

# The Life Course Development of Human Sexual Orientation: An Integrative Paradigm

Phillip L. Hammack

University of Chicago, Chicago, Ill., USA

---

## Key Words

Homosexuality · Identity · Life course theory · Sexual orientation

---

## Abstract

Through the application of life course theory to the study of sexual orientation, this paper specifies a new paradigm for research on human sexual orientation that seeks to reconcile divisions among biological, social science, and humanistic paradigms. Recognizing the historical, social, and cultural relativity of human development, this paradigm argues for a moderate stance between essentialism and constructionism, identifying (a) the history of sexual orientation as an identity category emerging from the medical model of homosexuality in the late 1800s; (b) the presence of same-sex desire across species, history, and cultures, revealing its normality; (c) an underlying affective motivational force which organizes sexual desire within individuals, and (d) the assumption of a sexual identity in response to the identity and behavioral possibilities of a culture. This framework considers the biology of sexual desire while simultaneously acknowledging the socially constructed nature of identity and the historical foundations of sexual orientation as a meaningful index of human identity.

Copyright © 2005 S. Karger AG, Basel

The study of human sexual orientation is currently confronted with two significant problems. First, research on sexual orientation continues to be intellectually fragmented along disciplinary lines, primarily due to divergent epistemological, methodological, and metatheoretical perspectives. Second, as societal transformations fundamentally alter the life course of individuals who identify as gay, lesbian, or bisexual [Cohler & Hammack, in press], it becomes increasingly apparent

---

## KARGER

Fax +41 61 306 12 34  
E-Mail [karger@karger.ch](mailto:karger@karger.ch)  
[www.karger.com](http://www.karger.com)

©2005 S. Karger AG, Basel  
0018-716X/05/0485-0267\$22.00/0

Accessible online at:  
[www.karger.com/hde](http://www.karger.com/hde)

Phillip L. Hammack  
Department of Comparative Human Development  
University of Chicago, 5730 South Woodlawn Avenue  
Chicago, IL 60637 (USA), Tel. +1 773 256 6350  
Fax +1 773 702 0320, E-Mail [phammack@uchicago.edu](mailto:phammack@uchicago.edu)

that sexual orientation as a meaningful index of human identity is historically and culturally contingent.

This paper offers an interdisciplinary, integrative perspective that seeks to reconcile disparate theoretical formulations and research findings. Through the application of an existing theory of human development (i.e., life course theory [Elder, 1998]), I present a new paradigm for the study of human sexual orientation which synthesizes diverse intellectual perspectives from fields such as biology, psychology, anthropology, sociology, history, and gender studies. This paradigm is meant to provide a new articulation of the genesis of human sexual orientation within individuals, in consideration of the biological, historical, and cultural forces that create the social ecology within which human development occurs.

Following an overview of life course theory, the paper specifies the intellectual impetus for such a project in four sections. First, a brief explication of the disparate epistemological approaches to sexual orientation reveals the need for an integrative paradigm that avoids the trappings of either radical essentialism or radical constructionism. In the remaining sections of the introduction, reviews of the research on sexual orientation and sex differences, culture, and history reveal both the origins of the current metatheoretical schism in sexual orientation research and the relevance of an integrative approach. The bulk of the paper is then devoted to the articulation of a life course paradigm which may be used to examine the development of human sexual orientation. The paper concludes with several suggestions for research applications of a life course approach.

### **The Life Course Theory of Human Development**

Within the sociology of aging and developmental psychology, life course theory developed in response to the recognition in social science research of generation and cohort effects [Baltes, 1968; Elder, 1975; Kertzer, 1983; Mannheim, 1928; Neugarten, 1979; Ryder, 1965]. As a general theory of human development, life course theory emphasizes the salience of social, cultural, and, in particular, *historical* context on individual lives over time. In this formulation, developmental trajectories are altered by changing historical ecologies of development. As a framework for understanding individual development, life course theory shares the concern with person-environment transaction explicit in the ecology of human development perspective [Bronfenbrenner, 1979; see Elder, 1995]. This theoretical perspective has long argued for the salience of context and the mutual influence of person and environment in development. The *social ecology* of development, based on Bronfenbrenner's [1979] ecological perspective, refers in this paper to the totality of contextual systems to which the developing individual is exposed. Beyond the 'microsystem' of development (e.g., patterns of interpersonal relations) lies a 'macrosystem' represented in the consistencies revealed by cultural discourse and ideology. An individual's social ecology of development refers to the totality of these systems, themselves the legacy of history and the intergenerational transmission of a cultural repertoire.

Life course theory recognizes the significance of the social ecology of development but emphasizes the historical positioning of one's life course. The theory is most concisely explicated in the work of Glen Elder [1974, 1994, 1998], in which

he has explored the effect of living in particular historical circumstances (e.g., the Great Depression) on subsequent development. The key principles of life course theory emerge from this work, two of which are particularly relevant to the study of sexual orientation. First, the principle of *historical time and place* posits that ‘the life course of individuals is embedded in and shaped by the historical times and places they experience over their lifetime’ [Elder, 1998, p. 3]. Elder’s [1974, 1979] work on children of two different birth cohorts – one experiencing childhood during the prosperous 1920s and one navigating childhood during the contrary 1930s – revealed the significance of historical circumstances in determining life course development. Individuals in the second cohort experienced the impact of the Depression on family economic situation and family stress directly during childhood and adolescence, which resulted in negative effects on mental health over time. The course of life is intimately connected to the historical circumstances of one’s social ecology of development, as the historical time and place of development determines both behavioral possibilities and a particular discourse on human identity, with categories of identification containing social meaning (e.g., ‘woman’ in the 1950s has a different social meaning than ‘woman’ in the 2000s as a result of social movements in history).

A second principle in life course theory relevant to sexual orientation is the principle of *human agency*: ‘individuals construct their own life course through the choices and actions they take within the opportunities and constraints of history and social circumstances’ [Elder, 1998, p. 4]. An example from Elder’s work on the Great Depression is that, despite significant adversity in historical and social circumstances, many families achieved levels of coping and decision-making that contributed to a far more ‘positive’ life course trajectory than others. The notion of resilience in human development – the finding of positive developmental outcome in the context of significant risk and adversity [Cohler, 1991; Luthar, Cicchetti, & Becker, 2000] – reveals the significance of human agency in affecting the life course trajectory.

Life course theory seeks to balance the influence of biology and history by retaining a strong notion of agency. According to Elder [1998],

Life course theory and research alert us to [the] real world, a world in which lives are lived and where people work out paths of development as best they can. It tells us how lives are socially organized in biological and historical time, and how the resulting social pattern affects the way we think, feel, and act. (p. 9)

Life course theory thus acknowledges the dialectical process between internal and external, biology and culture, person and society. In this way, it offers a theoretical framework which moderates the polarizing metatheoretical perspectives in sexual orientation research.

## **Philosophies of Sexual Science**

An integrative paradigm is needed in sexual orientation research to ameliorate the impact of profoundly disparate approaches among disciplines [Tolman & Diamond, 2001]. A major metatheoretical concern in sexual orientation research continues to center on the debate between the philosophical assumptions underlying

disciplinary approaches. Specifically, the distinction between *essentialism* and *constructionism* continues to frame this intellectual division in research on sexual orientation. The resulting divergent research frameworks create a lack of clarity on the meaning of sexual orientation as a construct. Discordant conceptualizations of sexual orientation serve to render lines of scholarship incomparable, since comparisons across studies require operational consistency. The extreme consequence of this occurrence within the academy and research enterprise is that essentialists (often biologists or biopsychologists) and constructionists (often sociologists or gender studies scholars) at times dismiss one another's work without even reading it (see the response to social constructionism by Rahman & Wilson [2003]). This phenomenon contributes to knowledge fragmentation on sexual orientation and impedes the research innovation that might occur through interdisciplinary collaboration.

Research that assumes an essentialist perspective views sexual orientation as an internal property of individuals which transcends history and culture. In the essentialist frame, sexual orientation is an ahistorical, universal, context-independent underlying trait of the individual [DeLamater & Hyde, 1998]. Context matters to the essentialist only as it constrains, prohibits, or facilitates phenotypic expression. Our development of a social identity system with which to describe individuals with same-sex orientations represents the culmination of prior attempts to make sense of same-sex desire across history and cultures. In other words, our conceptualization of sexual orientation as a *personal trait* reflects an underlying reality that has always inhered in persons but has never been taxonomically specified.

Essentialism identifies sexual orientation as a deep category of human nature, which philosopher of science Edward Stein [1999] terms a 'natural human kind.' The only historical and cultural variation underlying sexual orientation involves the very act of labeling and categorizing. Sexual orientation as an intrinsic experience of the person has always been present, it simply has gone unrecognized in other historical and cultural milieus. In contrast, the constructionist perspective argues that sexual orientation is a *social* human kind – a characteristic created as a social and historical act.

Social constructionism as a line of scholarly theory posits that knowledge is a culturally and historically specific social product sustained by social processes and defined by language [Berger & Luckmann, 1966; Burr, 1995; Gergen, 1999]. Applied to the concept of sexual orientation, social constructionism argues that sexual orientations are 'products of particular historical and cultural understandings rather than being universal and immutable categories of human experience' [Bohan, 1996, p. xvi]. Constructionists do not posit that sexual orientation is *chosen*. Rather, it is a social human kind exterior to the individual *describing* the internal sexual desire of that individual categorically (or dimensionally, depending on the taxonomy). It is a system made by human beings to describe and make sense of desire. Ardent constructionists would likely posit that even desire itself is socially constructed, since the totality of human experience is socially mediated in this perspective. Essentialism, by contrast, views sexual orientation as inhering within the person and the taxonomy of sexual orientation as a natural human attempt to describe an actual intrapersonal property.

