

AIDS Stigma and Sexual Prejudice

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Throughout the 1980s, AIDS was closely linked to homosexuality in the minds of many Americans. This association can be traced to the syndrome's initial epidemiology in the United States. AIDS was first identified in 1981, when clusters of gay men in Los Angeles and New York were diagnosed with Kaposi's sarcoma and pneumocystis pneumonia. Early media reports referred to it variously as a gay disease, gay cancer, or gay plague, and some health care providers and researchers informally labeled it "gay-related immune deficiency" (GRID), reflecting an initial assumption that it struck only gay men (Epstein, 1996, p. 50). By 1990, the Centers for Disease Control (CDC) had recorded 115,786 diagnosed adult cases of AIDS in the United States, of which 61% were traced to unprotected male-male sex. Another 7% were linked to both male-male sex and sharing needles for injecting drugs (CDC, 1990, p. 10).

Given the disproportionate impact of AIDS on the gay community, along with the prevalence of widespread negative attitudes toward homosexuality at the time (e.g., Herek, 1991), it was perhaps inevitable that AIDS would be defined in political and cultural terms as well as medically, and that many heterosexuals' reactions to AIDS would reflect their attitudes toward homosexuality. The political construction of AIDS and the association between AIDS

attitudes and attitudes toward gay people were most likely intensified by the efforts of the gay community itself and its opponents in the Christian Right.

Much of the initial impetus for AIDS research and prevention came from the gay community, which initially was also the primary source for volunteers and monetary donations (Epstein, 1996). The gay community worked to promote an understanding that HIV infection results from behavior rather than status, with heterosexual and homosexual behaviors alike carrying potential risks for transmission. Even as this message was promulgated, many in the community expressed concern about the "dehomosexualization" or "degaying" of AIDS. They worried that gay and bisexual men's special needs were being rendered invisible as prevention and treatment efforts increasingly targeted heterosexuals (Epstein, 1988).

On the other side of the political spectrum, members of the Christian Right and other conservatives routinely invoked AIDS in their antigay political rhetoric (e.g., Cameron, 1988; Dannemeyer, 1989). For example, Patrick Buchanan wrote in a 1987 column:

"There is one, only one, cause of the AIDS crisis — the willful refusal of homosexuals to cease indulging in the immoral, unnatural, unsanitary, unhealthy, and suicidal practice of anal intercourse, which is the primary means by which the AIDS virus is being spread through the 'gay' community, and, thence, into the needles of IV drug abusers, the transfusions of hemophiliacs,

and the bloodstreams of unsuspecting health workers, prostitutes, lovers, wives, children.” (Buchanan, 1987, p. 23)

Similarly, an antigay activist argued:

“If you think that homosexuals are largely to blame for AIDS, then you’re right.... It seems pretty clear if homosexuals hadn’t come out of the closet and started sodomizing one another all over the world, none of this would have gotten started in the first place....It’s safe to say AIDS is the first and greatest by-product of the Gay Liberation Movement.” (Cameron, 1988, p. 126)

These quotations reflect a strategy of blaming the gay community for starting the epidemic and portraying homosexuals as ongoing dangers to themselves and to heterosexuals. From this premise, conservatives argued for a variety of punitive measures under the guise of fighting AIDS. They proposed quarantine (e.g., Cameron, 1988), reinstating state sodomy laws (Cameron, 1988; Dannemeyer, 1989), tattooing people infected with HIV (Buckley, 1986), and eliminating laws to protect PWAs from discrimination (Dannemeyer, 1989). They also admonished heterosexuals to avoid homosexuals, arguing that HIV and various AIDS-related diseases could be spread through casual contact (e.g., Cameron, 1988; Dannemeyer, 1989), while actively campaigning to prevent AIDS education programs from providing explicit information to gay and bisexual men about how to protect themselves sexually from HIV (Dannemeyer, 1989; see also Bailey, 1995).

A connection between AIDS and homosexuality was apparent in public perceptions and attitudes. Empirical studies throughout the 1980s and into the early 1990s revealed that Americans with high levels of sexual prejudice (i.e., negative attitudes toward gay people) were more likely than others to be poorly informed and excessively fearful

concerning AIDS, and more likely to stigmatize people with AIDS. Furthermore, gay men with AIDS and men who contracted HIV through male-male sex were more negatively evaluated and blamed than were heterosexuals with AIDS or other illnesses. Among health care professionals, anti-gay attitudes were significantly associated with unwillingness to work with AIDS patients and with negative attitudes toward them. Some health professionals believed that homosexual patients deserved to have AIDS (for brief reviews of this literature, see Herek, 1997; Herek & Glunt, 1993).

Because most survey data suggested that the AIDS epidemic had not significantly affected public attitudes toward homosexuality (Herek, 1997; Schneider, 1987), these patterns suggest that AIDS attitudes were for many heterosexuals a symbolic vehicle for expressing preexisting sexual prejudice. Various studies have reported data consistent with the hypothesis that much of the stigma attached to AIDS in the 1980s reflected longstanding hostilities toward gay men, specifically, and the gay and lesbian community more generally (Herek, 1997; Herek & Glunt, 1991; Pryor, Reeder, & Landau, this issue; Pryor, Reeder, Vinacco, & Kott, 1989).

The epidemiology of AIDS in the United States has changed considerably since the early 1980s. By 1997, for example, only 35% of new AIDS cases in the U.S. were diagnosed among men who reported sex with another man, with another 4% among men who reported both homosexual sex and injecting drug use (CDC, 1997). If popular perceptions of AIDS mainly reflect the realities of the epidemic, recent public opinion data should show a decreased tendency for the American public to think of AIDS primarily in terms of homosexuality. However, if public reactions to AIDS continue to serve substantially as symbolic expressions of attitudes toward homosexuality, the strong association between AIDS-related stigma and sexual prejudice should endure. In the present paper, we report data from our national survey studies to address this issue. We describe the extent to which AIDS remained a gay disease in the

minds of heterosexual Americans in the 1990s, and examine some of the psychological processes that underlie this association.

