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Lipstick, Needle, and Company: a Case Study of the Structure of a Bridge Group in Houston, Texas

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Research regarding HIV transmission has been interested in the role of bridge groups, a venue for HIV transmission consisting of individuals grouped according to social roles that intersect at disparate populations, to which they may remain weakly linked. Bridge groups enable HIV transmission between separate types of risk groups, not simply between individuals, such as among gay men or among IDUs. For some time, researchers have speculated on the existence and function of bridge groups in the transmission of HIV between injection drug users to populations far removed from this targeted population. Despite various research efforts, we still know very little about such groups. Some research has surmised that gay male IDUs are a likely bridge group, as are male street prostitutes. This study examines bridge group members' perceptions of the realities of their social relations and HIV risk behaviors. The anecdotes that illustrate the functions of this bridge group are representative of all participants' stories. The core study participants are HIV-positive injection drug users who share needles with one another, but their links extend beyond drug use. All engage in risky, noncommercial sexual behaviors with one another and with individuals beyond the network. Some report that they engage in risky sexual behaviors with paying clients who are not part of the drug culture and who request these unsafe behaviors, often with the knowledge that the sex workers are seropositive. After a discussion of the findings, the manuscript discusses some bridge group characteristics to consider in future interventions and research, including rationales for avoiding safer sex practices, sexual segregation, and abuse histories.

Introduction

The importance of social networks to HIV transmission first became apparent when researchers noticed differences in HIV risk between individuals who differed according to characteristics that were other than behavioral (Klovdahl, 1985). Since then, it has been demonstrated that understanding social networks enhances our understanding of the epidemiology of HIV for reasons that include disease transmission and preventative intervention.

The premise that a network's structure has consequences for its individual members and for the network as a whole, beyond the effects of characteristics and behavior of the individuals involved, has guided much social network research (Klovdahl, 1985, p. 1204). Regarding the risk of HIV and drug research, there are three basic mechanisms by which social networks influence HIV risk. First, the social network structure — including the strength of ties between members, the cohesiveness and stability of networks, and the absence or presence of weak ties — determines the degree of risk faced by network members, independently of individual behaviors (Mandell *et al.*, 1993). For example, Houston injection drug users' (IDUs) networks tend to be small, triadic, stable over time, and have relatively few weak links; they exhibit a slow but persistent HIV seroincidence among IDUs. In contrast, San Juan, Puerto Rico, networks are larger, less stable, and have more weak links (Williams *et al.*, in press). Second, network structure may help determine the degree of influence on behavior change that peers can exert on individual network members; smaller or less cohesive networks exert less influence than larger or more cohesive networks (Fisher, 1988). Third, and finally, Wallace (1991) has

suggested that the individuals at the greatest degree of risk are those who inhabit "low dimensional" socio-geographic networks. In such networks, members are weakly linked to one another by sexual or needle-sharing ties along which HIV can be transmitted, yet these ties do not necessarily correspond to those of social comparison processes, social sanctions, and information exchange. For example, Dawson and associates recently found that if two men in a dyadic sexual encounter knew the other's HIV status, unprotected anal sex was more than one and a half times more likely to have occurred than in partnerships in which there was no knowledge of HIV status on either side (1994, p. 839).

Bridge Groups: An Emerging Area for Social Network Analysis

Social network inquiry in HIV epidemiological research has led researchers to speculate on the existence and function of *bridge groups,* a venue for HIV transmission consisting of individuals grouped according to social roles that intersect at disparate populations, to which they may remain weakly linked (Battjes *et al.*, 1989). In other words, bridge groups enable HIV transmission between separate types of risk groups, not simply between individuals, such as among gay men or among IDUs. For some time, researchers have speculated on the existence and function of bridge groups in the transmission of HIV between injection drug users to populations far removed from this targeted population (e.g., Battjes *et al.*, 1989; Murphy, 1988; Williams & Johnson, 1993; Williams *et al.*, in press). Williams and Johnson posit that understanding the interpersonal links within a social network structure is key to understanding the spread of the virus within a population; understanding the weak links of that structure can help predict the future course of the epidemic (1993, pp. 87-88). Despite various research efforts, we still know very little about such groups. Data regarding their function in HIV transmission have been garnered largely through second-hand reports, as when women who exchange sex with IDUs for crack cocaine are characterized as a bridge group on the basis of IDUs' claims that they have met or had sex with such women (Williams & Johnson, 1994). Similarly, other research has surmised that gay male IDUs are a likely bridge group (see e.g., Williams *et al.*, in press), as are male street prostitutes (Morse *et al.*, 1991, 1992 a&b). Yet until recently, the Houston project has found only gay male IDUs without weak ties or the requisite risky behavioral characteristics (e.g., sex without condoms, sharing of needles/works).