Both essentialism and constructionism are subject to critique. Essentialism is legitimately criticized for being reductionistic and deterministic, universalizing and

ahistorical. Constructionism is legitimately criticized for being radically relativistic and eliminating the agency of the individual [De Cecco & Elia, 1993]. Research revealing differences in sexual orientation based on sex and culture both contributes to this conceptual polarization and calls into question the generalizable regularity of sexual identity development.

### **Sex Differences and Sexual Orientation**

The philosophical division underlying these divergent perspectives may derive, in part, from findings of sex differences in sexual orientation research. Specifically, essentialism seems to 'fit' better with research on males, while constructionism seems to more accurately describe the experience of females [e.g., Kitzinger & Wilkinson, 1995]. Biological differences between men who identify as gay and men who identify as straight suggest underlying genetic, hormonal, and neuro-anatomical differences based on self-reported sexual orientation [for a review, see Rahman & Wilson, 2003]. Furthermore, qualitative research relying on retrospective accounts of realizing same-sex desire suggests that it is outside the realm of conscious control [Savin-Williams, 1998]. The presence of an apparent bimodal distribution of sexual orientation among men (i.e., many men who identify as either heterosexual or homosexual, but few who identify as bisexual [Bailey, Dunne, & Martin, 2000; Pattatuci & Hamer, 1995]) suggests a possible underlying 'reality' of the sexual orientation dichotomy for men. These types of findings lend support to the notion of an essentialist position which argues for sexual orientation as a natural human kind. There appear to be different sexual 'types' of men: those who prefer their own or the opposite sex for sexual activity and relationships. These men can be differentiated not only in the way they identify (i.e., their personal sexual identities), but also according to aspects of their biological compositions.

Research with females reveals a different story about sexual orientation. Specifically, the constructionist perspective seems to fit better with research on women. The finding of biological differences between women who identify as lesbians and heterosexuals is uncommon [Veniegas & Conley, 2000], with some exceptions of self-identified 'butch' lesbians [e.g., Brown et al., 2002]. Female sexual orientation also appears to be multimodal in its distribution [Bailey, Dunne, & Martin, 2000], meaning that there exists a wide spectrum of self-identification for women and the presence of many women who identify as bisexual. Research also suggests that female sexual orientation frequently changes over the life course of an individual [Diamond, 2000, 2003a; Parks, 1999; Stein, 1997], which may be related to greater 'erotic plasticity' [Baumeister, 2000], sexual fluidity, and/or a more relational, sex-unspecific pattern of erotic preference [Peplau, 2001; Peplau & Garnets, 2000]. Changes in sexual orientation are often reported as representing an act of direct agency on the part of the individual [Ponse, 1978; Stein, 1997].

In sum, one origin of the philosophical schism in sexual orientation research is likely related to the persistent finding of sex differences. These sex differences appear to make the essentialist argument more salient for males and the constructionist argument more salient for females. Cultural and historical perspectives also contribute to the underlying conceptual polarization in sexual orientation research.

## Culture and Sexual Orientation

Homosexual behavior is common across cultures but takes on a variety of social forms [Greenberg, 1988; Herdt, 1997]. That is, the notion of sexual orientation understood in much of Western culture through the 'gay-straight' dichotomy is extremely rare; few cultures reveal patterns of exclusive homosexuality [for exceptions, see Boswell, 1994; Williams, 1986]. Yet homosexual *behavior* – sex acts between members of the same sex – occurs with frequency throughout the world. The *meaning* of homosexual behavior appears to vary across cultures.

A good example of this variation is apparent in Herdt's [1981, 1982, 1999] extensive fieldwork among the Sambia of Papua New Guinea, in which adolescent males participate in an initiation ritual. In this ritual, the adolescent males perform oral sex on the young adult and adult men, swallowing their semen in order to, they believe, begin to produce their own. There is a distinct period in the life course among the Sambia in which sex segregation and exclusively homosexual behavior occurs. However, Sambian men eventually initiate heterosexual activity in adulthood, and exclusive homosexuality in adulthood does not occur with great frequency.

Similar evidence of cross-cultural variability in homosexuality exists in research on female sexuality. In Lesotho, southern Africa, relational and sexual intimacy between adolescent females ('mummy-baby relations') is common [Gay, 1986], and there exists an institutionalized sexual relationship between a married woman and her *motsoalle* (an unmarried close female friend) [Kendall, 1999]. Blackwood [2000] reviewed the numerous examples of same-sex relations between women across cultures, including sexual 'sisterhoods' in nineteenth-century China [e.g., Sankar, 1986], adolescent same-sex play among the !Kung of southern Africa [Shostak, 1983], and the erotic attachments to both women and men of Creole women in South America [Wekker, 1999; see also Blackwood & Wieringa, 1999]. These examples of diversity in the social meaning of same-sex relations reveal the cultural relativity of human sexuality.

The extent to which this kind of anthropological evidence supports a constructionist perspective depends upon whether there is ethnographic data to suggest the existence of sexual orientation as a human 'trait' prior to the 1800s Western world. Though many cultures have had social identity systems to accommodate sexual diversity [e.g., Williams, 1986], none appear to have conceived of 'sexual orientation' in the categorical way which has evolved in Western discourse beginning in the nineteenth century. There is evidence, however, to suggest that other cultures have recognized something akin to the concept of sexual orientation in the social roles and sexual identity labels available to their members (e.g., the berdache of American Indian culture [Williams, 1986]). Research in other cultures, such as Hong Kong [Ho, 1995] and India [Asthana & Oostvogels, 2001], specifically argues that homosexual orientation is a social construct of the West. This recent cross-cultural research reveals the spread of 'Western' style homosexuality, with the emergence of specific gay and lesbian identity labels and communities, in part due to cultural globalization [see Herdt, 1997].

Cross-cultural research reveals same-sex desire and behavior as a normative part of human experience in many cultures. But it fails to empirically resolve the question of whether sexual 'orientation' is an essential trait of persons, or merely a

social construct of the West. While cultural variation in same-sex behavior reveals the social relativity of sexual practices, it fails to render essentialism impossible, nor does it fully expose sexual orientation as a social construct.

## History and Sexual Orientation

Just as homosexual behavior is common across cultures, it has been recorded over the entire course of human history from the time of ancient Greece [Greenberg, 1988; Mondimore, 1996]. As is the case across cultures, however, exclusive homosexuality or the grouping of individuals according to gender-specific sexual preference is inconsistently demonstrated in the historical record. Despite historical evidence of socially recognized same-sex relationships [e.g., Boswell, 1994], the concept of sexual orientation does not display continuity across history. As a clinical term, 'homosexuality' was introduced in a German medical pamphlet in 1869 and embraced by the emergence of the scientific study of sexuality initiated by Krafft-Ebing [1886]. Foucault's [1978] historical analysis argues for the increasing medicalization of sexuality at this point in history as a discourse of power and control in order to support dominant discourses of economic interest. Regardless of the underlying cultural function of such a conceptualization of sexuality, there is little question that the dominant perspective at the time was influenced primarily by a medical disease model, and homosexuality was only de-pathologized as a psychiatric illness in 1973 by the American Psychiatric Association.

Focusing on the urban United States in the late 1800s and early 1900s, we find a gradual embrace of the term and the concept of homosexuality as a legitimate identity category. Chauncey's [1994] historical study of gay culture in New York revealed subgroups of men somewhat similar to men in contemporary India [Asthana & Oostvogels, 2001]. *Fairies* were extremely effeminate men who had sex with men exclusively and were sometimes considered an intermediate sex. *Trade* were masculine men who had sex both with men and women. This dichotomy within the gay male community in *fin-de-siècle* New York reveals the power of gender roles in determining sexual practice. The masculinity of trade, for example, meant that they would ultimately reproduce. A third group, self-defining as *queers*, emerged around 1910 and were masculine men who had sex only with other men. Gradually, communities arose in urban centers around North America and Europe, embracing their 'infection' with same-sex desire and increasingly engaging in exclusively homosexual relationships.

Historical studies of same-sex relations among women reveal many instances of same-sex experience over time. Faderman's [1981] work on the history of romantic relationships between women offers a detailed analysis of the changes in female relational experiences in light of social systems for understanding sexuality from the sixteenth to the twentieth century. Focusing on historical changes in same-sex relations among women over the course of the twentieth century, she argues that the nature of these relationships changed radically with the significant social changes of the century, including the Women's Rights Movement and the widespread dissemination of feminist thought [Faderman, 1991]. Romantic friendships between women in the early twentieth century diminished with the pathologizing of same-sex relationships in Western society. Gradually, a legitimate lesbian identity

emerged in urban centers, reducing the notion of same-sex relations between women as 'odd' [Faderman, 1991].