Data Sources

This paper presents new data and integrates it with findings from our earlier surveys. The new data were collected in a national telephone survey conducted between September of 1996 and March of 1997 (referred to hereafter as the 1997 survey). Using a list-assisted Random Digit Dialing (RDD) procedure, a national cross-section sample ($N = 1309$; hereafter the primary sample) was drawn from the population of English-speaking adults (at least 18 years of age) residing in households with telephones within the 48 contiguous states. Using similar procedures, but targeting census tracts with at least 15% Black households, an additional oversample was recruited, consisting of 403 individuals who described their own race or ethnicity as Black or African American. In some of the analyses presented below, we compare Whites and Blacks, using responses from Whites in the primary sample ($n = 1037$) and Blacks from the primary sample and the oversample combined ($n = 542$).¹

Within each household, a respondent was randomly selected from the enumerated list of all eligible household residents. Interviews were conducted by the staff of the Survey Research Center at the University of California at Berkeley, using their computer-assisted telephone interviewing (CATI) system. Response rates (number of completed interviews divided by the number of eligible households) were 65.1% for the primary sample and 63.1% for the oversample. The median duration of the interview was 44 minutes. (For more information about the survey, see Capitanio & Herek, this issue; Herek, 1999; Herek & Capitanio, 1999.)

We also report data from a national telephone survey that we conducted in 1990-91 (hereafter the 1991 survey) and a follow-up study approximately one year later in which those respondents were reinterviewed (the 1992 survey). The methodology for both of these

earlier surveys was generally similar to the 1997 study, although the sample sizes were different (for the 1991 survey, $N = 538$ for the primary sample, with an additional Black oversample of 607; for the 1992 survey, $N = 382$ for the primary sample, with an additional oversample of 420 Blacks). (For more information, see Herek & Capitanio, 1993, 1994, 1997, 1998.)

The Persistent Linkage Between AIDS and Male Homosexuality

Near the beginning of the 1997 interview, respondents were asked “When you hear the word ‘AIDS,’ what groups or type of people first comes to your mind?” A majority of the primary sample (52.9%) volunteered that they thought about homosexuality, gay men, lesbians, or bisexuals. Thus, AIDS remained strongly linked to homosexuality in the minds of Americans. In a series of follow-up forced-choice questions, all respondents were asked about the extent to which they thought of certain groups more than others in connection with AIDS. A majority reported that they thought mainly of homosexuals (67.7%) rather than heterosexuals (8.1%) or bisexuals (9.4%), with a few (0.9%) volunteering that they thought equally of homosexuals and bisexuals. The remainder (13.4%) volunteered that they thought of all three groups equally or that they did not think about AIDS in terms of any of these groups. (Percentages do not total to 100% because of “don’t know” responses.)

Respondents who associated AIDS with homosexuality or bisexuality also harbored more negative feelings toward gay men. We assessed this relationship by examining respondents’ scores on two measures: the 3-item Attitudes Toward Gay Men (ATG) scale (Herek, 1994) and a 101-point feeling thermometer, on which respondents rated their feelings toward gay men. Higher ATG scores indicated more hostile attitudes whereas higher feeling thermometer ratings indicated “warmer,” more favorable attitudes.

Respondents who mentioned homosexuality or bisexuality in answering the open-ended item about their associations with AIDS scored

significantly higher on the ATG scale than respondents who did not mention it ($M_s = 9.51$ versus 8.53 , respectively), $F(1, 1412) = 15.03$ ($p < .001$). They also gave significantly lower feeling thermometer ratings to gay men ($M_s = 34.35$ versus 39.83), $F(1, 1447) = 14.77$ ($p < .001$). Similarly, respondents who selected “bisexuals” or “homosexuals” for the follow-up forced-choice item scored significantly higher on the ATG, $F(5, 1466) = 10.04$, $p < .001$, and significantly lower on the feeling thermometer, $F(5, 1502) = 7.76$ ($p < .001$), compared to respondents who volunteered that they did not think of AIDS in terms of sexual orientation.

Thus, AIDS and homosexuality remained closely linked for most adult Americans as the epidemic’s second decade drew to a close, even though gay and bisexual men constituted a shrinking portion of U.S. AIDS cases. Moreover, individuals who associated AIDS closely with homosexuality harbored more negative attitudes toward gay men. In the next section, we present data showing that survey respondents evaluated men who contracted AIDS through sex with another man more negatively than heterosexuals with AIDS.

AIDS Stigma and Attributions of Responsibility

People with AIDS are routinely blamed for their condition, especially if they contracted HIV through sexual behavior or injecting drug use. In our 1991 survey, for example, 20.5% of respondents agreed that “people with AIDS have gotten what they deserve.” Approximately six years later, in the 1997 survey, 28.8% agreed with that statement, an increase of roughly 40%. Even more of the 1997 respondents assigned some degree of responsibility when the question was framed less harshly. For example, 55.1% agreed that “most people with AIDS are responsible for having their illness” (Herek & Capitano, 1999).

