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Meaning in Sexual Behavior: Associating Personal Constructs with Condom Use

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MEANING IN SEXUAL BEHAVIOR:

ASSOCIATING PERSONAL CONSTRUCTS WITH CONDOM USE

by

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ABSTRACT

MEANING IN SEXUAL BEHAVIOR:
ASSOCIATING PERSONAL CONSTRUCTS WITH CONDOM USE

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Thirty-seven female and 30 male heterosexual undergraduates responded first to vignettes of sexual behavior in which they were asked to describe the partners' behaviors using their own personal constructs and using the researcher-provided constructs *safe sex*, *unsafe sex*, *intimate*, and *impersonal*; participants then responded to questions about condom use. Sixty-one percent of participants reported using condoms at least 75% of the time, and 64% reported use on last intercourse. Women reported a higher percentage of intercourse without condoms than did men. Within-subject principal components analysis was used to identify the extent to which an individual's personal constructs loaded on factors defined by *safe sex* and *unsafe sex*. These loadings were not related to reported condom use, failing to support the hypothesis that the presence of a safe-sex factor in an individual's personal construct system is related to condom use. Similarly, stronger within-subject positive correlations between *unsafe sex* and *intimate* and between *safe sex* and *intimate* also were not related to reports of more frequent condom use. In a multiple regression equation, gender and the correlations between *unsafe sex* and *intimate*, *safe sex* and *intimate*, *unsafe sex* and *impersonal*, and *safe sex* and *impersonal* predicted 14% of the variance in reported condom use.

This is dedicated to Viktor Frankl, R. D. Laing, and Franz Kafka.

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CHAPTER I.

INTRODUCTION

"We really don't know why people do what they do sexually." — Maggie Reinfield, Director of Education, Gay Men's Health Crisis (De Stefano, 1990, p. 41)

In 1993, human immunodeficiency virus (HIV) disease was the leading cause of death for Americans aged 25 to 44 years. Given an incubation period that can extend beyond a decade, it is likely that many of these people were infected as youths (Centers for Disease Control and Prevention, 1995). Since 1993, with improvements in treatment, the annual number of deaths from acquired immune deficiency disease (AIDS) has decreased, but as of June 30, 1999, there had been 711,344 cumulative cases of AIDS reported in the United States (Centers for Disease Control and Prevention, 1999). There is still no cure for HIV infection or AIDS, and avoidance of those behaviors likely to transmit HIV is the only known method of prevention (Peterson & Marin, 1988).

Because HIV research originated in the medical and public health fields, it was shaped by a focus on biology and disease metaphors, which led to a search for *causes* of the disease. Much of the research framed unprotected sex as a disease vector in transmitting HIV. Within this framework, unprotected sex is clearly a danger to personal and public health and takes on a universal meaning as something dangerous and unwanted; however, outside such disease-focused ways of viewing human behavior, sex without a condom may have many personal and social meanings. More individually focused frameworks, which might examine the idiosyncratic meanings people attribute to

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sexual behavior, have been rare in HIV prevention research. Early epidemiological research focused strictly on measuring acts of defined *risky behavior*, but such tightly defined conceptions limited the prevention efforts emerging from such foundation research in the causes and transmission of HIV. The first preventionists encountered what they viewed as *irrational behavior*: *At-risk* individuals refused to give up their risky behaviors. However, as prevention advocates experienced individuals' difficulties in adhering to rational behavior and began to explore their subjects' lives in greater detail, they took more constructivist approaches for understanding the unique meanings people attribute to sexual behaviors (Vance, 1991). Such constructivist approaches examine how each person might develop (*construct*) his or her unique personal meanings for sexual behavior.

In 1990, Annick Prieur, a sociologist studying unsafe sex in Norwegian gay men, published a groundbreaking article. What she did seems simple and obvious in retrospect, but at the time, it represented an important divergence in HIV research. She talked with men who were not practicing safer sex and asked them why. She asked them what sex meant for them. What she discovered was that, although these men were well aware of HIV risk in unsafe sex, these behaviors held very powerful emotional, social, and spiritual meanings for them that far outweighed HIV risk. Prior HIV research had ignored such meanings or dismissed them as illogical barriers to be overcome for the sake of public health. To say that meaning is important is a tautology; however, one may accuse most HIV research, and even much sexual research, of not seeing the forest for the trees.

What for one person is a *highly risky* sexual behavior is for another person a *highly intimate* one. In fact, the gay community's grass-roots safer sex campaign demonstrates that sexual behavior is constructed and can be reconstructed; these efforts have consciously changed social meanings and eroticized previously *unerotic* behaviors such as condom use, which was once associated mostly with heterosexuality and birth control (Patton, 1996; Vance, 1991). This investigation centers on individuals' idiosyncratic meanings; such meanings may be critical in assessing HIV risk behaviors and consequently in intervening effectively. In taking a constructivist approach to behavior, *meaning* is operationalized as personal construct systems generated by a variation of Kelly's (1955) Reptest.

Constructing Experience

Social constructivism views reality as the result of ongoing structuring by individuals: People perceive and interpret the world in different ways. In contrast, realism views reality as objective, existing independently of individuals. Anthropology and sociology have traditionally embraced constructivist approaches to human behavior; actions that appear irrational from one viewpoint become rational when one learns the meanings a people attribute to them (Chernela, 1991). Even the physical sciences have embraced constructivist approaches, noting that the observer's models shape reality. Language itself limits the way in which people see the world because it imposes certain meanings and relationships: named constructs, the creation of subject and object, the framing of causality (Reiss, 1993).

George Kelly (1955) asserts that individuals create reality as they interpret their experience. Each person actively makes sense of the world through developing personal

constructs, which structure reality by shaping perceptions. Language describes the world, but in so doing, it also shapes how the individual experiences reality. For Kelly, personal constructs are bipolar dimensions for evaluating experience; for example, many experiences can be rated on the dimension of *good versus bad*, with some events falling at extremes of poles and others falling nearer to the middle. Bipolar personal constructs are simply "ways of construing the world." Each person possesses unique sets of bipolar personal constructs that are structured in different ways. The way a person views the world is imposed from within the individual onto the world, not from the world onto the individual. Kelly views personality as the totality of these personal constructs or, more precisely, as the active process of construing the world. Therefore, each person is best understood through the way he or she views the world. Because a person's life is an ongoing process of new experiences, his or her personal constructs and personality should change over time with these new experiences. Unlike Kelly and his followers, other constructivist researchers use the term *construct* in a broader sense, meaning an interpretive word or phrase that describes experience. Consequently, in this proposal, construct is used in this broader sense, and *personal construct* refers to Kelly's more specific creation that pairs constructs in creating a bipolar evaluative dimension, such as *good versus bad.*

Even though one can view personality as the sum of a person's constructs, individuals do not use all constructs equally at all times; events call forth constructs that the person sees as most relevant to the situation. Advanced cues can influence how people interpret ambiguous stimuli. Castille and Geer (1993) present advance notice that a passage is either about sex or horseback riding; those participants believing the passage

is about sex find sexual meanings in the story, whereas the other participants find nonsexual meanings in the passage. People's expectations activate constructs that they use to interpret subsequent information. Each individual's experience develops certain constructs, which he or she then uses to interpret the world along those past experiences.

Personal construct theory emphasizes intellectual over physical experience, even more than does psychology in general. Consequently, research guided by such theory underrepresents the symbolic importance of the human body and its physical existence in the world. Personal construct theory often embraces the cognitive and neglects meanings found through the body: food, sex, sickness, health (Salmon, 1985). Vance (1991) reports that graduate departments offer little training in human sexuality and often discourage graduate work, especially dissertation research, in the area as a possible stumbling block for starting careers. Just as psychology and other sciences have shied away from sexuality, the developing field of sexology also avoided applying research to broader concerns. Consequently, sexuality research developed in isolation from other research disciplines because of cultural uneasiness with sexuality; the advent of AIDS has forced some change in this mutual segregation (Pollak, 1992). Desires for food and sex are physical needs, but that is not all they are. People exert a great deal of effort in preparation, presentation, seeking particular foods of dubious nutrition, sharing food, staging order of dishes, going out to eat, and having friends or family over for meals; eating may have many emotional, social, and even spiritual meanings for different people. Similarly, sex carries powerful meanings for people beyond simple biological urge and, through its physical union, offers a unique symbolic physical manifestation of emotional intimacy (Gochros, 1988). These meanings may be shaped by cultural beliefs

or individual conviction, but even the limits of what is sexual and what is not can vary widely between individuals and societies (Salmon). Although *having sex* and *making love* may be thought of as the same behavior, for most people, the difference between them is great, the latter term carrying a greater emotional weight. However, individuals will vary in how much they see these two constructs differing and in their connotations (Peplau & Gordon, 1983). A man may have several sexual partners, yet some women define his behavior as *promiscuous* only if he is emotionally involved with more than one of them; consequently, the perception of disease risk depends on emotional and not epidemiologic reasoning (Woodcock, Stenner, & Ingham, 1992). In one study of heterosexual adults, 62% reported that they perceived themselves at low risk of HIV exposure through their partners, despite lacking the relevant information about their partners on which to base such a determination (Kusseling, Shapiro, Greenberg, & Wenger, 1996). People interpret their behavior and experiences through meanings; language mediates such meaning-making and can limit the possible meanings available or can become extremely solipsistic, so that the same word carries different meanings for different people (Morris, 1991).

In anthropology, research using social constructivist approaches shows that the very same sexual behavior can have very different social and personal meanings across cultures, times, and individuals. This approach is now the reigning paradigm in anthropological sexology, holding the central tenet that human sexuality is personally and socially constructed — not subject to universal meanings and nosologies. The bulk of previous sexual scholarship focuses on heterosexual intercourse and sets it as synonymous with reproduction, placing such constructs as foreplay, fantasy,

nonreproductive sexual behavior, and same-sex sexuality as minor variations in human sexuality. In contrast, naturalistic studies show that penile-vaginal penetration constitutes a minority of actual human sexual behavior (Vance, 1991). Our biology creates opportunities for sexual behavior but the meaning ascribed to it can be as diverse as human experience and imagination; as with most human behaviors, the mind is the driving force and organizing principle.

Categories of behavior are created and imposed by researchers as outside observers; this is particularly easy to recognize in the disparity between an outsider's description of a new culture versus those of an anthropologist who has spent a decade assimilating into that culture. Once these categories are adopted, they are reified and conscript reality so that information resisting this classification is ignored or altered to fit the scheme (Mendès-Leite, 1993). A significant part of feminist thought centers on separating the fusion of reproduction with sexuality, as well as the fusion of gender role with sexual behavior. Similarly, the historically relatively recent identities of *gay* and *lesbian* have integrated previously isolated sexual behaviors with an entire social class. The concept of *sexual orientation* allows people to categorize sexual behavior as heterosexual, homosexual, or bisexual; however, this is a new social construct that structures sexual object selection — an area as easily constructed as one diffuse construct and not divisible into categories, such as Freud's *polymorphous perversity* (Vance, 1991). For example, the construct *homosexuality*, taken for granted and as universal in much sexual research, is a relatively new one, first printed in 1869 as *Homosexualität* (Mendès-Leite, 1993). The modern constructs of homosexual and gay are not synonymous and are not continuous with historical constructions around sexual behavior

between men. Words carry specific meanings and, through labeling reality, alter it to conform with those meanings (de Queiroz, 1993).

Another example of a cultural shift in interpreting sexual behavior comes from Sicily: The meaning attributed to the practice of coitus interruptus changed greatly in the last hundred years. A behavior that once connoted licentiousness now, in an age demanding fewer offspring, represents sexual restraint; complementing this change, having many children shifted from representing respectability to demonstrating lack of sexual restraint (Schneider & Schneider, 1991). However, even widely accepted cultural constructions of sexuality may disagree with the individuals' experiences of sexual behavior. The Bumbita Arapesh of Papua New Guinea have strong cultural beliefs about male dominance in sexual behavior; however, these constructs are played out only during sexual experience outside marriage. The daily realities of married relationships seem to place sexual behavior under the control of women, which contradicts cultural expectations, to the consternation of many men (Leavitt, 1991).

Personal constructs vary from person to person with experience, but common experiences can create shared or similar meanings across individuals within a particular culture. Similarly, differences between the experiences of men and women can create subtle and profound gender differences in perception, expression, and behavior. These differences become more apparent when men and women become intimate with each other. Research demonstrates that men are more likely than women to attribute sexual meanings to people's behavior in dating situations. Social anxiety seems to amplify this gender difference, perhaps by activating dormant constructs about the self. Men may think of themselves in more sexual terms than women think of themselves (Kowalski,

1993b). Men attribute more sexual meaning to women's mundane dating behaviors (smiling, eye contact) than do women. Gender differences in interpreting behaviors may be most extreme during first dates: Women are least likely to see their own behaviors as sexual, and men are most likely to interpret women's behaviors as sexual. Men may refer more often to sexual schemas for interpreting ambiguous social situations than do women (Kowalski, 1993a). Misperception of sexual intention is more likely early in dating relationships, when the two people are less familiar with one another. Perhaps, through experience, the two establish common meanings for behaviors related to intimacy (Kowalski, 1993b).

Heterosexual partners show a significant correlation of scores on sex-role attitude inventories, suggesting that they have similar construct systems (Peplau & Gordon, 1985). Dion and Dion (1985) describe personality dimensions as "systems of interrelated needs and beliefs about self and others that provide frameworks for individuals' interpretations of their experiences in close relations" (pp. 210-211). This is very similar to Kelly's constructivist views of personality. Similar construct systems may draw people together, or the common experiences of being a couple may create similar construct systems. Coupled individuals with dissimilar construct systems may have more difficulty understanding each other, which can create relational problems. Counseling couples, an underutilized approach to HIV prevention, can be highly effective in preventing heterosexual transmission from an infected partner to an uninfected partner (Padian, O'Brien, Chang, Glass, & Francis, 1993). Perhaps such counseling helps partners to understand each other's construct systems. Bergner and Bergner (1990) describe a common problem of intimate couples seeking psychotherapy; the men and women tend

to ascribe different meanings to intercourse without appreciating their partners' viewpoint. The men see intercourse as a way of creating relational intimacy, whereas the women see it as one way of expressing already existing closeness in a relationship. The women value talking especially, and then other nonsexual means, as establishing intimacy with a partner. Without an appreciation between partners of this difference, one can imagine how easily initiation or avoidance of sexual behavior by one partner can be misinterpreted as the opposite of intimacy-seeking behavior, causing a growing rift in the relationship.

As with sexual behavior, people describe the experience of love very differently, and this varies by gender and personality. Some people describe love as feelings toward the other person, whereas others may describe it as an inner feeling, such as joy. People often assume their partners experience love just as they do and struggle with the relationship when such individual differences become apparent (Dion & Dion, 1985). There are pronounced gender differences in relational style, with women tending to merge in relationships and men tending to distance. These styles are most clearly evident in same-gender couples, in which they are amplified by having a *double dose* of one style (Elise, 1986). Some studies find that, in general, men, especially of high school and college age, describe love more romantically than do women (Hendrick, 1988). In studies of romantic love among heterosexual college students, women are less idealistic, less cynical, and more pragmatic about heterosexual romantic love than are men. Men score higher on romanticism measures and fall in love more easily, whereas women tend to link love with marriage more and to fall out of love more easily. In keeping with a more companionate style of love, women find it easier to stay friends after a breakup. These

differences can be organized under Lee's (1973) six love styles: College men are more likely to show ludic (game-playing) and erotic love, and women, storgic (companionate), pragmatic, and manic (obsessive) love (Dion & Dion; Hendrick, 1988; Hendrick & Hendrick, 1986). Although a person may have one dominant style of love, each person can be rated on the six different styles as six different dimensions of their experience of love. Love style is probably not unitary, but more multidimensional or multicomponential. Furthermore, factor analytic studies support the validity of Lee's six love styles as relevant dimensions of most people's experience (Hendrick & Hendrick, 1986, 1989).

The conclusions of studies on sexual behavior do not agree as much as those from studies of romantic love. Men tend to initiate intercourse, but women control it (Hendrick, 1988). Some studies show that women approve of casual sex less than do men; American men may value promiscuity more than do American women because of their sex-role socialization (Peplau & Gordon, 1983). However, other studies show that individuals of both genders may be more permissive with their own gender and stricter with the other one (Hendrick, 1988). Hendrick finds that men are more permissive and instrumental (sex as a bodily function) about sex, whereas women tend to see sex as communion and endorse responsible sexual practices. Factor analysis of these sexual attitudes with Lee's love styles demonstrates that permissiveness and instrumentality load positively on game-playing (ludic) love and load negatively on selfless (agapic) love; communion and responsibility load positively on erotic, obsessive (manic), and selfless love. Hendrick concludes that gender differences in sexual attitudes are even stronger than those on love relationships.

Differences in use of sexual terms occur across cultural groups and genders. Some studies show men and women have separate vocabularies for some sexual words; even words used by both groups vary in connotation by gender. McDermott, Drolet, and Fetro (1989) have college men and women rate sexuality-related words on 15 bipolar adjective pairs, using a 7-point scale. Men and women both rate most positively the words *contraception, family planning, foreplay, sexual intercourse, contraceptives, breasts, premarital sex,* and *genitals*. They both rate most negatively the words *homosexuality* and *bisexuality*. Men rate the words *heterosexuality, heterosexual,* and *vagina* significantly more positively than do women, whereas women rate the words *pregnancy, cohabitation, extramarital sex,* and *marriage* significantly more positively than do men. Men rate the words *gonorrhea, gay, homosexual,* and *transsexual* significantly more negatively than do women, whereas women rate the words *VD, pornography,* and *lesbian* significantly more negatively than do men.