In light of research on sex differences, as well as cultural and historical studies of homosexuality, one is forced to conclude that both essentialism and constructionism make conceptual sense. The validity of each philosophical approach does not rest on empirical discovery, as data can substantiate both positions. It is difficult to deny the complementary roles that biology, culture, and society assume in the development of sexual orientation among individuals, and historical evidence makes both essentialist and constructionist perspectives equally plausible [Halwani, 1998]. This philosophical conflict possesses continued relevance to the study of sexual orientation inasmuch as researchers continue to deny the possibility of developing a moderate, integrative metatheoretical approach and, subsequently, continue to produce dissonant research. The continued polarization in philosophical perspectives underlying sexual orientation research is in need of eradication, for the benefit of more meaningful scholarly inquiry on human sexuality in the late modern era.

### **The Development of Sexual Orientation in the Life Course Perspective**

To resolve the current conceptual division in sexual orientation research, the polarizing dichotomy between essentialism and constructionism must be rejected. A life course perspective on sexual orientation assumes the possible validity of both perspectives in articulating an integrative paradigm for future sexual orientation research.

#### *Life Course Perspectives on Gay, Lesbian, and Bisexual Identities*

A life course perspective has rarely been applied to the study of sexual orientation, with most developmental researchers acknowledging but not emphasizing the salience of sociohistorical context in their developmental models of sexual identity [e.g., Cass, 1979; Troiden, 1979]. Boxer and Cohler [1989], in a critical review of research on gay and lesbian adolescents, argue for a life course research perspective on sexual orientation. They particularly highlight the problem that prior research on gay and lesbian adolescence relied almost exclusively on retrospective self-reports from adults. The act of constructing a personal narrative in such retrospection always results in a coherent life story [Cohler, 1982], and the remembered past is often not the actual past. Boxer and Cohler [1989] rightly conclude that only prospective longitudinal studies with gay and lesbian youth will yield meaningful information on their changing developmental trajectories. In their adoption of the life course framework, they recognize cohort specificity and the significance of historical context in the experience of gay and lesbian adolescents.

The study by Herdt and Boxer [1993] of gay and lesbian adolescents in Chicago, Ill., USA, employed an interdisciplinary perspective with sensitivity to life course theory. The study examined the culture of 'Horizons,' a youth drop-in center, considering the history of the gay and lesbian community in Chicago. They

detailed the symbolic practices of the group (e.g., the ‘prom’), the rituals and rites of passage (e.g., coming out), and the developmental milestones of the youth group participants. They acknowledged cohort specificity, with an epilogue discussing coming of age in the era of AIDS. Their perspective seems to take certain premises of life course theory as given (e.g., the importance of history), without an overarching articulation of a theoretical framework.

In a theoretical paper, Hostetler and Herdt [1998] integrate a life course model of human development in their articulation of the concept of *sexual lifeway* – a construct that they recommend to replace ‘sexual orientation’ and ‘sexual identity’ entirely.

Sexual lifeways are the culturally specific erotic ideas and emotions, sexual/gender categories and roles, and theories of being and becoming a full social person that together constitute life-course development within a particular *sexual culture*. Sexual cultures, in turn, are the specific discursive and material fields in which systems of power relationships are used to control sexual behavior or conduct, and through which sexual lifeways are instituted, enculturated, enacted, and reproduced. (p. 264)

Through a brief historical analysis of changing conceptions of homosexuality over the past century in the United States, they argue that the concept of a historically and culturally situated (and mediated) sexual lifeway better represents the actual process of human sexual development than the more static notion of ‘identity.’ In keeping with the life course principle of human agency, they argue that the assumption of a particular lifeway is contingent upon ‘developmental agency’ – ‘a self-conscious, active engagement in our own development that *produces us* as living and desiring subjects, not objects that are simply acted upon’ (p. 277). They argue for a reconsideration of sexual taxonomies, based on the cultural and historical variation in sexual lifeways. They further argue, though, that sexual taxonomies are an important part of the social order within which development unfolds.

Parks’ [1999] study of lesbian identity development reveals the relevance of birth cohort in the study of sexual orientation. She recruited lesbians who were members of one of three generations (age 45 and over, 30–44, and under 30 years old). She conducted in-depth life history interviews with 31 women, discovering significant developmental differences among cohorts. For example, the age of reported self-awareness declined steadily and significantly from women coming of age in the pre-Stonewall era to those coming of age in the 1980s (from a mean age of 19 to 14 years). Similar trends were discovered for age at first sexual involvement, disclosure, and self-labeling. The identity development of lesbians, as Parks’ study reveals, by no means follows a simple, predictable trajectory. Rather, historical events fundamentally alter the developmental milestones of sexual orientation.

Recent work on sexual orientation by Cohler and colleagues [Cohler, in press; Cohler & Galatzer-Levy, 2000; Cohler & Hammack, in press] has begun to more explicitly integrate a life course theoretical perspective. The importance of birth cohort in the development of gay men and lesbians in the United States is highlighted in this work, in consideration of the history of gay and lesbian lives over the twentieth and early twenty-first centuries [e.g., Loughery, 1998]. At least five cohorts with unique developmental experiences are apparent in both research and autobiographical sources: (1) pre-War (World War II), (2) post-War, (3) post-Stonewall, (4) AIDS, and

(5) post-AIDS. Pre-War gay life was characterized by massive secrecy, furtive sex, and the inevitability of marriage and reproduction. The post-War urban culture, increasingly populated by hordes of soldiers who had engaged in homosexual behavior, witnessed the birth of urban gay communities, with more gay men choosing to live a nonheterosexual lifestyle [see Sadownick, 1996]. The Stonewall Inn riots of 1969 provided significant maturation and momentum to the Gay Civil Rights Movement, which began with the formation of the Mattachine Society in 1950 [Williams, 2003], marking the political and social involvement of a generation.

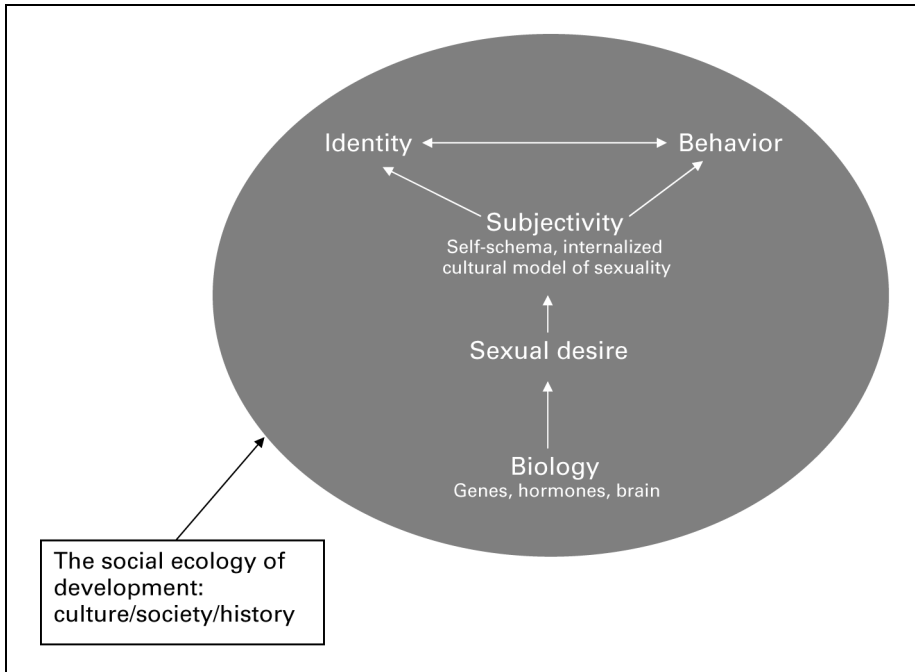
The generation of men and women who came of age during and after Stonewall experienced massive political involvement and fought for the acceptance of the urban gay and lesbian culture that had been formed by the post-War generation. This generation was also influenced by the sexual revolution and counterculture of the late 1960s and 1970s, which resulted in increases in the number of sexual partners and more freedom in sexual practices. With the discovery of AIDS in the early 1980s, this generation (along with the previous one) began to die en masse.

Those who came of age in the 1980s became highly educated about AIDS, and a cultural shift from promiscuity to monogamy occurred among gay men. By contrast, those who came of age in the mid and late 1990s witnessed the effectiveness of AIDS treatments, began to view HIV as a chronic, manageable illness (rather than the death sentence it was in the 1980s), and began to engage in unsafe sex in increasing numbers [e.g., Crawford et al., 2003; Vanable et al., 2000]. This most recent generation has also come of age in an era of gay-straight alliances in their high schools, not to mention mainstream media popularity of gay-male representations in such television programs as *Will and Grace* and *Queer Eye for the Straight Guy*. The effects of this far more accepting social climate for gay identity on today's youth remain to be seen, but it is difficult to argue that their developmental trajectories will not diverge considerably from those coming of age during Stonewall or AIDS.

Although the life course model has been adopted implicitly in work by sexual orientation researchers, an explicit theoretical exposition has yet to be articulated. The paradigm of sexual orientation development proposed here incorporates biological, anthropological, and psychological findings to argue for a broad explanatory model for the development of gay or lesbian identity in individuals today. The model is necessarily broad, as vast diversity exists among individuals who identify as gay, lesbian, or bisexual in their processes of development.

