

# Desegregating Sexuality Research: Cultural and Biological Perspectives on Gender and Desire

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Scholarly investigations into male and female sexuality over the life course have long occupied two separate “camps”: One focused on the biological aspects of sexuality and one focused on the sociocultural/political aspects. This bifurcated approach has been particularly ill suited for the study of sexual desire, a topic that has been generally undertheorized by sex researchers. A modern reappraisal of gender and sexual *desire* is proposed that takes into coordinated account both the biological and sociocultural/political factors that produce and shape subjective sexual desires over the life course. The specific relevance of this approach for three particular topic areas, adolescent sexual maturation, same-sex sexuality, and sexual dysfunction, is addressed. Methodological approaches to the study of gender and sexuality capable of investigating how cultural and biological factors intersect to shape the subjective *quality* of men’s and women’s desires at different points in the life course and within different sociocultural and interpersonal contexts are advocated.

**Key Words:** adolescence, gender, hormones, qualitative, sexual dysfunction, sexual orientation, sexuality.

## Interactionism Revisited

Debates about the basic nature of sexual desire and about the forms of desire that should be considered normal, healthy, and/or moral have raged throughout history, and have been perennial topics of both biomedical and social scientific research on sexuality: At what age do sexual desires develop? Are men’s and women’s desires different? What causes same-sex desires, and can they be altered? These questions have always been infused with sociopolitical undercurrents. The very fact that some individuals’ sexual experiences are deemed “normal,” investigated, tabulated, and worried about, whereas other individuals’ experiences are ignored or considered deviant lays bare the inherently political nature of questions about sexuality and sexual desire (Foucault, 1980; Weeks, 1986).

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Some have attempted to avoid these tangled sociopolitical factors by focusing exclusively on the biology of desire—typically operationalized in terms of genes and hormones. Others have taken the opposite approach, focusing entirely on sociopolitical factors to the total exclusion of bodies and biology. The resulting dualism has suffused and fractured the study of sexuality. We maintain that neither a purely biological nor a purely sociocultural approach can encompass the complexity of sexual desire and thus neither is fully satisfying on its own. Sexual desires are always embedded in particular sociocultural contexts (i.e., relationships nested within societies nested within cultures and historical epochs) *and* always embedded in particular biological contexts (including not only chromosomal and hormonal status, but nutritional status, age, and general health). Sex researchers who take both of these contexts into account will be best able to pose and to answer complex questions about the nature of human sexual experience and the extent to which it is differentiated by gender, age, cultural background, historical epoch, and so on.

The solution, then, seems to be some form of interactionism with “just the right” amounts of culture and biology linked through “just the right” alchemy. This seems so commonsensical as to hardly merit discussion—who could argue with studying culture *and* biology instead of culture *or* biology? Yet this is not the impression one would gain from the contemporary empirical literature on gender and sexuality. Rather, sex research (from its personnel to its journals to its teaching texts) has generally devolved into two different camps: one focused on the biological aspects of sexuality and one focused on the sociocultural/political aspects—not only as if never the twain have met but often as if they were sworn enemies. There is nothing necessarily wrong with a two-pronged approach—after all, specialization is endemic to intensive and productive research. Yet there is a point at which productive specialization becomes counterproductive polarization, and the field of sexuality research has indisputably crossed this line. Increasingly, researchers who emphasize the sociocultural and/or political aspects of sexuality have little to say to—or learn from—those who emphasize the biological aspects, and vice versa (with some exceptions, such as McClintock & Herdt, 1996). This growing divide hampers our understanding of *both* the sociocultural and biological aspects of sexual experience.

We are certainly not the first to note or critique this bifurcation, nor to make recommendations for rapprochement (note especially Ehrhardt, 2000; Fuss, 1989; McClintock & Herdt, 1996; Udry, 1993, 1995; Udry, Talbert, & Morris, 1986). Yet we argue that mending the cultural/biological divide is particularly critical for research on sexual *desire*, espe-

cially the role of gender in experiences of desire. On the whole, sexual desire has been surprisingly undertheorized by sex researchers (contrary to the case with cultural theorists and feminists [i.e., Hammonds, 1994, 1997; Stein, 1992; Tiefer, 1995; Wilkinson & Kitzinger, 1993]). Although it is a truism that sexual desire plays a central role in sexuality, few agree (or even attempt to delineate) just what sexual desire *is*. Rather, sex researchers have tended to focus on the prevalence and frequency of sexual thoughts and behaviors across different groups instead of exploring the meaning and subjective quality of sexual desires for different individuals across varying sociocultural and interpersonal contexts. When sexual desire does receive attention, a male conceptualization is implicitly adopted as the default. According to this default view, sexual desires are discrete, easily identifiable experiences of lust (i.e., you know them when you feel them), and the most interesting questions to ask about such desires are how often they are spontaneously experienced, how strong they are, and whether they are directed toward same-sex or other-sex partners.

Because men tend to come out ahead on the “frequency” and “strength” questions, there has been considerable historical and contemporary investigation of why women have “weaker” sex drives than men (most recently, Baumeister, Catanese, & Vohs, 2001). In contrast, there has been surprisingly little discussion of how cultural and biological factors may intersect to shape the subjective *quality* of men’s and women’s desires for a range of different types of partners, acts, or experiences at different points in the life course and in different sociocultural and interpersonal contexts. Such questions are, in our view, far more interesting and informative, and have critical implications for attempts to design effective educational programs and social services regarding sexuality.

Thus, our aim is to propose a modern reappraisal of gender and sexual desire that takes into coordinated account both the biological and sociocultural/political factors that produce and shape subjective sexual desires over the life course. Importantly, we do not attempt to formulate a singular, grand reconciliation of the roles of body and culture in sexual desire. Rather, we argue that there are *multiple* such reconciliations, and the jury is still out (rather, it has not even started deliberating) on which are the most successful and productive. We therefore do not argue in favor of one particular biocultural calculus, but seek to highlight some of the most provocative possibilities and tensions that arise when *both* sociocultural and biological factors are given substantive consideration. For this reason, we have elected not to white-wash the tensions in our *own* ongoing conversation regarding these questions. Specifically, one of us leans more toward the cultural end of

the balance, whereas the other leans more toward the biological. By allowing the push and pull between these differing emphases to ebb and flow throughout this article, rather than trying to hammer out a patently uncontroversial (and probably uninteresting) middle position, we hope to cast light on the heretofore shadowy possibility that there are multiple answers to the question of how culture and biology may braid together to shape women's and men's subjective sexual desires.

It bears noting that integrated cultural/biological conceptualizations and investigations of sexuality are important for understanding *multiple* aspects of sexuality, not just sexual desire. Yet we emphasize sexual desire for three main reasons. First, as noted above, sexual desire has been relatively undertheorized in academic research on sexuality. Second, sexual desire represents, in many ways, an ideal "laboratory" for interactions between biological and sociocultural aspects of sexuality. Sexual behaviors and even sexual fantasies are heavily mediated by cognitive processes, whereas sexual desire is often (although not always) more spontaneous, less intentional, and demonstrably associated with biological phenomena (specifically, hormone levels) that are outside of conscious awareness. Thus, sexual desire is a particularly apt topic for investigations into how internalized sociocultural norms regarding sexual feelings and experiences *interact* with biological processes that are not part of our conscious awareness of our bodies. Third and finally, conceptualizations of sexual desire are directly implicated in conceptualizations of human sexual *nature*, and the degree to which it varies as a function of biological sex (and, additionally, as a function of sexual orientation). Consequently, questions regarding the cultural/biological coconstitution of sexual *desire* are among the most basic and compelling questions about sexuality that we can ask.

We begin by briefly reviewing the two extremes of the biocultural spectrum—pure essentialism and pure social constructionism—and contrasting these perspectives with our version of an integrative approach. We then showcase the unique contributions of sociocultural *and* biological approaches, demonstrating how and why each perspective is indispensable to a multidimensional understanding of sexual desire. From the social constructionist side, we use historical and cross-cultural examples to demonstrate the importance of investigating sexual desire not as a "natural function" but a cultural production. From the biological side, we note how new research on the biological underpinnings of sexual ideation and behavior can productively inform and expand understandings of gender differences and similarities in experiences and expressions of desire. By sometimes piecing, sometimes weaving together pieces of evidence and strands of argument from both perspectives, we

hope to demonstrate the value of this integrative approach for three particular topic areas: adolescent sexual maturation, same-sex sexuality, and sexual dysfunction. Because the epistemology of sexual desire is inextricably linked to methodological choices and justifications, we address issues of methodology in the course of the paper and conclude with both cautionary and encouraging remarks about the potential of integrative cultural/biological research for developing a more comprehensive understanding of gender and sexual desire over the life course.