Just as men and women differ in understanding sexuality, research also highlights gender differences in needs for and responses to HIV prevention (Fullilove, Fullilove, Gasch, & Poulson, 1991). Turner, Korpita, Mohn, and Hill (1993) find clear gender differences in responding to safer sex interventions. Considerable evidence shows that same-gender peers are especially relevant for learning HIV prevention information and skills as well as gauging norms. Gender-specific shared constructs or vocabularies may allow better communication, validation, and learning in same-gender dyads. Grossberg, Tillotson, Roberts, Roach, and Brault (1993) find that communication skills among same-gender peers are a critical target for initiating changes in unsafe sexual behavior with sexual partners. College students reject sexually explicit prevention information

when it is presented in printed form. Oral person-to-person or small-group discussion may be the best format to teach sexual information and behavior in a way that will be accepted by students (D'Augelli & Kennedy, 1989). When people communicate face to face, they may begin to share vocabularies and construct systems through mutual give and take.

People construct reality differently, and language is a primary tool in this construction. Differences in these constructions are evident in the areas of love and sexual behavior, especially between men and women as groups. Such differences may contribute to difficulties interventionists have with understanding unsafe sexual behavior and implementing successful safer sex campaigns for HIV prevention. Parker, Herdt, and Carballo (1991) charge that the unique meanings each individual gives to various sexual behaviors has been neglected by scientific studies of human sexuality, especially research on HIV; however, it is precisely the meaningful context of sex that allows any true understanding of it at all.

Is *Safer Sex* Tunnel Vision?

The same sexual act can have multiple meanings for a given person. Michaël Pollak (1993) reveals that public sexual behavior in certain gay men can symbolize emancipation, cultural affiliation, self-affirmation, and also violation of wider cultural norms. Safer sex campaigns run counter to many people's ideas about affection: Risky behaviors are often those that most represent emotional intimacy, whereas promoted behaviors emphasize barriers between people. For many gay men who were trying to adopt more affirming meanings for using condoms, the change in gay community norms to endorsing condom use was reinforcing; however, some gay men found this very

acceptance a betrayal of the spirit of rebellion they found in having sex with other men. For these men with this particular meaning attributed to sex without condoms, many community-based safer-sex campaigns actually pushed them away from adopting condom use (Patton, 1996). Sexual desire can outweigh concerns about HIV; sexual behavior can mean more to a person than simply the risk of infection (Pollak, 1992). Rotello (1997) argues that expecting people to adhere to using condoms all the time may run counter to the very nature of human sexual behavior.

Interventionists tend to view anal intercourse solely from a public-health disease-prevention model; within this framework, the behavior has an overriding meaning of risk and danger for disease transmission. Within this framework, people engaging in such behavior are clearly behaving irrationally. This way of viewing behavior leaves little room for the power of emotion and needs for closeness. Sexual behavior means much more to individuals than just disease transmission; otherwise, few people would do it. Sexual behavior carries multiple and complexly interrelated meanings of relationship, pleasure, affection, risk, affirmation, condemnation, and belonging, just to name a few. Successful attempts to change a person's sexual behavior must gauge that behavior's importance from within that individual's worldview; only by entering another's world can a preventionist hope to assess meaning accurately (Hunt et al., 1993). These meanings are often also culturally influenced and shaped through interactions with others. Consequently, sexual behaviors may represent ways of confirming identity, especially gender identity, e.g., a man's refusal to wear a condom may confirm his *maleness* by indicating passion, procreative prowess, and pride while at the same time confirming a female partner's *femaleness* by indicating her desirability, fecundity, and demureness

(Pivnick, 1993). In some cultures, using a condom with a woman may indicate that she is "loose" or "unclean" (O'Donnell, San Doval, Vornfett, & DeJong, 1994).

Donovan, Mearns, McEwan, and Sugden (1994) assert that researchers' push for quantitative analysis has stripped sexual behavior of its social context, especially in research on gay men. They attribute the counting of sexual acts with the overlooking of such important variables as partners, locations, feelings about partners, emotional state, and other factors that might reveal motivation more clearly. When such important motivations are ignored, sexual decisions begin to appear irrational to researchers, and studies reach conflicting conclusions. Gold and Skinner (1992) explore situational factors during sexual encounters and conclude that post hoc analyses of sexual behavior may overlook thought processes that occur only during sexual behavior, leaving researchers with the difficult task of finding ways to gauge risk assessment during, rather than before or after, the act.

Prieur (1990) demonstrates that unsafe sexual behavior can be very rational if one can understand the individual's viewpoint. Gay men who continue to practice unsafe sex, despite knowledge of HIV risk, are more likely than those who practice safer sex to have low social support; for these men, sexual behaviors labeled by public health officials as unsafe represent one of the very few means of social, physical, or emotional intimacy available to them. These men experience safer sexual activities as "cold, distrustful, and morbid," whereas they exchange semen as an act of affection and commitment. Semen exchange is a physical act of sharing that symbolizes emotional and social sharing. Intercourse without a condom can represent spiritual union. Given these men's limited social contacts, they have a very limited behavioral vocabulary for expressing intimacy;

unsafe sexual behaviors carry highly positive meanings for them and are not easily replaced. If they follow public health dictates to give up such behaviors, they are left without a way to express feelings of closeness with others; safer sexual behavior is seen as the exact opposite of intimacy. Asking these men to give up these sexual behaviors and adopt new ones is akin to asking them to speak a new language that uses the same words as their old one, only all the meanings are opposite. Certainly, no one could expect them to make such a change easily, quickly, or without extensive social support and guidance.

Sex and emotional needs are strongly interwoven. Sex is a way of expressing emotional need in a relationship. Individuals with different styles and needs in intimate relationships may express themselves very differently sexually or may interpret the same sexual behaviors very differently, creating misunderstandings. Although they recognize the risk of unprotected anal intercourse, some gay men rank it as both physically and emotionally highly significant. Unsafe sex is often associated with communicating commitment, seeking closeness, and avoiding the coldness of safer sex (Feeney & Raphael, 1992). In contrast, some gay men find anal intercourse disgusting (Davies, 1993). However, even among gay men who prefer celibacy to attempting sex with a condom, the meanings attributed to all manner of sexual activity, safer and unsafe, vary greatly (Siegal & Raveis, 1993). In focus-group interviews examining reasons for having unprotected anal sex with a casual partner, Dutch gay men gave explanations of enjoying risk, gaining physical pleasure, becoming more intimate, falling in love, feeling strongly attracted, trying not to disappoint a partner, and trying to assuage negative feelings about oneself (Hospers, Molenaar, & Kok, 1994). In another study of Dutch gay men, among

those who enjoy anal sex, the meaning of that behavior is one of the three main predictors of condom use; men who like it for pure physical satisfaction use condoms more than those who want to express intimacy or feel that their partner is "special" (de Wit, Teunis, van Griensven, & Sandfort, 1994).

Meanings can be powerful motivators for or against sexual behaviors. Baffi, Schroeder, Redican, and McClusky (1989) contend that men need stronger self-efficacy beliefs and that women need stronger self-expression and assertiveness skills in sexual situations; however, this approach overlooks the possibility that such skills may be present but cannot overcome extreme negative meanings for sexual behaviors. St. Lawrence (1993) finds that one sample of African-American men and women saw prevention of disease and pregnancy as abnormal, unusual, and embarrassing behavior. Introducing a condom into a sexual encounter may elicit very negative connotations of betrayal, infidelity, illness, and death (Pivnick, 1993). Some sexual behaviors that are very low risk for HIV transmission (e.g., kissing) may be avoided with casual partners because they feel intimate; whereas intercourse without a condom may be pursued with a loved yet possibly HIV-infected partner precisely because it feels so intimate (Kane, 1990).

Vanwesenbeeck, de Graaf, van Zessen, Straver, and Visser (1993) examine the meaning prostitutes' clients (Dutch men, in this case) attribute to their services and the use of condoms in such situations. The researchers find motivators and meanings vary greatly between individuals and living situations; however, they do identify different styles of perceiving commercial sex and conjoint condom use. Condom users view prostitution and condom use more positively; they also tend to have more education and

have more internal loci of control. Clients vigorously opposed to condom use view prostitution more negatively and appear to enjoy the power struggle of getting her to do without a condom, rather than the pleasure of unprotected sex. The men seeking commercial sex attribute diverse meanings to it: "a pleasant hour's relaxation," "a sexual pick-me-up," "an escape from loneliness," "wanting a bit of warmth," "friendship," "deliciously kinky," "enjoying it while I still can," and "disgusting." Meanings ascribed to condom use during commercial sex also vary: "a bitter necessity," "a matter of course," "a symbol for the whole situation in which you have ended up," "doing it with a lot of different people," "use with old slags," "it suits me," and "if she wants to." The meanings held for unprotected intercourse are more positive among those men who do not use condoms: "real sex," "intense contact," "a high," "the heat of the play," "whole contact," "that bit of privacy that we have," "she's clean," "absolutely uninhibited," "a safe woman," and "more adventurous." For these men, meaning and behavior go hand in hand; they value sex without a condom more highly than sex with one, and they are also less likely to use condoms during sex.

Mental health therapists have also noted and addressed clients' idiosyncratic meanings about sexual behavior. Clinicians working with clients who have sexual dysfunctions find that individuals' unique meanings about sexuality determine the therapeutic approach. Clinicians also find that many of these meanings are learned from the family. Families pass down their views of normalcy in sexual and relational behavior. Furthermore, relational constructs and expectations are often played out in the arena of sexual behavior, so that sexual acts symbolize affection, power, sacrifice, communication, or any other of the very wide range of meanings found in close

relationships (Stavros, 1991). Assumptions that therapist and client mean exactly the same thing by the same words is a common problem in psychotherapy, moreso when the two people share some common cultural experiences such as ethnicity or sexual orientation (Forstein, 1986). When faced with clients from non-Western cultures, sex therapists become aware of their own imposed meanings for sexuality, normalcy, and sexual dysfunction. Western sex therapists tend to assume that sexual behavior is foremost a means of pleasure exchange; however, sex may mean obligation, loyalty, or a way of pleasuring only one partner (Lavee, 1991). Sex is social in nature and does not hinge on one person's control; it is a mutual process of negotiation (Pollak, 1992). When researchers precisely define specific sexual behaviors, they strip such behaviors of social context. This creates an illusion of shared meaning that such behaviors mean the same things to all respondents in all situations. Sex is more than pure behavior; it has a social function, and behaviors have diverging cultural and individual significances. Tunnel vision in viewing sexual behavior perpetuates simple educational interventions such as "Always use a condom," but such approaches do not address the complexity of sexual negotiations between two people in a relationship. Kalichman, Kelly, and Rompa (1997) find that researchers must examine both respondents' characteristics and their partners' characteristics in differentiating those respondents who have unprotected sex from those that have protected sex. The future of risk reduction may be in abandoning mechanistic guidelines and instead in facilitating context-specific negotiation skills and fostering the creation of community cultures that encourage safer sex skills (Dowsett, 1993).

Even with improved risk-reduction interventions, initiating a behavioral change is far easier than maintaining it (DeMayo, 1991). Fisher and Fisher (1992) underscore that

the immediate impact of interventions may not translate into long-term changes in behavior. Much of the HIV prevention literature of the past 6 years focuses on behavior maintenance and *relapse prevention* (Rosser, Coleman, & Ohmans, 1993). Maggie Reinfield, who conducts workshops addressing gay men's emotional and social barriers to safer sex, sums up the state of such interventions: "We're in uncharted waters here. We're inventing a field as we go along" (De Stefano, 1990, p. 42). Research explores the roles of many possible causes of unsafe sexual behavior — being in love, being sexually aroused, knowing a partner's serostatus, trusting a partner, having low self-esteem, being drunk or high, not having condoms, and many more — yet no decision-making model can predict satisfactorily an individual's return to a behavior after a change away from it.

Roesnthal, Biro, Succop, Baker, and Stanberry (1994) find that, among adolescent girls, "enjoyment" as a reason for preferring either using condoms or not using condoms; the authors were unsure if such enjoyment is more emotional or physical. Similarly, Hays, Kegeles, and Coates (1990) cite enjoyment of unprotected anal sex as a motivator for such behavior in young gay men. In a longitudinal study of gay men, reporting unprotected anal intercourse as a favorite sexual activity in 1984 most strongly predicts engaging in that behavior in 1988. The authors describe such partiality as "habit patterns and preferences" but go no farther in explaining it; they suggest addiction-modeled interventions to address the problem (McKusick, Coates, Morin, Pollack, & Hoff, 1990). Tighe (1991) describes people who relapse as having made "vows" and "failing to keep their resolution." The concept of *relapse* into unsafe sexual behavior uses an addictions model that casts behaviors such as unprotected anal intercourse as unhealthy in and of themselves, regardless of the serostatus of the

participants. This is a negative metaphor that labels sexual expression as irrational and mostly uncontrollable (DeMayo, 1991). Within this framework, the motivation of anyone engaging in unsafe sex is simply weakness, habit, or addiction. If one presses the model, perhaps a motivation of pleasure seeking may emerge, but that is as far as the model pursues causes of behavior: Sexual activity is *pleasurable*. Such a conception does not answer the question of why someone engages in an HIV-risky sexual behavior when a far less risky sexual behavior could also give them pleasure. Focusing on the physical pleasure of sexuality ignores its multidetermined nature as communication, social bonding, and ritual. Sex is inextricably tied to identity — personal and social (De Stefano, 1990).

After the unprecedented success of educational campaigns in reducing HIV infection rates among gay men, prevention experts were baffled by the advent of relapse into unsafe sexual behaviors. This wave of relapse starts to make sense if one believes self reports that many *unsafe* behaviors carry important meanings for closeness, affirmation, and identity (Ekstrand, 1992). Gay men in monogamous relationships are more likely to engage in unprotected anal intercourse than those not in such relationships (McKusick, Coates, Morin, Pollack, & Hoff, 1990). Some gay men find it more difficult to practice safer sex with long-term partners with whom they are becoming intimate; they find safer sex easier with casual sexual partners (De Stefano, 1990). McLean and colleagues (1994) study gay men who have had unprotected intercourse; the researchers report that most of them did so with regular partners for whom they felt either love or commitment. These men rated unprotected sex with their partners as not risky, even though most did not know their partner's HIV status; in contrast, the men who also had

nonregular partners rated unprotected sex with them as risky, regardless of the partners' HIV status. The researchers conclude that loving a partner reduces perception of risk from that partner and having unprotected sex helps confirm that perception.

Many gay men adopted safer sexual practices solely from knowledge-based educational campaigns; however, they did so with an expectation that giving up certain sexual practices was a temporary sacrifice (Ekstrand, 1992). As the AIDS epidemic wore on through the years, they returned to those behaviors (Tighe, 1991). De Stefano describes lapsing into unsafe sex as "a kind of battle fatigue." Some men have managed to find lost meaning in newly adopted safer sexual behaviors, but others, faced with the permanent loss of those meanings, relapsed into the behaviors that fulfilled those important purposes for them (Ekstrand, 1992). Even so, many young gay men who are relatively "new" to the epidemic report having unprotected anal sex as a way of pleasing partners or expressing love (Hays et al., 1990). Furthermore, a study of younger (15- to 21-years old) gay men found that the desire to have unprotected sex often preceded the actual behavior and was not an unexpected impulse in their unsafe encounters (Gold & Skinner, 1992).

In a 1998 street survey of 22,000 gay men, San Francisco's STOP AIDS Project found that 33% of respondents reported having unprotected anal sex (either receptive or insertive) with two or more partners in the last 6 months, an increase from the 24% of respondents reporting the same behaviors in a 1994 survey (Howard, 1998). Many men no longer view such unprotected behavior as taboo as they did in the early days of the epidemic; in fact, some men now refer to unprotected anal sex using the more positive terms *barebacking*, *raw sex*, or *skin-to-skin sex*, indicating that there is something they

find attractive about unprotected versus protected sex. Scott O'Hara, a writer and former porn star, describes barebacking using such phrases as "spiritual intensity," "exchanging," and "share." Eric Rofes, former Executive Director of the San Francisco Shanti Project, attributes the rise of barebacking to the meaningfulness of the act and its importance to many gay men's concept of their identity (Krieger, 1998). A more recent development is the concept of *gift giving*, which eroticizes the very act of becoming HIV infected through unprotected sex; web sites, chat rooms, and personal ads now show that some people are seeking infection (*getting the gift*) because it carries some positive meaning for them (Fertig, 1997). The advent of *The Gift* clearly shows the pitfalls of assuming that all people attribute the same meanings to HIV or are motivated to avoid infection by it. Some researchers even believe that social proscriptions have added allure to unprotected sex as a form of transgression (Sheon & Plant, 1997).

Accepting the risk of being infected by a partner or even actually becoming infected by that partner can be a way of communicating intimacy, loyalty, and a romantic desire to not outlive a partner or to share a partner's suffering (Pivnick, 1993). Such commitment extends beyond only sexually intimate partnerships; Connors (1992) recounts the important bond between injection-drug–using partners that encompasses friendship as well a working relationship ensuring mutual survival and access to drugs. Sharing needles with a potentially infected partner is a way of indicating loyalty and commitment to the friendship. For sexually intimate partners who also share needles, sharing a needle may even take on sexual meanings.