#### *A Model of Sexual Orientation Development in the Life Course Perspective*

Figure 1 schematically depicts a model of sexual orientation development informed by a life course perspective. In this formulation, *sexual orientation* is defined as the *biologically based affective disposition of sexual desire which motivates behavior and assumption of identity*. There are three important propositions embedded in this definition: (1) that individuals possess a biological disposition to respond affectively to members of a particular sex; (2) that this disposition is reflected in sexual desire, and (3) that a subjective understanding of one's desire in the context of a specific cultural model of human sexuality leads to behavioral practice and identity assumption.



**Fig. 1.** Schematic representation of the developmental pathway for sexual orientation.

The conceptual distinction between sexual *orientation* and sexual *identity* is made explicit in this perspective. In contrast to the definition of sexual orientation, *gay* or *lesbian identity* is defined as a sexual identity category describing individuals who, by and large, have sex exclusively with members of the same sex. In making this terminological distinction, it is posited that biology, psychology, and society all assume pivotal roles in the formation of individual selves within a particular cultural context. In addition, the salience and significance of interpersonal relationships in the formation of a gay, lesbian, or bisexual identity cannot be underestimated [Peplau, 2001; Peplau et al., 1999], as understandings of self always occur in and through our relations with others [Galatzer-Levy & Cohler, 1993; Gergen, 1994].

### *The Biological Foundation*

The biological predisposition to respond affectively and intimately to members of the same sex is likely rooted in genetic [e.g., Bailey et al., 1999; Hamer et al., 1993], neurohormonal [e.g., Lalumiere, Blanchard, & Zucker, 2000], and neuroanatomical [e.g., LeVay, 1991] processes. Methodological shortcomings aside [see Banks & Gartrell, 1995; Byne, 1995, 1997; Byne & Parsons, 1993; Stein, 1999; Van Wyck & Geist, 1995; Weinrich, 1995], there is compelling, converging evidence to suggest that biology plays *some* role in the development of same-sex sex-

ual desire and the assumption of a gay or lesbian identity, despite a wide range of individual differences [for a review, see Rahman & Wilson, 2003].

For both men and women, exclusive homosexuality tends to cluster in families, suggesting a heritable link [e.g., Bailey et al., 1999; Pattatucci & Hamer, 1995]. Research suggests that some gay men may possess a genetic sequence on the X chromosome which may be implicated in hormonal factors in the brain [Hamer et al., 1993; Hu et al., 1995; Saifi & Chandra, 1999]. This finding does not always hold up to replication [e.g., Bailey et al., 1999; Rice, Anderson, Risch, & Ebers, 1999] and does not appear to extend to females [Hu et al., 1995].

In addition to genetic evidence, studies suggest possible neurohormonal and neuroanatomical differences between self-identified gay men or lesbians and their heterosexual counterparts. This research includes differences discovered in handedness [see Lalumiere, Blanchard, & Zucker, 2000], finger length ratios [e.g., Williams et al., 2000], and other hormone-related processes (e.g., otoacoustic emissions [McFadden & Pasanen, 1998]). More controversial has been the research examining neuroanatomical differences between gay and straight men, which suggests a more 'feminine' looking hypothalamus among gay men [LeVay, 1991].

Apart from human studies, research with animals suggests biological correlates of same-sex sexual behavior and preference. Sheep represent one animal that displays exclusive homosexuality [see also Bagemihl, 1998]. Research with sheep suggests neuroanatomical differences analogous to those discovered by LeVay [1991] in the human hypothalamus [Roselli et al., 2004]. Differences observed in the volume of the ovine sexually dimorphic nucleus (located in the hypothalamus) between 'homosexual' and 'heterosexual' sheep reveal this anatomical distinction.

Research on nonhuman primates reveals same-sex sexual behavior as widespread, though the observation of exclusive homosexuality has never been documented [Wallen & Parsons, 1997]. Though it is not possible to examine the internal psychological states of nonhuman primates, several studies suggest that their motivations to engage in same-sex sexual behavior are rooted in the *desire for sexual gratification* [see Wallen & Parsons, 1997]. This research directly supports the core argument of this paper: that human sexual orientation describes an identity label which is rooted in the sexual desire of biologically organized individuals; it does not represent an inherent quality of organisms which categorically specifies different sexual 'types' of humans. That same-sex *desire* and *behavior* exist in nature with frequency and in the absence of social stigma within animal communities strongly suggests the normality of homosexuality, while simultaneously revealing the historically and culturally bound concept of 'sexual orientation.' Research with male sheep suggests that a clustering of organisms based on sexual preference may be possible, though even this research discovered significant 'mixed' sexual preferences, with some sheep responding sexually to both males and females without a clear preference [Roselli et al., 2004]. The cross-species validity of the notion of sexual orientation remains to be extensively explored, though it would contribute greatly to the study of human sexuality.

There are significant methodological and metatheoretical concerns outlined by the numerous critics of the biological program of research on sexual orientation. Byne [1995] notes the 'intersex' (i.e., that gay men are biologically more similar to straight women) and the 'defect' (i.e., that homosexuality arises from some 'problem' of normal biological development) assumptions that underlie this work.

Of perhaps greatest concern, though, is the simple essentialist assumption which forms the basis of the entire methodological approach utilized in these studies. That is, the assumption of intrinsic, static identity categories is taken as given so that the universe of human subjects can be nicely divided into discrete categories of 'gay,' 'lesbian,' 'straight,' and so on. The notion of 'fixed' identities is particularly problematic when considering social change in identity categories or the cultural meaning of various identities, as postmodern perspectives on sexuality have convincingly argued [e.g., Weeks, 1995].

Though it certainly has its conceptual and methodological flaws, the biological research on sexual orientation suggests *some* biological processes which might be implicated in the development of same-sex sexual orientation. An indirect role for biology in the process of sexual identity development seems likely [e.g., Bem, 1996; Byne & Parsons, 1993]. The life course paradigm articulated here does not attempt to specify *the* biological substrate which underlies the development of same-sex desire, since there is unlikely a single biological mechanism but rather an interaction of processes beginning with gestation and varying significantly among individuals. Specification of any universal biological mechanisms in this process not only betrays the line of research revealing cultural differences in the meaning, conception, and practice of homosexuality, it also obscures important, well-documented gender differences in sexuality. Baumeister's [2000] review of decades of empirical research on female sexuality in Western societies offers the important conclusion that female sexuality is characterized by a significantly higher degree of plasticity than observed in males, revealing fundamental distinctions in processes of sexual development along the lines of gender.

The life course perspective thus acknowledges the biological foundation of sexual orientation to the extent that some biological processes organize sexual desire along a continuum of possibility. Research with both humans and animals suggests that a dimensional, rather than categorical, approach to human sexual preference more accurately reflects the underlying 'reality' of sexual desire [Kinsey, Pomeroy, & Martin, 1948; Wallen & Parsons, 1997].

### *Desire and Sexual Subjectivity*

Biology is integrated decidedly into a life course paradigm of sexual orientation development to the extent that biological factors serve to organize sexual desire. Biology lays the foundation for the spectrum of affect which will ultimately underlie an individual's subjective experience of relationships in context. A biological foundation of the organism is thus set by genetic, hormonal, and anatomical processes. This biological foundation creates a pattern of sexual and emotional experience in which same-sex desire is powerfully perceived, even prior to gonadarche and the onset of puberty [Herdt & McClintock, 2000].

It is important to note that affectional bonding and sexual desire are functionally independent and can thus be separate experiences [Diamond, 2003b, 2004; Fisher, 1998], suggesting that individuals can fall in love with someone for whom they do not possess sexual desire. Historical, cultural, and biological evidence has revealed that it is possible to experience affectional bonding and sexual desire, both independently or concurrently, across the lines of gender [Diamond, 2003b]. The

experiential fusion of sexual desire and affectional bonding for members of one's own sex undoubtedly creates an emerging sense of homosexual subjectivity [e.g., Savin-Williams, 1998], but what is the sexual subjectivity of individuals whose experiences of affectional bonding and sexual desire are not gender-specific? This occurrence seems more likely for females than males [Diamond, 2004], perhaps for both biological and cultural reasons.

Gender-specific cultural models of sexuality may create divergent experiences of sexual subjectivity in childhood and adolescence. For example, a boy who develops a strong emotional and intimate connection with another boy at age 12 might consider him a 'best friend.' But if the affection becomes sexualized and the boy *desires* his friend, he is likely to interpret this subjective experience using the 'conceptual map' of human sexuality embedded in an internalized cultural model of identity by asking himself, 'Am I possibly gay?' Having both sexual desires and feelings of affection or love for another boy tends to lead boys to consider the possibility that they are gay [Savin-Williams, 1998]. Since intense female relationships at young ages are part of the socially sanctioned Western cultural model of being female [Peplau, 2001], this cognitive sequence of internal identity exploration is less likely to occur among females. The ways in which experiences of affectional bonding and sexual desire – only recently clearly identified as conceptually and subjectively distinct – impact the life course development of sexual orientation require significant future inquiry. An important research question that has not been addressed adequately is the extent to which, for males, the Western cultural model of sexuality tends to subjectively conflate experiences of affectional bonding and sexual desire, such that males who experience either one with other males begin a process of sexual identity exploration.