### **Essentialism Versus Social Constructionism— A View Whose Time Has Gone**

Historically, sexuality has most often been viewed by theorists, researchers, and everyday folk as the product of an innate, fixed, biologically determined drive. Although this drive was considered to have been repressed, celebrated, sublimated, and stigmatized to different degrees in different cultures and historical periods, its basic operation was presumed until recently to be a fundamentally biological rather than sociocultural phenomenon. Specifically, sexual desire has been attributed to the action of gonadal hormones, particularly androgens. Biomedical researchers have found that high levels of circulating androgens, particularly testosterone, are reliably associated with self-reported sexual motivation in both men and women (reviewed in Bancroft, 1978; Udry, 1988). Correspondingly, differences between male and female experiences of sexual desire—specifically, the fact that women report fewer spontaneous sexual urges than men (Beck, Bozman, & Qualtrough, 1991; Knoth, Boyd, & Singer, 1988; Laumann, Gagnon, Michael, & Michaels, 1994), fewer purely sexual fantasies (Ellis & Symons, 1990; Leitenberg & Henning, 1995), and less motivation to seek or initiate sexual activity (Blumstein & Schwartz, 1983; Byers & Heinlein, 1989; Julien, Bouchard, Gagnon, & Pomerleau, 1992; Laumann et al., 1994; O'Sullivan & Byers, 1992)—have been attributed to (and in the most extreme cases, fundamentally reduced to) the well-known gender differences in testosterone levels. This rendering of gender differences in sexuality can be described as “essentialist.” In its purest form, those holding an essentialist perspective argue that although sociocultural and historical influences on sexuality are far from trivial, they nonetheless come into play *after* biology has already established the basic parameters; that is, although different cultures and societies may emphasize or downplay gender differences in sexuality, the differences themselves are biological and elemental, providing the raw materials from which cultures craft their own interpretations and elaborations of “male” and/versus “female” sexuality.

In contrast, those adhering to social constructionist perspectives maintain that gender differences in sexual desire are products of the cultural and psychosocial processes through which men and women are socialized into gender-specific constructions of sexuality prescribing appropriate male and female sexual feelings and behaviors. Social constructionism also emphasizes the political context of such scripts by highlighting the systematic social forces that collectively define and reproduce specific conceptualizations of sexuality in different cultures and historical periods. This perspective is perhaps best represented by the work of philosopher Michel Foucault (1980), who argued that cultural and historical factors do more than just heighten or dampen the biologically given contours of sexual experience, but actually constitute or construct sexual experience at a more basic level. Foucault argued that conceptualizations of sexual desire as repressed "essences" are *themselves* strategic social discourses<sup>1</sup> that are crafted and deployed by those with social authority and power in the service of particular political and ideological ends. Importantly, such discourses are usually not visible as such; rather, they reflect what *appears* to be natural, factual, or objectively real.

Numerous feminists have built on Foucault's analysis by highlighting the extent to which conventional understandings of sexuality both spring from and reproduce hierarchies of gender that privilege (White, middle class) men and oppress women (Bartky, 1990; Duggan, 1990; Ramazanoglu & Holland, 1993; Rich, 1980; Rubin, 1984; Tiefer, 1987, 1995), not only by restricting their freedom to *act* on sexual desires but their very *experiences* of sexual desire. For example, Fine (1988) noted that school-based discourses about adolescent sexuality within sex education made frequent references to male but *not* female sexual desire. In her analysis, this "missing discourse of desire" effectively robs adolescent girls of a strong sense of sexual subjectivity and sexual agency. Along similar lines, Hollway (1984, 1989) identified several related cultural discourses organizing the contours, contents, and limits of "typical" heterosexuality. By sending powerful messages that women do not have the same types of desires as men, culture (translated through institutions, media, and everyday talk) creates a self-fulfilling prophecy. Women are, in effect, trained to discount their own bodily experiences of sexual desire because they lack the cultural basis to acknowledge and

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<sup>1</sup>By "discourse" we refer to "ways of constituting meaning which are specific to particular groups, cultures, and historical periods" (Gavey, 1993, p. 9). Discourses can be communicated and transmitted through a variety of means, ranging from academic and popular writings to media images to beliefs/attitudes to discrete practices.

meaningfully interpret such feelings and experiences. Thus, from this perspective, experiences of sexual desire are inextricably linked to the historically and culturally specific belief systems in which we are embedded, and therefore there is no such thing as a "culture-free" or "context-free" experience of sexual desire. Correspondingly, our entire experience of sexuality can be viewed as a context- and culture-specific *story* that we come to live, most often without conscious awareness that we are doing so (Plummer, 1995). To the extent that we perceive our desires as fundamentally "natural" and context-independent, this is only because the sociocultural forces that shape our subjective experiences of sexuality are largely invisible to us.

Both the essentialist and social constructionist perspectives speak to certain truths about sexual desire; and yet, in their purest and most extreme forms, each perspective becomes untenable. Social constructionist accounts of sexual desire that altogether ignore the contribution of bodies and biology cannot elucidate the mechanisms and parameters constraining and potentiating the relationship between social scripts and subjective sexual experiences. In other words, by virtue of its wholesale rejection of biological contributors to human experience, the most extreme form of social constructionism sacrifices precision for coverage. Despite its power as a macroanalytic tool for modeling historical changes in particular groups' experiences of sexuality, it is less effective at specifying how these changes are subjectively experienced within the life courses of particular men and women or addressing how sexual desire "works" and changes in individual bodies. Similarly, extreme essentialism basically boils down to "anatomy is destiny," a conclusion that is not only belied by voluminous data on variation within and across cultures in subjective sexual experiences, but by psychological research on the processes by which individuals internalize culturally and historically specific sexual scripts (Gagnon & Simon, 1973). Those clinging to pure essentialism also fail to acknowledge the degree of human agency involved (at the level of systematic social forces rather than acts of individual will) in creating and reproducing these scripts. Thus, the larger sociopolitical aims served by particular notions of gender differences in sexuality at particular cultural and historical moments are neither acknowledged nor taken into account in empirical endeavors.

It bears noting that in recent years, the mantle of intolerance draped historically over the essentialism/constructionism debate has begun to slip (especially in the realm of theory [i.e., Grosz, 1994]), and, thus, this debate is less and less often enacted between each side's most extreme formulations (which we have laid out largely for didactic clarity). Social constructionists increasingly acknowledge some role for biological factors

in sexuality, just as essentialists increasingly acknowledge the power of culture. The devil, of course, is in the details. Practically everybody can agree on some bland form of biosocial interactionism, but the terms of this interaction remain hotly debated. Whereas many essentialists still strive to separate the wheat (biological essence) from the chaff (cultural variation), social constructionists continue to argue that this distinction *itself* is a cultural construct that functions to define and legitimize specific sexual ideologies at particular historical moments. Thus, despite greater movement toward conceptualizing sexual desire in terms that acknowledge *both* culture and the body, it remains more typical for scholars of sexuality to reproduce and reinforce the essentialism/social constructionism dichotomy than to fundamentally challenge it.

It is for this reason that we plunge anew into this project, striving toward a reconceptualization of sexual desire that acknowledges both biological processes *and* the fact that embodied sexual desires are necessarily sociocultural, political, and even interpersonal productions. As Anne Fausto-Sterling proposed recently "sexuality is a somatic fact created by cultural effect" (2000, p. 21). As noted earlier, we are certainly not the first authors to advocate such an integrative approach, but the message has been slow to take and has generated more talk than action when it comes to empirical research. In an effort to make it as uncomfortable as possible for future researchers (ourselves included) to ignore either culture or biology, we now focus on each of these domains in turn, highlighting the unique and indispensable contributions that *both* socio-cultural and biological approaches make to comprehensive analyses of gender and sexual desire.

### **Historical and Cross-Cultural Perspectives on Gender and Desire**

Prior to the Enlightenment, the existence and necessity of female sexual pleasure for successful reproduction was a common conception in Western thought. This perspective was grounded in the belief that women's bodies were simply a variation on the male template, such that women had the same reproductive organs as men, only on the inside rather than the outside of their bodies (Laqueur, 1990). It was believed that both women and men had to be sexually aroused and had to experience sexual pleasure in order for conception to occur. One author writing in the 17th century recommended preparing women for "successful" sexual intercourse with lascivious words, wanton behavior, "all kinde of dalliance," and "handl[ing] of her secret parts and dugs, that she may take fire and be enflamed in venery" (Laqueur, 1990, p. 102). Women's sexual desire was understood not only as normal and necessary but as the very



counterpoint to the pain of childbirth that kept the human race going.

However, with the Enlightenment came a reconstruction of male and female biology and of male and female sexuality, not as hierarchical, with female bodies and sexuality understood as derivative of male, but as fundamentally different, distinct, and incommensurable. By the 19th century, female orgasm was no longer seen as necessary for conception (Groneman, 1994). In fact, the search for anatomical and physiological differences between the sexes led to arguments about whether or not "normal" female sexual passion even existed (Cott, 1978; Degler, 1974). At the same time, a shift in the sociopolitical landscape rendered women's reproductive organs and capacities, and their roles as wives and mothers, the defining features of women's lives and identities. Within this context, nymphomania came to be defined as a specific type of disease to which women were particularly vulnerable, and whose symptoms included adultery, flirting, divorce, and the desire for more sex with one's husband than the husband himself wanted. That is, any behavior that defied social norms of feminine modesty could be defined and medically "treated," sometimes through clitoridectomy, as nymphomania (Groneman, 1994; Laqueur, 1990).

Yet the underlying belief that normal women were not "plagued" with sexual desire did not apply to all women. Rather, this view pertained only to White, middle-class women, who were viewed as more civilized, moral, and restrained; thus, cultural fictions about the "nature" of White, middle-class women came to define a standard against which African-American women, poor women, and immigrants could be judged by authorities and, not surprisingly, always found lacking (i.e., Bush, 1981). These groups were relegated to subnormal status and conceptualized as "naturally" more promiscuous, animalistic, and unrestrained, thus necessitating, and justifying, greater social controls (D'Emilio & Freedman, 1988; Laqueur, 1987). Vestiges of these beliefs still remain in contemporary Western ideologies about White and ethnic-minority women's bodies and sexual natures (Caraway, 1991; Collins, 1990; Painter, 1992).