The notions of responsibility for and controllability of the onset of disease have figured prominently in attributional accounts of AIDS stigma (Weiner, 1993). Attribution

theorists have noted that people who contract AIDS through behavior that is perceived as controllable (e.g., sex, sharing needles) are assigned more blame, receive less sympathy and more anger, and are less likely to receive assistance than are PWAs who were infected through circumstances such as receiving a blood transfusion (Weiner, 1993). This pattern was manifested in 1980s rhetoric about so-called innocent victims of AIDS, a descriptor that implied the existence of “guilty” victims (Schellenberg, Keil, & Bem, 1995). It was evident in findings from our 1992 survey. We asked all respondents about their feelings toward two hypothetical persons with AIDS, someone who got AIDS “through homosexual behavior” and someone who contracted AIDS “from a blood transfusion.” Whereas 98% felt sympathy for a blood transfusion recipient (and fewer than 1% felt no sympathy at all), only 58.3% felt sympathy for someone who had engaged in homosexual behavior (22.8% felt not at all sympathetic). Nearly one-third (29.3%) expressed anger toward a homosexual PWA, and anger was negatively correlated with sympathy for a homosexual PWA ($r = -.31$, $p < .001$).²

There is also evidence to indicate that attributions of responsibility to PWAs are affected by preexisting antigay attitudes. Experimental studies utilizing samples of undergraduate students have repeatedly shown that a homosexual man with AIDS elicits more negative reactions than a heterosexual PWA, even when both are described as having contracted HIV through sexual behavior with multiple partners (Anderson, 1992; Fish & Rye, 1991; Murphy-Berman & Berman, 1993; Triplet & Sugarman, 1987). Thus, gay men with AIDS have been regarded as guilty for two reasons: (a) because they engaged in sex with another man, an activity widely perceived as controllable and risky, and (b) simply because they were gay.

Did the same attributional pattern persist in the late 1990s? To address this question, we included an experimental manipulation in our 1997 survey. Each respondent was posed a

description of a hypothetical person with AIDS in his or her thirties. We randomly varied the PWA's *race* (Black or White), *sex and sexual orientation* (heterosexual woman, heterosexual man, bisexual man, homosexual man) and *route of infection with HIV* (receiving a blood transfusion approximately 15 years earlier, having sex with one partner over the past 15 years, having sex with multiple partners over the past 15 years, sharing needles for drugs over the past 15 years). Combining these variables yielded 32 different descriptions of the hypothetical PWA.

Each respondent received one description, and was asked to report his or her beliefs about the PWA's *responsibility* for being infected ("How much do you feel [he/she] is responsible for getting AIDS?"), *sympathy* for the PWA ("How sympathetic do you feel toward this person?"), *anger* ("How about feeling angry toward this person?"), and willingness to *help* the PWA ("Suppose [he/she] was your neighbor or someone you knew personally and that [he/she] needed help with chores and errands because [he/she] was sick. If [he/she] asked for your help and assuming you had the time, how willing would you be to help?").

In addition to the three experimentally-manipulated factors, we anticipated that respondents might react differently to the PWA depending on their own race and sex. Accordingly, we analyzed the data separately for Black and White respondents, and included sex as a factor in the analysis. Because the manipulations involved the hypothetical PWA's sexual orientation and needle-sharing behavior, and because the sample did not include sufficient numbers of non-heterosexuals or persons who had shared needles for illegal drugs to include these variables as factors in the analysis, we excluded the relatively small number of respondents who reported that they had injected illegal drugs or who self-identified as gay, lesbian, or bisexual (or refused to answer either the drug use or sexual orientation question). Because the analyses differed somewhat between Blacks and Whites, we present the

results for the two groups separately. Because of space limitations, we focus here primarily on findings relevant to AIDS and sexual orientation. We also limit our discussion to significant main or interaction effects with effect sizes (ES, or partial h^2) greater than .01.³

Whites. For White respondents, we conducted a 2 (race of PWA) \times 4 (sex and sexual orientation of PWA) \times 4 (infection route) \times 2 (sex of respondent) multivariate analysis of variance (MANOVA), using the responsibility, sympathy, anger, and help items as dependent variables (Tables 1-4). Excluding individuals with missing data on the dependent measures resulted in a weighted sample size of 948 White respondents (491 females, 457 males). Whites' reactions to the PWA did not show any significant main effects or 2-way or 3-way interaction effects according to whether the PWA was described as White or Black. Hence, we collapsed responses across the race variable for the analysis presented here.

Insert Tables 1 - 5 about here

Of principal relevance to the present paper was the finding that a homosexual or bisexual male was accorded significantly more responsibility (Table 1), less sympathy (Table 2), and less help (Table 4) than a heterosexual female with AIDS [main effects for responsibility, $F(3, 916) = 11.62$ ($p < .001$, ES = .037), sympathy, $F(3, 916) = 10.39$ ($p < .001$, ES = .033), and helping, $F(3, 916) = 3.41$ ($p < .05$, ES = .011).] A significant sex/orientation \times infection route interaction revealed that this pattern occurred only when the PWA contracted AIDS sexually, for sympathy, $F(9, 916) = 3.48$ ($p < .001$; ES = .033) and responsibility, $F(9, 916) = 5.52$ ($p < .001$; ES = .051).

The pattern varied somewhat depending on the respondent's sex. Male respondents gave the most negative reactions to a homosexual man with AIDS, whereas female respondents gave

the most negative reactions to a bisexual man with AIDS [sex of respondent \times sex/orientation of PWA interaction for sympathy ($F(3, 916) = 3.99, p < .01, ES = .013$), anger ($F(3, 916) = 2.84, p < .05, ES = .009$), and responsibility ($F(3, 916) = 3.72, p = .01, ES = .012$)]. Women accorded the least sympathy to bisexual men who were described as having contracted AIDS sexually, particularly if the men had multiple sex partners [PWA sex/orientation \times Respondent sex \times Transmission interaction for sympathy ($F(9, 916) = 3.46, p < .001, ES = .033$)].

We observed a consistent hierarchy of stigma according to route of infection (Table 5). Responses were the most negative for a PWA who contracted AIDS through sex with multiple partners or sharing needles, and the most positive for a PWA infected through a transfusion. Reactions to a PWA infected through sex with one partner fell between these extremes [main effect for transmission route for blame ($F(3, 916) = 457.94, p < .001, ES = .600$), sympathy ($F(3, 916) = 134.51, p < .001, ES = .306$), anger ($F(3, 916) = 43.65, p < .001, ES = .125$), and willingness to help ($F(3, 916) = 14.78, p < .001, ES = .046$)].