Even if individuals shared the same meanings for sexual behaviors, researchers would still have difficulty reaching consensus on what constitutes safer and unsafe

sexual behavior. Precise behavioral definitions of risk may also misinterpret actual HIV risk, as such definitions neglect context and the other factors contributing to risk. Assumptions that unprotected intercourse is equally risky between any two people are misleading; what appears to be risky behavior (unprotected intercourse) may be the result of careful negotiation between partners, based on history and knowledge of other HIV risk behaviors. Many gay men are using serostatus concordance as a risk reduction strategy, and one study finds that unprotected anal intercourse is most likely between seroconcordant partners (Kippax, Crawford, Davis, Rodden, & Dowsett, 1993). Many gay couples negotiate explicit rules regulating sexual behavior between themselves and with others; these rules may allow safer sexual activities only outside the relationship and unprotected intercourse exclusively within the relationship (Davies, 1993; Hickson et al., 1992). The British Project SIGMA study reports that the most common reason (34%) for gay men not using condoms during anal intercourse was limitation of this behavior to activity with one partner. Reserving unprotected anal intercourse to one relationship suggests associations with love, trust, or intimate knowledge of a partner (Hunt et al., 1993). Among college students, growing positive regard or trust for a partner is associated with lessening condom use for HIV prevention; it is noteworthy that lessened concern about AIDS and sexually transmitted diseases is associated more with positive feelings about the relationship and partner than with any medical proof of negative HIV status (Pilkington, Kern, & Indest, 1994). The belief that safer sexual practices are unnecessary with a known or trusted partner is also prevalent among African-American youth (Ford, Rubinstein, & Norris, 1994) and United Kingdom youth (Ingham, Woodcock, & Stenner, 1991).

Such strategies do have weaknesses. Ekstrand and colleagues (1993) point out that *negotiated safety* is flawed because people have difficulty revealing their serostatus or may not know it; a better label may be *negotiated risk.* Although such strategies rely on truthfulness of partners, they do represent a means of reducing risk through negotiation — a practice researchers have often overlooked but which may be the most common form of risk reduction.

In contrast, high levels of condom use are associated with self-labeling of sexual behavior as risky for HIV infection, condom enjoyment and commitment to their use, good communication about sex, and single marital status (Catania et al., 1994). Personal meanings of condom use affect HIV prevention strategies: People who hold strong positive feelings for unprotected sex and strong negative feelings for using condoms are more likely to use partner reduction or screening strategies than barrier methods. However, even if condom failure rates are estimated as high as 25%, a person having unprotected sex with one or two partners runs a significantly greater risk of HIV infection than one who uses condoms with 20 different partners (Reiss, 1993).

It is a testimony to its symbolic and emotional significance that, despite the risk, gay men continue to have unprotected anal intercourse. That this occurs mostly in limited situations, often proscribed by explicitly stated rules, demonstrates that such behavior is not automatic or unplanned. If one acknowledges that (unprotected) anal intercourse, for many gay men, carries important meanings of closeness, intimacy, and affection, then it is unrealistic for interventionists to expect to change such behavior through poster campaigns. A more effective approach must honor the contextual meaning; this means working with the relationship, developing clear rules for reducing risk within that

relationship, valuing needs for emotional intimacy, teaching negotiation skills, educating about accurate risk evaluations, and attempting to develop similar important meanings for safer sexual behaviors that have previously been seen as cold and impersonal (Hickson et al., 1992). Some HIV counselors find discussing clients' meanings for sexual behaviors the most helpful approach to risk reduction (Sheon, 1998).

Public Health Campaigns: One Size Does Not Fit All

One of the reasons poster campaigns have limited success in changing behavior is that public health educational messages are subject to individual interpretation. Macintyre and West (1993) asked one sample of 879 Glaswegian 18-year-olds to define *safer sex*: 84% mentioned condom use; 68%, partner selection; and only 2%, avoidance of specific sexual acts. Individuals' connotative meanings of sexuality-related words are likely to involve morality and self-esteem; such meanings can prevent people from choosing healthier sexual behaviors or seeking help for sexual problems. Differences in personal meanings for words can create misunderstandings between individuals and professionals seeking to intervene in sexual behavior. Even presumably specific health education messages can be divergently received by different people, owing to language idiosyncrasy. Without examining personal meanings, sex educators and therapists will overlook a significant predictor of behavior and outcome (McDermott, Drolet, & Fetro, 1989). Even basic educational interventions can fail as individuals interpret the messages differently. To succeed, these messages must be explicit, detailed, contextual, and supported by a consensual social definition (Lyttleton, 1994).

Meaning is all important in communication; the same word can have very different meanings for different people and create misunderstandings. One word may

carry a host of related meanings or may be very simple and precise in its meaning. Separation and clarification of meanings in specific words is important for scientific discourse and was an early stumbling block for behavioral scientists concerned about HIV. Construal of *homosexuals* as a unitary category of individuals engaging in the exact same sexual practices allows the creation of a *risk group* based on identity and not behavior; the salient indicator of risk should be behavior, not sexual identity. However, this misconstrual has mired HIV prevention efforts and facilitated bias against homosexual people and people with HIV. Health educators now strive as a first-line intervention to have people differentiate the constructs *sexual identity* and *sexual behavior*, and link the latter and not the former with their construct for HIV risk (Vandevyer, 1993).

HIV education campaigns in Thailand have been fairly successful in teaching people not to share intravenous needles when injecting drugs; however, most Thai people define *injecting drugs* as pertaining solely to illicit narcotic use and not to the local *injection doctors*, who administer medicines and vitamins and are known to reuse syringes. The Thai HIV prevention campaign links promiscuity with commercial sex workers (CSWs), but villagers have taken this to mean that *promiscuity* is situational: A single visit to a CSW is promiscuous, but having sex with several women who are not CSWs is not. Consequently, married men are more likely than other men to use condoms with CSWs but are less likely than other men to use them with their primary sexual partners, their wives (Lyttleton, 1994).

Ingham, Woodcock, and Stenner (1991) conduct semistructured interviews with UK participants aged 16 to 25 years old. Because *getting to know one's partner* before

intercourse was a prominent prevention message in the UK at the time, the researchers examine participants knowledge of their partners on first intercourse. They find that although many participants felt that they *knew* their partners on first intercourse and thus felt *safe*, this sense was based more on emotional factors or irrelevant partner characteristics than on information relevant to such a risk assessment. In fact, the researchers uncover compelling reasons for participants to not ask and to not reveal more relevant risk information; they conclude that rational decision-making models, such as the Health Belief Model, fail to consider the important emotional forces, physical urges, and situational pressures that many respondents discussed as relevant in deciding to have intercourse.

Most models for predicting condom use, or other HIV-preventive behaviors, assess cost-benefit analysis. These models are often applied to groups of people or to all people; however, the various factors in these models have different relative weights for different individuals. Another, and possibly more intuitive, way of assessing an individual's analysis of the costs and benefits of condom use is to assess the meanings attributed to condom use. Exploring the meanings a person attributes to a behavior conveys the pros and cons of that behavior in a manner that may be more phenomenologically true to the individual's experience. Vanwesenbeeck and colleagues (1993) conclude that people are more willing to accept information phrased in their own words and tailored to their experience; interventionists interested in educating people should shape their messages differently for each individual.

Behavior change models acknowledge that appraisals of threat and efficacy are crucial for predicting any individual's risk-reduction behavior. Exploring the meaning of

such behaviors is simply another way of discussing such appraisal (Martin, 1993). Examining an HIV-prevention model may reveal the feasibility of using constructivist approaches. Fisher and Fisher (1992), in a comprehensive review of the HIV prevention literature, propose a three-factor HIV-risk behavior change model based on *i*nformation, *m*otivation, and *b*ehavioral skills (IMB model). Before people can be expected to change their behavior, they must have information on how HIV is transmitted and on explicit ways in which they can prevent its transmission. Motivation determines whether this information spurs people to desire behavior change. Behavioral skills are requisite on information and motivation but must be familiar and comfortable before people implement them to prevent HIV transmission. Within this model, the specific information, motivation, and behavior that optimally improve preventive behavior vary between target groups. In testing, the model accounts for 35% of the variance in gay men's HIV-prevention efforts and 10% of the variance in college students' efforts. Such percentages are relatively high for such models; however, the higher percentage of unattributable variance indicates some key elements are missing in the model. The reviewers find that the most effective HIV prevention programs are those based on a coherent theory, tailored to a target population, and focused on changing information, motivation, and behavior.

Fisher and Fisher (1992) suggest conducting elicitation research within the target population to determine current HIV knowledge, current motivators for HIV prevention, and current preventive behavioral skills. This information guides the development of group-specific interventions. They recommend open-ended questioning to reveal behavior beliefs, evaluations, attitudes, reference group, conformity, and subjective

norms, which determine motivation. Behaviors are more easily changed after identifying the relative significance of each of these in shaping behavior within the target group. *Open-ended questioning* can be a way of uncovering another's construct system, and *belief, evaluation, attitude, norms, motivation, and relative significance* can be subsumed by the more general and experiential word *meaning*.

Intervention programs tailored to their target community are more likely to succeed than are those designed from outside the community. Most HIV-prevention programs among college students have not conducted elicitation research, and most have focused on information provision rather than skills building or motivation (Fisher & Fisher, 1992). Elicitation research can reveal the most relevant variables to target for intervention. Such research is also indispensable in creating effective media; elicitation research can identify culturally appropriate sexual slang so that safer sex information will be understood and accepted (Mays & Jackson, 1991). Such elicitation research is a method of discovering relevant constructs and gauging their importance for specific groups; of course, this offers a closer match than constructs from the general population but may still not match well with every individual within a community.

In their review, Fisher and Fisher (1992) point out that HIV prevention knowledge rarely correlates with behavior change in research. They attribute this to methodological errors. Many studies fail to match information measures and behavior measures on specificity and content; if one wants to assess the likelihood of a person using a condom, one should assess information on using a condom and not more general information (such as knowing that intercourse can transmit HIV) or information from another content area (such as knowing that an HIV-infected woman can transmit HIV to

a child at birth). Ajzen (1982) detailed four *criteria for correspondence* on which information and predicted behavior must match: target of behavior, type of action performed, time of occurrence, and context. Only when these four dimensions are equivalent will information predict behavior optimally. Matching on these criteria creates a test situation more similar to actual life experiences. Fisher and Fisher also question whether highly structured questionnaires (such as true-or-false questions) accurately assess the type of HIV information people can access and find relevant in social situations; even the difference between recognition and recall memory could mislead researchers.

Beyond such questions of method, Fisher and Fisher (1992) also establish that information may be a necessary but not sufficient condition for prevention behavior (Johnson, Gant, et al., 1992). Tudiver et al. (1992) succeeded in changing HIV knowledge and attitudes without changing prevention behavior. Rotheram-Borus and Koopman (1991) also find that knowledge alone is insufficient to maintain HIV prevention behaviors; they conclude interventions must target beliefs and behavior. A formal college AIDS course increased students' knowledge but did not change their behavior, sense of personal vulnerability, or perception of social norms (Goertzel & Bluebond-Langer, 1991). Information solely on risk addresses only one aspect of meaning of the targeted behaviors; youths report disliking using condoms because of beliefs they reduce pleasure, misperceptions about HIV risk, unavailability at time of intercourse, and drug and alcohol use (Schinke, Botvin, Orlandi, Schilling, & Gordon, 1990). If sexual behaviors mean more to individuals than simply risk, risk information

may not be addressing the relevant meaning of these behaviors and so may not contribute to behavior change.

Furthermore, a person's past behavior may influence risk perception more than knowledge transmitted from others; every risky sexual behavior that does not result in HIV infection may actually reinforce that behavior. Simply because a single incident of unprotected sex *may* infect a person does not mean that every incident will (Pinkerton & Abramson, 1992). Some people acknowledge their behavior puts them at risk for contracting HIV but then discount it because past risks carried no consequences or because emotional reasons are more important (Woodcock et al., 1992). Becoming infected even from a single instance of receptive anal intercourse with an HIV-positive partner, is a low-probability (one chance in five instances) event, which most people typically have difficulty assessing accurately, preferring to round the risk down to zero (Hayes, 1991). Additionally, the actual onset of illness or death from HIV infection may occur more than 10 years after unprotected sex, so that such a risk can be outweighed by more immediate gratifications in a sexual encounter. The subjective importance of sexual fulfillment for any given person may outweigh immediate risk of HIV infection even in a *rational* decision process. The same process applies to needle sharing for injection-drug use; risk-taking may be a daily part of acquiring a drug, with the reinforcing consequence of *getting high*. Similarly, more distant threats to health and personal safety (such as HIV-related illness and death) are far outweighed by the rewards of getting high, especially when habitual drug use almost always entails the daily prioritizing of getting high over immediate physical and emotional health (Connors, 1992). Drug use during or

in anticipation of sexual behavior predicts having unprotected sex, possibly by affecting judgment or by disinhibiting desired behavior (Siegel, Mesagno, Chen, & Christ, 1989).

Fisher and Fisher (1992) use Fishbein and Ajzen's theory of reasoned action to predict motivation (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975): A person's attitudes toward performing the preventive behavior and the social norms he or she perceives to govern it determine the intention (motivation) to perform the behavior. Fisher and Fisher's literature review also cites much research supporting the predictive power of these two factors. These two determinants each have two subcomponents. A person's attitude consists of beliefs about what effects a behavior will have in conjunction with an evaluation of each consequence; a person's subjective norms consist of what a specific reference group thinks should or should not be done in conjunction with the motivation to comply with that group's opinions. To increase the motivation for a prevention behavior, an intervention should enhance efficacy beliefs about the behavior, positive evaluations of the behavior's consequences, perception of normative endorsement of the behavior, and desire to adhere to a pro-prevention reference group's opinions. Discussing meaning is another, although perhaps less specific or compartmentalized, way of assessing these constructs; does a person see the behavior as important or unimportant, pleasant or unpleasant, fulfilling or unfulfilling, prestigious or shameful?

Information and motivation are useless unless a person has the necessary skills to act on them effectively. Prevention programs thus need to teach specific skills that will facilitate avoiding risky behavior: skills such as communicating openly about sex, being assertive with a sexual partner, and avoiding alcohol and drug use. Cultural differences

may require additional skills to negotiate the particular style of interpersonal relationships, but elicitation groups can quickly reveal such needs. Additionally, for people to use such skills, they must believe that the skills are effective in preventing infection (Fisher & Fisher, 1992). Rotheram-Borus and Koopman (1991) find that the belief one can prevent oneself from becoming infected is significantly related to safer sexual behaviors.

Johnson, Douglas, and Nelson (1992) state that consistent condom use is the most important behavior to address in HIV prevention campaigns targeting male African-American college students. Norris and Ford (1994) study a sample of youth in Detroit; they find that attitudes based on direct experience are hard to change and predict behavior fairly well. Many beliefs about condoms may be based on direct experience. Negative experiences with condoms are associated with negative beliefs about them, lower intentions of future use, and lower incidence of use at last intercourse. Respondents who have had negative experiences are more likely to endorse negative beliefs about condoms. Those who have ever experienced a condom breaking or slipping off are much more likely to endorse the belief that condoms break or come off. Experience shapes the meanings people attribute to behaviors. Those who report that using a condom interrupts lovemaking, reduces sensation, or makes it harder for the penis to move in and out of the vagina or anus are significantly less likely to have used a condom at last intercourse (see also Gant, Gilbert, Hinkle, & Johnson, 1992; Sharma & Sharma, 1995). Therefore, it is crucial that interventions attempt to prevent negative experiences with condoms by teaching how to use condoms correctly, how to make condom use a natural part of lovemaking, how to eroticize other parts of the body than

the genitals, how to increase sensation, and how to use water-based lubricants. New positive experiences can change the meanings of a behavior. For those youth who believe that condoms decrease arousal, interventionists should teach sexual enhancement techniques and eroticizing safer sex skills. Interventions should stress use of lubricants to increase sensation and should also directly challenge the belief that condoms lower sensation (Ford & Norris, 1991).

Examining individual meaning can encompass cost-benefit analysis, information, evaluations, beliefs, motivation, perceived norms, and significance. Discussing meaning may be a more phenomenologically friendly way of examining individuals' motivations for safer sexual behavior; this approach is more easily applied in face-to-face exchanges, such as psychotherapy, individual health education, or peer counseling, than in one-way prevention communications, such as video or poster campaigns. Based on their clinical experience, Woodcock and colleagues (1992) state that individual confidential counseling may be the best approach to altering individuals' risk perception. In their 1997 study of repeat testers, Kalichman, Schaper, and colleagues speculate that some clients may return for HIV testing many times as a way of engaging in ongoing risk-reduction counseling. One HIV prevention program in Washington, DC, uses counseling to help high-risk men consider how their sexual behavior relates to other important aspects of their lives such as guilt, love, and family relationships (Wright, 1998). Such individual approaches to HIV prevention are certainly more labor intensive, but they represent a relatively unexplored avenue for addressing prevention efforts. Furthermore, the traditional research on groups may not offer sufficient guidance for such individual approaches.

Idiographic Versus Nomothetic Approaches

Idiographic (individual) approaches to widespread problems and to large groups of people are not popular because they involve a greater investment of time and resources than often seems practical. Most social science research examines groups and differences across groups; however, such analyses may not produce conclusions relevant for individuals. Nomothetic science attempts to derive general laws, whereas idiographic science attempts to derive laws for an individual. In psychology, existentialists and humanists have traditionally used idiographic approaches to understand each person from a unique perspective. Correlations across individuals yield information about the behavior of people in groups not about each individual. Conclusions drawn from such correlations are accurate on a group level but may mean nothing about the behavior of individuals in that group when it is examined person by person. For instance, group studies using rating scales assume that each person in that group interprets and employs the scale in the same way; this is probably not so, and variations between individuals' use of the scale can alter means and correlations (Jaccard & Dittus, 1990).

There are logical and statistical problems in applying nomothetic analysis to predict an individual's behavior. The idiographic approach involves creating a model separately for each person; each individual model contains those variables and their relationships that are specific to that individual. Regression analysis is the most favored interpretive statistic for research in attitudes and behavior. Researchers typically produce a regression equation that predicts behavior from several variables, such as attitudes and norms, and that then weights each behavior differently according to their importance in the model. Jaccard and Dittus (1990) demonstrate the error of researchers who use

regression equations derived from group analysis to predict the behavior of specific individuals within that group: They assume that the same variable weights apply to each individual within the group. In fact, given several variables, the importance of each is likely to vary greatly between individuals and possibly even within an individual across situations. This heterogeneity is leveled by correlation analysis across individuals, producing weights of relative importance for the group as a whole but not necessarily representing their relative importance for any member of that group. Conclusions drawn about the group's behavior as a whole would be appropriate, but conclusions drawn about individual behavior are likely erroneous.