Conceptions of sexuality vary across cultures as well as over time. For instance, Muslim concepts of female sexuality bear little resemblance to current Western beliefs about women's sexual nature as passive; in fact, precisely the opposite view prevails (Ahmed, 1992; Brooks, 1995). A quote from the founder of the Shiite sect of Islam, Ali ibn Abu Taleb, husband of Muhammed's daughter Fatima, conveys profoundly different beliefs about the nature of women's and men's sexuality: "Almighty God created sexual desire in 10 parts; then he gave nine parts to women and one to men" (Brooks, 1995). These societies concep-

tualize female sexuality as active and intense and female sexual desires as powerful. Within Islam, married women enjoy the privilege (theoretically, at least) of demanding sexual satisfaction as a condition of marriage. Furthermore, whereas sexual intercourse is the primary focus of male-female sexual interaction in Western society and religion, Mohammed encouraged men to linger in sexual foreplay for the purposes of stimulating and satisfying women, a goal considered requisite for maintaining social order (Mernissi, 1987).

Of course, this seemingly liberated conceptualization of women's sexuality has been used to justify women's oppression; many Islamic cultures prescribe clitoridectomy and other forms of genital mutilation as necessary means for controlling women's dangerous desires in the name of preventing social chaos. Mernissi (1987) observed that the different concepts of female sexuality seen in Western and Muslim societies are related to different strategies for regulating women vis-a-vis their sexuality. Western societies, with their emphasis on women's sexual passivity, rely on internalized sanctions against premarital sex and adultery. Muslim culture, with its view of female sexuality as active and assertive, uses more external and explicit forms of control such as veiling, constant surveillance, and the administration of severe punishments (including death) for actual or suspected violations of feminine modesty. Thus, whereas Western culture has overtly condemned sexuality, Muslim culture overtly condemns women.

### **Political Power and Marginalized Groups**

One of the most powerful effects of social constructionism is the skepticism it casts on modern Western notions of objective truth or reality, and particularly on the notion that "natural orders" of different social groups reflect natural differences between different types of individuals. Thus, social constructionism poses a serious threat to the social status quo by taking away the argument that things are the way they are because they are *supposed* to be or are so by nature. It also reveals how privileged groups produce social institutions and cultural stories that reinforce and reproduce their power at the expense of those deemed different and/or deficient. For this reason, social constructionism has proved a liberating and empowering tool in the hands of those who have been historically marginalized and oppressed. For instance, Collins (1990) revealed how contemporary "controlling images" of Black women are anchored in historical myths about Black women's sexuality, exemplified by stereotypes such as the asexual "mammy," the "welfare queen," the "seductive Jezebel," or the "sexually predatory" woman. Her analysis demonstrates the way in which dominant cultural stories

about Black women have been used to control their sexuality, and she posited this control as central to their oppression.

Using social constructionism, authors have also highlighted how historical beliefs about homosexuality and heterosexuality have served specific sociopolitical ends. Prior to the 20th century, there was no Western conception of a homosexual—or heterosexual—identity; rather, specific sexual acts were labeled homosexual, regardless of who performed them (Padgug, 1992). Over time, the desire for such acts came to be viewed as a specific form of psychopathology with a set of associated causes, symptoms, and probable outcomes (Ellis, 1933/1978). In the modern era, as political movements, such as those for civil rights and women's rights, crystallized around particular social identities, the notion of "homosexual" as a diseased state came to be replaced by the notion of "lesbian/gay" as a social identity. This shift produced in the 1970s and 1980s a "liberal humanistic" conception of lesbians and gay men as healthy, well-adjusted individuals indistinguishable from heterosexuals save for the gender of their sexual partners. Thus, whereas 19th century physicians maintained that one "had" the disease of homosexuality or one did not, contemporary social scientists largely maintain that one either "is" gay/lesbian/bisexual or one is not. As articulated by Money (1987, 1988), same-sex sexuality is no longer considered a "sin" or a "sickness" but a "status."

Although this change in conceptualization was associated with a lessening of the traditional stigma associated with same-sex sexuality, many social constructionists (most notably Kitzinger, 1987) argued that the liberal humanistic conception of lesbians and gay men served many of the same sociopolitical goals as the pathology conceptualization, albeit in a more palatable guise. Specifically, she maintained that the liberal humanistic conception retained the essentialist view of lesbians and gay men as distinct types of people, but effectively deflated their potential political power by portraying them as "just like the rest of us," except for their desires. Whereas the very existence of same-sex desire had previously posed an inherent threat to historical notions of the "naturalness" of heterosexuality, the liberal humanistic construction of lesbians and gay men neutralized this threat by offering them the quiet acceptance (or at least tolerance) they had long sought from mainstream society, predicated on their disavowal of any attitudes, beliefs, and behaviors that challenged the prevailing heterosexist social order.

In many ways, the liberal humanistic view of same-sex sexuality can be viewed as a response to the more radical conceptualization of same-sex sexuality articulated by Rich (1980). She challenged the very notion of discrete categories organized by vicissitudes in sexual attraction,

arguing that any close relationships among women, even purely emotional bonds, might be considered potentially lesbian, breaking down the essentialist distinction between homosexuality and heterosexuality that allowed sexual minorities to be effectively contained and controlled. She coined the term "compulsory heterosexuality" to identify the invisible but powerful system of social control which grants privileges to women on the basis of their adherence to a social and sexual order that meets the needs and desires of men. Rich's conceptualization posited that all women are socialized into heterosexuality through various means of persuasion and coercion, and explicit sexual ties between women were simply the most visible and salient form of resistance to this socialization. Contrary to the liberal humanistic view of sexual orientation, this view implies that lesbians, as well as gay men (Tolman, Spencer, Rosen-Reynoso, & Porche, in press), are not, in fact, safe and harmless "types" of people with slightly different sexual desires, but potentially galvanizing forces for resistance against the hegemony of "natural heterosexuality," emphasizing the political contours of both heterosexuality and homosexuality.

The tension between essentialist and social constructionist conceptualizations of sexual orientation, and the debate over which standpoint offers a more positive and progressive view of sexual minorities, has yet to be resolved. Contemporarily, essentialist conceptualizations predominate, bolstered by research suggesting that at least in some individuals, sexual orientation is partly determined by genes (Bailey & Pillard, 1991; Bailey, Pillard, Neale, & Agyei, 1993; Hamer, Hu, Magnuson, Hu, & Pattatuchi, 1993; Hu et al., 1995). This evidence has been seized by some lesbian/gay/bisexual activists as proof that sexual orientation is a natural form of human variation that should not be subject to social stigma or prejudice; others, however, argue that genetic conceptualizations of sexual orientation bear an uneasy resemblance to the old pathology models, with their attendant implications for possible medical "treatment" in the service of normalization (for a review of these perspectives, see Hamer & Copeland, 1994; Savin-Williams & Diamond, 1997). Radical social constructionists continue to maintain that it is necessary to question any and all sexual typologies, safe, natural, and otherwise, and thus to highlight the social construction of all sexual subjectivity (Kitzinger, 1987, 1995).

### **Biological Perspectives on Gender and Desire**

Now that we have a more sophisticated notion of the multiple cultural forces that construct, offer up, and deny various forms and meanings of sexuality and sexual desires, the challenge is to weave biology

in, appropriately discerning its influence on men's and women's subjective sexual experiences without inappropriately and inadvertently using it to "naturalize" the cultural distinctions that we unconsciously find most familiar and most reassuring. Of course, the more radical social constructionists would argue that this project makes no sense, since there is nothing biology can tell us that is not in and of itself a social construction: that is, that there are no purely biological processes. Yet to take the position that we cannot acknowledge anatomy, physiology, and other features of the body because they can only be understood through culture does not seem useful (Fausto-Sterling, 2000). We propose that one of the critical benefits of an integrative approach is that it moves us beyond the tired set of questions that has long spurred vociferous nature/nurture debates (i.e., "do women have weaker libidos, and if so, why?") toward more complicated questions regarding how biology and culture may intersect, collide, or mutually transform men's and women's experiences of lust and love at different stages of life. Such questions presume that there are variations between and among women and men in both the biological and cultural components of sexual experiences, and that the sophisticated interplay between such variations deserves systematic study.

One example of how this interplay can be productively theorized comes from Fausto-Sterling (1993), who argued that based on the little-known prevalence of different forms of hermaphroditism among humans, one could argue that there are actually five sexes rather than two: Conventional males, conventional females, true hermaphrodites, and hermaphrodites whose genitals are either more male than female or more female than male. Fausto-Sterling took a social constructionist stance in highlighting that our conventional assumptions and anxieties regarding the existence of two and only two sexes is a culturally derived notion rather than a biologically preordained fact, and she straightforwardly addressed how contemporary social practices and ideologies regarding gender and sexuality would be radically transformed if we were to acknowledge the existence of five rather than two sexes. Yet importantly, she based her "five sexes" argument not on a wholesale rejection of biological "maleness" and "femaleness," but a critical reevaluation of the extant biological data regarding how biological "maleness" and "femaleness" are distributed in the population at large. Her analysis demonstrates, therefore, that some of the most profound and radical critiques of restrictive and reductionistic claims regarding sex, gender, and sexuality can be based on biological evidence as well as sociocultural analyses.