Coming to Terms With Social Networks and Bridge Groups

In an emerging area of analysis, it is particularly important to define the terms used to illuminate the data. For the purposes of this study, a *social network* is a set of individuals in a particular situation and the links that connect them (see, e.g., Klovdahl, 1985). A *bridge group* consists of social network members and the individuals outside the network to whom they are linked. *Core group* refers to those members who are nodes for the social network and, in this case, function as bridges. A *node,* or *core individual,* functions as a bridge for HIV transmission unless otherwise specified.

Subjects and Method

This study examines the structure of a bridge group and reinforces researchers' previous speculations regarding the endangerment of marginalized and mainstream groups for HIV infection and re-infection. The study participants continually and consciously engage in behaviors that permit virus transmission. The core members are HIV-positive injection drug

users who share needles with one another, but their links extend beyond drug use. They hang out in the same places; many live in the same apartment. All engage in risky, noncommercial sexual behaviors with one another and with individuals beyond the network. Some report that they engage in risky sexual behaviors with paying clients who are not part of the drug culture *and* who request these unsafe behaviors, often with the knowledge that the sex workers are seropositive. The anecdotes that illustrate the functions of this bridge group are representative of the participants' stories.

A snowball sample (Watters & Biernacki, 1989) of 40 respondents was assembled, starting with members of the core group of HIV-positive, gay male IDUs. Limited information was collected on individuals who could not be recruited into the study. Individual, structured, ethnographic interviews were conducted with all respondents who could be contacted. Such interviews included the Relationship Network Diagram, a set of concentric circles for participants to diagram members of their network and demonstrate the distances they believe exist among them. In this diagram, the innermost circle represents the participant. The first circle surrounding the participant is the area to place "people you feel closest to, . . . so close that it's hard to imagine life without them." In the second circle, participants place people who do not merit inclusion in the inner circle, yet "are still important." The third circle is the site for people "who are important enough in your life that they should be placed in the last circle." Outside the circles, respondents place "people you spend time with, but are not really that important in your life (acquaintances, hanging buddies, drug or alcohol buddies, tricks, etc.)."

In short, the use of concentric circles provides a visual aid to help participants structure their discussions to easily determine the relationships and risky behaviors among network members and the risky behaviors that occur with individuals outside their network--the site of the bridges. Participants also completed the Bridge Group Assessment, a questionnaire that includes items from the Cooperative Agreement's Social Network Questionnaire (SNQ), and the Risk Behavior Assessment (RBA).[2] The RBA was developed for the National Institute on Drug Abuse as a method for collecting HIV infection risk data related to drug abuse and sexual behaviors at the community level. The SNQ supplements the RBA to assess the strength and characteristics of drug use linkages among chronic drug users and the contexts in which their uses occur. The Bridge Group Assessment collects data regarding demographics, drug use, needle sharing, and sexual behaviors. Data from the RBA completed at intake were occasionally used to supplement participant descriptions.

Initial questionnaires were coded manually; the relationship data were mapped in an extended sociogrammatic format (see, e.g., Scott, 1991, pp. 11-12). Drawing on Moreno's (1934) idea of the sociogram, these maps depict the connections among multiple nodes, network members, and outsiders of the bridge group. Such connections include sexual relations, needle sharing, and degrees of friendship. Each type of connection was depicted in a different manner; for example, an unprotected sex link is signified by a solid red line; needle sharing appears as a solid blue line. Data from the Bridge Group Assessment were used to illuminate the relationships depicted in the extended sociogram.