To avoid such problems, Jaccard and Dittus (1990) employ an idiographic approach, which is very similar to that of Kelly's (1955) Reptest, that allows conclusions about individual behavior. They then use aggregate statistics to generalize across individuals. In this method, they ask a participant about a specific decision. The participant generates a list of possible behavioral options and then a list of relevant evaluative dimensions for comparing the options. The participant then rates each option on each dimension with a numerical rating scale. This procedure produces a grid of options by dimensions, with each cell containing a scaled rating. Researchers compare pairs of options across dimensions, creating difference scores, which form a matrix. Cluster analysis of this matrix of difference scores yields discrete clusters of options grouped by functional similarity. The same procedure produces clusters of evaluative dimensions, which form a personal construct system.

Less open-ended assessment methods, such as questionnaires asking for number of *sexual partners*, draw divergent replies as each respondent personally defines what

constitutes *sexual* and what constitutes a *partner*. Asking for number of partners with whom one has engaged in *anal intercourse* is less open to personal interpretation but still varies, as people may define *intercourse* as penetration without a condom, penetration to climax only, or penetration by another (versus penetrating another). The same question may be gathering very different information for each respondent and thus over- or underestimate the HIV risk behaviors (Hunt, Davies, Weatherburn, Coxon, & McManus, 1991).

Quantitative self reports of behavior are not as straightforward as one might imagine; respondents use strategies to estimate behavior occurrences and often take unintended cues from the rating instrument or situation to shape their estimates. Schwarz (1990) makes a strong case that respondents typically proceed through three to five steps in reporting their behavior numerically: interpreting the question and the type of behavior being queried; recalling instances of the behavior; judging whether the instances remembered fell within the queried time frame; mapping the report onto a scale or format, if required; and possibly altering the response for social desirability. Rather than recalling and counting specific instances, respondents may also use related information to infer the number of instances in the given period.

Study respondents often interpret questions differently than the researchers who formulate them. If a question seems too difficult, respondents will interpret it as an easier one; they may narrow general terms or disregard words overly specifying a behavior. They may even use the anchor points of the scale or the alternatives presented to infer the real meaning of the question (Schwarz, 1990).

In a meta-analysis of sexual behavior research, Catania, Gibson, Chitwood, and Coates (1990) find that retrospective self-reports of sexual behavior are reliable for periods as long as a month but begin to falter with longer periods. Upchurch and colleagues (1991) find significant agreement between heterosexual partners in reporting the incidence of specific sexual behaviors (including condom use) over a 30-day period; men and women showed no significant differences in their reports of condom use, even when compared by across socioeconomic level, marital status, or age. A similar study of unprotected sex in gay male couples also finds significant interpartner-report reliability for a 6-month period, especially for anal sex incidence ($r = .78$ to $.79$, $p \leq .001$; Seage, Mayer, Horsburgh, Cai, & Lamb, 1992).

People typically remember only very infrequent or very salient occurrences of behaviors; they may recall only a representative or archetypal instance. Oversimplified response models propose that people simply remember instances and then count them, but people do not keep running tallies of all behavioral instances. Researchers can frame questions to encourage recall rather than estimation strategies, by using shorter and more recent reference periods (past week) and by asking for more specific behaviors. Other recall cues can focus on salient situations and persons, which respondents are more likely to remember, rather than on dates. Asking for the most recent occurrence of the target behavior and then going backward in time enhances accurate recall over recalling from the reference period's start and then going forward. Regardless of the strategy employed, respondents will generally err on the side of underreporting behaviors (Schwarz, 1990).

Specifying reference periods by weeks or months or by a start date usually does not enhance accuracy of reports. People tend to remember events not by calendar

chronology but by their order relative to salient personal or public events (holidays, natural disasters). Quality of memory is an often-used but inaccurate heuristic for dating an event; people assume that memories of older events will be less distinct, but this strategy is confounded by events' salience (Schwarz, 1990).

Respondents estimate behavioral occurrences through a number of inference strategies. Decomposition strategies count occurrences over a short period and multiply to cover the reference period; this may work for estimating the incidence of regular, habitual behaviors, such as brushing teeth. The availability heuristic is very similar to the saliency heuristic described previously: Better ease of recall equates with greater recency. For retrospective reports, respondents may have a theory of change or development that estimates past behavior from their present behavior. This is a particular problem for outcome research, as people undergoing some goal-directed program will assess their present skills, assume that the program has improved them, and retrospectively underestimate their skills before the program's onset. People also may compare themselves to an internalized norm (*I exercise more than most people*) and use the response alternatives to place themselves on its perceived normal distribution, in which the scale's midpoint represents the norm. For more socially undesirable behavior, using a respondent's own words to describe that behavior is one way to minimize his or her self-censoring in reporting instances (Schwarz, 1990).

Respondents frequently use the rating scale or the response alternatives offered as indicators of normal distributions and expected responses. Mid-points of scales are assumed to be the norm and endpoints are assumed to be behavioral extremes; respondents assume that the questionnaire designer knows the reported behavior's

frequency distribution and gauges the scale accordingly. If a question is unclear, respondents will review response alternatives for clues to the intended meaning or the desired answer. The more out of range a respondent's behavior is in comparison with the rating scales and response alternatives, the greater the effect on the reported behaviors (Schwarz, 1990).

Asking participants for absolute frequencies (number of times) of a behavior's occurrence leads them to use some estimating heuristic and some sample of absolute frequency. Asking them for relative frequencies allows use of much broader heuristics that often include evaluations of the behavior, especially intensity. Both strategies become more inaccurate as the actual frequency increases; however, *never* has just about the same meaning for everyone. Individuals can mean very different things by relative descriptors of frequency such as *hardly ever* or *constantly*. Meanings for such words do tend to vary by race, education, and age; those who are Caucasian, have more education, or are younger mean higher frequencies by such vague quantifiers, which may represent differences in cultural norms or shared experiences. Whether a person likes or dislikes something will influence whether its occurrence is rated as *often*. As compared with a pleasant event, an unpleasant event will occur often with far fewer instances; twice may not be rated often for something pleasant, but it may be rated often for something unpleasant (Schaeffer, 1991). Men are in much greater agreement than are women on the differences in meanings between pairs of similar words expressing some degree of uncertainty, for example, *think* versus *know*, and *probably* versus *possibly*. This means that a man and a woman, or two women, who are talking are more likely to

misunderstand each other's certainty in expression than are two men who are talking (Furrow & Moore, 1990).

Kelly (1955) takes a novel approach to participants' idiosyncratic responses to experimental situations; he sees individuals as scientists, trying to make sense of the world, so that even when they are participants in a *real* scientist's experiment, individuals are still interpreting information, formulating theories, testing those theories, and attempting to exert control over the situation, sometimes to the detriment of the experiment's intended purpose (Bannister & Mair, 1968). Kelly invented the Role Construct Repertory Test (Reptest) to assess individuals' construct systems; he wanted to design a more open-ended instrument that would use to advantage individuals' natural attempts at structuring situations. The original Reptest uses role titles as stimuli along one axis of a grid. Individuals supply the names of real people they consider to fulfill those role titles. Kelly presents individuals with groups of three names and asks them how two are alike yet different from the third; this prompts respondents to generate lists of bipolar personal constructs. The first construct generated in a pair is the *emergent* pole of the bipolar personal construct (how two of the named people are alike), because it is the pole most readily applied, and it is listed on the grid's perpendicular axis. The opposite pole (how the third person is different) is the *implicit* pole because it is not as readily applied, and individuals may even have to struggle to uncover what they consider to be the opposite pole; implicit poles are listed along the opposite side of the grid from the emergent poles. A personal construct is not each descriptive construct itself, rather it is the bipolar dimension generated by pairing such constructs; it is a more dynamic and informative structure. After completing the axes, respondents then rate each role on

every personal construct by filling the corresponding cell with a *1* for the emergent pole, a *2* for the implicit pole, and a *0* if the bipolar construct does not apply.

Analysis of a Reptest grid reveals bipolar personal construct content and structure: words selected, how easily a personal construct can assess all roles, how similarly roles are rated across personal constructs, how similarly personal constructs are applied across roles (how orthogonal the various personal constructs are). A person can have a very complex structure, with many independent factors (dimensions) for evaluating others, each factor composed of interrelated personal constructs; another person may have a very simple structure, with all of the personal constructs linked along one dimension, or perhaps with no organization whatsoever (Neimeyer and Mitchell, 1988). A Reptest can assess any area of living, simply by using a set of representative stimuli. The original and most commonly used stimuli are role descriptors such *as father, trusted person, pal,* and *pitied person*. There are over 1,000 studies using the Reptest in print (Neimeyer, 1993).

Although researchers have underutilized the Reptest in studying sexuality, they have frequently used it in examining friendship formation. Some researchers find that friends have complementary needs or roles, but friends seem to have an underlying similarity of attitudes or personal constructs (Duck & Spencer, 1972). Friendship may be based on validation of each other's ways of seeing the world (Duck & Craig, 1978). Even complementarity requires a similarity of construing because each individual needs a bipolar model (personal construct) of the paired complementing roles or qualities. Duck and Craig report that the Reptest predicts choice of friend only later in the relationship (at 8 months), not earlier (at 1 or 3 months); at 8 months, friends are more similar in

psychological and role personal constructs than non-friends. Duck and Spencer use the Reptest to assess personal constructs among college women; they find that friends have more literally similar personal constructs before the friendships' inception but have more similar *psychological* personal constructs only after 6 months. The researchers conclude that this shaping process grows from disclosure in the developing friendship and that close relations and personal constructs mutually influence each other.

The structure of each individual's personal construct system may vary greatly across individuals. People with simple structure (one factor) or with unstructured constructs (no factors) view their actions mechanistically and without reference to higher order classifications, whereas people with complex structures (several factors) think of their actions in terms of meanings, personal attributes, or consequences (Vallacher & Wegner, 1989). Neimeyer and Neimeyer (1983) find that friends who report liking each other more have greater similarity in the structure of their personal construct systems after 18, but not after 4, weeks of acquaintance, as compared with friends with less similarity of structure. In one study of same-sex friendship formation, Neimeyer and Mitchell (1988), using the Reptest, find that personal construct structural similarity predicts friendship survival at 8 weeks. Different personality qualities may be more important at different stages of friendship formation. Social aspects of personality may be evident on first meetings, but personal constructs of a more psychological nature emerge only with intimacy. Therefore, new friends may be more similar in social aspects of personality, whereas old friends may be more similar in less apparent but more fundamental aspects of personality, such as deeply held beliefs about the world (Duck & Craig, 1978).

If similarity of personal constructs is associated with friendship, perhaps personal constructs are also important in intimate relationships. Assessing an individual's personal constructs, through the Reptest or even through less standardized methods, may offer a unique view of his or her way of experiencing sexuality. Such an approach could avoid the many pitfalls of questionnaire methods that structure experience in a way that may be unnatural for the respondent. Because most people rely on *folk language*, which some may consider offensive, to describe their sexual experience, an open-ended assessment instrument, such as the Reptest can sample each person's vocabulary more fully (Parker et al., 1991). If personal constructs are associated with actual sexual behaviors, such as condom use, they may present a target for HIV prevention activities. Such interventions might employ more individualized approaches to prevention rather than more traditional approaches such as poster campaigns. By becoming familiar with an individual's personal constructs concerning sexuality, an interventionist may be better able to alter those constructs in ways that favor safer sexual behavior.

Personal Construct (PC) Study

This study concerned associations between personal constructs and condom use. The Reptest offered a method of assessing the meanings that an individual attributes to sexual behavior; this method was open ended and does not present participants with a fixed and finite list of constructs. The Reptest is true to constructivist approaches while allowing quantitative analysis. The use of a computer-administered test loosely based on the Reptest determined how meaningful a *safe sex—unsafe sex* bipolar construct was in each participant's personal construct system and how this bipolar construct related to a bipolar construct of *impersonal—intimate*. The relationship between these two bipolar

constructs was expected to vary across respondents, and the correlations between the terms *safe sex, unsafe sex, intimate,* and *impersonal* were expected to show their degree of relatedness. After computing the correlations between these terms for each participant, aggregate analyses across all participants determined whether these bipolar personal constructs related to condom use. Results of this study tested five hypotheses:

Hypothesis 1. Respondents whose safe sex—unsafe sex *bipolar construct is more meaningful in their personal construct systems will be more likely to report condom use than those respondents whose* safe sex—unsafe sex *bipolar construct is less meaningful.*

As Catania and colleagues (1994) report, labeling of sexual behavior as risky for HIV infection is associated with condom use. Such labeling would involve an *unsafe sex* construct, and the more it overlaps with other personal constructs about sexuality, rather than operating in a vacuum, the more likely the person is to apply it to a wider array of situations related to sexuality. The more meaningful the *safe sex—unsafe sex* bipolar construct was for respondents, the more likely they should have been to use it in evaluating sexual behavior; consequently, they should have been more likely to act on these evaluations and report using condoms.

Hypothesis 2. Respondents for whom unsafe sex *and* intimate *are significantly positively correlated will be more likely to report not using condoms than other respondents.*

Correlations indicate the degree of constructs' relatedness; therefore, a positive correlation would show an association of unsafe sex with something intimate. Individuals who saw unsafe sex as intimate and saw safer sex as impersonal should be more likely to seek unsafe sex and thus wshould be less likely to use condoms during

intercourse (Ekstrand, 1992; Feeney & Raphael, 1992; Pollak, 1992). Such individuals are similar to Prieur's (1990) respondents, for whom unsafe sex was both a physical and a relational way of achieving intimacy.

Hypothesis 3. Respondents for whom safe sex *and* intimate *are significantly positively correlated will be more likely to report using condoms than other respondents.*

Regarding the bipolar marker constructs, these respondents would be the opposites of those detailed in Hypothesis 2. For these individuals, safer sex was seen more as an intimate act, perhaps an act of caring or responsibility, and unsafe sex was associated with impersonal sex, perhaps casual sex or sex carrying a high risk of disease transmission. These respondents valued the intimacy of safer sex and thus should have been more willing to use condoms and report condom use.

Hypothesis 4. Women's safe sex—unsafe sex *bipolar construct will be more meaningful than will men's* safe sex—unsafe sex *bipolar construct.*

Hypothesis 5. Women are expected to have higher positive correlations between safe sex *and* intimate *than do men, and men are expected to have higher positive correlations between* unsafe sex *and* intimate *than do women.*

Because women's personal constructs concerning sexuality are more likely to involve responsibility and communion and men's constructs are more likely to involve physical descriptors and romantic feelings, one could expect women to assess risk more often and to emphasize responsible practices such as condom use (Hendrick, 1988). Consequently, women may use the *safe sex—unsafe sex* bipolar construct more often than do men in evaluating sexual situations, as reflected by higher meaningfulness scores

for that bipolar construct. Women should have higher positive correlations between *safe sex* and *intimate* and higher reported rates of condom use than do men.

CHAPTER II.

METHOD

Pilot Study

Because this study involved personal constructs about sexuality, the stimuli used to elicit them needed to activate such constructs. Participants could have been presented with lists of sexual behaviors, but such methods have difficulty capturing the contextual richness of sexual behavior. In focusing on specific isolated behaviors, researchers can easily overlook individual respondent's perceived nuances in meaning, which grow from a lifetime of experience. This is especially true when respondents are asked to ascribe values or meanings to behaviors; the context can greatly alter the meaning of a behavior (Morris, 1991). Consequently, the stimuli for the personal construct (PC) study were vignettes of erotic intimacy. The vignettes represented a more contextual behavioral stimulus for eliciting constructs than did simple lists of sexual acts; they met more of Ajzen's (1982) criteria of correspondence for actual condom use, and they more closely reproduced social situations (Fisher & Fisher, 1992). To enhance the ecological validity of the vignettes, the stimuli for the PC study were generated by participants in a pilot study.

Participants

To create vignettes of themes and language relevant to the PC study participants, pilot study participants came from the same population: the undergraduate psychology participant pool of the College of William & Mary. People in this pool received course credit for participating. Students volunteered through posted sign-up sheets for a study on "writing stories about physical intimacy." Thirteen people completed the pilot study: 7

women and 6 men. The mean age was 18.5 years ($SD = 0.7$), with a range of 18 to 20 years.

Procedure

Participants consented to have their stories be stimuli in future studies; they were assured that any identifying information in the vignettes would be changed (see Appendices A1 and A2). Participants were asked to "Write a short story (five to six lines) about two people engaging in erotic behavior; the people in the story know each other for at least 6 weeks but no more than 6 months" (see Appendix A3). This period of 6 weeks to 6 months was the incubation period for seroconversion to a positive HIV-antibody status after exposure to HIV; using this reference period implied that even if a partner's HIV-antibody status was known, the results were not necessarily accurate. Additionally, the period represented the beginning stages of a relationship in which high levels of trust may not be supported by an adequate sampling of behavior. After participants finished this task, they were given the following instructions: "Write a short story (five to six lines) about two people in which safer sex is an issue. Do not mention the words 'safer sex' or 'HIV.' The people in the story know each other for at least 6 weeks but no more than 6 months" (see Appendix A4). Participants were asked to exclude the *red-flag* words *safer sex* and *HIV*, which might automatically activate constructs about safer sex. Participants who did not see safer sex as relevant to their daily lives or to everyday sexuality may not have activated constructs about safer sex without explicit (popular culture) triggers such as *AIDS, HIV, sick, gay, bisexual*, and *promiscuity*. Consequently, these safer sex vignettes did not use such words; this ambiguity might have better differentiated those individuals who applied the *safe sex*—

unsafe sex bipolar construct to most sexual situations from those who did not. Each participant thus wrote two stories: one about erotic behavior in general and one in which safer sex was an issue. Under this procedure, the 13 participants thus produced 26 stories, all of which were used in the PC study. All participants were debriefed at the end of the study (see Appendix A5).