Another example of how fresh reevaluations of the extant biological data can advance our understanding of gender and sexuality concerns

the neurochemical substrates of sexual desire itself. As noted earlier, extensive attention has been devoted to differences between the relative strength of male and female libido, and the possibility that such differences are attributable to differences in circulating levels of testosterone. The conventional biomedical position on this question is "But of course," whereas the conventional social constructionist position is "Hogwash!" Our contribution to this long-standing debate is to ask an altogether new set of questions: "Why must testosterone get *all* the attention? How might a range of different neurochemicals interact with social and relational processes to shape different forms of sexual desire in different contexts?"

There are a number of other neurochemicals that have shown demonstrable links to sexual desire, activity, and even orgasm, many of which appear to function differently in women than in men, such as estrogen (Adams, Gold, & Burt, 1978; Judd & Yen, 1973; Stanislaw & Rice, 1988) and adrenal hormones (McClintock & Herdt, 1996; Udry et al., 1986). One particularly promising candidate for future research on sexuality is the neuropeptide oxytocin, which has received increasing attention in recent years because of the critical and simultaneous roles it has been found to play in mammalian childbirth, infant care, affectional bonding, and sexual activity. Oxytocin is most well known for stimulating the contractions of labor and facilitating milk letdown in nursing mothers, but it is also involved in multiple processes of mammalian attachment and affiliation over the life course. Studies of animals (typically rats and prairie voles) have identified direct effects of oxytocin on maternal feeding behavior, maternal/infant bonding, and kin recognition (Carter, 1998; Nelson & Panksepp, 1996; Pedersen, Caldwell, Walker, & Ayers, 1994; Uvnäs-Moberg, 1994), but it is also associated with female sexuality. Specifically, researchers have found that exogenous administration of moderate amounts of oxytocin stimulates females to seek out sexual activity (Argiolas, Melis, Mauri, & Gessa, 1987; Floody, Cooper, & Albers, 1998) and to show receptivity to sexual requests (Arletti & Bertolini, 1985; Caldwell, Prange, & Pedersen, 1986; Gorzalka & Lester, 1987). Back in the human paradigm, the highest circulating levels of oxytocin are detected during sexual activity, and oxytocin has been implicated in the experience of orgasm and feeling of satiety that follows sexual activity (Carmichael, Warburton, Diken, & Davidson, 1994; Carter, 1992, 1998; Riley, 1988). Perhaps most interestingly, Carmichael and colleagues (1994) found that blood levels of oxytocin were higher in females than in males during sexual activity and were associated with subjective reports of orgasm intensity among those women who were multiorgasmic. Such findings lead us to ask why investigations into bio-

logically based differences between female and male sexuality have devoted so little attention to neurochemicals such as oxytocin, in comparison with the long-standing preoccupation with testosterone.

### **Reconsidering Embodied Desire**

Consideration of a more diverse range of biological contributors to human sexual experience invites more complex conceptualizations of gender differences in subjective sexual desire. Rather than focusing on who has "more" or "less" sexual desire, researchers might consider more complex questions about the quality of women's and men's sexual desires, the contexts in which these desires are experienced, both between and within groups, and how such variations might reflect different types of biological and social and relational interaction. For example, some researchers have suggested that we might profit by attending more closely to the distinction between an individual's urge to initiate sexual activity and his/her arousability, or capacity to become interested in sex given certain learned cues. Interestingly, these two forms of sexual desire may be differentially influenced by biological and sociocultural factors.

As reviewed by Wallen (1995), variability in spontaneous sexual urges (which is, notably, the form of variability that has been most frequently assessed in sex research) appears directly linked to variability in gonadal hormone levels. For example, exogenous administration of androgens reliably stimulates sexual urges in both men and women (Alexander & Sherwin, 1993; Arver et al., 1996; Kwan, Greenleaf, Mann, Crapo, & Davidson, 1983; O'Carroll, Shapiro, & Bancroft, 1985; Sarrel, Dobay, & Wiita, 1998; Schiavi, White, Mandeli, & Levine, 1997; Sherwin & Gelfand, 1987; Sherwin, Gelfand, & Brender, 1985). Also, in both cross-sectional and longitudinal research among adolescents, investigators have found that pubertal increases in gonadal and adrenal androgens are associated with increases in self-reported sexual desire (Halpern, Udry, Campbell, & Suchindran, 1993; McClintock & Herdt, 1996; Udry & Billy, 1987; Udry et al., 1986). Among women, cyclic fluctuations in estrogen have been shown to be associated with corresponding fluctuations in sexual interest (Adams et al., 1978; Judd & Yen, 1973; Stanislaw & Rice, 1988), although estrogen levels are not associated with patterns of sexual behavior, which are regulated instead by social and interactional factors (Palmer, Udry, & Morris, 1982).

Yet variability in arousability is independent of hormonal status. Research has detected no relationship between gonadal hormone levels and humans' arousability to erotic stimuli (Abramson, Repczynski, & Merrill, 1976; Griffith & Walker, 1975; Hoon, Bruce, & Kinchloe, 1982;

Slob, Ernste, & van der Werff ten Bosch, 1991). In fact, even hypogonadal men with castrate levels of testosterone become readily aroused to erotic stimuli (Bancroft, Tennent, Loucas, & Cass, 1974; Kwan et al., 1983). Notably, however, such men do not seek sexual stimuli, highlighting the importance of distinguishing between sexual motivation and arousability. Furthermore, Wallen (1995) reviewed research on female and male primates, suggesting that as a result of hormonal factors, arousability may play a greater role in structuring female desire and sexual activity than male desire and activity. Specifically, female primates (both human and nonhuman) have a fundamentally different pattern of day-to-day gonadal hormone activation than do males. Females' levels of circulating androgens are substantially lower than those of men, and they only experience high estrogen levels a few days out of each menstrual cycle. Males, in contrast, have high levels of circulating androgens on a relatively constant basis, so high, in fact, that human males have been described as experiencing "ceiling" levels of androgenic sexual motivation (see Udry, 1988). Thus, as noted by Wallen (1995), females might be conceptualized as experiencing a brief period of high sexual motivation around the time of ovulation and lower levels of sexual motivation desire the rest of the month, whereas men have relatively higher, constant levels of sexual motivation.

However, one should not necessarily conclude on the basis of such findings that women have weaker libidos than men, because when women do experience strong initiatory urges for sexual contact, the strength and intensity of these urges is apparently comparable to those of men (reviewed by Wallen, 1995). Wallen, therefore, drew an important distinction between low sex drive and periodic sex drive. Even more interesting, however, are the implications of women's potentially more periodic sex drive for the relative role of arousability. If the hormone-dependent component of women's sexual desire is more frequently quiescent than men's, then a greater proportion of the sexual desire they do experience will be predominantly situation-dependent. Accordingly, variability in women's exposure to specific sexual stimuli, their internalization of particular sexual scripts, and their immersion in particular interpersonal and sociocultural contexts may, therefore, have a more persistent influence on their day-to-day experiences of sexual arousal than men's (as well as their behavior, as demonstrated by Udry & Billy, 1987). This phenomenon has been exhaustively documented by Baumeister (2000) and described as female sexual plasticity. Yet, although Baumeister briefly acknowledged the distinction between sexual motivation and arousability, he mischaracterized arousability as a simple willingness to engage in sex when desire and motivation were



low, rather than a capacity to become aroused and motivated. This may explain why Baumeister did not consider the possibility that the distinction between sexual motivation and arousability may be a central mechanism underlying the greater situation-dependence, or plasticity, of women's sexual desires relative to men's.

One of the most notable aspects of this particular reconceptualization of sexual desire is that it grants a significant role for culturally and situationally specific factors in the experience of sexual desire at a basic, fundamental level. In other words, the constellation of social forces and ideologies that structure women's desires, and the contexts in which such desires do and do not emerge, are not extra layers wrapped around a "real," hormonally mediated biological core, but are part of the core itself. This is consistent with Holland, Ramazanoglu, Scott, Sharpe, and Thomson's (1994) notion of the material body and its social context as fundamentally entwined "in complex and contradictory ways which are extremely difficult to disentangle in practice" (p. 22). We are not suggesting that this model of sexuality is necessarily "the right one" (e.g., Wallen's [1995] speculations regarding gender differences in the relative importance of sexual motivation versus arousability for human males and females is based heavily on primate research, and thus much more remains to be learned from studies of humans), but we put it forth as an example of how alternative, integrative models of sexuality might prompt us to reexamine the very definition of sexual desire on which the essentialist/social constructionist debates have been premised. Rather than arguing yet again over whether testosterone matters more or less than culture, we might instead ask whether different forms of sexual desire depend on different interactions between biological and contextual factors, and whether the nature of these interactions varies between men and women as well as over the life course. Thus we might reach a more fruitful and generative analysis of gender differences in sexual desire by wedding a critical analysis of cultural ideologies regarding men's and women's desires (and their histories, political functions and possible "causes") with a critical analysis of the multiple biological factors that contribute to gender differences (and similarities) in these experiences. The most incisive and fascinating questions for study may involve "what happens" when cultural influences press with versus against biological influences, and what happens when one domain changes (perhaps as a result of life course transitions) while the other remains static.

Having demonstrated the unique and indispensable contributions of quilting together cultural and biological approaches to sexuality, we now focus on three of the most pressing topics regarding gender and

sexual desire that occupy contemporary sex research—adolescent sexual maturation, same-sex sexuality, and sexual dysfunction—in an effort to demonstrate the value (and methodological requirements) of an integrative approach.