Developmentally, the intensity of sexual desire begins with puberty and occurs concurrently with processes of social and cognitive development that results in an increasing sense of self (or 'self-schema,' in more cognitive terms) [see Erikson, 1950; Harter, 2003]. One's sense of *subjectivity* – of being and experiencing in the world – develops more fully during adolescence, as childhood identifications and experiences become integrated with an emerging awareness of one's social and cultural context. Awareness of same-sex desire is prominent and results in the subjective experience of eroto-emotional preference for members of the same sex. Simultaneously, the social development of the individual results in an internalization of the matrix of social identity categories available in society. That is, concurrent with the self-exploration of one's own sexual desire, an individual internalizes the epistemological and ontological dimensions of her or his cultural context [Erikson, 1959; McAdams, 1990]. The dominance of a categorical, rather than dimensional, system of sexual identification creates a *cultural press* among males to identify the pole of sexual identity which best describes their underlying desire. The feelings that precede this explicit identification are outside the realm of conscious control [Savin-Williams, 1998].

This notion of a 'press' upon the individual is rooted in Murray's [1938] classic theory of personality. According to Murray, a press represents a 'directional tendency in an object or situation' (p. 118). This notion of a *cultural press* is akin to Murray's concept, though he emphasizes presses as objects. In the current context, the press is identified not as a physical object but as an internalized, ideologically based *system* of identity categories. For men with primarily same-sex desires, the

cultural press is experienced often as a crisis – the coming-out crisis – but nonetheless results in sexual behavior and assumption of an identity which is consonant with the underlying sexual desire and emotional experience of the individual. In this way, the affect that underlies sexual desire, when subjectively interpreted through a particular cultural model of sexuality, represents a *motivational force* for the assumption of sexual identity [see D’Andrade & Strauss, 1992]. Because of social stigma and sanction against homosexuality, a process of psychosocial reconciliation is necessary for individuals with strong homosexual desire. This process of self-appraisal and exploration requires integration of one’s childhood identifications, internalized cultural system of sexuality, and sense of sexual subjectivity into the personal narrative at the core of identity [Cohler, 1982].

Realization and acknowledgment of same-sex desire thus requires revision of the personal narrative one constructs over the life course [Cohler, 1982]. The life story theory of identity posits that identity is constructed in the development of a narrative about the self that provides coherence to life experience [McAdams, 1990, 1993, 2001; Mishler, 1999]. In adolescence, cognitive and neurobiological development [see Piaget, 1972; Keating, 2004] creates the context within which individuals begin this lifelong process of constructing and reconstructing their life stories. Adolescence is often a defining moment in identity formation, as subjectivity, culture, and childhood experiences collide with biological ‘predispositions’ to begin this process of self-understanding. As one engages with the sexual stories [Plummer, 1995] and sexual ‘scripts’ available in culture [Gagnon & Simon, 1973], the construction of one’s own sexual life story begins. This psychosocial process, which is undertaken through a dynamic engagement with the storied world of one’s social ecology, creates the context in which internal and external spheres of experience collide to lay the foundation for personal identity. It is precisely this emergent sexual subjectivity which motivates social practice (e.g., participation in a coming-out group for gay youth), which further exposes the individual to the identity possibilities of a culture [see Holland, Lachicotte, Skinner, & Cain, 1998]. It is important to emphasize, though, that adolescence cannot be considered a *definitive* critical period for identity formation, as research on sexual identity development sensitive to the impact of sociohistorical context has demonstrated the flexible timing of these processes across the life course [e.g., Cohler, in press; Kitzinger & Wilkinson, 1995; Peplau, 2001; Peplau et al., 1999].

Sexual desire, arousal, and intimacy assume a prominent place in the process by which individuals internalize the sexual story possibilities of a culture, especially for individuals whose desires cluster more toward the same-sex end of the continuum. The salience of this process is unique to our culture and historical time in which a categorical system of identity possibilities is imposed on an underlying dimensional experience of far greater affective complexity. Hence, there exists the perception of a cultural press, which motivates one to categorically self-label in a way that is most consonant with underlying sexual desire. For males, same-sex desire conflicts significantly with the gender role ideal of American culture [Harrison, 1995; Pleck, 1981]. This discrepancy must be resolved in order for development to proceed. The coming-out process provides a cultural mechanism through which this role discrepancy can be alleviated or at least reconceptualized.

For females, whose gender role socialization offers less of a rigid dichotomy of behavioral opportunities [Peplau & Garnets, 2000], the perception of this same

'press' may be less common. The story identified and internalized by females is one of sexual fluidity, permissive experimentation, and identity flexibility. Longitudinal research with women has consistently demonstrated the fluidity of sexual identity labels and behavior [e.g., Diamond, 2000, 2003a], and the sexual developmental trajectories of women do not display the same patterns of 'milestones' (e.g., disclosure of nonheterosexual orientation [Diamond, 1998; Savin-Williams & Diamond, 2000]) or sexual identity 'polarization' as observed in males [e.g., Bailey, Dunne, & Martin, 2000; Baumeister, 2000]. Thus, female sexual orientation is depolarized, as a fuller spectrum of behavioral possibilities is culturally permitted. Though females may be accorded greater sexual behavior possibilities and thus may experience a cultural 'press' less intensely than males, many women do indeed struggle during the course of sexual identity development [e.g., Kitzinger & Wilkinson, 1995], particularly with the need to understand their sexual subjectivity in terms of the male-dominated categorical model of sexual orientation.

### *From Subjectivity to Identity: The Role of Agency*

Biology, history, culture, and society all assume essential roles in a life course paradigm of sexual orientation, without obstructing human agency. As I have argued, biology creates the emotional foundation within individuals to experience sexual pleasure and intimacy in response to members of the same sex. Society offers the social identity category – the categorical marker of self we call 'sexual orientation.' By internalizing the structure of society, one learns to identify same-sex sexual desire with the identity label 'gay' or 'lesbian.' Culture offers the landscape in which sexual orientation develops – the physical setting, the normative structure, the customs and symbolic practices, the behavioral possibilities and constraints. Finally, history offers the legacy on which culture and society are founded.

Agency is preserved within the life course paradigm of sexual orientation development, although it is an indirect agency. Identity is assumed based on the individual's response to her or his internal, biologically based disposition of sexual desire. It is a natural tendency of humans to assume identities which foster coherence to the self [Linde, 1993], in light of cultural possibilities. Individuals are inclined toward *personal coherence* in the contemporary Western life course [Cohler & Hammack, in press] and *affective-behavioral consonance*, meaning that they seek to act in concordance with their motivating feelings. With these natural human tendencies as a backdrop, the perception of the cultural press is powerful (albeit unconscious). Recognition that, in our society, the homosexual-heterosexual identity dichotomy (for males, at least) represents the only means of self-identification results in an indirect choice to assume a gay identity. The alternative to such an act of indirect agency is *sexual-desire dissonance* and *self-incoherence* in the act of assuming a straight identity in the context of gay desire. This kind of choice can be associated only with poor adjustment outcomes [Cohler & Galatzer-Levy, 2000], as one's behavior conflicts with his or her internal desire.

## *Differential Developmental Trajectories*

Human development is often conceived as a process assuming a likely trajectory of experience [e.g., Steinberg, 1995]. However, these trajectories possess cultural, social, and historical specificity, as the life course paradigm reveals. Savin-Williams [1998, 2001] argues that the life course of nonheterosexual youth must be conceived as a 'differential' developmental trajectory when compared with heterosexual youth. In the paradigm proposed here, differential developmental trajectories are also highly likely *among* individuals with same-sex desire, particularly along the lines of gender and ethnicity.

Ethnic minorities in multicultural contexts form bicultural identities in which their sense of self is influenced both by the norms of their culture of origin as well as the culture to which they have immigrated [e.g., Berry, 1993]. Thus, ethnic minorities with same-sex desire navigate both the norms of their ethnic culture and those of the dominant culture when forming their sexual identities [see Crawford, Allison, Zamboni, & Soto, 2002; Martinez & Sullivan, 1998]. An interesting and timely example of ethnic variation in the life course development of sexual orientation involves African-American male 'down-low' or 'homothug' identity as an emergent and culture-specific identity category [Mays, Cochran, & Zamudio, 2004]. A subculture of African-American men who have sex with men (called 'MSM' in the HIV/AIDS literature) do not identify as 'gay' or even 'bisexual.' Rather, they consider themselves 'straight' but have sex regularly with men. This emergent pattern of self-identification is only beginning to be documented and examined [e.g., Mays et al., 2004; Williams et al., 2004]. The phenomenon may represent either a conscious rejection of the dominant (i.e., European American) culture's sexual identity categorical system, or it may simply stem from an individual's inability to reconcile the perception of traditionally strong homophobia in African-American culture [see Stokes & Peterson, 1998], even though African-American culture may not be as homophobic as perceived [Lewis, 2003]. Regardless of the origins of the phenomenon, this kind of variation in identity reveals a differential trajectory in sexual identity development rooted in race or ethnicity and demonstrates the need for empirical work that addresses cultural and gender-based specificity.

Gender undeniably determines differential developmental trajectories, owing to both the biological and socialization effects which create a male-female binary. The paradigm offered here was meant to provide a general framework for conceptualizing the developmental *process* of sexual orientation and the assumption of a gay, lesbian, or bisexual identity in the contemporary West. Implicit applications of a life course perspective have already revealed significant gender differences in sexual orientation development [e.g., Kitzinger & Wilkinson, 1995], and some have argued that male and female sexualities are so divergent as to require entirely distinct perspectives on their development [Peplau, 2001].

