change and fluidity in their sexual desires and behaviors as well (Dickson et al., 2003; Kinnish et al., 2005; Rosario et al., 2006; Savin-Williams & Ream, 2007; Stokes et al., 1993, 1997; Weinberg et al., 1994). However, among women these phenomena appear to be more common, perhaps even *normative*. Our task now is to determine why this is the case and to chart the implications of this gender difference for models of female and male sexual orientation as well as *human* sexuality more generally.

REFERENCES

Adler, K. A. (1967). Life style, gender role, and the symptom of homosexuality. *Journal of Individual Psychology, 23*, 67–78.

Bailey, J. M. (2009). What is sexual orientation and do women have one? In D. A. Hope (Ed.), *Nebraska Symposium on Motivation: Contemporary perspectives*

on lesbian, gay, and bisexual identities (Vol. 54, pp. 43–63). Lincoln: University of Nebraska Press.

Bailey, J. M., Dunne, M. P., & Martin, N. G. (2000). Genetic and environmental influences on sexual orientation and its correlates in an Australian twin sample. *Journal of Personality and Social Psychology, 78,* 524–536.

Baumeister, R. F. (2000). Gender differences in erotic plasticity: The female sex drive as socially flexible and responsive. *Psychological Bulletin, 126,* 247–374.

Baumeister, R. F., & Twenge, J. M. (2002). Cultural suppression of female sexuality. *Review of General Psychology, 6,* 166–203.

Beach, F. A. (1976). Sexual attractivity, proceptivity, and receptivity in female mammals. *Hormones and Behavior, 7,* 105–138.

Bell, A. P., Weinberg, M. S., & Hammersmith, S. K. (1981). *Sexual preference: Its development in men and women.* Bloomington: Indiana University Press.

Berenson, C. (2002). What's in a name? Bisexual women define their terms. *Journal of Bisexuality, 2,* 9–21.

Bergler, E. (1954). Spurious homosexuality. *Psychiatric Quarterly Supplement, 28,* 68–77.

Blackwood, E. (2000). Culture and women's sexualities. *Journal of Social Issues, 56,* 223–238.

Blumstein, P., & Schwartz, P. (1990). Intimate relationships and the creation of sexuality. In D. P. McWhirter, S. A. Sanders, & J. M. Reinisch (Eds.), *Homosexuality/heterosexuality: Concepts of sexual orientation* (pp. 307–320). New York: Oxford University Press.

Bos, H. M. W., Sandfort, T. G. M., de Bruyn, E. H., & Hakvoort, E. M. (2008). Same-sex attraction, social relationships, psychosocial functioning, and school performance in early adolescence. *Developmental Psychology, 44,* 59–68.

Bower, J., Gurevich, M., & Mathieson, C. (2002). (Con) tested identities: Bisexual women reorient sexuality. In D. Atkins (Ed.), *Bisexual women in the 21st century.* New York: Haworth.

Burr, C. (1996). *A separate creation: The search for the biological origins of sexual orientation.* New York: Hyperion.

Cass, V. (1990). The implications of homosexual identity formation for the Kinsey model and scale of sexual preference. In D. P. McWhirter, S. A. Sanders, & J. M. Reinisch (Eds.), *Homosexuality/heterosexuality: Concepts of sexual orientation* (pp. 239–266). New York: Oxford University Press.

Cassingham, B. J., & O'Neil, S. M. (1993). *And then I met this woman.* Freeland, WA: Soaring Eagle Publishing.

Chivers, M. L., & Bailey, J. M. (2005). A sex difference in features that elicit genital response. *Biological Psychology, 70,* 115–120.

Chivers, M. L., & Bailey, J. M. (2007). The sexual psychophysiology of sexual orientation. In E. Janssen (Ed.), *The psychophysiology of sex.* (pp. 458–474). Bloomington: Indiana University Press.

Chivers, M. L., Rieger, G., Latty, E., & Bailey, J. M. (2004). A sex difference in the specificity of sexual arousal. *Psychological Science, 15,* 736–744.

Chivers, M. L., Seto, M. C., & Blanchard, R. (2007). Gender and sexual orientation differences in sexual response to sexual activities versus gender of actors in sexual films. *Journal of Personality and Social Psychology, 93,* 1108–1121.

Chivers, M. L., Seto, M. C., Lalumiere, M. L., Laan, E., & Grimbos, T. (2010). Agreement of self-reported and genital measures of sexual arousal in men and women: A meta-analysis. *Archives of Sexual Behavior, 39,* 5–56.

Costa, M., Braun, C., & Birbaumer, N. (2003). Gender differences in response to pictures of nudes: A magnetoencephalographic study. *Biological Psychology, 63,* 129–147.