PC Study

Participants

Participants were heterosexual college students, individuals in an age group at significant risk for HIV (Centers for Disease Control and Prevention, 1995). An attempt was made to recruit 100 participants from the undergraduate psychology participant pool of the College of William & Mary. These students completed a mass survey at the beginning of the semester; it detailed demographic information, including sexual behavior. With this information, study recruitment targeted heterosexual participants who identified as currently sexually active. This population, as compared with people without sexual experience, may have had more developed and accessible personal construct systems about sexual behavior. Personal sexual experience develops constructs about sex, and ongoing sexual behavior keeps those constructs activated and more easily accessible. If participants indicated they were in a relationship, then only those participants who indicated the relationship was of less than 6 months in duration were solicited, 6 months being the amount of time after exposure to HIV for a maximally accurate blood test to detect antibodies to the virus. Thus participants in relationships of longer than 6 months might not have been using condoms because they and their partners had been tested and were monogamous. Through telephone calls, prospective subjects

were asked if they would be interested in participating in a study on meanings in physical intimacy (see Appendix B1). All participants were at least 18 years of age, and a total of 86 people (43 women and 43 men) participated; as discussed later, 19 people were eventually excluded from the final analysis of 67 participants. Students received class credit for participation. The Human Participants Committee of the College of William & Mary approved this study.

Measures

Index of Personal Constructs for Sexual Behavior

The PC study featured a computer-administered test loosely based on the Reptest to assess researcher-supplied constructs of *safe sex, unsafe sex, impersonal, intimate,* and other bipolar personal constructs concerning sexuality. The computer program presented vignettes of characters engaged in varying degrees of physical intimacy as a means of gauging how respondents construe such behavior. These vignettes were generated by the undergraduate participants in the pilot study. Each of the 26 stories was edited down to 350 characters or less in length, and the names of the people in the stories were changed. Additionally, one person in each vignette was randomly selected to be the principal character for comparison. Providing such stimuli differed from the original Reptest procedure in that behavioral vignettes were supplied rather than names of people (Kelly, 1955). In the original Reptest, participants were given a set list of role titles, and they then created a name list of people who filled those roles; in the PC study, participants were given stories about the behavior of persons they did not know, and they then created a list of words to describe the behaviors of the people in the stories. Some people might have objected to reading vignettes about erotic behavior; to ensure that such persons

were forewarned of the nature of the study before becoming participants, the recruitment script and the informed consent agreement specified that they would be asked to read stories describing erotic behavior that may be considered pornographic.

From the 13 pairs of vignettes generated during the pilot study, 10 pairs were randomly selected to be the stimuli for the elicitation phase of the computerized test: 3 pairs in which a man was the principal character of both vignettes, 3 pairs in which a woman was the principal character of both vignettes, and 4 mixed pairs in which a man was the principal character of one and a woman was the principal character of the other (see Appendix C2). All 13 pairs were used in the subsequent rating phase of the computerized test. Each of the vignettes describes behavior between a man and a woman, although the names and the details of a few of the vignettes are gender neutral. The order of presentation within each pair was randomly assigned. All the pairs contained only one vignette about safer sex, as each pair was written by the same pilot study participant. Two additional pairs of vignettes were also created solely for a practice session, which was designed to familiarize participants with the test and did not generate any data; within each of these 2 practice pairs, one vignette has a male principal character, and the other, a female principal character (see Appendix C1). The presentation order of the vignettes was randomized, and each participant was presented with the same vignettes in the same order.

The computerized test presented two vignette stimuli at a time along with a question asking the participant whether the behaviors of the two principal characters in each vignette were alike or different (see Appendix C5). If the participant entered that they were alike, the computer program prompted for a term describing how the two were

alike and then for a term that was the opposite of the first one (see Appendix C6). If the participant indicated that they were different, the computer program prompted for two terms — one for each of the two principal characters' behaviors (see Appendix C7). For each pair of vignettes, each participant thus generated a bipolar personal construct, or two personal constructs.

In the elicitation phase of the test, by comparing the principal characters' behaviors in each of the 10 pairs, participants created a list of 10 bipolar personal constructs (20 constructs total); the program then added the 4 researcher-supplied constructs to this list: *safe sex, unsafe sex, intimate*, and *impersonal*. In the next phase of the test, the rating phase, participants rated the behavior of each of the 26 principal characters from all 26 vignettes (see Appendix C3) on each of the 24 constructs (20 participant-generated personal constructs plus 4 researcher-supplied constructs); participants used a 9-point scale in which 1 is *never or almost never true* and 9 is *always or almost always true* (see Appendix C9). The computer screen showed the vignette and allowed the participant to rate the principal character's behavior on each of the 24 constructs in turn. By completing the rating of principal characters' behavior, each participant generated a 24 by 26 grid of terms by principal characters, respectively: One axis listed the 26 characters from the vignettes, and one axis listed the 24 descriptive terms. Each cell of this grid carried a scaled rating from 1 to 9 of each character on each term. This grid could then be statistically analyzed for construct structure for each participant.

Sexual Behavior Questionnaire

Participants completed the Sexual Behavior Questionnaire (SBQ, see Appendix B4) to assess frequency of sexual intercourse without a condom. In keeping with Schwarz's (1990) recommendations, the SBQ began by instructing the participant to recall the last instance of sexual intercourse; it then asked whether or not a condom was used. This most recent experience is probably the most accurately recalled instance of sexual behavior and requires little estimation. The SBQ then asked for percentage of condom use during intercourse for two salient periods: during the last week and since the beginning of Fall Break (approximately 1 month), respectively. The recall proceeded chronologically into the past; however, it required respondents to use estimating strategies to arrive at percentages of use.

Variables

Correlations Between Marker Constructs

The four correlations between the researcher-selected constructs served as independent variables: the correlations between *safe sex* and *intimate*, *safe sex* and *impersonal*, *unsafe sex* and *intimate*, and *unsafe sex* and *impersonal*. These correlations were taken to represent the degree to which these constructs were associated in each participant's mind; for example, if *safe sex* and *intimate* were strongly positively correlated for a participant, one assumed that he or she saw safe sex as an intimate act.

Meaningfulness

Within-subject principal components analysis (PCA) compared how a respondent rated constructs across the vignettes, showing how correlated the constructs were with each other and consequently grouping them into factors by the closeness of their

association. Each construct's scaled ratings across vignettes was correlated with the other constructs' ratings. Constructs that a respondent generated as pairs of opposites should have inverse correlations, creating a bipolar personal construct. However, for such opposite constructs not used in such a precisely inverse way that they create a bipolar personal construct, correlations showed their degree of relatedness; the two constructs may not have correlated significantly or may have had a positive rather than a negative correlation. Using a cutting score greater than .30 as a limit of correlation (degree of relatedness) established groups of personal constructs that the respondent applied similarly across vignettes; these are the principal components, or factors. Each factor thus represented a cluster of constructs that a respondent used in similar ways to rate sexual behavior, and each factor represented clusters of constructs that were relatively orthogonal to those in other factors.

Meaningfulness was an independent variable derived from the PCA; hence, it covaried with the construct correlations, on which it was based. Meaningfulness was essentially a percentage, so it was a continuous variable, ranging from 0 to 1, that could have only positive values.

How meaningful the supplied *safe sex—unsafe sex* bipolar construct was in the individual's overall construct structure was determined by performing Heidal-Schiltz's (1996) meaningfulness computation after PCA of the test results: For the factor containing the marker bipolar construct *safe sex—unsafe sex*, the meaningfulness of that bipolar construct was the proportion of the individual's total constructs that also loaded on that same factor. Meaningfulness, therefore, varied from 0 to 1. For example, if a participant had 10 of 20 personal construct terms falling on the factor also containing

safe sex—unsafe sex, then the meaningfulness of the *safe sex—unsafe sex* bipolar construct was 10 divided by 20, or .5. As the number of constructs loading on the marker bipolar construct approached the total number of terms, meaningfulness approached 1; as the number of constructs loading on the marker bipolar construct approached 0, meaningfulness approached 0. Therefore, those participants with higher meaningfulness scores for the *safe sex—unsafe sex* bipolar construct had personal constructs that were more highly related to the bipolar construct. In summary, PCA determined relatedness of the group of constructs falling on the same factor, and meaningfulness gave that factor a weight relative to other factors in the construct structure.

Most respondents were expected to use *safe sex—unsafe sex* as a bipolar construct, both loading on the same factor but inversely correlated. However, 15 respondents (4 women and 11 men) used *safe sex* and *unsafe sex* as more orthogonal constructs that did not represent a bipolar dimension: *Safe sex* and *unsafe sex* loaded on separate factors. Consequently, these 15 respondents were excluded from analysis.

Gender

Gender was an independent dichotomous nominal variable.

Condom Use

Condom use was the continuous dependent variable representing the percentage of intercourse *without* a condom; ranging from 0 to 1, it had only positive values. This was an aggregate measure based on three self-reported behaviors from the SBQ: percentage of sex without a condom in the last month, in the last week, and on last intercourse. Percentage of sex without a condom on last intercourse represented a single incident; therefore, it could have values of 0 or 1 only. Because it included data from last

intercourse, the aggregate condom use variable could represent a period greater than a month: Some participants may have last had sex more than a month before the survey, whereas others may have last had sex that day. All participants identified as "sexually active" on the mass testing questionnaire at the beginning of the semester, but some had not had sex in the last month.

Procedure

Participants arrived at a computer laboratory of the College of William & Mary. The researcher oriented each participant to the study (see Appendix B2) and obtained informed consent (see Appendix B3) before proceeding. Each individual sat at a separate workstation, and each was assigned an identifying code in the computer. Participants began the computer program with a practice run that had them read two vignette pairs, generate four personal constructs, and then rate all four vignettes on the four constructs; this practice familiarized participants with all aspects of the computerized test and ensured that they were comfortable with the various keystrokes before beginning the actual test. The program had several prompts to assist users: They offered directions, identified mistakes and corrective actions, and prevented the reuse of terms (see Appendix C8). The researcher observed the practice sessions and was available to answer questions and clarify the procedure.

After completing the computerized test, participants answered the SBQ, which was also labeled with their identifying code. Participants were individually debriefed and thanked for their contribution (see Appendix B5). The entire procedure took about an hour for most participants.

Special Considerations

Because this study examined intimacy and sexuality, some prospective participants might have been made uncomfortable by reading about or answering questions about such behavior. The recruitment script and the informed consent both attempted to forewarn participants about the nature of the study. Furthermore, the informed consent and directions to participants emphasized that participants were free to discontinue the experiment at any time without penalty. Additionally, the researcher was a doctoral candidate in clinical psychology who was very experienced with assessing and discussing sexual concerns with people in a respectful and sensitive manner, having over 6 years work experience in HIV and safer sex counseling, half of which was as a Certified Health Education Specialist and an HIV Early Intervention Health Educator. He had counseled individuals, couples, and groups about sexual behavior and had made professional presentations to audiences as diverse as elementary school children to business professionals. Should any participant have experienced adverse effects during the study, the researcher would have been able to offer appropriate support, information, and referrals to resources. No participants gave written or verbal feedback that they were offended or bothered by the study. One male participant wrote on his SBQ that the vignettes had not entered the realm of *pornography* for him: "I didn't think any of this material was pornographic, really." Two other participants (one female, one male) wrote that the vignettes were not detailed enough for them to complete the study easily: "Case scenarios (were) not descriptive enough to make accurate character judgement." "A little difficult to come up with different adjectives to describe behavior, since a lot of the behaviors were similar."

Excluded Respondents

Response Error and Fatigue

Eighty-six participants completed the PC study in eight groups over 3 days in the same week of November 1997. Several PC study participants gave written or verbal feedback that the test was repetitive or monotonous and indicated that their attention may have wavered while completing the procedure. Some participants also indicated that they had trouble with their keyboards and may have made errors in responding by holding down the *Enter* key. Because *5* was the default value assigned by the computerized test, those participants who wished to end the test most quickly could have done so by holding down the *Enter* key on the computer keyboard. Review of all participants' responses to the test showed that some did have several rows of *5*s, indicating that they ranked more than one vignette with the default value on all descriptive terms. To reduce the effects of response error and motivational fatigue on the study's findings, all data sets with more than two rows of *5*s were excluded from analyses: 4 participants' (2 women and 2 men) data were thus excluded. The excluded participants did not appear to differ significantly from the remaining ones on demographic variables, although the sample sizes were too small to examine all these differences statistically.

The mean age of the excluded participants was 18.8 years (SD = 1.5), and the mean age of the PC study participants was 18.9 years (SD = 2.6). Levene's test for equality of variances shows that the samples' variances did not differ significantly, $F(1,84) = 0.01, p < .1$. A pooled-variance t test for independent samples demonstrated that the excluded participants did not differ significantly in age from the PC study participants, $t(84) = 0.10, p < .1$.

Both the excluded and PC study participants were evenly divided by gender. Comparison of the samples using Pearson's chi-square statistic was not possible owing to the small size of the excluded sample.

Excluded participants were all Caucasian, and PC study participants were predominantly Caucasian (92.6%). One PC study participant did not disclose his ethnicity and so was eliminated from this particular analysis. Comparison of the samples using Pearson's chi-square statistic was not possible owing to the small size of the excluded sample.

Excluded participants (M = 50.0, SD = 57.7) did not differ significantly from PC study participants (M = 33.3, SD = 44.1) in their reports of average percentage of intercourse without a condom, $t(84) = -0.73$, *ns*.

Pilot and Test Samples Comparisons

The relevance of the vignettes used in the PC study depended partly on the similarity of the pilot participants, who wrote the vignettes, to the PC study participants. Statistical analyses showed the samples did not differ significantly by age, gender, or ethnicity. The mean age of the pilot participants was 18.5 years (SD = 0.7), and the mean age of the PC study participants was 18.9 years (SD = 2.6). Levene's test for equality of variances showed that the samples' variances did not differ significantly, $F(1,93) = 0.50$, *ns*. A pooled-variance t test for independent samples demonstrated that the samples did not differ significantly in age, $t(93) = 0.583$, *ns*. Both the pilot and PC study samples were almost evenly divided by gender and did not differ significantly in their gender composition, $\chi^2(1, N = 95) = 0.07$, *ns*. Both samples were predominantly Caucasian (pilot = 76.9%, PC study = 92.6%). Again, one PC study participant did not disclose his

ethnicity and so was eliminated from this particular analysis. Because of the low frequencies of participants in the categories other than Caucasian, a chi-square statistic could not compare the samples; therefore, groups were collapsed into two categories, Caucasian and Other. Divided into these new categories, the samples did not differ significantly by ethnicity, $\chi^2(1, N = 94) = 3.18, p < .08$.

Factor Structure

Among the 82 respondents remaining, 15 (18.3%) did not use *safe sex—unsafe sex* as a bipolar construct: *Safe sex* and *unsafe sex* loaded most strongly on different factors for these respondents. For example, *safe sex* loaded most strongly on the first factor whereas *unsafe sex* loaded most strongly on the second factor. Four (9.8%) women in the sample had such a split factor loading, whereas 11 (26.8%) men had one; men were significantly more likely than women to have *safe sex* and *unsafe sex* load on different factors, $\chi^2(1, N = 82) = 4.00, p < .05$. For respondents with a split factor loading, the mean of the average percentage of intercourse without a condom was 21.2% ($SD = 35.5$), whereas for those with *safe sex* and *unsafe sex* loading on the same factor, the mean was 36.0% ($SD = 45.6$). Levene's test showed that the variances differed significantly between the groups, $F(1,80) = 9.15, p < .01$. A separate-variance t test for independent samples demonstrated that respondents with split factor loading did not differ significantly from other respondents in average percentage of intercourse without a condom, $t(25.54) = -1.38$, *ns*. Because these 15 respondents did not use a *safe sex—unsafe sex* bipolar construct, they were excluded from further analyses.

After all exclusions, 67 participants remained in the sample. The mean age of these participants was 18.9 years ($SD = 2.8$), with a range of 18 to 40, a median of 18,

and a mode of 18. Most participants (89.6%) were 18 or 19 years of age, six were between 20 and 23 years, and one was 40 years, representing a substantial outlier. There were 37 (55.2%) women and 30 (44.7%) men in the sample. The sample was predominantly Caucasian (92.4%). Comparing all excluded participants ($M = 27.3$, $SD = 41.0$) with the 67 retained participants ($M = 36.0$, $SD = 45.6$) showed the groups did not differ significantly in their reports of average percentage of intercourse without a condom, $t(25.54) = 0.75$, *ns*.

CHAPTER III.

RESULTS

The alpha level for all statistical tests in this study was .05 unless otherwise stated.

Reported Condom Use

Of the 67 remaining participants, 43 (64.2%) reported using condoms on last intercourse. Of the 12 participants who had sex in the last week, 6 (50.0%) reported using condoms every time, and 4 (33.3%) reported not using condoms at all; overall, 7 (58.3%) reported using condoms more than 75% of the time. Of the 46 participants who had sex in the last month, 26 (56.5%) reported using condoms every time, and 10 (21.7%) reported not using condoms at all; overall, 30 (65.2%) reported using condoms more than 75% of the time.