Regardless of the differential trajectories created by gender, the life course paradigm is sufficiently broad to contribute to an understanding of sexual orientation development among both males and females. Three notable differences between men and women in this paradigm are (1) the impact of biology, (2) the cultural press mechanism, and (3) the timing of developmental events and processes. The role of biology might be more limited in the developmental course of assuming

a lesbian identity. Female homosexuality is related to biological factors (most notably hormones and brain differentiation [Brown et al., 2002]). However, research has most frequently failed to find meaningful biological differences between lesbians and straight women [Peplau & Garnets, 2000], especially when compared with research on gay and straight men. Considerable evidence suggests that females possess a far more malleable sex drive than males, and that female sexuality is more influenced by external (e.g., social or situational) factors than male sexuality [Baumeister, 2000]. In addition to differences in erotic plasticity, males and females may pursue different ends in sexual activity, with females tending to seek romantic attachment and males tending to seek adventurous stimulation [Peplau, 2001]. In her relational paradigm of female sexuality, Peplau [2001] notes that this fundamental divergence in sexual motivation calls into question the relevance of a concept of 'sexual orientation' for females, arguing instead for the sex-specific notion of 'relationship orientation' for women.

Second, and perhaps alternatively, because of the relative fluidity of female gender role prescribed in our culture when compared with male gender role, females are less likely to experience the cultural press postulated here. Receiving a less rigid set of identity categorization possibilities (e.g., the permissibility of homosexual experimentation among women, the greater acceptance of female bisexuality as a legitimate identity), women are freer in their behavioral and identification options. Finally, much evidence suggests that the development of female and male sexual identity assumes divergent courses in the timing of milestones, such as initial same-sex attractions, self-labeling, and initial same-sex sexual contact [e.g., Savin-Williams & Diamond, 2000].

In sum, the life course paradigm offers a broad conceptualization of sexual identity development while acknowledging differential developmental trajectories. Aspects of the model might be more salient for explaining male, rather than female, sexual orientation. However, the biosocial, historical perspective of the theory is equally pertinent to the development of men and women, as it seeks to articulate a broad framework for understanding human sexual orientation in cultural context.

## Research Directions

Future research on human sexual orientation must heed the call of Boxer and Cohler [1989] to utilize prospective longitudinal designs in order to meaningfully examine the course of sexual lives. Life course theory offers a number of specific research questions for empirical investigation, but all center on a specific concern: how do individuals come to understand their sexual identities across the course of life in a particular social ecology of development?

This complex but fundamental research question can offer a rich account of the ways in which human development dialectically unfolds in cultural and historical context. It focuses on the meaning of lived experience in a way consistent with narrative theories of identity development, thus a part of the program of research in human development which seeks to explore the cultural psychology of the life course [e.g., Bruner, 1990; Shweder, 1991, 1998, 2003]. Both qualitative and quantitative approaches – with both children and adults – are possible as methodological avenues in constructing an account of contemporary sexual development. Specific

examples of research programs include, but are certainly not limited to, the following: (1) the relationship among biological factors, sexual desire, and affectional bonding [e.g., Diamond, 2003b, 2004]; (2) the development of sexual subjectivity in childhood and adolescence, including the cognitive and emotional processes which youth use to navigate their sexual desires, behaviors, and identities; (3) the impact of changing historical circumstances (e.g., increased positive attitudes toward homosexuality) on the sexual identity development of youth, compared with previous generations, using archival data; (4) the emergence of new sexual identity categories, such as 'queer' and 'homothug,' and the individual motivations to self-label as such rather than 'gay' or 'lesbian'; (5) specific gender differences in the life course formulation of sexual orientation, such as the differential experience of sexual desire or sexual subjectivity, and (6) the impact of cultural globalization on sexual identity development across cultures, as identity-related processes appear salient to the ways in which cultural change occurs in the context of globalization [Arnett, 2002].

A particularly rich approach to investigating the paradigm outlined here might entail a prospective longitudinal study which assesses the life story at various moments in the life course: in childhood, as narrative tone is established [McAdams, 1993]; in adolescence, as ideological commitments are identified and identity categories are explicitly explored [McAdams, 1990]; in emerging adulthood [Arnett, 2000], as experiments in life pathways are undertaken, and well into adulthood, as social practice and the desire for intimacy and generativity [Erikson, 1959; McAdams, Diamond, de St. Aubin, & Mansfield, 1997] converge to solidify a personal identity that is coherent with the entirety of the life story narrative [Cohler, 1982; Cohler & Hammack, in press]. The life stories of gay men, bisexuals, and lesbians – as well as heterosexual men and women – might offer the best empirical lens on the life course paradigm of sexual orientation explicated here.

## Conclusions

This paper has offered a preliminary articulation of a new paradigm for understanding and investigating the development of human sexual orientation. The paradigm aspires to integrate perspectives on sexual orientation that have been unnecessarily disparate, in part because of the polarizing essentialist-constructionist debate. It offers a unique and valuable contribution to the theoretical literature on sexual orientation in its attempts to transcend intellectual divisions to construct an interdisciplinary research framework.

This new paradigm is guilty both of relativism and determinism, as well as essentialism and constructionism. It is relativistic in its recognition of cultural and historical variations in the meaning ascribed to same-sex desire. It is deterministic in its emphasis on an underlying biological foundation which shapes sexual desire. It is essentialist in its claim that different biological foundations do in fact exist within individuals, creating a spectrum of sexual subjectivities. However, the paradigm explicitly rejects the notion of sexual orientation as a natural human kind inhering within persons. Finally, it is constructionist in its claim that sexual orientation and gay, lesbian, and bisexual identities are social categories created by human beings to describe their world. These categories are just as likely to be ephemeral as

all of the social institutions which rapidly change through the course of human evolution. The goal of research on sexual orientation, in light of this perspective, is not to search for ultimate, universal human truths. Rather, its lofty aim is to make sense of the diverse specificity of lived experience as it impacts the history of individuals, cultures, and societies forever in flux.

## Acknowledgments

I thank Bert Cohler, Jill Mateo, Julia Cassiniti, Bianca Dahl, Anne Janus, Gabriel Smith, Jason Yee, and students in the Biopsychology of Sex Differences seminar at the University of Chicago for valuable feedback on the ideas expressed in this paper. I am grateful for the excellent and insightful comments of six anonymous reviewers on the original manuscript.

## References

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*, 469–480.
- Arnett, J. J. (2002). The psychology of globalization. *American Psychologist*, *57*, 774–783.
- Asthana, S., & Oostvogels, R. (2001). The social construction of male 'homosexuality' in India: Implications for HIV transmission and prevention. *Social Science and Medicine*, *52*, 707–721.
- Bagemihl, B. (1998). *Biological exuberance: Animal homosexuality and natural diversity*. New York: St. Martin's.
- Bailey, J.M., Pillard, R.C., Dawood, K., Miller, M.B., Farrer, L.A., Trivedi, S., & Murphy, R.L. (1999). A family history study of male sexual orientation using three independent samples. *Behavior Genetics*, *29*(2), 79–86.
- Bailey, J.M., Dunne, M.P., & Martin, N.G. (2000). Genetic and environmental influences on sexual orientation and its correlates in an Australian twin sample. *Journal of Personality and Social Psychology*, *78*, 524–536.
- Baltes, P.H. (1968). Longitudinal and cross-sequential sequences in the study of age and generation effects. *Human Development*, *11*, 145–171.
- Banks, A., & Gartrell, N.K. (1995). Hormones and sexual orientation: A questionable link. *Journal of Homosexuality*, *28*, 247–268.
- Baumeister, R.F. (2000). Gender differences in erotic plasticity: The female sex drive as socially flexible and responsive. *Psychological Bulletin*, *126*, 347–374.
- Bem, D.J. (1996). Exotic becomes erotic: A developmental theory of sexual orientation. *Psychological Review*, *103*, 320–335.
- Berger, P.L., & Luckmann, T. (1966). *The social construction of reality: A treatise in the sociology of knowledge*. New York: Anchor.
- Berry, J.W. (1993). Ethnic identity in plural societies. In M.E. Bernal & G.P. Knight (Eds.), *Ethnic identity: Formation and transmission among Hispanics and other minorities* (pp. 271–296). Albany, NY: State University of New York Press.
- Blackwood, E. (2000). Culture and women's sexualities. *Journal of Social Issues*, *56*(2), 223–238.
- Blackwood, E., & Wieringa, S.E. (Eds.). (1999). *Female desires: Same-sex relations and transgender practices across cultures*. New York: Columbia University Press.
- Bohan, J. S. (1996). *Psychology and sexual orientation: Coming to terms*. New York: Routledge.
- Boswell, J. (1994). *Same-sex unions in premodern Europe*. New York: Villard.
- Boxer, A.M., & Cohler, B.J. (1989). The life course of gay and lesbian youth: An immodest proposal for the study of lives. *Journal of Homosexuality*, *17*, 315–355.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.
- Brown, W.M., Finn, C.J., Cooke, B.M., & Breedlove, S.M. (2002). Differences in finger length ratios between self-identified 'butch' and 'femme' lesbians. *Archives of Sexual Behavior*, *31*, 123–127.
- Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.
- Burr, V. (1995). *An introduction to social constructionism*. New York: Routledge.
- Byne, W. (1995). Science and belief: Psychobiological research on sexual orientation. *Journal of Homosexuality*, *28*, 303–344.