Costell, R. M. (1972). Contingent negative variation as an indicator of sexual object preference. *Science, 177,* 718–720.

Davis, A. (1999). Confessions of a LUG. *Flagpole Magazine Online,* October 25, 1999.

de Cecco, J. P. (1981). Definition and meaning of sexual orientation. *Journal of Homosexuality, 6,* 51–67.

Defries, Z. (1976). Pseudohomosexuality in feminist students. *American Journal of Psychiatry, 133,* 400–404.

Diamond, L. M. (2000). Passionate friendships among adolescent sexual-minority women. *Journal of Research on Adolescence, 10,* 191–209.

Diamond, L. M. (2002). "Having a girlfriend without knowing it:" The relationships of adolescent lesbian and bisexual women. *Journal of Lesbian Studies, 6,* 5–16.

Diamond, L. M. (2003a). Was it a phase? Young women's relinquishment of lesbian/bisexual identities over a 5-year period. *Journal of Personality and Social Psychology, 84,* 352–364.

Diamond, L. M. (2003b). What does sexual orientation orient? A biobehavioral model distinguishing romantic love and sexual desire. *Psychological Review, 110,* 173–192.

Diamond, L. M. (2005a). "I'm straight, but I kissed a girl": The trouble with American media representations of female-female sexuality. *Feminism and Psychology, 15,* 104–110.

Diamond, L. M. (2005b). A new view of lesbian subtypes: Stable vs. fluid identity trajectories over an 8-year period. *Psychology of Women Quarterly, 29,* 119–128.

Diamond, L. M. (2006). The evolution of plasticity in female-female desire. *Journal of Psychology and Human Sexuality, 18,* 245–274.

Diamond, L. M. (2007). A dynamical systems approach to female same-sex sexuality. *Perspectives on Psychological Science, 2,* 142–161.

Diamond, L. M. (2008). *Sexual fluidity: Understanding women's love and desire.* Cambridge, MA: Harvard University Press.

Diamond, L. M., & Fagundes, C. P. (2012). Emotion regulation in close relationships: Implications for social threat and its effects on immunological functioning. In L. Cambell & T. J. Loving (Eds.), *Close relationships: An interdisciplinary perspective* (pp. 83–106). New York: Springer.

Diamond, L. M., & Savin-Williams, R. C. (2009). Adolescent sexuality. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of Adolescent Psychology, 3rd edition* (pp. 479–523). New York: Wiley.

Diamond, L. M., & Wallen, K. (2010). Sexual-minority women's sexual motivation around the time of ovulation. *Archives of Sexual Behavior, 38,* 417–426.

Dickson, N., Paul, C., & Herbison, P. (2003). Same-sex attraction in a birth cohort: prevalence and persistence in early adulthood. *Social Science & Medicine, 56,* 1607–1615.

Essig, L. (2000, November 15). Heteroflexibility. *Salon.com.*

Esterberg, K. G. (1994). Being a lesbian and being in love: Constructing identities through relationships. *Journal of Gay and Lesbian Social Services, 1,* 57–82.

Fergusson, D. M., Horwood, L. J., Ridder, E. M., & Beautrais, A. L. (2005). Sexual orientation and mental health in a birth cohort of young adults. *Psychological Medicine, 35,* 971–981.

Fine, M. (1988). Sexuality, schooling, and adolescent females: The missing discourse of desire. *Harvard Educational Review, 58,* 29–53.

Freud, S. [(1905) 1962]. *Three essays on the theory of sexuality* (J. Strachey, Trans.). New York: Basic Books.

Futuyma, D. J., & Risch, S. J. (1983). Sexual orientation, sociobiology, and evolution. *Journal of Homosexuality, 9,* 157–168.

Gagnon, J. H. (1990). Gender preference in erotic relations: The Kinsey scale and sexual scripts. In D. P. McWhirter, S. A. Sanders, & J. M. Reinisch (Eds.), *Homosexuality/heterosexuality: Concepts of sexual orientation* (pp. 177–207). New York: Oxford University Press.

Garofalo, R., Wolf, R. C., Wissow, L. S., Woods, E. R., & Goodman, E. (1999). Sexual orientation and risk of suicide attempts among a representative sample of youth. *Archives of Pediatrics and Adolescent Medicine, 153,* 487–493.

Golden, C. (1987). Diversity and variability in women's sexual identities. In Boston Lesbian Psychologies Collective (Ed.), *Lesbian psychologies: Explorations and challenges* (pp. 19–34). Urbana: University of Illinois Press.