The percentage of sex without a condom on last intercourse correlated significantly with the percentage of sex without a condom in the last week, $r(10) = .92, p < .001$, and in the last month, $r(44) = .80, p < .001$; similarly, the percentage of sex without a condom in the last week correlated significantly with the percentage of sex without a condom in the last month, $r(10) = .90, p < .001$. Given their high degree of intercorrelation, these three measures were averaged into one variable, the average percentage of intercourse without a condom, for each participant. Averaging was accomplished by converting sex without a condom on last intercourse from a binary variable to a percentage in which 100% represented no condom used on last intercourse and 0% represented a condom was used on last intercourse. The percentage of sex without a condom on last intercourse, in the last week, and in the last month were then

averaged together for each participant; if a participant reported having had no sex in the last week or in the last month, then the percentage of sex without a condom for that period was simply dropped from the average. For example, a participant reporting having sex in the last month but not in the last week would have an average percentage of sex without a condom that was based on percentage of sex without a condom on last intercourse and in the last month, but not in the last week. For a participant who reported not having sex in the last week or month, the average percentage of sex without a condom would be based solely on percentage of sex without a condom on last intercourse, which would represent a period of greater than a month but of potentially unknown duration; since all participants identified as being "sexually active" that semester, it is assumed the greatest period represented by the variable would be 2 months, since the beginning of the semester.

This averaging method was an attempt to preserve data across the three periods sampled — last intercourse, last week, and last month — to obtain a more representative measure of condom use. As expected, this new measure correlated significantly with the percentage of sex without a condom on last intercourse, $r(65) = .97, p < .001$, in the last week $r(10) = .98, p < .001$, and in the last month, $r(44) = .94, p < .001$; thus, this new averaged variable was a good representation of the data contained in the three original variables. On the new averaged variable of condom use, of the 67 participants, 36 (53.7%) reported using condoms every time, and 20 (29.9%) reported not using condoms at all; overall, 41 (61.2%) reported using condoms at least 75% of the time.

Gender

Women and men did not differ significantly in whether they reported having had sex in the last week, $\chi^2(1, N = 67) = 2.31$, *ns*, or the last month, $\chi^2(1, N = 67) = 0.20$, *ns*. Women and men also did not differ significantly in whether they reported not using a condom on last intercourse, $\chi^2(1, N = 67) = 3.69, p < .06$.

However, the women ($M = 45.9$, $SD = 48.4$) in this sample reported a higher average percentage of intercourse without condoms than did the men ($M = 23.7$, $SD = 39.3$). Levene's test for equality of variances showed that the variances differed significantly between genders, $F(1,65) = 13.00, p < .001$. A separate-variance t test for independent samples demonstrated that on average women reported a greater average percentage of intercourse without a condom than did men, $t(65.00) = 2.08, p < .05$. Because of this bias in reporting, gender was partialled out in subsequent analyses.

Hypothesis 1

Hypothesis 1. Respondents whose safe sex—unsafe sex *bipolar construct is more meaningful in their personal construct systems will be more likely to report condom use than those respondents whose* safe sex—unsafe sex *bipolar construct is less meaningful.*

Principal components analysis of each participant's test grid was expected to yield one to three significant factors composed of related constructs. The researcher-introduced constructs of *safe sex, unsafe sex, intimate,* and *impersonal* established markers in the construct system; these markers were to identify factors associated with risk (unsafe sex) and intimacy. Principal components analysis of each participant's test responses yielded varied factor structures. The mean number of factors for all respondents was 5.2 (SD = 1.0), with a range of 3 to 7, a median of 5, and a mode of 5. Women had a mean of 5.2

(SD = 1.0), and men had a mean of 5.3 (SD = 0.9). Levene's test showed no differences in variances, F (1,65) = 0.41, *ns*, and women and men did not differ significantly in number of factors, t(65) = -0.58, *ns*.

After gender was partialled out of the correlation of meaningfulness with average percentage of intercourse without a condom, the resulting partial correlation was not significant (see Table 1). Participants whose *safe sex—unsafe sex* bipolar construct was more meaningful did not report higher condom use than did those whose bipolar construct was less meaningful. This result fails to confirm Hypothesis 1.

Table 1

Partial Correlations (Gender Partialled Out)

of Independent Variables with Sex Without Condom[a]

	Partial *r*
Meaningfulness	-.17
*Unsafe*Intimate*	.18
*Safe*Impersonal*	.20
*Unsafe*Impersonal*	-.03
*Safe*Intimate*	-.12

[a]100% Condom = 0, 100% No Condom = 100.

*$p < .05$, two-tailed.

Hypothesis 2

Hypothesis 2. Respondents for whom unsafe sex *and* intimate *are significantly positively correlated will be more likely to report not using condoms than other respondents.*

After gender was partialled out of the correlation of $r_{unsafe\text{-}sex \bullet intimate}$ with average percentage of intercourse without a condom, the resulting partial correlation was not significant (see Table 1). Participants with significantly positive correlations of *unsafe sex* with *intimate* did not report higher condom use than did other participants. This result fails to confirm Hypothesis 2.

Hypothesis 3

Hypothesis 3. Respondents for whom safe sex *and* intimate *are significantly positively correlated will be more likely to report using condoms than other respondents.*

After gender was partialled out of the correlation of $r_{safe\text{-}sex \bullet intimate}$ with average percentage of intercourse without a condom, the resulting partial correlation was not significant (see Table 1). Participants with significantly positive correlations of *safe sex* with *intimate* did not report higher condom use than did other participants. This result fails to confirm Hypothesis 3.

An exploratory multiple regression analysis was used to predict condom use (average percentage of intercourse without a condom) from the six independent variables of gender; meaningfulness of the *safe sex—unsafe sex* bipolar construct; and the correlations between the marker constructs *unsafe sex* and *intimate*, *safe sex* and *impersonal*, *unsafe sex* and *impersonal*, and *safe sex* and *intimate*. The association of higher scores on meaningfulness with higher reported condom use would have confirmed

Hypothesis 1. Association of lower reported condom use with a higher positive correlation between *unsafe sex* and *intimate* would have confirmed Hypothesis 2, whereas association of higher reported condom use with a higher positive correlation between *safe sex* and *intimate* would have confirmed Hypothesis 3.

Zero-order correlations were calculated between all the variables. Only one predictor variable, gender, correlated significantly with average percentage of intercourse without a condom, $r(65) = -.24, p < .05$: Women reported less frequent condom use than did men (see Table 2). The other predictor variables (meaningfulness of the *safe sex—unsafe sex* bipolar construct, and correlations between *unsafe sex* and *intimate*, *safe sex* and *impersonal*, *unsafe sex* and *impersonal*, and *safe sex* and *intimate*) were not significantly correlated with average percentage of intercourse without a condom.

The correlation of gender with meaningfulness of the *safe sex—unsafe sex* bipolar construct was marginally significant, $r(65) = -.22, p < .08$. Women tended to have a greater proportion of personal constructs associated with the *safe sex—unsafe sex* bipolar construct than did men.

The four construct correlations — $r_{unsafe\text{-}sex*intimate}$, $r_{safe\text{-}sex*impersonal}$, $r_{unsafe\text{-}sex*impersonal}$, and $r_{safe\text{-}sex*intimate}$ — all intercorrelated significantly (see Table 2). Intercorrelation among these variables was expected because the variables themselves were correlations between the four marker constructs *unsafe sex, intimate, safe sex,* and *impersonal.* Analyses of these variables showed no significant multicollinearity problems: variance inflation factors (VIFs) ranged from .23 to .30, and tolerances ranged from 3.3 to 4.4.

Table 2

Zero-Order Correlations of Regression Variables

		NoCon	Gender[a]	UnMean	Un*Int	Saf*Imp	Un*Imp	Saf*Int
r	NoCon[a]	—						
	Gender[b]	-.24*	—					
	UnMean	-.11	-.22[b]	—				
	Un*Int	.16	.08	.00	—			
	Saf*Imp	.18	.04	-.18	.43***	—		
	Un*Imp	-.02	-.06	.15	-.40**	-.76***	—	
	Saf*Int	-.10	-.08	.07	-.80***	-.55***	.27*	—

Note. NoCon = average percent intercourse without a condom, UnMean = meaningfulness of *unsafe sex*, Un*Int = correlation of *unsafe sex* and *intimate*, Saf*Imp = correlation of *safe sex* and *impersonal*, Un*Imp = correlation of *unsafe sex* and *impersonal*, and Saf*Int = correlation of *safe sex* and *intimate*.

[a]Women = 1, men = 2. [b]$p < .08$.

*$p < .05$, two-tailed. **$p < .01$, two-tailed. ***$p < .001$, two-tailed.

Owing to the small sample size ($N = 67$), a multiple regression equation containing all predictor variables and their interactions with gender would not have had sufficient power to detect the significant interactions. Consequently, a more conservative approach was employed in which separate multiple regression equations were run to test each interaction. Each of these equations tested only the ability of gender, one of the other predictor variables, and their interaction to predict average percentage of intercourse without a condom; gender and the selected predictor variable were entered in the first step of the regression, then the interaction of the two was entered in the second

step. None of the interactions of gender with the other predictor variables — *safe sex—unsafe sex* meaningfulness, $r_{unsafe\text{-}sex*intimate}$, $r_{safe\text{-}sex*impersonal}$, $r_{unsafe\text{-}sex*impersonal}$, or $r_{safe\text{-}sex*intimate}$ — was significant, so they were not included in subsequent multiple regression equations (see Table 3). Although gender and *safe sex—unsafe sex* meaningfulness were marginally significantly correlated, the interaction of the two in the regression equation was clearly not significant in predicting condom use, standardized β = .40, *ns*.

Table 3

β Weights for Gender Interactions of Independent Regression Variables Predicting Reported Condom Use

	B	*SE B*	Standardized β
Gender[a]*Meaningfulness	120.64	140.78	.40
Gender*$r_{unsafe\text{-}sex*intimate}$	-37.01	52.50	-.26
Gender*$r_{safe\text{-}sex*impersonal}$	-49.42	52.76	-.34
Gender*$r_{unsafe\text{-}sex*impersonal}$	78.05	49.60	.60
Gender*$r_{safe\text{-}sex*intimate}$	26.15	45.22	.21

[a]Women = 1, men = 2.

*$p < .05$.

A multiple regression equation using the six predictor variables — gender, *safe sex—unsafe sex* meaningfulness, $r_{unsafe\text{-}sex*intimate}$, $r_{safe\text{-}sex*impersonal}$, $r_{unsafe\text{-}sex*impersonal}$, and $r_{safe\text{-}sex*intimate}$ — without interactions, accounted for 22% of the variation in average intercourse without a condom, $R = .47$, $R^2 = .22$. After adjustments for the number of variables and the sample size, the equation accounted for 14% of the variation in reported condom use, adjusted $R^2 = .14$. The equation's standard error of estimate was very close to the standard deviation of the dependent variable, average percentage of intercourse without a condom (*SEE* = 42.23, *SD* = 45.61); therefore, the equation was not a very good predictor of reported condom use. However, the model was still significant $F(6,60) = 2.83$, $p < .05$. All predictor variables except *safe sex—unsafe sex* meaningfulness were significant (see Table 4).

Table 4

β Weights for Regression Variables Predicting Reported Condom Use

	B	*SE B*	Standardized β
Gender[a]	-25.53	10.69	-.28*
Safe Sex—Unsafe Sex Meaningfulness	-98.14	67.76	-.17
$r_{unsafe\text{-}sex*intimate}$	100.59	42.07	.51*
$r_{safe\text{-}sex*impersonal}$	132.85	49.68	.61*
$r_{unsafe\text{-}sex*impersonal}$	107.02	42.77	.52*
$r_{safe\text{-}sex*intimate}$	86.04	41.46	.50*

[a]Women = 1, men = 2.

*$p < .05$.

The meaningfulness of the *safe sex—unsafe sex* bipolar construct was not a significant predictor of reported condom use in the multiple regression equation; this finding fails to confirm Hypothesis 1, that higher meaningfulness would predict reports of more frequent condom use. The correlation of *unsafe sex* and *intimate* was a significant predictor of reported condom use in the model, seemingly indicating that participants with greater positive associations of *unsafe sex* and *intimate* were more likely to report less frequent use of condoms. Similarly, the correlation of *safe sex* and *intimate* was also a significant predictor of reported condom use in the model, and the relationship unexpectedly indicated that participants with greater positive associations of *safe sex* and *intimate* were also more likely to report less frequent use of condoms. The apparent discrepancy in these findings and their disagreement with the insignificance of the partial correlations presented a contradiction. The interrelated nature of $r_{unsafe\text{-}sex*intimate}$, $r_{safe\text{-}sex*impersonal}$, $r_{unsafe\text{-}sex*impersonal}$, and $r_{safe\text{-}sex*intimate}$, despite the insignifcant VIFs and tolerances of these variables, may have added an artifact to the multiple regression equation that resulted in the findings that these correlations were significant predictors of condom use when their partial correlations with condom use were not significant. In the multiple regression procedure, the effects of all the other variables were partialled out to determine the predictive ability of each of the independent variables. Since $r_{unsafe\text{-}sex*intimate}$, $r_{safe\text{-}sex*impersonal}$, $r_{unsafe\text{-}sex*impersonal}$, and $r_{safe\text{-}sex*intimate}$ were so intercorrelated, partialling out the influence of any one would also have partialled out some of the influence of all the others. For example, partialling out the influence of $r_{unsafe\text{-}sex*intimate}$ also partialled out some of the influence of

$r_{unsafe\text{-}sex*impersonal}$ and $r_{safe\text{-}sex*intimate}$; this would have affected the *B* and partial correlations of these variables.

To better control for these intercorrelations, separate multiple regression equations were run to predict reported condom use with the independent variables of gender, meaningfulness, and one of $r_{unsafe\text{-}sex*intimate}$, $r_{safe\text{-}sex*impersonal}$, $r_{unsafe\text{-}sex*impersonal}$, or $r_{safe\text{-}sex*intimate}$. As expected, the resulting *B*s for the four correlations were not significant when each was isolated from the others in separate multiple regression equations (see Table 5).

Table 5

β Weights for Correlation Variables Predicting Reported Condom Use in Separate Multiple Regression Equations

	B	*SE B*	Standardized β
$r_{unsafe\text{-}sex*intimate}$	35.07	23.25	.18
$r_{safe\text{-}sex*impersonal}$	36.92	26.35	.17
$r_{unsafe\text{-}sex*impersonal}$	-2.10	25.15	-.01
$r_{safe\text{-}sex*intimate}$	-18.52	20.93	-.12

$^{*}p < .05$.

Hypothesis 4

Hypothesis 4. Women's safe sex—unsafe sex *bipolar construct will be more meaningful than will men's* safe sex—unsafe sex *bipolar construct.*

For the *safe sex—unsafe sex* bipolar construct, women had a mean meaningfulness score of 24.7% ($SD = 0.08$); this represented an average of 24.7% of women's personal constructs loading on the same factor with the *safe sex—unsafe sex* bipolar construct. Men had a mean of 21.1% ($SD = 0.08$). Levene's test showed the variances between genders did not differ significantly, $F(1,65) = 0.12$, *ns*, and women's meaningfulness scores on the *safe sex—unsafe sex* bipolar construct were marginally significantly different from those of men, $t(65) = 1.83$, $p < .08$. There was a marginally significant trend for women to have higher meaningfulness scores, indicating that more of their personal constructs about intimate behavior were more closely related to the *safe sex—unsafe sex* bipolar construct than were men's. These results confirm Hypothesis 4 but again are of marginal significance.

Hypothesis 5

Hypothesis 5. Women are expected to have higher positive correlations between safe sex *and* intimate *than do men, and men are expected to have higher positive correlations between* unsafe sex *and* intimate *than do women.*

There were no significant differences between women and men in the correlations between the marker constructs of *safe sex, unsafe sex, intimate*, and *impersonal* (see Table 6). In particular, the correlation between *safe sex* and *intimate* and the correlation between *unsafe sex* and *intimate* were not significantly different between women and

men, $t(65) = 0.61$, *ns*, and $t(63.55) = -0.64$, *ns*, respectively. These results fail to confirm Hypothesis 5.

Table 6

Correlations of Unsafe Sex *and* Safe Sex *with* Intimate *and* Impersonal, *Comparisons by Gender*

						Variance Equality[a]	Means Test	
		n	*M*	*SD*	Range	*F*	*t*	(*df*)
$r_{unsafe\text{-}sex*intimate}$	Women	37	-.04	0.27	-.53 – .49	6.90*	-0.64	(63.55)
	Men	30	-.00	0.18	-.36 – .37			
$r_{safe\text{-}sex*impersonal}$	Women	37	-.08	0.22	-.51 – .28	0.11	-0.32	(65)
	Men	30	-.06	0.20	-.49 – .31			
$r_{unsafe\text{-}sex*impersona}$	Women	37	.08	0.21	-.21 – .58	0.98	0.45	(65)
	Men	30	.05	0.24	-.33 – .62			
$r_{safe\text{-}sex*intimate}$	Women	37	.06	0.29	-.63 – .65	2.12	0.61	(65)
	Men	30	.02	0.22	-.45 – .53			

[a]Levene's test for equality of variances.

*$p < .05$.

CHAPTER IV.

DISCUSSION

This study's purpose was to examine how the meanings of *unsafe sex, safe sex, intimate,* and *impersonal* relate to condom use. The relationships between participants' constructs of sexuality and intimacy were more complex than expected: Most participants' 24 constructs sorted into five main factors rather than just three, indicating that people may be making many significant distinctions among such intimate behaviors. One such distinction is between *unsafe sex* and *safe sex*: Although it may seem that *unsafe sex* and *safe sex* are diametric opposites, a substantial portion (18%) of participants did not use them as such, for the two constructs loaded most heavily on different factors. The present study did not explore further the idiosyncratic meanings of these constructs among those participants, but the findings are intriguing and suggest that for some people, *unsafe sex* may be assessed using criteria rather unrelated to those used to assess *safe sex*. Prevention efforts seeking to influence how people assess sexual situations as either *unsafe* or *safe* may need to target very different judgments depending on the construct, which is also likely to change between persons. This finding suggests that a person may judge one sexual situation not to be *safe* without making the judgment that the situation is actually *unsafe*. If using a condom depends on the person judging the situation *unsafe*, then there are likely to be some idiosyncratic *gray zones* for certain people in which there is a sexual risk of HIV infection that they see as not *safe*, but they also do not judge it *unsafe* and therefore do not use a condom.