- Byne, W. (1997). Why we cannot conclude that sexual orientation is primarily a biological phenomenon. *Journal of Homosexuality*, *34*, 73–80.
- Byne, W., & Parsons, B. (1993). Human sexual orientation: The biologic theories reappraised. *Archives of General Psychiatry*, *50*, 228–239.
- Cass, V.C. (1979). Homosexual identity formation: A theoretical model. *Journal of Homosexuality*, *4*, 219–235.
- Chauncey, G. (1994). *Gay New York: Gender, urban culture, and the making of the gay male world, 1890–1940*. New York: Basic Books.
- Cohler, B.J. (1982). Personal narrative and life course. In P. Baltes, & O.G. Brim (Eds.), *Life span development and behavior* (Vol. 4, pp. 205–241). New York: Academic Press.
- Cohler, B.J. (1991). The life story and the study of resilience and response to adversity. *Journal of Narrative and Life History*, *1*, 169–200.
- Cohler, B.J. (2005). *Writing desire: Generation and life story by men having sex with other men*. Madison, WI: University of Wisconsin Press.
- Cohler, B.J., & Galatzer-Levy, R.M. (2000). *The course of gay and lesbian lives: Social and psycho-analytic perspectives*. Chicago: University of Chicago Press.
- Cohler, B.J., & Hammack, P.L. (in press). Making a gay identity: Life story and realization of a coherent self. In D.P. McAdams, R. Josselson, & A. Lieblich (Eds.), *Identity and story: Creating self in narrative*. Washington, D.C.: American Psychological Association.
- Crawford, I., Allison, K.W., Zamboni, B.D., & Soto, T. (2002). The influence of dual-identity development on the psychosocial functioning of African-American gay and bisexual men. *Journal of Sex Research*, *39*, 179–189.
- Crawford, I., Hammack, P.L., McKirnan, D.J., Ostrow, D., Zamboni, B.D., Robinson, B., & Hope, B. (2003). Sexual sensation seeking, reduced concern about HIV and sexual risk behavior among gay men in primary relationships. *AIDS Care*, *15*, 513–524.
- D'Andrade, R.G., & Strauss, C. (Eds.). (1992). *Human motives and cultural models*. New York: Cambridge University Press.
- De Cecco, J.P., & Elia, J.P. (1993). A critique and synthesis of biological essentialism and social constructionist views of sexuality and gender. *Journal of Homosexuality*, *24*, 1–26.
- DeLamater, J.D., & Hyde, J.S. (1998). Essentialism vs. social constructionism in the study of human sexuality. *Journal of Sex Research*, *35*, 10–18.
- Diamond, L.M. (1998). Development of sexual orientation among adolescent and young adult women. *Developmental Psychology*, *34*, 1085–1095.
- Diamond, L.M. (2000). Sexual identity, attractions, and behavior among young sexual-minority women over a 2-year period. *Developmental Psychology*, *36*, 241–250.
- Diamond, L.M. (2003a). Was it a phase? Young women's relinquishment of lesbian/bisexual identities over a 5-year period. *Journal of Personality and Social Psychology*, *84*, 352–364.
- Diamond, L.M. (2003b). What does sexual orientation orient? A biobehavioral model distinguishing romantic love and sexual desire. *Psychological Review*, *110*, 173–192.
- Diamond, L.M. (2004). Emerging perspectives on distinctions between romantic love and sexual desire. *Current Directions in Psychological Science*, *13*, 116–119.
- Elder, G.H. (1974). *Children of the Great Depression: Social change in life experience*. Chicago: University of Chicago Press.
- Elder, G.H. (1975). Age differentiation and the life course. *Annual Review of Sociology*, *1*, 165–190.
- Elder, G.H. (1979). Historical change in life patterns and personality. In P.B. Baltes & O.G. Brim (Eds.), *Life-span development and behavior* (Vol. 2, pp. 117–159). New York: Academic Press.
- Elder, G.H. (1994). Time, human agency, and social change: Perspectives on the life course. *Social Psychology Quarterly*, *57*, 4–15.
- Elder, G.H. (1995). The Life Course paradigm: Social change and individual development. In P. Moen, G.H. Elder, & K. Luscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 101–140). Washington, D.C.: American Psychological Association.
- Elder, G.H. (1998). The life course as developmental theory. *Child Development*, *69*, 1–12.
- Erikson, E.H. (1950). *Childhood and society*. New York: Norton.
- Erikson, E.H. (1959). *Identity and the life cycle*. New York: Norton.
- Faderman, L. (1981). *Surpassing the love of men: Romantic friendships and love between women from the Renaissance to the present*. New York: William Morrow.
- Faderman, L. (1991). *Odd girls and twilight lovers: A history of lesbian life in twentieth-century America*. New York: Columbia University Press.
- Fisher, H.E. (1998). Lust, attraction, and attachment in mammalian reproduction. *Human Nature*, *9*, 23–52.
- Foucault, M. (1978). *The history of sexuality, Vol. 1: An introduction*. New York: Vintage.
- Gagnon, J.H., & Simon, W. (1973). *Sexual conduct: The social sources of human sexuality*. Chicago: Aldine.
- Galatzer-Levy, R.M., & Cohler, B.J. (1993). *The essential other: A developmental psychology of the self*. New York: Basic Books.

- Gay, J. (1986). 'Mummies and babies' and friends and lovers in Lesotho. In E. Blackwood (Ed.), *The many faces of homosexuality: Anthropological approaches to homosexual behavior* (pp. 97–116). New York: Harrington Park Press.
- Gergen, K.J. (1994). *Realities and relationships: Soundings in social construction*. Cambridge, MA: Harvard University Press.
- Gergen, K.J. (1999). *An invitation to social construction*. Thousand Oaks, Calif.: Sage.
- Greenberg, D.F. (1988). *The construction of homosexuality*. Chicago: University of Chicago Press.
- Halwani, R. (1998). Essentialism, social constructionism, and the history of homosexuality. *Journal of Homosexuality*, 35, 25–51.
- Hamer, D.H., Hu, S., Magnuson, V.L., Hu, N., & Pattatucci, A.M.L. (1993). A linkage between DNA markers on the X chromosome and male sexual orientation. *Science*, 261, 321–327.
- Harrison, J. (1995). Roles, identities, and sexual orientation: Homosexuality, heterosexuality, and bisexuality. In R.F. Levant & W.S. Pollack (Eds.), *A new psychology of men* (pp. 359–382). New York: Basic Books.
- Harter, S. (2003). The development of self-representations during childhood and adolescence. In M.R. Leary & J.P. Tangney (Eds.), *Handbook of self and identity* (pp. 610–642). New York: Guilford.
- Herd, G. (1981). *Guardians of the flutes: Idioms of masculinity*. New York: McGraw-Hill.
- Herd, G. (Ed.). (1982). *Rituals of manhood: Male initiation in Papua New Guinea*. Berkeley, CA: University of California Press.
- Herd, G. (1997). *Same sex, different cultures*. Boulder, CO: Westview.
- Herd, G. (1999). *Sambia sexual culture*. Chicago: University of Chicago Press.
- Herd, G., & Boxer, A. (1993). *Children of Horizons: How gay and lesbian teens are leading a new way out of the closet*. Boston: Beacon.
- Herd, G., & McClintock, M. (2000). The magical age of 10. *Archives of Sexual Behavior*, 29(6), 587–606.
- Ho, P.S. (1995). Male homosexual identity in Hong Kong: A social construction. *Journal of Homosexuality*, 29, 71–88.
- Holland, D., Lachicotte, W., Skinner, D., & Cain, C. (1998). *Identity and agency in cultural worlds*. Cambridge, MA: Harvard University Press.
- Hostetler, A.J., & Herdt, G.H. (1998). Culture, sexual lifeways, and developmental subjectivities: Rethinking sexual taxonomies. *Social Research*, 65, 249–290.
- Hu, S., Pattatucci, A.M.L., Patterson, C., Li, L., Fulker, D.W., Cherny, S.S., Kruglyak, L., & Hamer, D. H. (1995). Linkage between sexual orientation and chromosome Xq28 in males but not in females. *Nature Genetics*, 11, 248–256.
- Keating, D.P. (2004). Cognitive and brain development. In R.M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 45–84). Hoboken, NJ: Wiley.
- Kendall (1999). Women in Lesotho and the (Western) construction of homophobia. In E. Blackwood & S.E. Wieringa (Eds.), *Female desires: Same-sex relations and transgender practices across cultures* (pp. 157–180). New York: Columbia University Press.
- Kertzer, D.I. (1983). Generation as a sociological problem. *Annual Review of Sociology*, 9, 125–149.
- Kinsey, A., Pomeroy, W., & Martin, C. (1948). *Sexual behavior in the human male*. Philadelphia: W.B. Saunders.
- Kitzinger, C., & Wilkinson, S. (1995). Transitions from heterosexuality to lesbianism: The discursive production of lesbian identities. *Developmental Psychology*, 31, 95–104.
- Krafft-Ebing, R. (1886). *Psychopathia sexualis*. New York: Bell.
- Lalumiere, M.L., Blanchard, R., & Zucker, K.J. (2000). Sexual orientation and handedness in men and women: A meta-analysis. *Psychological Bulletin*, 126, 575–592.
- LeVay, S. (1991). A difference in hypothalamic structure between heterosexual and homosexual men. *Science*, 253, 1034–1037.
- Lewis, G.B. (2003). Black-white differences in attitudes toward homosexuality and gay rights. *Public Opinion Quarterly*, 67, 59–78.
- Linde, C. (1993). *Life stories: The creation of coherence*. New York: Oxford University Press.
- Loughery, J. (1998). *The other side of silence: Men's lives and gay identities: A twentieth-century history*. New York: Henry Holt.
- Luthar, S.S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development*, 71, 543–562.
- Mannheim, K. (1928). *Essays on the sociology of knowledge*. London: Routledge.
- Martinez, D.G., & Sullivan, S.C. (1998). African American gay men and lesbians: Examining the complexity of gay identity development. *Journal of Human Behavior in the Social Environment*, 1, 243–264.
- Mays, V.M., Cochran, S.D., & Zamudio, A. (2004). HIV prevention research: Are we meeting the needs of African American men who have sex with men? *Journal of Black Psychology*, 30, 78–105.
- McAdams, D. (1990). Unity and purpose in human lives: The emergence of identity as a life story. In A.I. Rabin, R.A. Zucker, R.A. Emmons, & S. Frank (Eds.), *Studying persons and lives* (pp. 148–200). New York: Springer.