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[2]Cooperative Agreement refers to the National Institute on Drug Abuse's Cooperative Agreement for AIDS Community-Based Outreach/Intervention Program, a multi-site research project dedicated to evaluating the impact of an AIDS risk reduction intervention on the risk behaviors of chronic, out-of-treatment injection drug and crack cocaine users

Ties That Bind: Characteristics of Core Group Relations

The strong ties, or links, among social network members are characterized by locations, activities, and race. Members typically maintain their relationships at two social centers. Activities include sex and drug consumption. Intriguingly, the members of racial and ethnic groups seldom interact.

Centers for Social Relations: Bering Care Center and Needle's Place

Most of the participants in this study frequent the Bering Care Center, a social, medical, and dental services center for people with HIV/AIDS, operating under the auspices of Bering Memorial Methodist Church. Although the center (whose clients refer to it simply as "Bering") is located in Montrose, a Houston neighborhood known for its high concentration of gay people and illegal drug users, Bering clients commute from all areas of the city. Study participants who commute use the center as a base to spend the day in the neighborhood. Bering also functions as a community center for most individuals in the network under study. Core individuals report hanging out at the center with old friends and meeting new people who became network members. Perhaps unbeknown to Bering officials, participants use the center to make drug and sexual contacts. For core individuals, drug use and sex are the two commonly mentioned links among network members they have met at Bering.

"Needle" is an HIV-positive, 25-year-old, gay white male whose studio apartment in the Montrose serves as the network's social center and as a 24-hour shooting gallery for select clientele. Five to ten additional people live with Needle at any given time. Only network members and the people they "sponsor" are admitted. Network members, their friends, and friends of friends come by to visit and to purchase and inject cocaine. In the evenings, Needle has a rockman who sells drugs to those who need them; however, one need not make a purchase to gain admittance. During an afternoon site visit, we observed 10 people on site and 10 additional people who came by to inject. They borrowed cookers, they used Needle's house works without sterilization, and some even shared a single injection.

Needle reports keeping approximately 30 works on hand for people to use; he does not clean or sterilize used works and only purchases new ones when the supply dwindles. He views cleaning works as a personal choice and responsibility. Needle informs people of his seropositivity and readily shares works with others; if others share works with him, he does not clean them. When he lends his works to others, he leaves the decision of bleaching and rinsing to them. Many frequenters stash their works in a particular place to reclaim later; however, there is no guarantee that others will not use them during their absence. Moreover, according to Needle, "Even though people have their own, they still share with others."

Network members are concerned with camaraderie and getting high when they come to Needle's. They are not concerned with protecting themselves from HIV infection or re-infection; those who are HIV-positive report their status and leave preventative measures to the other guy. With one exception, the "other guys" are equally unconcerned. That exception is Kathy, a heterosexual woman in her 30s who is HIV-negative, fiercely guards her own works, buys bleach in economy-size bottles, uses it conscientiously, and offers fresh bleach to others. No one we spoke with reported accepting Kathy's offer or cleaning needles that others shared with them. Indubitably, Needle's place is a site of possible rampant HIV transmission though contaminated works. Although not a social center, another member's home is a limited gathering place for drug sales and consumption.

Ron is loosely linked to the network through two of Needle's associates, Kathy and Larry. An army veteran, Ron sells drugs in his apartment, but limits sales to friends. As he says, "If they have friends who want stuff, they can bring it to them or they'll have to wait in the car." Ron takes no chances in compromising his safety or his freedom. During this study, the police raided Needle's more open and active shooting gallery and arrested many study participants and potential recruits. As a shooting gallery operator, Ron is more vigilant in risk prevention than Needle. He makes bleach and clean water readily available and teaches people who are performing risky behaviors about safer practices. But if he has taught them "after two or three times and they're not gonna do it, I just leave 'em alone." A more socially responsible host than Needle, Ron is public with his HIV status, informs his guests on HIV prevention, and places responsibility for safer practices on others because, "I don't know what I'm gonna do when I get messed up."