### **Maturation and Desire: Revelations About “Normality”**

When it comes to sexuality, there have long been concerted efforts on the part of social scientists to identify what is “normal,” and these efforts have been most strident when it comes to adolescents. The stakes of identifying “normal” and “natural” patterns of sexual development are particularly high in contemporary America, given society’s concern about sexually transmitted diseases and teen pregnancy, to the exclusion of other dimensions of sexual health (Michael, 2001). Thus, to the extent that social scientists have adopted an impoverished approach to adult sexuality that tabulates acts, instead of eliciting their meanings and contexts, this tendency is even more exaggerated when adolescent sexuality and sexual development are under scrutiny. This focus has produced a particularly limited range of information about *adolescent* sexuality that fails to tell us about the subjective quality of young women’s and men’s sexual feelings and experiences as they move through childhood and adolescence within particular cultural and historical biographies and geographies (Brooks-Gunn & Furstenberg, 1989; Martin, 1996). This notable oversight highlights our society’s anxieties over childhood and adolescent sexuality and the resulting systematic and relentless surveillance of adolescents and their behavior (Fine, 1988).

For example, although (as noted earlier) there is widespread agreement that sexual desire is a critical component of sexuality, adolescent sexual development is typically studied without reference to sexual desire; instead, the biological basics of physical maturation receive primary emphasis. The age of menarche, breast development, and growth spurts have been dutifully charted (Brooks-Gunn & Warren, 1988; Graber, Brooks-Gunn, & Galen, 1998; Herman-Giddens et al., 1997; Slap, Khalid, Paikoff, Brooks-Gunn, & Warren, 1994), as have the implications of these changes for a youth’s social status and attractiveness (Udry, 1990). Yet the question of *which* specific developmental processes are implicated in the maturation of sexual desire and (perhaps even more importantly) just what the maturation of desire “looks like” have not been studied. For example, we know little about whether prepubertal experiences of desire and arousal are qualitatively similar to postpubertal or later adult experiences. Overall, the historical concern with accurately charting the precise development of reproductive maturity

has crowded out attention to the experiential aspects of these processes (Brooks-Gunn & Paikoff, 1997).

The same is true of investigations into adolescent sexual behavior. Most researchers are far more interested in finding out how often adolescents are having sex, and with whom, than in investigating the subjective quality of these experiences, including their motivations for, and interpretations of, sexual exploration (Ford, Sohn, & Lepkowski, 2001; Resnick et al., 1997). Much research on adolescent sexual behavior implicitly reproduces dominant ideologies about differences between male and female sexuality, as well as differences between the sexuality of ethnic-minority and White teenagers. The sociopolitical context of these differences, as well as the sociopolitical context of our own attempts to assess them, receive too little explicit analysis. For example, it is notable that unlike virtually all other areas of research on adolescents, investigations of adolescent sexuality have focused disproportionately on girls, particularly poor girls and girls of color (Fordham, 1993; Tolman & Higgins, 1996). This is particularly true of research on sexual decision-making, contraception, and prevention of sexually transmitted diseases (STDs) (Gilmore, DeLamater, & Wagstaff, 1996; Jemmott III, Jemmott, & Fong, 1998; St. Lawrence, Brasfield, Jefferson, Allyene, & Shirley, 1994), reflecting the common expectation that girls should be the "gatekeepers" of adolescent heterosexuality and that boys cannot control their "more powerful" libidos (Thompson, 1995; Tolman, in press).

The generally unstated rationale for such studies is the prediction and prevention of "risky" sexual behaviors rather than the promotion and nurturance of healthy forms of adolescent sexual expression (Haffner, 1998; Hirst, 1999). In part, this focus on risk reflects the pressures on researchers and educators, from both funding agencies and policy makers, to identify predictors of sexual intercourse, contraceptive use, and STD prevention (e.g., studies of the prevalence and prevention of teen pregnancy and childbearing have grown into a virtual industry of "sexuality" research). The end result is a research and sex-education paradigm that focuses disproportionately on teaching adolescents the biological "nuts and bolts" of sexuality and emphasizes the importance of saying "no" to sexual intercourse rather than trying to help them to understand the interpersonal and cultural contexts of their sexual and romantic feelings and experiences (Sears, 1992).

Erhardt (1996) has pointed out that this approach offers an impoverished understanding of adolescent sexuality. She and others have called on both researchers and educators to shift their focus toward normalizing and contextualizing adolescents' sexual feelings, giving them the safety to consider multiple ways of expressing those feelings (including

celibacy), and emphasizing sexual responsibility. Some researchers do, in fact, conduct the kinds of studies of adolescents' desires, thoughts, and fantasies that such an agenda demands (Thompson, 1995; Tolman, in press), yet such research often receives far less attention than large-scale surveys of sexual activity and contraceptive use because it does not aim to answer the questions that have had more political valence, such as the prevalence and frequency of specific (risky) behaviors. Importantly, it also requires a different methodological approach than is typical for standard social scientific inquiries into adolescent sexuality. Specifically, such research requires qualitative analyses capable of discerning not just *whether* factors such as gender, race, ethnicity, and social class are statistically related to specific sexual behaviors, but *how and why* these factors bear a meaningful relationship to adolescents' experiences of their sexuality.

In our view, a particularly promising approach for investigating such questions involves integrating qualitative investigations of adolescents' subjective sexual and affectional feelings with biologically oriented assessments of development transitions in hormonal status. Extant research on the biosocial determinants of adolescent sexuality suggests the explanatory power of such an approach.

### **Biological and Cultural Influences on Early Experiences of Desire**

Interactions between the biological and cultural aspects of adolescent sexuality become salient the moment we first ask, "When do boys and girls begin to have sexual desires?" Very young children, indeed infants, touch their genitals and masturbate: Does this behavior involve sexual desire? Little is known about the sexual feelings of prepubertal children, because we generally assume (or at least wish) that they do not have such feelings. The conventional biological explanation for this assumption is that children's low pre-pubertal levels of gonadal hormones render them incapable of authentic sexual fantasies and desires, and that only after pubertal gonadal maturation (termed gonadarche) does mature sexuality emerge.

We now know that this convention is not biologically accurate, but our cultural privileging of puberty as the "onset" of sexuality has prevented this fact from seeping into contemporary consciousness. As McClintock and Herdt (1996) noted, it has long been assumed that gonadal maturation, which occurs around 12-14 years of age, provides a momentous hormonal "switch" that instantaneously transforms asexual children into sexual proto-adults. Yet they reviewed newer data demonstrating that it is the maturation of the adrenal glands and secretion of

adrenal hormones around age 10 that appears to be associated with the development of nascent sexual attractions, cognitions, and emotions, which children subsequently begin to link with their cultures' conceptualizations of sexuality. As they argued,

[Data on the emergence of sexual attractions around age 10] provide a key for understanding sexuality as a process of development, rather than thinking of it as a discrete event. . . . the new data suggest a longer series of intertwined erotic and gender formations that differentiate beginning in middle childhood. . . . No longer can the brain at puberty be treated as a black box, which is suddenly able to process sexual stimuli *de novo* at the time of gonadal change. (pp. 179, 183)

It is particularly interesting to recognize that McClintock is a biologist and Herdt is a cultural anthropologist. Thus, their collaborative critique of the gonadarche model of sexual maturation provides a useful example of the way in which creative efforts to consider interplays between the biological and cultural underpinnings of sexual development yield powerful new insights into the nature of sexual experience.

These interplays are of critical importance for interpreting the role of gender in sexual maturation. As adolescent girls' and boys' bodies are changing, they are receiving multiple cultural cues about how men and women typically (or ideally) express, experience, and manage sexual feelings. Romance novels, magazines, television, and movies, and now the Internet, provide ever-present templates of "normal" heterosexual desire, often reinforcing historical conceptions of women as "naturally" sexually passive and males as "naturally" relentless and uncontrollable. As a result, many girls experience intense yet invisible cultural pressure to enact compulsory heterosexuality by internalizing their position as sexual objects rather than exploring and discovering their own sexual subjectivity and agency. Boys, meanwhile, may feel compelled to live up to the popularized image of masculinity as a form of sexual predation (Tolman et al., in press).

Reflecting these gendered notions of sexuality, in some of the most interesting and provocative research integrating biological and social perspectives on sexual maturation, it has been found that social pressures appear to have a more significant influence on the sexual behavior of young women than young men. Udry and Billy (1987) sampled 1,400 adolescent "virgins" (i.e., who reported that they had never had vaginal sexual intercourse) and examined the role of hormonal and social variables in predicting which of the adolescents initiated sexual activity within a 2-year period. In addition to a battery of hormonal assessments, they collected data on a wide array of social factors, such as same-sex and opposite-sex friends' participation in sexual activity,

popularity with the opposite sex, grades, deviance, religiosity, sexual permissiveness, future orientation, parents' education, and locus of control. They found that free testosterone level was directly related to initiation of coitus for White males, to the exclusion of all social variables save for a male youth's popularity among female friends. The pattern of results was entirely the opposite among White girls: Hormones had no direct effect on first coitus in White females (although they were significantly related to variables assessing sexual thoughts and fantasies), but every social variable significantly influenced a White girl's initiation of first intercourse, and most of these factors operated independently of one another. A number of additional studies (reviewed in Halpern, in press) have yielded similar findings.