Blacks. Response patterns for Blacks are also reported in Tables 1-5. Although the Black subsample included 542 respondents, it was nevertheless too small to permit a full analysis of the three experimental conditions (PWA's sex/orientation, transmission route, and race) and respondent's gender. Consequently, we conducted two 3-way MANOVAs: (a) PWA's infection route, PWA's race, and respondent's sex; and (b) PWA's sex/orientation, PWA's race, and respondent's sex. After exclusion of cases with missing data, the weighted final sample consisted of 445 Black respondents (244 females, 201 males).

Similarly to Whites, Blacks responded more negatively to homosexual and bisexual PWAs compared to heterosexual PWAs. In the analysis that included PWA's sex/orientation, there was a main effect for sex/orientation for sympathy ($F(3, 429) = 9.95, p < .001, ES = .065$), responsibility ($F(3, 429) = 6.62, p < .001, ES =$

.044), and willingness to help ($F(3, 429) = 3.39, p < .05, ES = .023$). As with Whites, Blacks reacted most negatively to a PWA who contracted AIDS through sharing needles or multiple sexual partners, compared to transfusion recipients. PWAs who were infected through sex with one partner were rated between these two extremes. In the analysis that included PWA's source of infection, there was a main effect for source of infection for responsibility ($F(3, 429) = 87.78, p < .001, ES = .38$), sympathy ($F(3, 429) = 34.84, p < .001, ES = .196$), and anger ($F(3, 429) = 9.83, p < .001, ES = .064$).

Although not central to the present paper's discussion, we observed interesting differences among Black respondents according to the PWA's race. Black respondents expressed significantly *less* willingness to help a Black PWA than a White PWA, an effect that resulted from Black males' low level of willingness to help a Black PWA [main effect for the PWA's race for help ($F(1,435) = 6.73, p < .01, ES = .015$); for the interaction, $F(1, 435) = 12.56, p < .001, ES = .028$]. Female respondents were more angry and attributed more responsibility to a Black PWA than a White PWA, whereas no differences on these variables were found for male respondents. However, male respondents were less likely to help a Black PWA than a White PWA, whereas no differences on the helping item were found for females [interactions between PWA's race and respondent's sex for responsibility ($F(1, 429) = 4.74, p < .05, ES = .011$), anger ($F(1, 429) = 4.72, p < .05, ES = .011$), and helping ($F(1, 429) = 10.57, p < .001, ES = .024$)].

Summary. The results for Whites and Blacks alike indicate that the American public continues to harbor a hierarchy of blame for people with AIDS. Gay and bisexual men who contract AIDS sexually are held blameworthy and are negatively evaluated both because they engaged in sexual behavior (whether with one or many partners) and because they are gay or bisexual.

Beliefs About AIDS, Sex, and Contagion

Perhaps the simplest explanation for the patterns observed in the experiment is that sexual prejudice leads heterosexuals to make more negative attributions to men who contract AIDS through sex with other men. The notion that AIDS has provided many heterosexuals with a symbolic hook upon which to hang their preexisting antigay attitudes is supported by public opinion trends throughout the 1980s (Herek, 1997). While accepting this explanation, however, we sought to better understand the mechanisms whereby sexual prejudice exerts its effect on AIDS stigma. We were able to shed some light on the tendency to blame and negatively evaluate gay and bisexual men who contract AIDS sexually by examining two aspects of respondents' beliefs about HIV transmission. The data suggest that many respondents equated male-male sex with AIDS transmission, and that beliefs about AIDS transmission may reflect underlying beliefs about social pollution and what Rozin and his colleagues have termed magical contagion (Rozin & Nemeroff, 1990).

Beliefs About AIDS and Male-Male Sex

Sex between two men does not, in itself, carry a risk for AIDS. AIDS can only be contracted from male-male sex when three conditions are met: (a) one of the men is infected with HIV; (b) they engage in sexual conduct that is capable of introducing HIV-infected blood or semen into the bloodstream of the uninfected partner (e.g., anal intercourse); and (c) the introduction of the infected blood or semen actually occurs because, for example, the men do not use condoms to effectively prevent transmission. If any of these three conditions are not met — as when two male sex partners are both HIV-negative, they engage in forms of sex that do not introduce infected blood or semen into the partner's body, or they effectively use condoms — HIV transmission cannot occur.

These facts may seem too elementary to warrant comment. Yet, in our 1991 survey, roughly one-fifth (19%) of heterosexual respondents believed that a healthy man was

almost sure to get AIDS or had a fairly strong chance of doing so if he had sex with an *uninfected* man, even if they used condoms. If the uninfected couple had sex without condoms, nearly half of the sample (47%) believed that one of them was likely to get AIDS (Herek, 1997).

To assess whether a substantial portion of the U.S. public continued to equate *any* homosexual sex with AIDS, we presented a similar series of items in the 1997 survey, but in a slightly different format. We first posed two scenarios describing high-risk sex. The items asked about a heterosexual woman's (Item #1) and a homosexual man's (Item #2) likelihood of getting AIDS from having unprotected sexual intercourse one time with an infected male partner. Respondents indicated whether the woman or man was *very likely, somewhat likely, somewhat unlikely, very unlikely to get AIDS* in that situation, or *it is impossible to get AIDS from having intercourse that one time*. Using the same response alternatives, the remaining items were similar to those posed in the 1991 survey. They asked about the risk for two *uninfected* homosexual men to have sex with each other one time, using a condom (Item #3) or without a condom (Item #4).