Sex Inside the Network: Drugs, Endangerment, and Continual Re-infection

Given that network members share needles without cleaning between uses, it is perhaps not surprising that they do not use condoms during sexual intercourse. Members place each other at risk for re-infection at an extraordinary rate and in myriad ways. For example, Needle reported active, unprotected anal sex with seven network members within the 30 days prior to his interview; thus, he potentially re-exposes his HIV-positive cohorts through sharing works and sex.

Needle's sexual contacts include "Lipstick," an HIV-positive white man in his early 30s, who had receptive, anal intercourse with Needle at least 20 times during the month prior to his interview. Needle also had sex with Randy, who regularly shares works and has sex with Lipstick. Our initial contact, Lipstick recently had sex and shared needles with Jerry, who reported having unprotected sex with Greg within the past 30 days. Lipstick remembers unprotected sex with more than 20 other men over the same time period; he could remember practices with only 20 people and said there were "lots more" during the time period, but recalling them was beyond his capacity. This memory lapse may be convenient. Although three network members assert that Lipstick is a prostitute, Lipstick would not report that he had ever given sex to get money, drugs, or gifts. He admits to performing sexual favors for three friends before they share their drugs with him, yet does not consider this to constitute trading sex for drugs. Likewise, network members do not consider this behavior to be prostitution when they report their own behaviors, so it is doubtful that the above-mentioned behavior is the prostitution to which Lipstick's cohorts referred. In the center of a cycle of consistent, possible re-infection, Lipstick is a strong bridge candidate for HIV transmission to non-network gay men through sexual intercourse and needle sharing, to non-network women through needle sharing--and, perhaps, to men who pay him for sex.

Another potential bridge is Donny, Needle's regular boyfriend, who is HIV-positive and incarcerated at the time of this study. According to Needle, Donny was a promiscuous lover before his arrest but forbade Needle from having sex with others: "Donny does not like to share. He's pretty violent." Given this purported proclivity and prison culture, Donny may constitute a bridge for HIV transmission to inmates. However, his incarceration made him unavailable for interviews to verify this hypothesis.

"Café" is another network node. (S)he is a 35-year-old, HIV-positive, African-American, non-operative, transgendered man whose demeanor, thought and speech patterns are so thoroughly feminine that one interviewer thought she was conversing with her "best girlfriend."

Café's main partner is Clifton, a slight, unassuming, HIV-positive black man in his late 40s. Café and Clifton share needles and have unprotected sex, thus risking re-infection on a regular basis. Café has two additional, regular, unprotected sexual and drug relationships with Red and Dwight, both of whom are HIV positive. Briefly stated, Café's three relationships do not simply place Café at risk, but involve all four parties in a web of potential and continuous re-infection with HIV. Furthermore, Café's relationships with Clifton, Dwight, and Red function as bridges not only beyond the network, but also beyond the gay and African-American communities.

Bridges of Endangerment: Weak Links of Risk

Obviously, HIV has the possibility for transmission among network members. It can easily pass beyond their realm through drug use, noncommercial, and commercial sex. The bridges of endangerment proceed in multiple directions.

Casual Contacts: Multiracial Links to Women and Men

Beginning with Café as a node, Clifton reports frequent contact with three women. He shares needles with all three and has unprotected sex with two of them. Clifton was unaware of their HIV status and was in the process of convincing them to participate in the study at the time of this writing. Although Dwight reports sharing needles only with Café, he has unprotected, active sex with just about anybody. In addition to Café, Dwight's regular sex partners include three gay men and two straight women. Dwight also has assorted male sex partners who seek him out because he "is packing," or has an exceptionally large penis. Typical of the stories told during his interview, Dwight said he was invited to a man's house and, upon arrival, found three men who wanted anal sex. Dwight proudly reported that he was able to satisfy his partners throughout the evening. One fact remains constant throughout Dwight's reports of sexual encounters: black, white, straight, gay, men, women, Dwight is the active partner and never uses condoms. He is a bridge for transmission to members of disparate social networks.