Golden, C. (1994). Our politics and choices: The feminist movement and sexual orientation. In B. Greene & G. M. Herek (Eds.), *Lesbian and gay psychology: Theory, research, and clinical applications* (pp. 54–70). Thousand Oaks, CA: Sage.

Golden, C. (1996). What's in a name? Sexual self-identification among women. In R. C. Savin-Williams & K. M. Cohen (Eds.), *The lives of lesbians, gays, and bisexuals: Children to adults* (pp. 229–249). Fort Worth, TX: Harcourt Brace.

Goode, E., & Haber, L. (1977). Sexual correlates of homosexual experience: An exploratory study of college women. *Journal of Sex Research, 13,* 12–21.

Goy, R. W., & Goldfoot, D. A. (1975). Neuroendocrinology: Animal models and problems of human sexuality. *Archives of Sexual Behavior, 4,* 405–420.

Gramick, J. (1984). Developing a lesbian identity. In T. Darty & S. Potter (Eds.), *Women-identified women* (pp. 31–44). Palo Alto, CA: Mayfield.

Hamann, S., Herman, R. A., Nolan, C. L., & Wallen, K. (2004). Men and women differ in amygdala response to visual sexual stimuli. *Nature Neuroscience, 7,* 411–416.

Harry, J. (1984). Sexual orientation as destiny. *Journal of Homosexuality, 10,* 111–124.

Herdt, G. (1984). *Ritualized homosexuality in Melanesia.* Berkeley: University of California Press.

Hollander, G. (2000). Questioning youths: Challenges to working with youths forming identities. *School Psychology Review, 29,* 173–179.

Horner, E. (2007). Queer identities and bisexual identities: What's the difference? In B. A. Firestein (Ed.), *Becoming visible: Counseling bisexuals across the lifespan.* (pp. 287–296). New York: Columbia University Press.

Hyde, J. S. (2005). The genetics of sexual orientation. In J. S. Hyde (Ed.), *Biological substrates of human sexuality* (pp. 9–20). Washington, DC: APA Press.

Hyde, J. S., & Durik, A. M. (2000). Gender differences in erotic plasticity—Evolutionary or sociocultural forces? Comment on Baumeister (2000). *Psychological Bulletin, 126,* 375–379.

Igartua, K., Thombs, B. D., Burgos, G., & Montoro, R. (2009). Concordance and discrepancy in sexual identity, attraction, and behavior among adolescents. *Journal of Adolescent Health, 45,* 602–608.

Kinnish, K. K., Strassberg, D. S., & Turner, C. W. (2005). Sex differences in the flexibility of sexual orientation: A multidimensional retrospective assessment. *Archives of Sexual Behavior, 34,* 173–183.

Kinsey, A. C., Pomeroy, W. B., Martin, C. E., & Gebhard, P. H. (1953). *Sexual behavior in the human female.* Philadelphia: W.B. Saunders.

Kirk, K. M., Bailey, J. M., Dunne, M. P., & Martin, N. G. (2000). Measurement models for sexual orientation in a community twin sample. *Behavior Genetics, 30,* 345–356.

Kirkpatrick, R. C. (2000). The evolution of human homosexual behavior. *Current Anthropology, 41,* 385–413.

Kitzinger, C., & Wilkinson, S. (1995). Transitions from heterosexuality to lesbianism: The discursive production of lesbian identities. *Developmental Psychology, 31,* 95–104.

Kyrakanos, J. (1998). LUGgin' It. *InsideOUT Magazine, 9.*

Laan, E., & Janssen, E. (2007). How do men and women feel? Determinants of subjective experience of sexual arousal. In E. Janssen (Ed.), *The psychophysiology of sex.* (pp. 278–290). Bloomington: Indiana University Press.

Laumann, E. O., Gagnon, J. H., Michael, R. T., & Michaels, F. (1994). *The social organization of sexuality: Sexual practices in the United States.* Chicago: University of Chicago Press.

Laumann, E. O., & Mahay, J. (2002). The social organization of women's sexuality. In G. M. Wingood & R. J. DiClemente (Eds.), *Handbook of women's sexual and reproductive health* (pp. 43–70). New York: Academic/Plenum.

Liben, L. S., & Bigler, R. S. (2008). Developmental gender differentiation: Pathways in conforming and nonconforming outcomes. *Journal of Gay & Lesbian Mental Health, 12,* 95–112.

McClintock, M. K., & Herdt, G. (1996). Rethinking puberty: The development of sexual attraction. *Current Directions in Psychological Science, 5,* 178–183.