Among people who do use *unsafe sex* and *safe sex* more as opposite ends of a continuum of risk assessment, condom use was not significantly influenced by how well

this evaluative continuum (bipolar construct) was related to all their other constructs about sexual intimacy. Hypothesis 1 had posited that the relative interrelatedness (meaningfulness) of this bipolar construct would affect reported condom use because it would be more easily activated whenever any of its other related constructs were activated in assessing a sexual situation. The present study does not support this theory. The relative importance of a construct in the overall system may give some indication of how easily it is accessed and how frequently it is used, but at least in this instance, it does not predict reported behavior. Some people may actually be seeking unsafe sex and so use the *unsafe sex* construct often and then do not use condoms; however, others may never evaluate any sexual situations as *safe* or *unsafe* but use or not use condoms consistently because of some other motivator, such as fear of pregnancy or lack of concern about HIV, respectively.

Similarly, the study did not support the theory that the relationships of *safe sex* or *unsafe sex* with *intimate* were related to condom use. Hypotheses 2 and 3 had posited that people who see safe sex as intimate would report more frequent condom use, whereas those who see unsafe sex as intimate would report less frequent condom use. Interestingly, although these correlations were not independently related to reported condom use, they did appear significant as predictors of reported condom use when used together in a multiple regression equation. This finding may be an artifact of intercorrelation or it may indicate the presence of some unidentified variable related to the constructs or the factor structure. The meaningfulness of the *safe sex—unsafe sex* bipolar construct also did not predict reported condom use. Further studies may wish to examine other related variables for their relationship with reported condom use.

The meaningfulness of the *safe sex—unsafe sex* bipolar construct was marginally significantly correlated with gender. Women in the sample reported less frequent condom use than did men and had higher meaningfulness scores for the bipolar construct (Hypothesis 4). The higher meaningfulness scores may indicate that women use the evaluation of *unsafe sex* versus *safe sex* more readily than do men; more direct measures of the accessibility of these constructs, such as reaction-time studies, might confirm this supposition. Women may make the evaluation of *unsafe sex* versus *safe sex* more because they are more concerned with the risk of pregnancy, sexually transmitted diseases, or HIV, for which they are, in this heterosexual sample, more at risk than are men. If this is the case, it does not translate into reported behavior, as the women report less frequent condom use than do the men. This result concurs with the finding of the 1995 National College Health Risk Behavior Survey (NCHRBS; Centers for Disease Control and Prevention, 1997) that, among undergraduates attending 4-year institutions, significantly more men (35%) reported consistent condom use than did women (29%). It is difficult to ascertain reasons for the gender differences in reporting condom use, as the participants' sexual partners are not identified in this study; male and female undergraduate Freshmen and Sophomores may not be having sex only with each other or may be having sex disproportionately more with older partners or off-campus partners.

The men in the sample may be overreporting their condom use for some reason, such as social desirability; some men may see reporting more condom use as appearing more responsible or more desirable as partners. Alternately, women may be motivated to underreport condom use because of negative associations of condom use with sexually transmitted disease, distrust, or casual relationships. If the differences in reported

condom use represent actual differences in behavior, men may be selecting partners with whom they are more likely to use condoms, such as casual partners. Alternately, women may be more concerned about pregnancy than sexually transmitted diseases and may be using an alternative method of birth control, such as the pill, that would drive down their reports of condom use.

Overall, participants did report frequent condom use. Sixty-one percent of participants reported using condoms an average of at least 75% of the time, and among participants who reported having sex in the last month, 65% reported using condoms more than 75% of that time; these rates concur with a 64% rate of reported regular condom use among a similar sample several years earlier (Pilkington et al., 1994). Interestingly, both of these percentages are almost double those of the NCHRBS (Centers for Disease Control and Prevention, 1997), which found 32% reported consistent condom use among undergraduates attending 4-year institutions; the same survey showed a 33% condom use on last intercourse, as compared with the 64% use in the present study's sample. Why this sample from the College of William & Mary should have higher reports of condom use than do undergraduates from other institutions is unclear: It may be a geographical or cultural difference, or the present study's methodology may have motivated participants to overreport. The presentation of the vignettes may have made students think more about their own sexual behavior and its social desirability; participants, especially the men, may have been embarrassed to report less frequent condom use. Cognitive dissonance over exposing themselves to risk may have affected their estimates of past condom use.

One methodological finding of the present study is that sampling reported condom use on last intercourse is as good a measure as sampling reported condom use for other periods in the last 3 months. Participants reported percentages of condom use for three periods — on last intercourse, in the last week, and in the last month — and these reported frequencies had strong positive correlations that were highly significant. These results concur with Franzini and Sideman's (1994) findings among college students that reported condom use on last intercourse was as good an indicator of condom use as was reported percentage of use over the past 3 months.

Study Limitations and Implications for Future Research

In giving feedback after the study's completion, two participants (one female, one male) wrote that the vignettes used in the computerized test were not detailed enough for them to complete the study easily: "Case scenarios (were) not descriptive enough to make accurate character judgment." "A little difficult to come up with different adjectives to describe behavior, since a lot of the behaviors were similar." Since the vignettes are the stimuli used to activate and elicit personal constructs, if they were neither explicit nor varied enough to call forth a wide range of constructs about sexuality, then the study may have assessed only a small subset of participants' constructs about sexual behavior, adversely affect the findings of this study. Other researchers using similar methodologies might consider presenting more varied and sexually explicit vignettes to obtain a wider sampling of constructs. In particular, the use of erotic videos might offer more realistic and emotionally engaging portrayals of intimate and sexual situations. The more stimuli recreate actual experiences and arouse emotions about

sexuality, the more available and powerful will be participants' personal constructs about sexuality.

The present study did use a self-reported measure of condom use, which is susceptible to reporting biases such as social desirability. The next step in examining personal constructs' relationship with sexual behavior might use some behavioral indicator of condom use, such as requisitioning condoms at a campus health center, being diagnosed with a sexually transmitted disease, or becoming pregnant.

Although the present study did not establish an association of personal constructs with reported sexual behavior, researchers may still wish to use a longitudinal design to assess whether altering personal constructs about sexuality can lead to changes in sexual behavior, or whether changes in sexual behavior might precede changes in personal constructs about this behavior, either directly or through some other variable's influence.

The present study does not indicate that the way people think about and describe sexually intimate behavior corresponds to their reported behavior. Gender was the only significant predictor of reported condom use. However, there may still be some merit in the speculation that people who see unsafe sex as intimate will not be using condoms as much as those who do not see it as intimate. This hypothesis does fly in the face of long-standing notions that anything labeled *unsafe* will be seen as negative and undesirable. Researchers and prevention specialists should note well that individuals may have very idiosyncratic values around sexual behaviors — values that might be mapped, appreciated, and perhaps altered, through personal discussions of people's values and meanings. Continued studies in this area may one day support this idea.

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APPENDIX A:

PILOT STUDY SCRIPTS AND FORMS

Appendix A1: Pilot Study Instructions to Participants

Introduction & Consent: Hi, my name is David Indest, and I am doing some research in preparation for my dissertation in clinical psychology. This study is about how people describe erotic intimacy. If you choose to participate, you will be asked to write stories describing erotic behavior between two people and to write comments about these vignettes. Participants in my dissertation research will read these stories as part of the study. This study will be anonymous, except for some very limited demographic data, and your name will not be associated with any of your responses. Furthermore, any identifying information will be removed from the stories before they are used in later research.

You may refuse to answer any question asked, and you may discontinue participation at any time. Any grade, payment, or credit for participation will not be affected by your responses or by you exercising any of your rights. You may report dissatisfactions with any aspect of this experiment to the Psychology Department Chair. You must be at least 18 years of age to participate. Please sign the consent form if you volunteer to participate in this experiment. If you do not wish to participate, you may stay or leave at any time. After you have finished, we can discuss the research in more detail.

Procedure: (Researcher hands out Form A3): Write a short story (5 to 6 lines) about two people engaging in erotic behavior; the people in the story know each other for at least 6 weeks but no more than 6 months. When you have finished, turn your paper over.

(Researcher hands out Form A4): Write a short story (5 to 6 lines) about two people in which safer sex is an issue. Do not mention the words "safer sex" or "HIV." The people in the story know each other for at least 6 weeks but no more than 6 months. When you have finished, turn your paper over.

(When all participants have finished Form A4): Now I'd like you to go back through both stories and underline what you consider to be the key parts of each one. When you have finished, turn your paper over.

(When all participants have finished underlining): Thank you. If you would bring your papers up to the front, I will staple them together now.

(Participants bring Forms A3 and A4 to the researcher, who checks to make sure the two demographic questions on Form A4 are answered. If they are, he staples the forms): Thank you.

(If the demographic questions are not answered): Oh, don't forget to answer these two at the bottom. (The researcher then takes the forms and staples them.)

(Debriefing follows.)

Appendix A2: Pilot Study Consent Form

COLLEGE OF WILLIAM & MARY

PSYCHOLOGY DEPARTMENT CONSENT FORM

The general nature of this study of self-reports of erotic intimacy, conducted by David Indest, has been explained to me. I understand that I will be asked to write stories describing erotic behavior between two people and to write comments about these vignettes. I am aware that the stories I write may be presented to participants in future research. I further understand that my anonymity will be preserved and that my name will not be associated with my responses or with any of the results of this study.

I know that I may refuse to answer any question asked and that I may discontinue participation at any time. I also understand that any grade, payment, or credit for participation will not be affected by my responses or by my exercising any of my rights. I am also aware that I may report dissatisfactions with any aspect of this experiment to the Psychology Department Chair. I am aware that I must be at least 18 years of age to participate. My signature below signifies my voluntary participation in this experiment.

_____ _____

Date Signature

Appendix A3: Pilot Study Form A3

Write a short story (5 to 6 lines) about two people engaging in erotic behavior; the people in the story know each other for at least 6 weeks but no more than 6 months.

Appendix A4: Pilot Study Form A4

Write a short story (5 to 6 lines) about two people in which safer sex is an issue. Do not mention the words "safer sex" or "HIV." The people in the story know each other for at least 6 weeks but no more than 6 months.

Provide the following information about yourself:

Sex: Male ☐ Female ☐ Age: ☐

Appendix A5: Pilot Study Debriefing

I am going to use the stories you wrote today to modify an assessment instrument. This modified instrument will be used in my Psy.D. dissertation research next semester. I am interested in how the meanings people ascribe to sexual behaviors affect their actual behaviors, especially "safer" sexual behaviors. This particular line of research is unique in using an individual assessment method (the Reptest) to predict actual behavior. The Reptest elicits individuals' construct systems and traditionally uses role descriptors such as "pal" or "teacher" as stimuli to elicit the words with which people describe others' personalities. Someone might describe a pal as "trustworthy," whereas another person might describe a pal as "generous." The Reptest elicits a sample of these personality constructs that people use everyday, and it also indicates how related all these constructs are to each other. Using factor analysis, a researcher can usually derive two to three factors for each person's construct system; this allows a general overview of how a person views others.

I am modifying the Reptest to assess construct systems about sexual behavior; instead of asking people to describe their pal or their teacher, I am going to ask them to describe the stories that you just wrote for me. Of course, I may have to alter some of them or merge several into one story; they will be purged of any identifying details and will be seen only by myself, my dissertation committee, and participants in research using the modified Reptest.

I asked you to write these vignettes because undergraduates are going to be the participants in my dissertation research, and I wanted to make sure that the stories were relevant and worded most correctly to assess the dimensions of erotic behavior and safer sex. I thought that having you generate the stories was more ecologically valid.

As well as assessing people's constructs, I am going to collect some information on their reported sexual behavior, such as condom use. By comparing the organization and content of people's construct systems, I am hoping to be able to predict their behavior. One hypothesis is that the more highly integrated people's "safer sex" constructs are with their other erotic intimacy constructs, the more likely they will be to practice safer sexual behavior. This research can help professionals design safer sex interventions and campaigns aimed at preventing HIV transmission, sexually transmitted diseases, and unwanted pregnancy. The constructivist approach shifts emphasis away from more "mass appeal" traditional public health approaches and toward interventions that focus on individuals' unique meanings and experiences. Such an approach encourages using individual psychology in HIV prevention, a method that has been neglected in the field. You can see how important your stories can be for theory and practice.

Do you have any comments or questions?

Please do not discuss the nature of this study or my dissertation with other students, as some of them might be participants in my study in the Spring. Thank you for helping me.

APPENDIX B:

PC STUDY SCRIPTS AND FORMS

Appendix B1: PC Study Recruitment Script

Hi, my name is David Indest, and I'm conducting a study in the Psychology Department. Are you still looking for participant hours?

(If "No"): O.K., thank you for your time.

(If "Yes"): The study is about how people describe erotic intimacy. It takes about an hour and involves completing a computer-administered test and a short questionnaire. The test asks you to read stories describing erotic behavior that may be considered pornographic. Would you be interested in participating?

(If "No"): O.K., thank you for your time.

(If "Yes"): According to the mass testing report, you are ___ years old; is this true?

(If "No"): I'm sorry, you have to be at least 18 years old to participate.

(If "Yes"): Good, because you have to be at least 18 years old to participate. I also see that you are in a sexual relationship; is that true?

(If "No"): I'm sorry, but you need that experience for the study. Thanks for your time.

(If "Yes"): O.K., because you need that experience for the study. I have the following dates and times available for you to participate: _____. Which is best for you? The study will be in Room ____ of _____ Hall. My phone number is 757-423-2416; please call me at least 24 hours in advance if you need to reschedule, or you will be penalized for not showing up. Thanks for signing up, and I'll see you on _____ at _ o'clock.

Appendix B2: PC Study Instructions to Participants

Introduction & Consent: Hi, my name is David Indest, and I am doing some research in preparation for my dissertation in clinical psychology. This study is about how people describe erotic intimacy. If you choose to participate, you will be asked to read stories describing erotic behavior between two people that may be considered pornographic, and to type responses to these stories. It should take about an hour. I also have a very brief questionnaire that should take a few minutes. Your responses are kept strictly confidential by me; I use your name only to associate your responses to the mass testing questionnaire you previously completed. No one else will have access to your name.

You may refuse to answer any question asked, and you may discontinue participation at any time. Any grade, payment, or credit for participation will not be affected by your responses or by you exercising any of your rights. You may report dissatisfactions with any aspect of this experiment to the Psychology Department Chair. You must be at least 18 years of age to participate. Please sign the consent form if you volunteer to participate in this experiment. If you do not wish to participate, you may leave at any time. After you have finished, we can discuss the research in more detail.

Procedure: (Researcher seats participant at the computer and enters a participant number): Please follow the directions on the screen; first, you'll be doing a brief practice session so you can get the hang of the program. If you have any questions during the practice session, let me know. I want you to be confident you understand what you need to do before you start the main program.

(When the participant has finished the program, the researcher gives him or her a Sexual Behavior Questionnaire): Now I'd like you to answer these questions.

(When the participant has finished the questionnaire): Thank you.

(Debriefing follows.)

Appendix B3: PC Study Consent Form

COLLEGE OF WILLIAM & MARY

PSYCHOLOGY DEPARTMENT CONSENT FORM

The general nature of this study of self-reports of erotic intimacy, conducted by David Indest, has been explained to me. I understand that I will be asked to read stories describing erotic behavior between two people that may be considered pornographic, and to type responses about these vignettes. I further understand that my confidentiality will be preserved and that my name will not be associated with my responses in any printed report of this study or with any results of this study.

I know that I may refuse to answer any question asked and that I may discontinue participation at any time. I also understand that any grade, payment, or credit for participation will not be affected by my responses or by my exercising any of my rights. I am also aware that I may report dissatisfactions with any aspect of this experiment to the Psychology Department Chair. I am aware that I must be at least 18 years of age to participate. My signature below signifies my voluntary participation in this experiment.

_____ _____

Date Signature

Appendix B4: Sexual Behavior Questionnaire

	Please circle your response:
1. Please recall the last time you had sexual intercourse. Did you use a condom?	Yes No
2. During the last week, have you had sexual intercourse?	Yes No
3. During the last week, what percentage of the time did you have sexual intercourse without a condom?	0--10--20--30--40--50--60--70--80--90--100
4. Since the beginning of Fall Break, have you had sexual intercourse?	Yes No
5. Since the beginning of Fall Break, what percentage of the time did you have sexual intercourse without a condom?	0--10--20--30--40--50--60--70--80--90--100

Please feel free to write any comments about the study on the back of this page.

Appendix B5: PC Study Debriefing Script

I am interested in how the meanings people ascribe to sexual behaviors affect their actual behaviors, especially "safer" sexual behaviors. The computer test you took is a version of the Reptest; it elicits the words, or constructs, people use to describe sexual behavior, and it also indicates how related all these constructs are to each other. Using factor analysis, a researcher can usually derive two to three main ways people have of viewing such behavior.

I am going to compare people's responses to the computer test to their behavior on the questionnaire, to see how well what people think agrees with their actual behavior. This research can help professionals design safer sex interventions and campaigns aimed at preventing HIV transmission, sexually transmitted diseases, and unwanted pregnancy. This approach also encourages using individual psychology in HIV prevention, a method that has been neglected in the field. You can see how important your participation can be.

Do you have any comments or questions?

If you would like brief results of this study, please write your name and address on this paper, and I will mail them to you in the Spring.

Please do not discuss the nature of this study with other students until after final examinations begin, as some of them might become participants. Thank you for helping me.

APPENDIX C:

COMPUTERIZED TEST STIMULI AND SCREENS

Appendix C1: Practice Vignettes

Pair A

Sandy

Sandy and Aaron are having lunch in the cafeteria. Sandy reaches for the salt and knocks it into Aaron's lap. "I'm terribly sorry!" Sandy blurts out and squeezes his thigh under the table. Sandy winks at Aaron and he blushes a deep crimson.