Commercial Sex: High Risks and Missing Links

Researchers have suspected that male-to-male commercial sex is a likely venue for bridge group transmission (e.g., Morse *et al.*, 1991, 1992 a&b). Accessing sex workers is not particularly difficult; customers are the missing link toward verifying this hypothesis. Two other regular sex partners of Needle's, Greg and "Ms. Monica," are gay male prostitutes. Greg, 21, was less than a cooperative interview participant. As his network cohorts report, when you're cute and 21, you have more lucrative opportunities than to participate in a NIDA-sponsored research project. Network members also report that Greg is HIV-positive, which we verified through blood tests. Greg reported injecting drugs 400 times within the past 30 days. Although he stated that he always uses his own works, he admits to injecting "drugs that were shared, begged, or left over" for him 50 times during this same period--perhaps placing him at higher risk for infection than he believed. During the interviews, Greg maintained that he never had been told that he was HIV-positive or had the AIDS virus. Furthermore, he reported unprotected sex with 3 women and 27 men during the past 30 days and with at least 100 people total during the six months prior to his interviews.

Greg's seropositivity and other high-risk activities with HIV-positive network members make it extremely likely that his customers are getting more than the sex for which they bargained.

Ms. Monica was an intra-operative transsexual who died of AIDS-related complications during this study. She reported having unprotected sex with over 70 clients within 30 days of her interview. During this time, she had a platelet count of 35,000 and severely bleeding gums. This characteristic, her seropositivity, and her frequency of sexual partners make her perhaps the quintessential bridge candidate, but her untimely death closed the investigation before we could list and contact her partners.

Ron is a distant member of the network, linked by drug use with Kathy, who lives with Needle, and with Larry, who frequents Needle's apartment. He also is a bridge to affluent, suburban, heterosexually-identified Houstonians. Ron is 32, lives with his girlfriend, and has an eight-year-old son that his ex-wife refuses to let him visit since she learned Ron was HIV-positive. Ron sells drugs exclusively to people he knows well; he does not permit friends of friends in his apartment because he does not want to run a "drug diner." Ron and his girlfriend, who he refuses to name unless she consents to an interview, are also sex workers. Ron has hustled intermittently since he was 14, and estimates that he has had sex with about 800 people. He tricks with men, with women, to constitute a ménage-à-trois, and on occasion, jointly with his girlfriend. In short, he'll trick with anybody if they "look all right," meaning that the individuals do not look psychotic or like law enforcers. In addition, they cannot be "too ugly" or "too stinky." In any event, Ron maintains he always informs his clients of his HIV status. He also states, "None of the tricks want to use a rubber." He would not venture to speculate as to clients' reluctance to condom use, but instead proffered the ethic that emanated from many of the study participants: If you state you're HIV positive and your partner doesn't want to use a condom, it's your partner's responsibility and you're absolved of blame if your partner becomes infected.

When asked what his clients did for a living, he reported they are lawyers, business owners, petroleum executives, and offshore oil workers. They have money, he says, "lead a double life," and "come from all over." They own Buicks and Hondas; many clients "lease a Lexus." According to Ron, some even maintain a worn-out, older car for the sole purpose of purchasing sex. He has regular clients and one-time clients. Some want oral sex, to perform oral sex, or to be penetrated anally. Some activities are relatively safe when it comes to HIV transmission, but are risky in other ways, such as "backing onto a doorknob." When asked to name the neighborhoods he knew or speculated his clients lived, Ron listed Tomball, the Woodlands, Conroe, the Galleria area, and River Oaks, among others--all prestigious areas predominantly populated by heterosexual couples with children. Joel, a 27-year-old, HIV-positive, Jewish-American man, characterizes his clients as ranging "from a struggling student to a successful lawyer, doctor, judges, [to] just run-of-the-mill Circle K cashiers." He reports that his male customers are "fortyish, naive of street ways. . . . office workers mostly. They're indoor people, intellectuals." A recent news story appears to support these assertions. A woman in a far west Houston suburb contracted HIV from her husband; her now-deceased son contracted the virus in utero. The article suggests that the husband contracted the disease through prostitution and stressed that he did not disclose his extramarital relations to his wife (Pugh, 1994). In addition, data from two studies suggest that female sex partners of bisexual men frequently are unaware of their partners' sexual contacts with men (Hays & Samuels, 1989; Padian, 1989).