Money, J. (1990). Agenda and credenda of the Kinsey scale. In D. P. McWhirter, S. A. Sanders, & J. M. Reinisch (Eds.), *Homosexuality/heterosexuality: Concepts of sexual orientation* (pp. 41–60). New York: Oxford University Press.

Morgan, E. M., & Thompson, E. M. (2007). Young women's sexual experiences within same-sex friendships: Discovering and defining bisexual and bi-curious identity. *Journal of Bisexuality, 6,* 7–34.

Mosher, W. D., Chandra, A., & Jones, J. (2005). *Sexual behavior and selected health measures: Men and women 15–44 years of age, United States, 2002.* Advance data from vital and health statistics, no. 362. Hyattsville, MD: National Center for Health Statistics.

Murray, S. O. (2000). *Homosexualities.* Chicago: University of Chicago Press.

Muscarella, F. (1999). The homoerotic behavior that never evolved. *Journal of Homosexuality, 37,* 1–18.

Mustanski, B. S., Chivers, M. L., & Bailey, J. M. (2002). A critical review of recent biological research on human sexual orientation. *Annual Review of Sex Research, 13,* 89–140.

Nichols, M. (1987). Lesbian sexuality: Issues and developing theory. In Boston Lesbian Psychologies Collective (Ed.), *Lesbian Psychologies* (pp. 97–125). Urbana: University of Illinois Press.

Pattatucci, A. M. L., & Hamer, D. H. (1995). Development and familiality of sexual orientation in females. *Behavior Genetics, 25,* 407–420.

Peplau, L. A. (2001). Rethinking women's sexual orientation: An interdisciplinary, relationship-focused approach. *Personal Relationships, 8,* 1–19.

Peplau, L. A., & Garnets, L. D. (2000). A new paradigm for understanding women's sexuality and sexual orientation. *Journal of Social Issues, 56,* 329–350.

Phillips, G., & Over, R. (1992). Adult sexual orientation in relation to memories of childhood gender conforming and gender nonconforming behaviors. *Archives of Sexual Behavior, 21,* 543–558.

Rahman, Q. (2005). Fluctuating asymmetry, second to fourth finger length ratios and human sexual orientation. *Psychoneuroendocrinology, 30,* 382–391.

Remafedi, G., Resnick, M., Blum, R., & Harris, L. (1992). Demography of sexual orientation in adolescents. *Pediatrics, 89,* 714–721.

Rich, A. (1980). Compulsory heterosexuality and lesbian existence. *Signs, 5,* 631–660.

Rieger, G., Bailey, J. M., & Chivers, M. L. (2005). Sexual arousal patterns of bisexual men. *Psychological Science, 16,* 579–584.

Rimer, S. (1993, June 5). Campus lesbians step into unfamiliar light. *New York Times,* p. A2.

Rosario, M., Schrimshaw, E. W., Hunter, J., & Braun, L. (2006). Sexual identity development among lesbian, gay, and bisexual youths: Consistency and change over time. *Journal of Sex Research, 43,* 46–58.

Ross, M. W., & Paul, J. P. (1992). Beyond gender: The basis of sexual attraction in bisexual men and women. *Psychological Reports, 71,* 1283–1290.

Rust, P. C. R. (1992). The politics of sexual identity: Sexual attraction and behavior among lesbian and bisexual women. *Social Problems, 39,* 366–386.

Rust, P. C. R. (2000). Criticisms of the scholarly literature on sexuality for its neglect of bisexuality. In P. C. R. Rust (Ed.), *Bisexuality in the United States: A reader and guide to the literature* (pp. 5–10). New York: Columbia University Press.

Savage, D. (2002, May 11). Heteroflexible. *The Stranger. com, 11.*

Savin-Williams, R. C. (1996). Memories of childhood and early adolescent sexual feelings among gay and bisexual boys: A narrative approach. In R. C. Savin-Williams & K. M. Cohen (Eds.), *The lives of lesbians, gays, and bisexuals: Children to adults* (pp. 94–109). Fort Worth, TX: Harcourt Brace.

Savin-Williams, R. C. (1998). *"... And then I became gay": Young men's stories.* New York: Routledge.

Savin-Williams, R. C. (2005). *The new gay teenager.* Cambridge, MA: Harvard University Press.

Savin-Williams, R. C. (2006). Who's gay? Does it matter? *Current Directions in Psychological Science, 15,* 40–44.

Savin-Williams, R. C. (2009). How many gays are there? It depends. *Nebraska Symposium On Motivation. Nebraska Symposium On Motivation, 54,* 5–41.

Savin-Williams, R. C., & Ream, G. L. (2006). Pubertal onset and sexual orientation in an adolescent national probability sample. *Archives of Sexual Behavior, 35,* 279–286.