Insert Table 6 about here

Nearly everyone answered the first two questions correctly (Table 6). When asked about two uninfected homosexual men, however, the response patterns were similar to those in our 1991 survey. Nearly one-fourth of respondents considered infection to be very likely, somewhat likely, or only somewhat unlikely in a single sexual encounter when condoms were used (Item #3). If condoms were not used (Item #4), more than 4 respondents in 10 believed that a man could get AIDS through sex *with an uninfected man*. Blacks were more likely than Whites to overestimate the risk of transmission,

$C^2(1, N = 1577) = 40.00$ ($p < .001$) when a condom was used, and $C^2(1, N = 1569) = 53.30$ ($p < .001$) when a condom was not used.

These patterns might be interpreted as a tendency for respondents simply to err on the side of safety, assuming that any ambiguous situation involving sexual contact might result in AIDS for one of the participants. However, the questions stated unambiguously that neither man was infected. Moreover, our data suggest that errors were correlated with sexual prejudice. Regardless of race, respondents who incorrectly equated any male-male sex with AIDS also expressed significantly more negative attitudes toward gay men. Respondents who believed that infection was likely when two uninfected men used a condom, for example, assigned gay men a feeling thermometer score of 28.24, compared to 40.98 for those who said infection was unlikely in that scenario, $F(1, 1672) = 68.31$ ($p < .001$). Similarly, ATG scores were significantly higher (more hostile attitudes) among those who said HIV transmission was “very likely” when two uninfected men used condoms ($M = 9.76$), compared to those who said that infection was impossible in that situation ($M = 7.74$). Respondents in the other three response categories scored significantly higher on the ATG than those who responded “impossible,” and those who said that transmission was “very unlikely” had ATG scores that were significantly lower than those who responded “very likely,” $F(4, 1162) = 16.91$, $p < .001$ (post hoc comparisons conducted with Student Newman Keuls, $p < .05$). These patterns suggest that the association between AIDS stigma and antigay attitudes is buttressed by a belief system that equates sex between men with AIDS.

AIDS, Magical Contagion, and Symbolic Pollution

We also assessed exaggerated and seemingly irrational fears about HIV contagion from mere contact with an object that had once been touched by a person with AIDS (e.g. a sweater, a drinking glass), a phenomenon discussed elsewhere as evidence of the operation of magical contagion beliefs (Rozin, Markwith, &

Nemeroff, 1992). Borrowing from the method of Rozin et al. (1992), we first asked respondents about their willingness to wear “a very nice sweater that had been worn once by another person who you didn’t know” and had been “cleaned and sealed in a new plastic package so that it looked like it was brand new.” Then we asked about the likelihood that they would wear the same sweater if “you found out that the person who had worn it the one time before had AIDS.” We also asked how comfortable the respondent would feel about drinking out of a washed and sterilized glass in a restaurant if someone with AIDS had drunk out of the same glass a few days earlier.

Neither the sweater nor the drinking glass could possibly transmit HIV. Nevertheless, somewhat more than one-fourth of respondents were less likely to wear a sweater that had been worn once by a PWA (27.1%), or would feel uncomfortable drinking out of a sterilized glass that had been used a few days earlier by a PWA (27.5%). Respondents who reported that they were less likely to wear the sweater also scored significantly higher than others on the ATG scale ($M_s = 9.64$ versus 8.32), $F(1, 1190) = 53.18$ ($p < .001$), as did those who would feel uncomfortable about using the drinking glass ($M_s = 9.79$ versus 8.29), $F(1, 1192) = 68.44$ ($p < .001$).

Conclusions

Our findings suggest four main conclusions about the relationship between AIDS stigma and sexual prejudice among heterosexual adults in the United States. First, despite the changing epidemiology of HIV, most heterosexual adults continue to associate AIDS with homosexuality or bisexuality. Moreover, heterosexuals who think of AIDS primarily in terms of homosexuality or bisexuality harbor higher levels of sexual prejudice than do other heterosexuals.

Second, much of the public increasingly differentiates between “blameworthy” and “innocent” people with AIDS. Although people who contract AIDS sexually are assigned blame for their infection, especially if they had multiple

sex partners, a gay or bisexual man who contracted AIDS sexually evokes more negative responses than a heterosexual man or woman who contracted AIDS sexually. Heterosexual men tend to respond especially unfavorably to a gay man with AIDS, whereas heterosexual women respond more negatively to a bisexual man with AIDS.

Third, a minority of the public equates *any* same-sex behavior with AIDS, even when it occurs between two men who are both HIV-negative. This finding helps to explain, in part, why many heterosexuals assign greater blame and more negative feelings toward gay and bisexual men who contracted AIDS sexually, compared to heterosexual PWAs. Lacking an understanding of HIV and the process of infection, it is perhaps not surprising that they overgeneralize and assume that all homosexual behavior results in AIDS. This misperception has probably been encouraged by antigay campaigns arguing that there is no such thing as safe sex (Cameron, 1988; Dannemeyer, 1989). Heterosexuals who harbor this misconception manifest higher levels of sexual prejudice compared to other heterosexuals.

Fourth, a substantial portion of the public expresses concern about mere symbolic contact with PWAs, such as through touching an article of clothing or drinking from a sterilized glass used by a PWA. Such discomfort is correlated with sexual prejudice. We interpret this finding as evidence for the potency of symbolic meanings associated with AIDS. It reflects a belief in magical contagion that is related to moral health perhaps as much (or more) than to physical health (Rozin & Nemeroff, 1990). Just as beliefs about ritual pollution may function in some societies to create order by condemning transgressions against cherished systems of classification and enforcing separations between ingroup and outgroup (Douglas, 1966), so avoidance of even symbolic contact with PWAs may socially and psychologically distance uninfected heterosexuals from disliked outgroups that threaten their sense of order, including gay men.