Why might sociocultural factors exert stronger effects on young White women than on young White men? Udry and his colleagues suggested that it has to do with the fact that White adolescent men face a uniformly positive normative environment with regard to their sexual feelings and behaviors, whereas White adolescent women face an inconstant, highly differentiated normative environment. Unlike boys, girls confront conflicting combinations of positive and negative messages regarding their sexuality, combined with conflicting combinations of opportunities and constraints. When the researchers examined racial differences, they discovered that the same social factors that predicted White girls' initiation of sexual intercourse were not explanatory for Black girls. Rather, the strongest predictor of Black girls' sexual behavior was their observable level of pubertal maturation—in other words, whether they "looked mature" to their peers.

It is important to note that this research is a good representation not only of how society constructs male and female adolescent sexuality differently, but also the long-standing preoccupation with race as a key variable of interest—a preoccupation that cannot be taken lightly given the historical constructions of Black versus White sexuality that continue to circumscribe the types of questions we ask and assumptions we make about Black and White youths' sexual behavior. Udry and his colleagues described their findings of no social effects on Black girls' initiation of intercourse as "puzzling" and acknowledged that the differences may be due to factors that were not represented in their conceptual models. In truth, our current notions of what variables matter when it comes to sexuality are themselves sharply constrained and constructed by our own social and cultural locations, and we are too often blinded to the full range of factors that might shape sexual experiences for diverse youth across diverse environments.

Although this line of research provides strong evidence of variability

in how the interplay between hormonal processes and social constructions shape girls' and boys' sexuality, many questions about how this interplay is manifested at an experiential level remain to be asked and answered. For example, as noted by Halpern (in press), there has been substantially more research on how hormonal changes during adolescence influence *sexual* feelings and behaviors than *affectional* feelings and behaviors. Additionally, we should investigate how youths' experiences of *connections* between their sexual and affectional feelings are interlinked with hormonal changes. Such questions are ripe for qualitative inquiries into youths' subjective experiences of love and desire—such inquiries would make an indispensable contribution to interpreting the biological data.

Another promising area for future study concerns mediating mechanisms. For example, Halpern, Udry, Campbell, and Suchindran (1999) conducted a longitudinal study in which they demonstrated that some hormonal effects on sexual activity and dating were, in fact, mediated by changes in body fat. Most importantly, the nature of these effects varied across males and females given the gender-specific social meanings of high versus low body fat. Specifically, although the hormonal changes of adolescents lead to higher body fat among young women and lower body fat among young men, Halpern and her colleagues found that the girls with the highest likelihood of dating were those with lower than average body fat levels, consistent with our society's preoccupation with thinness among women. In other words, although increased body fat is a marker of *biological* maturation among women, cultural norms have transformed this marker into an obstacle for *social* maturation. The critical importance of culture in this arena is demonstrated by the fact that when body fat, pubertal status, and pubertal timing were entered into a simultaneous regression predicting dating initiation, body fat proved to be the strongest predictor.

One possible direction for future research of this nature might involve exploring how adolescent girls' sense of subjective desire, which is linked to both hormonal and social factors, also intersects with their enjoyment or distress regarding pubertal changes in their bodies (from increased body fat to increased height to changes in breast size and waist-to-hip ratio). How might a girl's interpretation of and reaction to such changes (or the relative timing of such changes, compared with her peers) influence her subjective sense of sexual arousal and her willingness to acknowledge such feelings? Might girls who long for thin, lean, prepubertal bodies become gradually estranged from their own physiological cues of sexual arousal? What might this have to do with their cultural background, given the well-documented cultural differences not only in

standards for physical attractiveness but in the degree of positive and negative attention paid to pubertal transitions in behavior and appearance? Wedding an analysis of these factors to an analysis of biological factors could substantially inform our understanding of how adolescents' subjective *experiences* of normative hormonal changes are filtered through unique cultural, intrapsychic, and interpersonal contexts.

Clearly, the success of such analyses depends on researchers' ability to identify the "right" cultural and biological variables and to appropriately model their independent and interacting influences not only on easily quantified acts and behaviors, but also on individuals' highly personal subjective experiences. Again, qualitative data are indispensable in this regard. To demonstrate this point, we take a brief digression into some of our own work to highlight how qualitative analyses of youths' sexual and affectional experiences can reveal surprising and important dimensions of their subjective sexual experiences.

### **The Importance of Experiential Questions and Answers**

In reviewing extant biosocial research on adolescent sexual behavior, Halpern (in press) noted that future researchers should expand the range of sexual/romantic "outcomes" that are assessed as a function of biological maturation. In our view, this expansion must incorporate greater attention to the subjective *quality* of adolescents' experiences. This direction will require different methodologies than the large-scale survey techniques, which have dominated conventional social scientific research on adolescent sexuality. Specifically, it requires phenomenological or experiential data collected with methods that elicit youths' own perspectives on everything from the local social meaning of certain transitions to the way certain urges and desires actually *feel* in their bodies. Of course, such studies are difficult to get approved and funded as a result of long-standing taboos prohibiting forthright, positively oriented discussions of sexuality with adolescents, which has surely contributed to the dearth of such research. Nonetheless, a developing body of qualitative data on contemporary young women has begun to reveal important subtleties regarding their sexual feelings and self-concepts. Up until now, such studies (which typically involve in-depth interviews with small, purposive samples) have remained altogether divorced from biologically focused analyses, but a brief review of some of their more notable findings makes clear how much this approach could contribute to biologically focused analyses of the development of desire and the importance of integrating biological dimensions of sexuality into such studies.

For example, Fine (1988) conducted a yearlong ethnography in an urban public school, which she intertwined with analyses of public



policy and sexuality education efforts. As noted earlier, she found that when adults spoke to and about adolescent girls in the context of sexuality, discourses of sexual desire were almost completely supplanted by discourses of victimization, morality, and disease. Fine argued that these discourses reflected and reproduced norms of heterosexuality that rendered boys sexually irresponsible, tarnished the reputations of girls who were actively sexual, and generally associated girls' sexuality with harm. She also observed girls' efforts to challenge these discourses by straightforwardly acknowledging their own desire or pleasure, while also acknowledging the conflict and ambivalence they wrestled with as a result of wading through simultaneously negative and seductive messages about female sexuality. She argued that the reality of both the pleasure and danger involved in adolescent girls' sexuality must be recognized in order to give girls a chance to make active, safe, and responsible sexual decisions as subjects of their own sexuality rather than solely as objects of boys' desire.

Fine challenged the notion that girls do not feel powerful embodied sexual feelings and opened the door for new questions about adolescent sexuality. Thompson (1990) continued in this direction by collecting in-depth, qualitative information from adolescent girls on an event that is frequently "tabulated," but rarely investigated at the level of subjective experience: first sexual intercourse. In collecting girls' descriptions of their first intercourse experiences, she learned that most of the girls found it painful and unpleasant, and were disappointed to discover that it did not meet their expectations as a gateway to deeper love and commitment. Nonetheless, a small group of girls offered more positive stories. These "pleasure narrators" noted that their mothers had talked to them about their sexuality in positive ways, had encouraged them to take their own feelings into account, and had socialized them to expect, even demand, satisfying sexual experiences. This kind of qualitative research is uniquely suited to elucidating how sociocultural and interpersonal factors manifest themselves at the level of individuals' private subjective experiences and their interpretations of these experiences.

It is also important for highlighting the diversity of youths' experiences. For example, Tolman (1994a, 1994b, 1996, in press) conducted an in-depth interview study comparing urban and suburban girls' embodied experiences of their own sexual desire. This study was notable not only for its simultaneous emphasis on the physiological, embodied phenomenon of sexual desire and the way in which this phenomenon is culturally constituted, but also for its focus on girls' desires as relevant to their sexual decision-making, a surprisingly understudied area. Acknowledging society's ambivalence and anxiety about female sexuality in general and

female *adolescent* sexuality in particular, Tolman's analysis was launched from the perspective that girls must negotiate a social set-up, a contradiction between their bodily feelings and what they routinely say, hear, and believe about their sexuality. Using qualitative narrative analyses, she identified consistencies across the group as a whole in how they described their experiences of embodied sexual desire and how these desires posed personal dilemmas requiring private resolution (Tolman & Szalacha, 1999).

For example, 90% of Tolman's respondents spoke in an "erotic voice," that is, described powerful sexual feelings *in their bodies* that they distinguished from their romantic wish to be in a relationship (although for a number of girls, these two experiences were intertwined). Interestingly, there were notable differences between the ways in which urban and suburban girls described responses to their own bodily feelings: The urban girls' narratives of sexual desire weaved together themes of caution, fear of physical danger, and concern about social consequences. In other words, these girls were frequently concerned with how their desires might lead them to be *treated*. In contrast, the suburban girls described a tension between curiosity and conflict about their identities as "good" girls, and showed concern with how others might *think* of them rather than treat them.