Men do not constitute the only possible venue for HIV transmission from these sex workers to the suburbs. Joel states that his female clients most often are women in their 30s whose husbands "work offshore." Although Joel's female clients request intercourse, Greg's customers more frequently request conversation or sex acts without penetration. These latter acts include objects such as leather masks and electric cattle prods. Clearly all the clients of these bridge group members do not pay for activities that place them at risk for HIV transmission.

The Ethics of Intimacy: Condom Use in Personal Relationships

Ron and his girlfriend demonstrate an intriguing ethics of intimacy. Ron's significant other is in her 40s and is entering her third trimester of pregnancy. She was pregnant when they became involved. Although she claims not to know her HIV status, Ron assumes she is seropositive by dint of her activities. She prostitutes and uses drugs more actively than he. Their practice of the ethics of intimacy involves condom use. When Ron tricks individually, he engages in risky behaviors at his customers' requests. His girlfriend follows the same practice. Yet Ron insists on using condoms when they are intimate, even if a customer is paying to watch them have sex. When asked why he is adamant in this regard, he responds, "These are our bodies and we have control over them." Perhaps a more accurate response is that this practice demonstrates a personal sense of control over a noncommercial relationship. If the expectant mother is HIV-negative, Ron may be protecting both her and the unborn child from infection. Condom use appears to be a sign of intimacy, a sign that their relationship cannot be totally commercialized, even if a third party pays them to watch a sex act.

Bridge Groups and HIV Transmission: Observations and Conclusions

The ethnographic structural investigation of this bridge group reveals that the avenues for HIV transmission are like a web inside the network; individuals serve as bridges of infection between members of other marginalized and hegemonic groups. For example, Dwight and Clifton are bridges to African-American, heterosexual women and non-IDU, white, gay men. Ron and, perhaps, his girlfriend, bridge HIV transmission from the marginalized world of the Montrose to the realms of white, heterosexual America: affluent suburbs, downtown offices, and Lexus dealerships. While this finding implies substantial public health consequences, data must be obtained from members of this latter group to assess the situation and to recommend appropriate interventions. An extension of this study should allow us to cross some of these bridges to determine these individuals' HIV status and potential risk behaviors.

Saying "No" to Safer Practices: Irrational Rationales

With one exception, all respondents report that they do not use condoms and do not sterilize shared works. They appear to know the risks involved regarding transmission to others and their own possible reinfection; they frame their decisions as a matter of choice. In Lipstick's words, "I've never used condoms. I don't like them. I don't like how they feel. And I'm not going to start now." No one presented fatalistic or vengeful attitudes--either that they welcomed re-exposure to weaken their systems and hasten death, or that they wanted to infect as many people as possible before they die. Yet two participants commented that Needle's increased drug use and refusal to relocate although he had advance warning that the police were observing his apartment were two signs that Needle had a death wish. In contrast, Needle seemed optimistic

during his interview and voiced plans about his future, including a reunion with an incarcerated boyfriend and a new apartment.

In summary, the participants voice rationales for their risky behavior that do not coincide either with their knowledge of HIV and AIDS or with the stories other network members tell about them. They demonstrate social responsibility by informing their drug and sex partners of their HIV status and letting them call the shots. Such behavior may emanate from unvoiced motives, or is a simple desire to continue the practices they understand as normal but which compromise their health.

Saying "No" to Condoms: Houston Customers, Calculated Risks, and Coitus Interruptus

Although condom use among male customers of sex workers has never been the standard, Morse *et al.* (1992b) found that almost half (46%) of customers wore condoms when they were the insertive partner. Conducted in New Orleans, the study also determined that 30 percent of the prostitutes interviewed believed that their clients solicited them for high-risk sex acts. According to these Houston participants, solicitation for high-risk acts appears to be the rule while customer requests or toleration of condom use is at best infrequent and at worst an aberration. For example, Joel states that his customers most often "want you to just fuck them or screw them with different objects. Twenty percent say, 'Absolutely use a condom,'" and the remainder "don't worry about it if it's not readily available. You can screw them, but don't cum." Other participants report that customers dismiss sex workers who refuse sexual contact without condoms; thus, sex workers accommodate them.