The persistence of the linkage between reactions to AIDS and heterosexuals' attitudes toward gay and bisexual men has disturbing implications. Americans who believe that male-male sex can never be safe are likely to be unwilling to support AIDS prevention programs targeting men who have sex with men unless those programs enforce complete abstinence from homosexual behavior, perhaps through coercive means (e.g., see former congressman Dannemeyer's [1989] argument for the reinstatement of all sodomy laws). Widespread ignorance about the mechanism of HIV infection also may effectively repathologize homosexuality in the minds of many Americans. Rather than being equated with mental illness, as was the case before 1974 when homosexuality represented a psychiatric diagnosis, it is now associated with physical illness. This perception has already been exploited in public debates about homosexuality. In 1996, for example, former Secretary of Education William Bennett argued that "homosexuality should not be socially validated," partly on the grounds that being gay is inherently associated with a truncated life span (Bennett, 1996, p. 13; Sullivan, 1997). To support his opinion, he referred to results from a methodologically flawed study by Cameron, Playfair, and Wellum (1994) which claimed to estimate the average life span of gay men and lesbians, based on obituaries in gay community newspapers, most of them for gay men who had died from AIDS (for a critique of the Cameron et al. study, see Herek, 1998, note 8).⁴

In summary, the data indicate that the continuing association between heterosexual Americans' AIDS stigma and their attitudes toward homosexuality is part of a belief system that equates homosexual conduct with AIDS, assigns blame to men who contract AIDS as a result of homosexual behavior, fosters anger and discourages sympathy toward gay and bisexual men who contract AIDS sexually, and leads to an unwillingness to help gay and bisexual PWAs. This belief system has been successfully exploited by antigay individuals and organizations to oppose effective AIDS prevention strategies

as well as civil rights for gay men and lesbians. Its persistence in a significant minority of the U.S. population creates the potential for more exploitation in the future.

References

Anderson, V. N. (1992). For whom is this world just? Sexual orientation and AIDS. *Journal of Applied Social Psychology*, 22, 248-259.

Bailey, W. A. (1995). The importance of HIV prevention programming to the lesbian and gay community. In G. M. Herek, & B. Greene (Eds.), *AIDS, identity, and community* (pp. 210-225). Thousand Oaks, CA: Sage.

Bennett, W.J. (1997, November 24). Clinton, gays, and the truth. *Weekly Standard*, p. 13.

Bennett, W.J. (1998, February 23). Letter to the editor. *New Republic*, p. 4.

Buchanan, P.J. (1987, December 2). AIDS and moral bankruptcy. *New York Post*, p. 23.

Buckley, W.F., Jr. (1986, March 18). Crucial steps in combating the AIDS epidemic: Identify all the carriers. *The New York Times*, p. A27.

Cameron, P. (1988). *Exposing the AIDS scandal*. Lafayette, LA: Huntington House.

Cameron, P., Playfair, W. L., & Wellum, S. (1994). The longevity of homosexuals: Before and after the AIDS epidemic. *Omega*, 29, 249-272.

Centers for Disease Control. (1990, January). *HIV/AIDS Surveillance Report*, 1-22.

Centers for Disease Control and Prevention. (1997). *HIV/AIDS Surveillance Report*, 9(2).

Dannemeyer, W. (1989). *Shadow in the land: Homosexuality in America*. San Francisco: Ignatius Press.

Douglas, M. (1996). *Purity and danger: An analysis of the concepts of pollution and taboo*. London: Routledge & Kegan Paul.

Epstein, S. (1988). Nature vs. nurture and the politics of AIDS organizing. *OUT/LOOK*, 1(3), 46-53.

Epstein, S. (1996). *Impure science: AIDS, activism, and the politics of knowledge*. Berkeley, CA: University of California Press.

Fish, T. A., & Rye, B. J. (1991). Attitudes toward a homosexual or heterosexual person with AIDS. *Journal of Applied Social Psychology*, 21, 651-667.

Herek, G. M. (1991). Stigma, prejudice, and violence against lesbians and gay men. In J. C. Gonsiorek, & J. D. Weinrich (Eds.), *Homosexuality:*

Research implications for public policy (pp. 60-80). Thousand Oaks, CA: Sage.

Herek, G. M. (1994). Assessing attitudes toward lesbians and gay men: A review of empirical research with the ATLG scale. In B. Greene, & G. M. Herek (Eds.), *Lesbian and gay psychology: Theory, research, and clinical applications* (pp. 206-228). Thousand Oaks, CA: Sage.

Herek, G. M. (1997). The HIV epidemic and public attitudes toward lesbians and gay men. In M. P. Levine, P. Nardi, & J. Gagnon (Eds.), *In changing times: Gay men and lesbians encounter HIV/AIDS* (pp. 191-218). Chicago: University of Chicago Press.

Herek, G. M. (1998). Bad science in the service of stigma: A critique of the Cameron group's survey studies. In G. M. Herek (Ed.), *Stigma and sexual orientation: Understanding prejudice against lesbians, gay men, and bisexuals* (pp. 223-255). Thousand Oaks, CA: Sage.

Herek, G. M. (1999). The social construction of attitudes: Functional consensus and divergence in the U.S. public's reactions to AIDS. In G. Maio, & J. Olson (Eds.), *Why we evaluate: The functions of attitudes* (pp. 00-00). Mahwah, NJ: Lawrence Erlbaum.

Herek, G. M., & Capitanio, J. P. (1993). Public reactions to AIDS in the United States: A second decade of stigma. *American Journal of Public Health*, 83, 574-577.

Herek, G. M., & Capitanio, J. P. (1994). Conspiracies, contagion, and compassion: Trust and public reactions to AIDS. *AIDS Education and Prevention*, 6, 365-375.