Across the urban/suburban divide, psychological typologies emerged in how girls dealt with their desire. Some described "silent bodies," that is, reporting they did not feel desire, whereas others were confused about whether their embodied feelings signified sexual desire or other feelings, such as anxiety or fear. Some girls told stories about resisting their desires, trying literally to talk their bodies out of desire, as in one girl's recollection that "my body says yes, yes, yes, yes and my mind says no, no, no." Other girls spoke about hiding their sexual feelings, taking them into the "underground" of their own private awareness but out of public sight, in order to protect themselves from perceived harm and negative consequences, for instance, drinking in public in order to "blame it on the alcohol." A few girls described a politicized resistance, springing from awareness of the double standard encouraging and acknowledging male adolescent desire while denying or restricting female desire. These girls refused to comply with the notion that girls are not supposed to have sexual feelings and, instead, described having pleasurable, responsible sexual experiences on their own terms (although, importantly, some of them distinctly chose *not* to have sexual intercourse). Furthermore, some managed to elude attempts at sexual violation because of their clear-cut awareness regarding when they did *and did not* experience desire and what the potential consequences of acting on those feelings might be.

Tolman also found that among the suburban girls (but *not* the urban girls), there was a significant interaction between a girl's history of sexual violence and her current experience of desire. Specifically, themes of vulnerability were particularly salient in the desire narratives of suburban girls who had experienced sexual abuse, molestation, sexual attack, or rape. Yet this was not observed among the urban girls, despite the fact that their rates of prior sexual victimization were comparable to the suburban girls. This finding challenges conventional assumptions that it is urban girls (and, in most contemporary stereotypes, urban girls of color) whose sexual behavior is forged in the context of violence and victimization. It also underscores the complexity, both for young women and for researchers, of trying to understand girls' own sexual feelings in a context that either demonizes or entirely denies them, within a society that is permeated by the constant threat and reality of sexual violence.

This type of detailed, experiential information could enable far more sophisticated interpretations of youths' biological transitions before, during, and after puberty. Instead of simply assessing whether changes in specific hormone levels correlate with changes in sexual thoughts and behaviors, we might investigate how a girl's specific social and interpersonal context influences the nature and subjective quality of these changes at an experiential level. For example, how might maturational changes in sexual desire be experienced differently by girls living in sexually charged environments, where sexual stimuli are encountered daily, versus environments in which access to sexual images and information is severely restricted? How might a girl's history of autoerotic behavior shape her awareness of fluctuations in sexual fantasy and desire? Similarly, how might her history of positive, intimate, *nonsexual* relationships influence the way in which she experiences links and distinctions between romantic love and sexual desire? Does her cultural environment portray women as sexually predatory or sexually reticent? Such factors might help explain why some women come to experience their desires as powerful versus weak, uncontrollable versus manageable, loving versus lustful, exciting versus frightening. Understanding desire at these experiential levels enables an understanding of *how* biological underpinnings of sexuality are woven together with cognitively and emotionally mediated cultural discourses to produce specific embodied experiences.

### **The Development of Same-Sex Desire**

The importance of experiential data on individuals' subjective sexual experiences is nowhere more evident than when investigating "nonnormative" sexual phenomena, such as same-sex desires. Historically, researchers of same-sex sexuality and its development have focused

greater attention on identifying its causes than on assessing how it is subjectively experienced by different individuals. Yet the latter issue is likely to become increasingly important as we strive to wed our emerging understanding of the potential biological underpinnings of same-sex sexuality with our emerging understanding of the diversity and variability observed in experiences and expressions of same-sex sexuality across different stages of life, different communities, different cultures, and (perhaps most notably) different genders.

For example, whereas the traditional essentialist model of sexual orientation portrays it as a stable, early appearing trait (Bailey & Pillard, 1995; Bailey et al., 1993; Ellis, 1996; Ellis & Ebertz, 1997; Gladue, 1993; Green, 1993), there is considerable qualitative and quantitative data suggesting that this model less adequately describes the development and experience of same-sex sexuality among women than among men. Some sexual-minority women have no childhood or adolescent recollections of same-sex attractions (Kitzinger & Wilkinson, 1995) but claim that their same-sex attractions were triggered in adulthood by exposure to lesbian, gay, or bisexual ideas or individuals (Golden, 1996) or the formation of an unusually intense emotional attachment to one particular woman (Cassingham & O'Neil, 1993; Kitzinger & Wilkinson, 1995; Shuster, 1987). Others report abrupt changes in their sexual attractions over time (Weinberg, Williams, & Pryor, 1994) or feel that they were able to shape the direction of their sexual or affectional feelings through specific choices regarding intimate relationships (Whisman, 1996).

According to an essentialist perspective, such phenomena are most effectively explained as products of either misperception (Bergler, 1954; Defries, 1976) or internal and external social constraints (Jensen, 1999). For example, if a lesbian who is exclusively attracted to women recalls strong attractions to men in the past, one might consider two possible explanations: Either she was never authentically attracted to men (and only believed so due to social pressure and denial of her "true" sexual orientation) or she was never exclusively attracted to women (i.e., she is actually bisexual rather than lesbian). Because sexual orientation is theoretically fixed over the life course, one's resulting propensity to experience same-sex and opposite-sex attractions becomes similarly fixed.

Yet when we investigate women's *subjective experiences* of their same-sex sexuality, this explanation appears inadequate. In an ongoing longitudinal interview study of 89 young sexual-minority women, Diamond (1998, 2000, in press) has found that more than half of them changed their sexual identity labels at least once after first

“coming out” as nonheterosexual, often because they found themselves in unexpected relationships that contradicted their perceptions of “typical” lesbian or bisexual behavior. For example, a number of lesbian women ended up having sexual contact with men as the years went by, and some felt that even if these experiences were “exceptions” to their general pattern of attraction and behavior, they could no longer comfortably claim a lesbian label. Perhaps most interesting, a surprisingly large number of women traded in their lesbian or bisexual label for an “unlabeled” identity. Many of these young women indicated that as time went by, they became increasingly aware of the way in which sexual identity categories failed to represent the vast diversity of sexual and romantic feelings they were capable of experiencing for female and male partners under different circumstances. As one woman said, “I’m really attracted to the person and not the gender, and there’s no category for that, not even ‘bisexual.’” Such data demonstrate how much we lose by trying to fit women’s (and men’s) complex, highly contextualized experiences of same-sex and other-sex sexuality into cookie-cutter molds of “gay,” “straight,” and (only recently) “bisexual.”

Importantly, fluidity in sexual attractions, behavior, and identity does not necessarily tell us anything about the origins of sexual orientation. Many have assumed that if sexual orientation has any sort of genetic basis, same-sex desires should be inherently stable over the life course and impervious to sociocultural context. Yet changes in individuals’ interpersonal relationships, social environments, and even personal ideologies may render same-sex and other-sex attractions differentially salient at different stages of life, regardless of how long a particular individual has experienced these attractions, how exclusive they are, and whether or not they are coded in the genes. In fact, the potential for change in same-sex attractions may itself be biologically wired via neurobiological circuits integrating the brain systems responsible for sexuality with those responsible for emotional attachment and caregiving (Diamond, 2001). Perhaps the most promising way to investigate these possibilities is to wed biologically based investigations of the development and expression of same-sex sexuality with comprehensive, culturally sensitive qualitative analyses of how same-sex sexuality is experienced in the minds, thoughts, emotions, *and* bodies of women and men in different sociocultural and interpersonal contexts at different stages of life.

This is particularly important for meaningfully interpreting fluidity in sexual minorities’ subjective sexual experiences and discontinuity in their developmental trajectories, topics that have long been noted

by sexuality researchers, but still receive far too little theoretical or empirical attention (Kitzinger & Wilkinson, 1995). As critiqued by Boxer and Cohler (1989), there has been considerably more research aimed at identifying *continuities* between childhood and adulthood same-sex sexuality (or indicators thereof, typically childhood gender atypicality: Bailey, Nothnagel, & Wolfe, 1995; Bailey & Zucker, 1995; Green, 1987; Phillips & Over, 1992; 1995; Zuger, 1984; 1988) than on detecting and explaining instances of change in discontinuity within the sexual-minority life course (as in Baumeister, 2000; Blumstein & Schwartz, 1977; Dixon, 1984, 1985; Golden, 1987; Kitzinger & Wilkinson, 1995; Stokes, Damon, & McKirnan, 1997; Weinberg et al., 1994). Boxer and Cohler (1989) argued that this overemphasis on continuity, exacerbated by a reliance on retrospective rather than longitudinal data, has impoverished our basic understanding of normative sexual development among sexual minorities *and* heterosexuals (for more extensive discussion of fluidity in heterosexual sexuality, see Baumeister, 2000; Wilkinson & Kitzinger, 1993). A complex and nuanced understanding of the normative sexual-minority life course that includes and explains both continuity *and* discontinuity proves increasingly important in light of efforts by psychologists, clinicians, and policy makers to design research programs, therapeutic interventions, and sex education curricula addressing the concerns of sexual-minority *adolescents*. At the current time, however, many such curricula presume a typical sexual-minority developmental trajectory—specifying early and continuous awareness of stable, exclusive same-sex attractions—which may be far less typical than is frequently assumed. Thus, although some youths may be successfully assured that their feelings and experiences are normal, others may feel doubly deviant, their developmental trajectories reflecting neither heterosexual nor sexual-minority norms.

In viewing and portraying sexual minorities as a consistent “kind” of person whose most pressing developmental tasks are simply the recognition and disclosure of their sexual orientation, we have paid too little attention to those whose changing desires create a similarly changing set of developmental hurdles at subsequent points along the life course. The prevailing impression that these individuals are few in number and exceptional in nature may be an artifact of a reliance on a restrictive set of assumptions concerning the stability and internal coherence of sexual orientation. More extensive qualitative research to chart the full diversity of same-sex sexuality among women and men and the way in which this diversity is manifested at both cultural and biological levels will prove useful not only to scientists investigating the nature of sexuality,

but also to adolescents and adults secretly hungering for greater understanding of their experiences.