- McAdams, D. (1993). *The stories we live by: Personal myths and the making of the self*. New York: Guilford.
- McAdams, D.P. (2001). The psychology of life stories. *Review of General Psychology*, 5, 100–122.
- McAdams, D.P., Diamond, A., de St. Aubin, E., & Mansfield, E. (1997). Stories of commitment: The psychosocial construction of generative lives. *Journal of Personality and Social Psychology*, 72, 678–694.
- McFadden, D., & Pasanen, E.G. (1998). Comparison of the auditory systems of heterosexual and homosexuals: Click-evoked otoacoustic emissions. *Proceedings of the National Academy of Sciences*, 95, 2709–2713.
- Mishler, E.G. (1999). *Storylines: Craftartists' narratives of identity*. Cambridge, MA: Harvard University Press.
- Mondimore, F.M. (1996). *A natural history of homosexuality*. Baltimore: Johns Hopkins University Press.
- Murray, H.A. (1938). *Explorations in personality*. New York: Oxford University Press.
- Neugarten, B. (1979). Time, age, and the life cycle. *American Journal of Psychiatry*, 136, 887–894.
- Parks, C.A. (1999). Lesbian identity development: An examination of differences across generations. *American Journal of Orthopsychiatry*, 69, 347–361.
- Pattatucci, A.M. L., & Hamer, D.H. (1995). Development and familiarity of sexual orientation in females. *Behavior Genetics*, 25, 407–420.
- Peplau, L.A. (2001). Rethinking women's sexual orientation: An interdisciplinary, relationship-focused approach. *Personal Relationships*, 8, 1–19.
- Peplau, L.A., & Garnets, L.D. (2000). A new paradigm for understanding women's sexuality and sexual orientation. *Journal of Social Issues*, 56, 329–350.
- Peplau, L.A., Spalding, L.R., Conley, T.D., & Veniegas, R.C. (1999). The development of sexual orientation in women. *Annual Review of Sex Research*, 10, 70–100.
- Piaget, J. (1972). Intellectual evolution from adolescence to adulthood. *Human Development*, 15, 1–12.
- Pleck, J.H. (1981). *The myth of masculinity*. Cambridge, MA: MIT Press.
- Plummer, K. (1995). *Telling sexual stories: Power, change and social worlds*. New York: Routledge.
- Ponse, B. (1978). *Identities in the lesbian world: The social construction of self*. Westport, CT: Greenwood Press.
- Rahman, Q., & Wilson, G.D. (2003). Born gay? The psychobiology of human sexual orientation. *Personality and Individual Differences*, 34, 1337–1382.
- Rice, G., Anderson, C., Risch, N., & Ebers, G. (1999). Male homosexuality: Absence of linkage to microsatellite markers at Xq28. *Science*, 284, 665–667.
- Roselli, C.E., Larkin, K., Resko, J.A., Stellflug, J.N., & Stormshak, F. (2004). The volume of a sexually dimorphic nucleus in the ovine medial preoptic area/anterior hypothalamus varies with sexual partner preference. *Endocrinology*, 145, 478–483.
- Ryder, N.B. (1965). The cohort as a concept in the study of social change. *American Sociological Review*, 30(6), 843–861.
- Sadownick, D. (1996). *Sex between men: An intimate history of the sex lives of gay men postwar to present*. San Francisco: Harper San Francisco.
- Saifi, G.M., & Chandra, H.S. (1999). An apparent excess of sex- and reproduction-related genes on the human X chromosome. *Proceedings of the Royal Society of London, Series B Biological Sciences*, 266, 203–209.
- Sankar, A. (1986). Sisters and brothers, lovers and enemies: Marriage resistance in Southern Kwangtung. In E. Blackwood (Ed.), *The many faces of homosexuality: Anthropological approaches to homosexual behavior* (pp. 69–83). New York: Harrington Park Press.
- Savin-Williams, R.C. (1998). *'...And then I became gay': Young men's stories*. New York: Routledge.
- Savin-Williams, R.C. (2001). *Mom, Dad, I'm gay*. Washington, D.C.: American Psychological Association.
- Savin-Williams, R.C., & Diamond, L.M. (2000). Sexual identity trajectories among sexual-minority youths: Gender comparisons. *Archives of Sexual Behavior*, 29, 607–627.
- Shostak, M. (1983). *Nisa: The life and words of a !Kung woman*. New York: Vintage.
- Shweder, R.A. (1991). *Thinking through cultures: Expeditions in cultural psychology*. Cambridge, MA: Harvard University Press.
- Shweder, R.A. (Ed.). (1998). *Welcome to middle age! (And other cultural fictions)*. Chicago: University of Chicago Press.
- Shweder, R.A. (2003). *Why do men barbecue? Recipes for cultural psychology*. Cambridge, MA: Harvard University Press.
- Stein, A. (1997). *Sex and sensibility: Stories of a lesbian generation*. Berkeley, CA: University of California Press.
- Stein, E. (1999). *The mismeasure of desire: The science, theory, and ethics of sexual orientation*. New York: Oxford University Press.

- Steinberg, L. (1995). Commentary: On developmental pathways and social contexts in adolescence. In L.J. Crockett & A.C. Crouter (Eds.), *Pathways through adolescence: Individual development in relation to social contexts* (pp. 245–253). Mahwah, NJ: Erlbaum.
- Stokes, J.P., & Peterson, J.L. (1998). Homophobia, self-esteem, and risk for HIV among African American men who have sex with men. *AIDS Education and Prevention, 10*, 278–292.
- Tolman, D.L., & Diamond, L.M. (2001). Desegregating sexuality research: Cultural and biological perspectives on gender and desire. *Annual Review of Sex Research, 12*, 33–74.
- Troiden, R.R. (1979). Becoming homosexual: A model of gay identity acquisition. *Psychiatry, 42*, 362–373.
- Van Wyck, P.H., & Geist, C.S. (1995). Biology of bisexuality: Critique and observations. *Journal of Homosexuality, 28*, 357–373.
- Vanable, P.A., Ostrow, D.G., McKirnan, D.J., Taywaditap, K.J., & Hope, B.A. (2000). Impact of combination therapies on HIV risk perceptions and sexual risk among HIV-positive and HIV-negative gay and bisexual men. *Health Psychology, 19*, 1–12.
- Veniegas, R.C., & Conley, T.D. (2000). Biological research on women's sexual orientations: Evaluating the scientific evidence. *Journal of Social Issues, 56*, 267–282.
- Wallen, K., & Parsons, W.A. (1997). Sexual behavior in same-sexed nonhuman primates: Is it relevant to understanding human homosexuality? *Annual Review of Sex Research, 8*, 195–224.
- Weeks, J. (1995). History, desire, and identities. In R.G. Parker & J.H. Gagnon (Eds.), *Conceiving sexuality: Approaches to sex in a postmodern world* (pp. 33–50). New York: Routledge.
- Weinrich, J.D. (1995). Biological research on sexual orientation: A critique of the critics. *Journal of Homosexuality, 28*, 197–213.
- Wekker, G. (1999). 'What's identity got to do with it?' Rethinking identity in light of the mati work in Suriname. In E. Blackwood & S.E. Wieringa (Eds.), *Female desires: Same-sex relations and transgender practices across cultures* (pp. 119–138). New York: Columbia University Press.
- Williams, J.K., Wyatt, G.E., Resell, J., Peterson, J., & Asuan-O'Brien, A. (2004). Psychosocial issues among gay- and non-gay-identifying HIV-seropositive African American and Latino MSM. *Cultural Diversity & Ethnic Minority Psychology, 10*, 268–286.
- Williams, T.J., Pepitone, M.E., Christensen, S.E., Cooke, B.M., Huberman, A.D., Breedlove, N.J., et al. (2000). Finger-length ratios and sexual orientation. *Nature, 404*, 455–456.
- Williams, W.L. (1986). *The spirit and the flesh: Sexual diversity in American Indian culture*. Boston: Beacon.
- Williams, W.L. (2003). *Gay and lesbian rights in the United States: A documentary history*. Westport, CT: Greenwood Press.

Copyright: S. Karger AG, Basel 2005. Reproduced with the permission of S. Karger AG, Basel. Further reproduction or distribution (electronic or otherwise) is prohibited without permission from the copyright holder.