Bill

An hour into the concert, Bill leans closer to Dale's ear and whispers, "Why don't we leave now?" as he runs his hand across her bare shoulder. Dale turns to look him in the eyes, and he kisses her passionately.

Pair B

Meg

Meg and Gus are rolling around in bed when things start to get serious. Gus reaches over to the bedside drawer and says, "Uh-oh, I'm out. Maybe we can just ...." "You wish," Meg says with a smile and gets up and goes in the bathroom.

Casey

Katie is rubbing Casey's chest as she sits on top of him. "Maybe we should stop so I can get a ...." "Yeah," Katie breathes but starts riding him at a faster pace. "Um ...." Casey starts. "Shhh!" Katie hisses.

Appendix C2: Elicitation Vignettes

Pair 1

Dana

After a romantic dinner, Steve suggests it's not time to go home yet. Dana jokingly suggests a late night swim. The pool is deserted. They're both feeling playful and decide to go skinny-dipping. Dana tries to dunk Steve and ends up in his arms. They kiss passionately. One thing leads to another, and they have sex.

Sue

Sue and Alex are finally becoming physically intimate. She wonders if Alex has a condom with him. They had discussed protection before, but hadn't specified what kind. Lying there naked, Alex pulls a condom from the bedside drawer. Sue knows he loves her since he chose to protect himself and her.

Pair 2

Tara

Tara and Billy, hot with unbridled passion, wrestle naked before the fireplace. "This is how I like it best," Tara pants as she gets on top of him. Slowly at first, then with growing speed, she rides his shaft. Both explode in an orgasmic frenzy. They hold each other close and confide their love for one another.

Ben

"How about tonight? C'mon, I love you," says Amy. "I said not until I'm ready," says Ben. Amy takes his hand and moves it slyly up her leg. "I mean it. Don't you care what I think," Ben says, shrugging off her advances. "Alright, we'll just sit and watch a movie AGAIN, but when can we..." "Not until I'm ready."

Pair 3

Jake

Jake and Lisa are just getting comfortable with each other. After a night out drinking with friends, they end up back at her place. One thing leads to another and

they're faced with whether or not to have sex. Neither has any protection. Jake decides the risks are too great and to discuss it at a better time.

Sal

Sal invited Mona over for dinner; it had been 4 weeks. As they sit drinking wine, Sal feels Mona's eyes draw them together. When their lips touch, it's all over. They're excited and curious for they had only just beginning to know each other. With that kiss, Sal feels a whole new world open up between them.

Pair 4

Bob

Bob and Jen say they're in love and have become very physical lately. Jen is scared of the consequences and wants Bob to use a condom - she trusts him but doesn't want to get pregnant. He agrees because he also wants to avoid a bad situation and doesn't see them as that seriously involved.

Steph

Bo brushes his lips across Steph's mouth. She feels his body rise and move closer to her. She runs her fingers through his hair and kisses him gently, then more strongly. Their bodies press against each other, and Steph thinks that no two people could be closer. She begins to share her feelings for him.

Pair 5

Art

Art has been talking to Nora in class for several weeks. They hit it off well. Tonight they're on their first date. Art is extremely attracted to her. Nora seems to feel the same way. They get a little close and soon are lustily kissing each other. Art loses all inhibition, but Nora hesitates to go any farther.

Jack

Jack and Pat feel very close to each other. They're making out, and it reaches a point where it's difficult to turn back. Jack realizes he doesn't have any protection with

him, and Pat doesn't either. They had previously agreed to use condoms when they were ready, but Jack feels too ready now to turn back.

Pair 6

Red

After some heavy petting, John starts going down on Red. Red wants to share this feeling and starts 69-ing with John. John decides it's time to put some sausage into the oven, but Red says stop and hands him a condom. After having hot sex, they both agreed it was better with the condom because they felt more at ease.

Gene

Joe and Gene sit on the couch, watching a movie on TV. Joe decides it's time to turn it on, so he starts caressing her and fondling her breasts. Slowly but surely, he makes his way to her vagina with his fingers. Just as he is ready to penetrate, Gene tells him that she is not in the mood.

Pair 7

Kate

Tony stares in secret awe at the splendor of Kate's nude body. He notices her glance toward her hastily dropped purse. Fighting a smile, he brings it to her. She reaches in. Handing him a small package, Kate starts, "It's not because I think you're...." "I know," he whispers, kissing her hand as he accepts it.

Eric

Cyn was waiting by the pool. The torches cast a bronze light on her shoulders. Eric slips his arms around her waist and kisses her once, twice, on the neck. The kiss is delicate yet forceful. As they migrate groundward, he can't help but think how much the scene reminds him of some Prince song.

Pair 8

Maria

Maria scolded, "Put that away!" "But, honey, it's our 2-month anniversary," whined Cal. "All you think about is sex," Maria chides. Cal began to kiss her again.

Their hands wandered all over, and clothing began to drop to the floor. Soon, they were both buck naked and going at it like rabbits....

Jan

Jan said, "I don't know where that things been. Don't you think we should use a condom?" "Yeah, good idea," Carl said. "Besides, I don't want any damn kids running around looking like me." Carl pulled out a ribbed Trojan, and they went at it. Both enjoyed the sex much more because they didn't have to worry.

Pair 9

Dan

Dan tastes the sauce as he eagerly awaits Bec's arrival. His mind wanders back 2 months to the first time. They had known each other only a few days and the attempt at intimacy had been disastrous. After getting to know each other better, he thinks they're ready to try again. He hears a knock. "Here's hoping," he thinks.

Trish

Trish giggles and rips it open with her teeth. This started as a simple outing. She and Jay had planned a romantic evening. Trish didn't like the condoms they'd been using and wanted a new brand. When Jay started whispering in her ear at the register, she couldn't wait, so here they were in the drugstore bathroom.

Pair 10

Rob

Rob takes Kiki out for a romantic dinner and gives her roses. At his apartment, they kiss passionately. Rob isn't sure he wants to make love to Kiki because he's not sure he truly loves her. Eventually he's so aroused he goes through with it. After, he's happy he did it, but their relationship is on a new level.

Tom

Tom and Alice are sexually intimate. Tom is very insistent on wearing a condom during intercourse, but Alice nags him about it. She says she's never been with anyone

else and is on the pill, so he has nothing to worry about. Tom thinks he may be in love with her but doesn't want to take any chances.

Appendix C3: Additional Vignettes for Rating

Val

After a few beers, Marc plays a Harry Connick CD. He approaches Val and slowly begins to kiss her and massage her hair. She lightly rubs his legs and stomach. Marc slowly removes her shirt and begins to undo her pants. Val's unsure but lets him continue. They sleep together, entwined in each other's limbs.

Vince

Joy and Vince are relaxing in the Jacuzzi. They begin to fondle and massage each other playfully in the foamy bubbles. Still kissing, they slide onto the bathroom floor. Joy reaches a condom and hands it to Vince, who puts it on. After their excited lovemaking, Vince tosses the condom away before falling asleep.

Ann

Ann looks deeply into Jeff's eyes as he caresses her hair. As he kisses her, chills course up her spine, inciting her closer and closer to his warmth. As he continues kissing her and rubbing his hands all over her body, she feels she can no longer contain herself - such powerful emotions he provokes in her.

Max

"I want you," Max breathes as he starts undressing Sara. "Don't," she commands. "I know your reputation and how many other girls you've slept with." Max says, "But I've always been careful, just as I will be with you. You mean so much to me." He removes a condom from his wallet to prove it to her.

Hil

As Hil and Alan lay by the fire, he tells her of his intense love and his inability to go without thinking of her. She stares deeply into his eyes, each word sending warm vibrations through her body. Although she'd told herself tonight was just for talking, her love makes her want to be as close to him as possible.

Phil

Phil was attracted to Reba, but he wasn't interested in a relationship. She had been sexually involved with many of his friends, and this somehow always turned him on. When they met at the party, he knew it was his chance. As she closed the bedroom door, he nonchalantly slipped the condom out of his wallet.

Appendix C4: Elicitation Instruction Screen

PRACTICE QUESTIONS

In the questions that follow, you will be asked for your view of similarities and differences among people's behaviors.

You will be asked for your views about several groups of persons. Please do not use the terms of similarity or difference more than once.

Keep in mind that there are no right or wrong answers. Rather, you are asked for your own view.

Please press ENTER to proceed...

Appendix C5: Vignette Comparison Screen

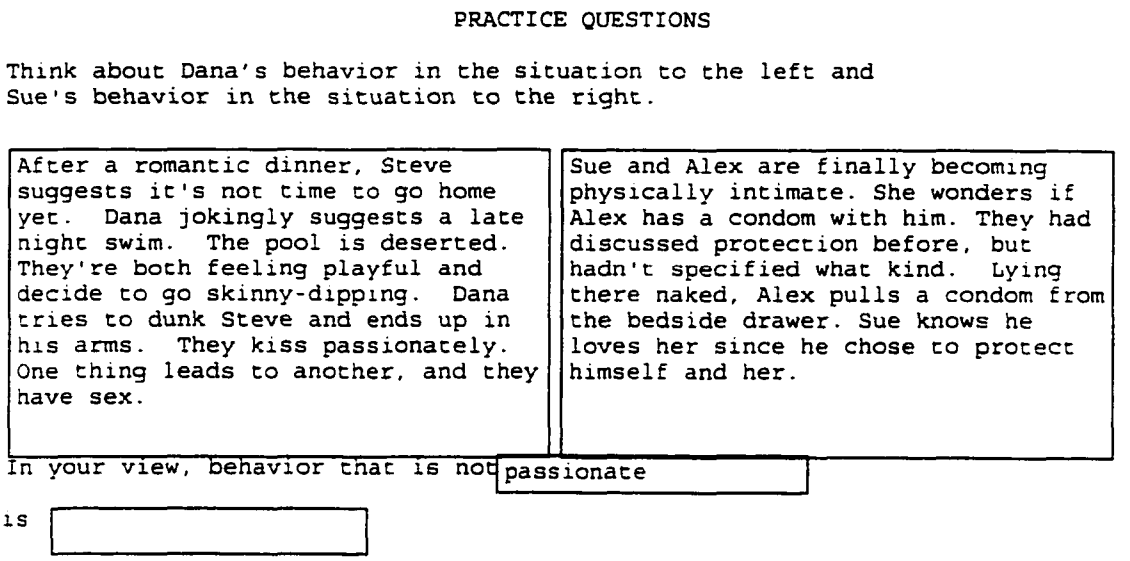
PRACTICE QUESTIONS

Think about Dana's behavior in the situation to the left and Sue's behavior in the situation to the right.

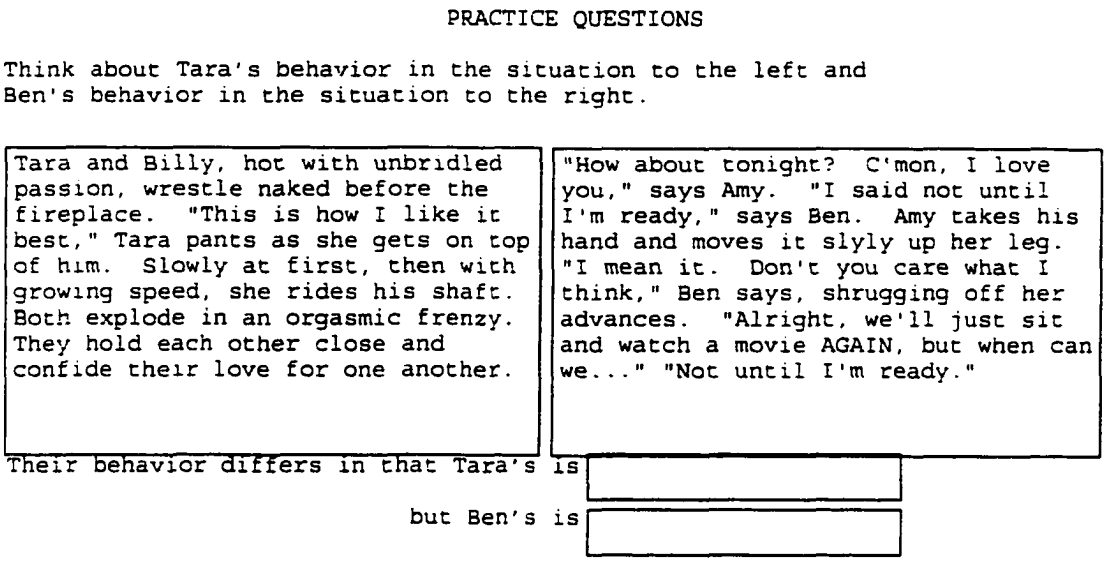
After a romantic dinner, Steve suggests it's not time to go home yet. Dana jokingly suggests a late night swim. The pool is deserted. They're both feeling playful and decide to go skinny-dipping. Dana tries to dunk Steve and ends up in his arms. They kiss passionately. One thing leads to another, and they have sex.	Sue and Alex are finally becoming physically intimate. She wonders if Alex has a condom with him. They had discussed protection before, but hadn't specified what kind. Lying there naked, Alex pulls a condom from the bedside drawer. Sue knows he loves her since he chose to protect himself and her.

Are their behaviors alike or different?

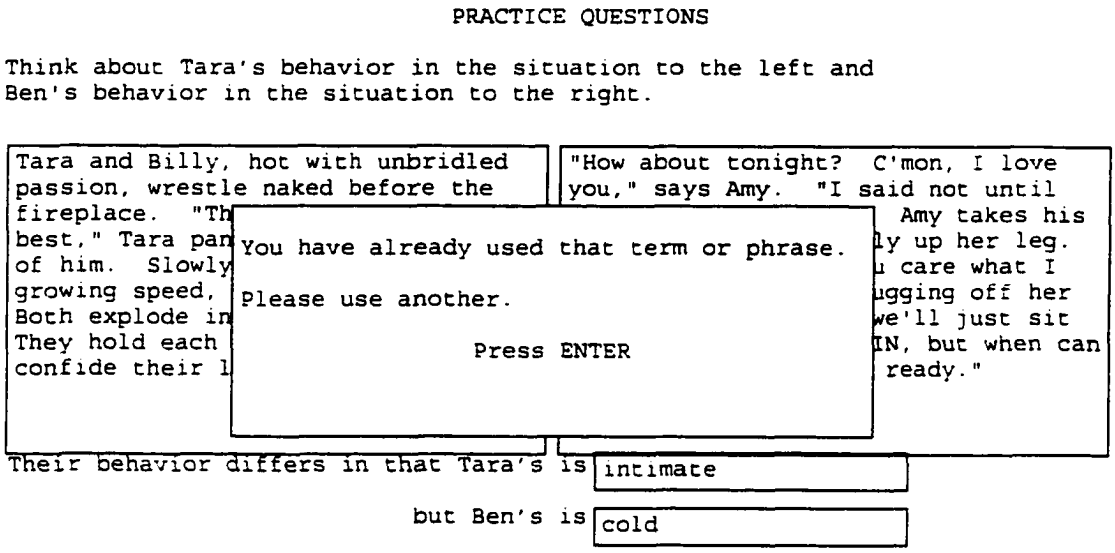
Appendix C6: Elicitation Screen for Alike Constructs



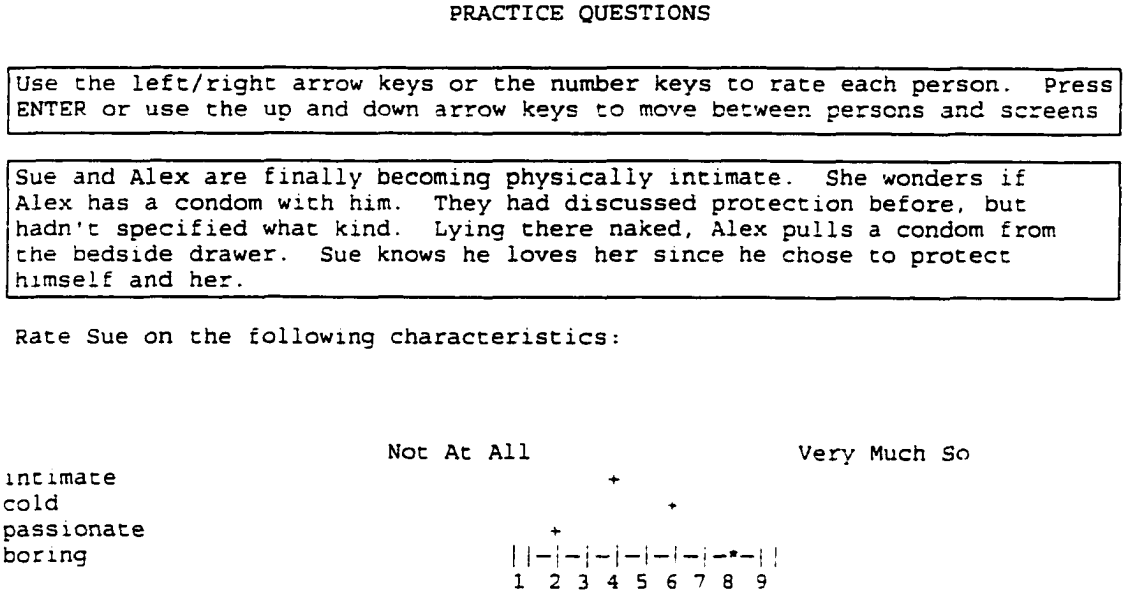
Appendix C7: Elicitation Screen for Different Constructs



Appendix C8: Redundant Response Prompt



Appendix C9: Rating Screen



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PUBLICATIONS

Pilkington, CJ, Kern, W, & Indest, D (1994). Is safer sex necessary with a "safe" partner? Condom use and romantic feelings. *The Journal of Sex Research, 31*, 203-210.

Pilkington, CJ, Derlega, VJ, Glenn, JE, & Indest, DW (submitted for review). The impact of emotional involvement on safer sex in gay romantic couples.