Herek, G. M., & Capitanio, J. P. (1997). AIDS stigma and contact with persons with AIDS: The effects of personal and vicarious contact. *Journal of Applied Social Psychology*, 27, 1-36.

Herek, G. M., & Capitanio, J. P. (1998). Symbolic prejudice or fear of infection? A functional analysis of AIDS-related stigma among heterosexual adults. *Basic and Applied Social Psychology*, 20, 230-241.

Herek, G.M. & Capitanio, J.P. (1999). *AIDS stigma and knowledge about HIV transmission in the United States*. Unpublished manuscript, University of California, Davis.

Herek, G. M., & Glunt, E. K. (1991). AIDS-related attitudes in the United States: A preliminary conceptualization. *The Journal of Sex Research*, 28, 99-123.

Herek, G. M., & Glunt, E. K. (1993). Public attitudes toward AIDS-related issues in the United States. In J. B. Pryor, & G. D. Reeder (Eds.), *The social*

psychology of HIV infection (pp. 229-261). Hillsdale, NJ: Lawrence Erlbaum Associates.

Murphy-Berman, V. A., & Berman, J. J. (1993). Effects of responsibility for illness and social acceptability on reactions to people with AIDS: A cross-cultural comparison. *Basic and Applied Social Psychology, 14*, 215-229.

Pryor, J. B., Reeder, G. D., Vinacco, R., & Kott, T. L. (1989). The instrumental and symbolic functions of attitudes toward persons with AIDS. *Journal of Applied Social Psychology, 19*, 377-404.

Rozin, P. N. C. (1990). The laws of sympathetic magic: A psychological analysis of similarity and contagion. In J. W. Stigler, R. A. Shweder, & G. Herdt (Eds.), *Cultural psychology: Essays on comparative human development* (pp. 205-232). Cambridge: Cambridge University Press.

Rozin, P., Markwith, M., & Nemeroff, C. (1992). Magical contagion beliefs and fear of AIDS. *Journal of Applied Social Psychology, 22*, 1081-1092.

Schellenberg, E. G., Keil, J. M., & Bem, S. L. (1995). "Innocent victims" of AIDS: Identifying the subtext. *Journal of Applied Social Psychology, 25*, 1790-1800.

Schneider, W. (1987). Homosexuals: Is AIDS changing attitudes? *Public Opinion, 10*(2), 6-7, 59.

Sullivan, A. (1997, January 5). False Bennett: Gay bashing by the numbers. *New Republic*, 15-16.

Triplet, R. G., & Sugarman, D. B. (1987). Reactions to AIDS victims: Ambiguity breeds contempt. *Personality and Social Psychology Bulletin, 13*, 265-274.

Notes

¹ For the primary sample, cases were weighted by the number of eligible adults in the household and the number of telephone lines in the household. After sampling weights were computed, 1990 Current Population Survey data were used to post-stratify the sample by race (White, Black, other/refused) and gender. For the Black subsample, cases were weighted using a similar procedure, with an additional adjustment for whether the case was obtained from the Black oversample or the primary sample.

² In pretesting, feelings of anger toward a transfusion recipient were so infrequent that the question was confusing to many respondents.

Consequently, we dropped it from the interview.

³ For all analyses, significant interaction terms were subsequently analyzed with tests of simple main effects. For variables with more than two categories that were components of interactions, one-way ANOVAs were conducted using Bonferroni tests to determine which means differed significantly from the others. The large number of factors in the analysis meant that extremely complex interaction effects might be detected, and we did indeed detect some statistically significant 4-way interactions in our analyses. Interpreting such effects is hazardous, however, because they often were based on extremely small cell sizes (e.g., $n < 10$). Moreover, our analyses of the higher-order interactions did not reveal any patterns that appeared to have theoretical significance. Therefore, we limit our discussion here to significant main effects and 2-way and 3-way interactions.

⁴ In brief, the study's conclusions about the average life span of homosexuals are invalid because obituaries in gay community newspapers do not provide a representative sample of gay men and lesbians. They focus primarily on deaths due to AIDS, and exclude people who are not actively involved in the local gay community, those who are in the closet, and those whose loved ones simply don't submit an obituary. Bennett (1997) later admitted that the Cameron et al. study was so flawed that it did not permit extrapolation.

Table 1

Responsibility Scores By PWA's Infection Source, Sexual Orientation, and Sex

PWA's Sex/Orientation	PWA's Infection Source			
	Blood Transfusion	Sex With 1 Partner	Sex With Many Partners	Sharing Needles
Heterosexual Woman				
Whites	1.09 (0.45)	1.70 (0.95)	3.22 (0.99)	3.61 (0.60)
Blacks	1.70 (1.05)	2.05 (1.03)	2.69 (1.29)	3.24 (0.80)
Heterosexual Man				
Whites	1.27 (0.76)	2.04 (1.05)	3.35 (0.88)	3.58 (0.67)
Blacks	1.45 (0.99)	1.91 (1.09)	3.53 (0.65)	3.32 (0.72)
Bisexual Man				
Whites	1.12 (0.48)	2.69 (1.06)	3.63 (0.65)	3.53 (0.81)
Blacks	1.24 (0.71)	3.00 (0.88)	3.73 (0.58)	3.07 (1.10)
Homosexual Man				
Whites	1.27 (0.78)	2.83 (0.97)	3.47 (0.81)	3.65 (0.63)
Blacks	1.48 (0.76)	2.95 (1.18)	3.52 (0.76)	3.80 (0.55)

Cell sizes ranged from 44 to 84 for Whites, and 21 to 35 for Blacks.