Participants in this study were wary of allowing us to interview their customers. However, we frequented the streets and bars participants listed as rendezvous spots and conversed with potential customers, hustlers, and a few study participants about sex and condom use. John, a heterosexually-identified man in his early 40s, said, "I believe in safety and security." For John, "safety and security" means to have his partners withdraw before orgasm during anal sex. In contrast, Juan pays to fellate a prostitute to orgasm: "I want to make sure I get what I'm paying for." A married bisexual, Juan may get more than the orgasms he purchases and also may transfer HIV and other STDs to male and female sexual partners (see Ross, 1991, for a taxonomy of bisexual behaviors and identities).

Conversations with male customers reflected paradoxical perspectives on sexual practices and personal risk for HIV infection. These men generally could rank sexual practices by risk of infection without prompting; still, many engage in the practices that endanger them. While this remains a quandary, current research points to explanations for this paradox. Woodhouse and collaborators (1994) report that participants in their Colorado Springs study commonly engage in risky behaviors because their perception reflects the area's epidemiologic reality, a low percentage of HIV infection. This may account for some of the Houston paradox; at 7 percent, the Houston HIV-infection rate is low, particularly for the fourth largest city in the United States. Customers may erroneously generalize the low epidemiologic reality to their sexual partners. Tielman and associates (1991) suggest that AIDS prevention campaigns are targeted to heterosexual *or* homosexual audiences; thus, bisexual men are marginalized from communities and information. The paucity of communication regarding bisexuality and HIV/AIDS may contribute to an attitude of invincibility regarding infection. In addition, Kegeles and colleagues (1990) suggest that fear of disclosure to their partners may motivate bisexual men to avoid learning information crucial to their own health and that of their partners. Moreover, men who have sex with men and women tend to engage in high-risk behavior and thus place

themselves and their partners at risk for HIV infection (Tielman *et al.*, 1989). Obviously, outreach to men who have sex with men and women, particularly those who solicit sex with male prostitutes, must be conducted to influence behavioral changes among sex workers and clients.

Network Links and Racial Lines: Sexual Segregation

In this network, European-American and African-American men report smoking crack or sharing needles with one another. No interracial sex occurs among the members. African Americans report having unprotected sex with white males outside the network, but many white participants stated strong preferences for members of their own race--at least for recreational sex. Based on this information, one should expect to see infection rates remain separate and unequal among whites and blacks in Houston.

Nodes and Abuse History: A Possible Correlation

One theme that appeared in all network nodes' narratives is that all had family histories of abuse. Parental substance abuse, severe beatings, sexual abuse, and combinations thereof appeared in every node's life histories. Certainly anecdotal evidence at present, this strong coincidence demonstrates that there is no monolithic "drug problem," but problems involved with drugs (see, e.g., Elwood, 1994; Gaylin, 1993). A genetic predisposition for chemical dependency may influence an individual's willingness to seek drug rehabilitation; the effects of sexual abuse during childhood may appear in adulthood as prostitution or promiscuity. Doll and associates (1992) found that 37 percent of gay men attending sexually transmitted disease clinics reported regular sexual risk behaviors and childhood and adolescent sexual abuse. Clearly, considering abuse patterns in personal histories may be a factor to consider when counseling clients during interventions or rehabilitation programs (see Allers & Benjack, 1992).

This paper illustrates the web of HIV exposure among a social network's members and the tendrils that envelop outsiders in that web. The behaviors of the core members of this bridge group clearly exacerbate the AIDS pandemic. Their risky drug and sexual behaviors put them at risk for consistent exposures to HIV, thus increasing the likelihood of an early AIDS-related demise. Those same behaviors place potential and new members at risk for infection or re-infection. Equally important, their behaviors place members of various Houston communities at risk for HIV infection; in turn, these individuals may transmit the virus to members of their own social networks who otherwise might not be at risk. Continuing this study to access these individuals is of utmost importance to understand HIV epidemiology beyond the individuals who constitute the bridge. A future project to study and educate the customers of sex workers is also required. Unlike the recent findings of Potterat and associates (1993) in Colorado Springs, the HIV and AIDS will continue to be an escalating public health concern in Houston.

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