### **Adult Sexuality—Deviance Becomes Dysfunction**

Unveiling the vicissitudes and complexities of sexual subjectivity among adolescents clearly challenges and expands our society's conceptions of sexual desire and development, simultaneously acknowledging and contesting the restrictive conceptualizations of these topics reproduced by contemporary culture. The same approach needs to be applied to the study of sexuality into adulthood. As it stands now, there is substantially more research on maturational changes in sexuality than on changes in sexual feelings and experiences that occur during the 20-60 years *after* sexual maturation.

When adult sexuality does receive attention, it is usually in the form of sexual *dysfunction*, an issue that has garnered notable concern since the recent publication of data from a nationally representative survey of adult sexuality revealing that both sexual dissatisfaction and dysfunction are far more widespread among American adults than commonly assumed (Laumann, Paik, & Rosen, 1999). Specifically, over 30% of women over the age of 18 reported difficulties with sexual arousal and sexual desire, whereas over 30% of men over the age of 18 experienced premature ejaculation. Further contributing to the interest in sexual dysfunction is the increasing availability of pharmacological remedies for such problems, most famously Viagra. In fact, Leiblum and Rosen (2000a) pinpointed the date of Viagra's approval by the FDA (March 29, 1998) as a watershed event in sex therapy, marking a large-scale trend toward *combined* medical and psychological treatment for sexual problems.

This trend holds both promise and danger. On the one hand, it obviously offers much-needed relief to individuals whose physiologically based sexual problems have proved unresponsive to traditional sex therapy. In the case of women, many health care advocates and feminists have applauded the fact that physicians have stopped telling women that their sexual problems are "all in their heads" and have started taking their complaints seriously as indications of possible medical problems, giving them a new choice between pharmaceutical and "talking" cures (or some combination thereof). On the other hand, the widespread embrace of medical remedies for sexual dysfunction threatens to obscure the sociocultural and interpersonal dimensions of these phenomena (Tiefer, 1996; Tiefer & Kimmel, in press). Although sex therapists typically emphasize that medical therapies are unlikely to be successful if the cultural and interpersonal contributions to sexual problems remained unexamined (Lottman, Hendricks, Vrugnink, & Meule-

man, 1998), this point is rarely emphasized in popular discussions of such remedies.

For example, the article that started the current flurry of attention to sexual dysfunction contains voluminous evidence of the social and interpersonal dimensions of the problem, yet somehow this information has been lost in the hype over just how prevalent sexual dysfunction seems to be. Specifically, Laumann and his colleagues (1999) found that sexual problems are significantly more likely to be reported by men and women with low social status (indexed by low levels of education and falling household income). They explained this association by noting that sexual dysfunction at all stages of life is positively associated with emotional and stress-related difficulties. They posited that individuals with low social status might experience more sexual problems than those with high social status, because they are under more chronic stress as a result of their social position. This finding lays an important foundation for exploring how larger sociocultural and economic conditions trickle down to construct individuals' most private subjective experiences. Yet such complexities are certainly not part of the "take-home" message from the mainstream media coverage of the study, and pharmaceutical companies have little interest in (and little to gain from) this type of analysis.

Importantly, it bears noting that nuanced, complex analyses of the psychological and interpersonal contributions to subjective sexual experiences can, in fact, be found in much of the *clinical* literature on sexuality (Leiblum & Rosen, 1988, 2000b; Ussher & Baker, 1993). For example, the very question of what "normal" adult desire looks like (a question that becomes immediately salient once the topic of *dysfunctional* desire is broached) is addressed by some sex therapists as fundamentally unanswerable without reference to the individual's cultural and interpersonal context (Ussher & Baker, 1993). One apt example of this stance concerns the widely discussed problem of low sexual desire, which has been reframed by some sex therapists as an issue of desire *discrepancy* between partners (Lazarus, 1988). Thus, whereas contemporary cultural discourses about sexual dysfunction implicitly cast the low-desire (and typically female) partner as "the one with the problem," certain couple-oriented therapeutic approaches seek to avoid this localization of blame altogether, instead affirming and legitimizing the low-desire partner's subjective sexual reality and considering the *high-desire* partner's contribution to the desire discrepancy problem (Apfelbaum, 1988).

In our view, in all investigations *and treatments* of "sexual dysfunction" researchers and clinicians should simultaneously consider both



the potential physiological underpinnings of sexual problems *and* the specific social, cultural, historical, and interpersonal contexts in which these problems are made manifest. The political and economic interests intertwined with specific conceptualizations of sexual dysfunction deserve especially close scrutiny. Leiblum and Rosen (2000a) pointed out that, in 1998, an international panel was convened to update classifications of female sexual disorder for the purpose of facilitating accurate diagnosis *and* facilitating the development of specific pharmacological interventions for such problems (Basson et al., 2000). Clearly, pharmaceutical companies have a vested interest in finding more things “wrong” than “right” about the average woman’s pattern of sexual desire and response. Rather than embracing the proliferation of biomedical therapies for an ever-expanding number and type of female sexual problems, researchers should continue to critically examine how eroticism is constituted not only by biological processes, but also by deeply personal longings for affirmation, to the avoidance of inner doubt, to the fulfillment of cultural ideals of femininity and masculinity, to the need for power, to the impact of nonsexual economic and sociopolitical contexts, personal histories of safety and abuse, and to a secure sense of identity.

### Concluding Remarks

The explanatory power of *both* cultural *and* biological accounts of sexuality should not be underestimated, and thus it behooves us not to allow either perspective to claim the mantle of “truth” about sexuality and sexual desire. Just as an exclusive focus on the biological underpinnings of sexual desire can inadvertently lead to a dangerously naturalized hierarchy of “normal” and “deviant” desires, an exclusive focus on the socially constructed origins of sexual desire can inadvertently lead to an untenable denial of the role of bodies and biology in human sexual experience. Neither culture nor anatomy is destiny, but neither can be discounted without impoverishing our understanding of human sexuality. In this article, we hope to have demonstrated the possibility of how reconceptualizations of the interplay between bodies and culture can lead to more diverse, nuanced sets of questions that will provide more provocative and perceptive answers regarding women’s and men’s sexuality and subjective sexual desires.

Yet obviously, it is far easier to argue for integrative, multi-method, biocultural research on sexuality than to actually conduct, fund, and publish it. Like all disciplines, the social, behavioral, and biological sciences have their own long-standing enclaves (and subenclaves), within which researchers share specific methods, terminologies, and episte-

mologies (not to mention journals, conferences, and study section appointments). Hewing to the old road, where everybody divides up the "problem" of sexuality into neat, self-contained sections, would obviously be far easier and more comfortable for everybody involved. What will it take, then, before researchers investigate adult sexual function and dysfunction with a combination of hormonal assays, in-depth qualitative interviews, *and* critical sociocultural analyses? What will it take before researchers track pubertal changes in boys' and girls' nuanced experiences of sexual desire as scrupulously as we typically track changes in body fat, body hair, and reproductive capacity? Perhaps most importantly, it will take a good deal of collaboration across different disciplines and specialty areas, and a willingness on the part of researchers to acknowledge that their particular theoretical and empirical approach to sexuality, whether biological or sociocultural, has some fundamental flaws as well as fundamental strengths. It will also take a greater openness on the part of journal and grant reviewers to multidisciplinary, integrative studies that draw on different (and often unfamiliar) literatures and approaches.

Then there is the perennial issue of politics. Thus far, researchers attempting to conduct more detailed studies about young women's and men's sexual experiences face increasing obstacles from a culture that is heavily invested in preventing sexual risk but is ambivalent about the prospect of promoting sexual health. For example, in 1991 Richard Udry and his colleagues were awarded a grant from the National Institutes of Health to conduct a nationally representative study of many different forms of adolescent sexuality (again, in the name of preventing risk and enhancing safety rather than as an effort to understand normative features of adolescent sexuality). Objective reviewers approved the study based on its scientific merit, as is standard practice in the scientific community. Yet Congress subsequently passed legislation aimed at stopping the research, making it the first federally sponsored scientific enterprise to have its funding canceled on overtly political rather than scientific grounds (Udry, 1993). We have little hope of deepening and diversifying our conceptualizations of adolescent sexuality if cultural phobias about frank and multidimensional discussions of sexuality continue to stymie scientific research.

It bears noting that we do not expect or advocate that all future researchers of gender and desire attempt a fully integrative approach, or take the risk of applying this approach directly to the most controversial (and thus typically understudied) topics. As we stated early on, some degree of specialization is necessary and inevitable, and certainly there are some topics that are more amenable to primarily biological or

primarily sociocultural approaches than others. However, all sex researchers can and should demonstrate greater sensitivity to the unique contributions and limitations of each facet we conceive of as the cultural/biological collage, as well as greater awareness of the extent to which our *own* positions in this collage fundamentally shape the way we see and represent the "truth" about gender and desire. This may seem an easy enough goal, but even a cursory review of the extant literature on sexuality reveals just how elusive it is. Hopefully, instead of revisiting the topic of biocultural interactionism every few years and then filing it away, sex researchers will take greater advantage of the increasing sophistication of sociocultural, biological, and more integrative studies of human experience by systematically using both approaches to expand our understanding of gender and sexuality across the life course.

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