Table 2

Sympathy By PWA's Infection Source, Sexual Orientation, and Sex

PWA's Sex/Orientation	PWA's Infection Source			
	Blood Transfusion	Sex With 1 Partner	Sex With Many Partners	Sharing Needles
Heterosexual Woman				
Whites	3.75 (.61)	3.85 (.45)	2.81 (1.05)	2.46 (1.05)
Blacks	3.91 (0.48)	3.70 (0.56)	2.99 (0.98)	3.20 (0.97)
Heterosexual Man				
Whites	3.77 (.63)	3.45 (.84)	2.40 (1.07)	2.22 (1.15)
Blacks	3.84 (0.38)	3.41 (0.96)	2.48 (1.08)	2.87 (0.99)
Bisexual Man				
Whites	3.75 (.51)	2.98 (.98)	2.21 (1.00)	2.48 (1.06)
Blacks	3.53 (0.87)	2.53 (0.98)	2.21 (0.93)	2.58 (1.02)
Homosexual Man				
Whites	3.76 (.60)	2.86 (1.17)	2.48 (0.99)	2.12 (.82)
Blacks	3.91 (0.36)	2.93 (1.05)	2.50 (0.93)	2.83 (0.85)

Cell sizes ranged from 44 to 84 for Whites, and 21 to 35 for Blacks.

Table 3

Anger By PWA's Infection Source, Sexual Orientation, and Sex

PWA's Sex/Orientation	PWA's Infection Source			
	Blood Transfusion	Sex With 1 Partner	Sex With Many Partners	Sharing Needles
Heterosexual Woman				
Whites	3.82 (0.54)	3.80 (0.65)	3.17 (1.01)	3.22 (1.08)
Blacks	3.77 (0.65)	3.45 (1.05)	3.44 (0.94)	3.09 (1.30)
Heterosexual Man				
Whites	3.88 (0.48)	3.70 (0.65)	2.95 (1.20)	3.12 (1.01)
Blacks	3.88 (0.49)	3.29 (0.93)	3.12 (1.10)	3.24 (1.05)
Bisexual Man				
Whites	3.93 (0.36)	3.29 (1.00)	2.85 (1.14)	3.18 (0.99)
Blacks	3.79 (0.70)	3.24 (1.01)	3.07 (1.28)	3.46 (0.95)
Homosexual Man				
Whites	3.85 (0.59)	3.56 (0.84)	3.04 (1.03)	3.42 (0.92)
Blacks	3.73 (0.85)	3.50 (0.85)	3.48 (0.83)	2.26 (1.24)

Cell sizes ranged from 44 to 84 for Whites, and 21 to 35 for Blacks.

Table 4

Willingness to Help By PWA's Infection Source, Sexual Orientation, and Sex

PWA's Sex/Orientation	PWA's Infection Source			
	Blood Transfusion	Sex With 1 Partner	Sex With Many Partners	Sharing Needles
Heterosexual Woman				
Whites	3.78 (0.42)	3.69 (0.57)	3.62 (0.55)	3.48 (0.71)
Blacks	3.87 (0.35)	3.22 (0.81)	3.62 (0.57)	3.74 (0.54)
Heterosexual Man				
Whites	3.68 (0.68)	3.64 (0.53)	3.37 (0.96)	3.29 (0.70)
Blacks	3.78 (0.42)	3.65 (0.53)	3.51 (0.69)	3.69 (0.56)
Bisexual Man				
Whites	3.74 (0.44)	3.60 (0.57)	3.22 (0.82)	3.34 (0.77)
Blacks	3.51 (0.77)	3.37 (0.49)	3.37 (0.63)	3.44 (0.70)
Homosexual Man				
Whites	3.71 (0.52)	3.52 (0.60)	3.27 (0.85)	3.49 (0.59)
Blacks	3.61 (0.54)	3.64 (0.49)	3.49 (0.53)	3.68 (0.51)

Each cell reports mean and, in parentheses, standard deviation. Cell sizes ranged from 44 to 84 for Whites, and 21 to 35 for Blacks.

Table 5

Attributional Responses to PWA By PWA's Infection Source for White and Black Respondents

Response Measure	PWA's Infection Source			
	Blood Transfusion	Sex With 1 Partner	Sex With Many Partners	Sharing Needles
Responsibility				
Whites	1.19 (0.64)	2.30 (1.10)	3.41 (0.85)	3.59 (0.67)
Blacks	1.45 (0.90)	2.48 (1.15)	3.37 (0.94)	3.39 (0.85)
Sympathy				
Whites	3.76 (0.59)	3.29 (0.98)	2.47 (1.05)	2.33 (1.03)
Blacks	3.79 (0.57)	3.16 (0.99)	2.55 (1.01)	2.85 (0.96)
Anger				
Whites	3.87 (0.49)	3.60 (0.80)	2.99 (1.11)	3.23 (1.01)
Blacks	3.80 (0.65)	3.38 (0.95)	3.29 (1.04)	2.94 (1.24)
Willingness to Help				
Whites	3.72 (0.54)	3.61 (0.57)	3.37 (0.83)	3.40 (0.70)
Blacks	3.69 (0.55)	3.46 (0.62)	3.50 (0.61)	3.63 (0.58)

For Whites, cell sizes range from $n = 208$ to $n = 257$. For Blacks, cell sizes range from $n = 104$ to $n = 122$.

Table 6
Beliefs About Sexual Transmission of AIDS (1997 Survey)

	All Respondents	Whites	Blacks
1. Heterosexual woman: Sex one time with infected man, <i>without</i> condom	98.9	99.1	98.6
2. Homosexual man: Sex one time with infected man, <i>without</i> condom	99.0	99.2	98.1
3. Two uninfected homosexual men, sex one time, <i>with</i> condoms	24.6	21.8	42.6
4. Two uninfected homosexual men, sex one time, <i>without</i> condoms	45.0	41.6	69.7

Table reports the percentage responding “very likely,” “somewhat likely,” or “somewhat unlikely” (versus “very unlikely to get AIDS,” or “it is impossible to get AIDS” from having intercourse that one time).