Savin-Williams, R. C., & Ream, G. L. (2007). Prevalence and stability of sexual orientation components during

adolescence and young adulthood. *Archives of Sexual Behavior, 36,* 385–394.

Sell, R. L., & Petrulio, C. (1996). Sampling homosexuals, bisexuals, gays, and lesbians for public health research: A review of the literature from 1990 to 1992. *Journal of Homosexuality, 30,* 31–47.

Shuster, R. (1987). Sexuality as a continuum: The bisexual identity. In Boston Lesbian Psychologies Collective (Ed.), *Lesbian Psychologies* (pp. 56–71). Urbana: University of Illinois Press.

Stokes, J. P., Damon, W., & McKirnan, D. J. (1997). Predictors of movement toward homosexuality: A longitudinal study of bisexual men. *Journal of Sex Research, 34,* 304–312.

Stokes, J. P., McKirnan, D., & Burzette, R. (1993). Sexual behavior, condom use, disclosure of sexuality, and stability of sexual orientation in bisexual men. *Journal of Sex Research, 30,* 203–213.

Storms, M. D. (1980). Theories of sexual orientation. *Journal of Personality and Social Psychology, 38,* 783–792.

Suschinsky, K. D., Lalumiere, M. L., & Chivers, M. L. (2009). Sex differences in patterns of genital sexual arousal: Measurement artifacts or true phenomena? *Archives of Sexual Behavior, 38,* 559–573.

Thompson, E. M. (2007). Girl friend or girlfriend?: Same-sex friendship and bisexual images as a context for flexible sexual identity among young women. *Journal of Bisexuality, 6,* 47–67.

Thompson, E. M., & Morgan, E. M. (2008). "Mostly straight" young women: Variations in sexual behavior and identity development. *Developmental Psychology, 44,* 15–21.

Tolman, D. L. (2002). *Dilemma of desire: Teenage girls and sexuality.* Cambridge, MA: Harvard University Press.

Tolman, D. L., & Diamond, L. M. (2001). Desegregating sexuality research: Combining cultural and biological perspectives on gender and desire. *Annual Review of Sex Research, 12,* 33–74.

Udry, J. R., & Chantala, K. (2006). Masculinity-femininity predicts sexual orientation in men but not in women. *Journal of Biosocial Science, 38,* 797–809.

Ussher, J. M. (1993). The construction of female sexual problems: Regulating sex, regulating woman. In J. M. Ussher & C. D. Baker (Eds.), *Psychological perspectives on sexual problems: New directions in theory and practice* (pp. 9–40). New York: Routledge.

Wallen, K. (1995). The evolution of female sexual desire. In P. R. Abramson & S. D. Pinkerton (Eds.), *Sexual nature/sexual culture* (pp. 57–79). Chicago: University of Chicago Press.

Wallen, K. (2001). Sex and context: Hormones and primate sexual motivation. *Hormones and Behavior, 40,* 339–357.

Walsh, C. (Ed.). (2010). *Dear John, I love Jane: Women write about leaving men for women.* Berkeley, CA: Seal Press.

Weinberg, M. S., Williams, C. J., & Pryor, D. W. (1994). *Dual attraction: Understanding bisexuality.* New York: Oxford University Press.

Welles, C. E. (2005). Breaking the silence surrounding female adolescent sexual desire. *Women & Therapy, 28,* 31–45.

Whisman, V. (1993). Identity crisis: Who is a lesbian anyway? In A. Stein (Ed.), *Sisters, sexperts, queers: Beyond the lesbian nation* (pp. 47–60). New York: Penguin.

Whisman, V. (1996). *Queer by choice: Lesbians, gay men, and the politics of identity.* New York: Routledge.

Wichstrom, L., & Hegna, K. (2003). Sexual orientation and suicide attempt: A longitudinal study of the general Norwegian adolescent population. *Journal of Abnormal Psychology, 112,* 144–151.

Worthington, R. L., & Reynolds, A. L. (2009). Within-group differences in sexual orientation and identity. *Journal of Counseling Psychology, 56,* 44–55.

Wright, L. W., Jr., & Adams, H. E. (1999). The effects of stimuli that vary in erotic content on cognitive processes. *Journal of Sex Research, 36,* 145–151.

Zhao, Y., Montoro, R., Igartua, K., & Thombs, B. D. (2010). Suicidal ideation and attempt among adolescents reporting "unsure" sexual identity or heterosexual identity plus same-sex attraction or behavior: Forgotten groups? *Journal of the American Academy of Child & Adolescent Psychiatry, 49,* 104–113.