

# The Influence of Family and Peer Risk Networks on Drug Use Practices and Other Risks among Mexican American Noninjecting Heroin Users

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Noninjecting heroin use (NIU) is spreading among social networks of young Mexican American polydrug users. This article examines the influence of family and peer networks on NIU behavior and other drug practices and risks. This study delineates the extent to which a culturally relevant modification of the “network facilitation” theoretical approach can increase both a theoretical and practical understanding of drug use and related risk behaviors. Using the methods of analytic ethnography, it identifies, describes, and explains variations in the social networks among this marginalized population and how specific aspects of Mexican American culture (*familismo*, and *collectivismo*) affects risk behaviors.

**Keywords:** *Mexican Americans; noninjecting heroin; social networks; risk behaviors, family and peers*

Heroin use among Mexican Americans has been largely confined to older hard-core street-based injectors. More recently, however, noninjecting heroin use (NIU) is spreading among social networks of young polydrug users (Maxwell 1999; Ramos et al. 1999). The rapid growth of NIU such as the sniffing and smoking of heroin is a drug behavioral trend

that has been associated with social and health risks, such as transitioning to injecting drug use (Neaigus et al. 2006; Des Jarlais et al. 1992; van Ameijden et al. 1994). This article examines the influence of family and peer networks on NIU behavior and other drug practices among groups in an urban marginalized ethnic community.

Mexican American heroin users have been in the past characterized as having a near universal use of intravenous injection as the primary route of administration (Bullington 1977; Casavantes 1976; Desmond and Maddux 1984; Moore 1978; National Institute of Justice 1996). In poor Mexican American *barrios*, a selective group of drug users has developed a distinct *tecato* subculture. This subculture consists of persons whose street identity revolves around a lifestyle of heroin use, criminality, incarceration, and unique style of dress and tattoos (Quintero and Estrada 2000; Ramos and Shain 1995; Valdez, Kaplan, and Cepeda 2000). Risks associated with injecting drug use are extensively documented among Mexican Americans, especially for the spread of HIV/AIDS and hepatitis B and C. Understanding the factors that are associated with drug behaviors that may lead to the transition to injecting is important to help control and prevent drug and other health risk behaviors.

This study is unique in that it examines the variations in risk behaviors of male and female NIUs associated with distinct social networks among this ethnic group. One of the main determinants that shapes drug use and other health risk behavior among drug users is social network influence (Neaigus et al. 1994; Ouellet, Rahimian, and Wiebel 1998; Sherman et al. 2002). Understanding how the social networks of Mexican American NIUs influence their drug risk behavior is significant for the prevention of injecting among this group as well as other health risks associated with NIU. However, social network influence may not shape risk behavior by itself, but rather “facilitate” (or, on the other hand, to impede) drug risk behavior among those who are already susceptible because of individual attributes.

In addition, there are different kinds of social networks. In particular, a distinction can be made between kinship-based or “family” networks characterized by strong ties and non-kinship-based networks such as economic-based networks with weak ties (Granovetter 1973). As an “ideal type,” kinship-based networks are “biologically based” (or through marriage) and

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can include both nuclear and extended family members. These networks frequently involve long-standing, emotionally close relationships that combine multiple functions as well as strong expectations (norms) regarding obligations and reciprocities. Nonkin or peer networks more often involve instrumentally based relationships that may occur through dependence, convenience, or opportunity. This type of network can also develop emotionally close relationships, for example, those among friends, colleagues, and lovers.

Among Mexican Americans, family-based networks are particularly important because of the strong cultural value that Mexican Americans place on family, identified as *familismo*. This type of network has been described as a strong attachment to, and identification with, and feelings of loyalty and reciprocity toward one's family (Freeman et al. 1998). Family-based social networks may be important for shaping drug use and other health risks among Mexican American NIUs. However, peer-centered networks such as close friends, neighbors, and associates may also be influential, especially for those networks centered on activities that are necessary for participation in the legal or illegal economy. Moreover, in real life, family and peer networks are fluid and may interact with one another depending on the context and activity that is involved. Of particular importance for understanding the influence of social networks on drug use and other risks among Mexican American NIUs is how both family and peer networks, separately and in combination, influence drug use and other health and behavioral risks in this population.

The purpose of this article is to explore the extent and the ways in which both family and peer networks of Mexican American NIUs interact with individual susceptibility to influence their drug use and other health risk behaviors. Networks facilitate certain risk behaviors through social diffusion, influence, and reinforcement, including creating the conditions whereby other behaviors can emerge. In this study, we distinguish certain features of social networks that are pertinent to understanding their significance in the spread of risk-related drug use and other health risk behavior. Using this approach, our interest is on assessing whether network facilitators function in similar or different ways among Mexican American NIUs.

The article will provide a culturally relevant modification and extension of the "network facilitation" approach. It does this by taking into account the role that Mexican American family networks and other cultural values specific to this group have on determining the type and form of network influence in this population. The study also considers the extent to which

family-base networks also intersect and often overlap with peer-based networks in shaping drug use and other health risks among NIUs. By adopting this modified network facilitation approach, the article will help to contribute to both a theoretical and practical understanding of the social network factors that shape the diffusion of drug use practices and related risk behaviors among Mexican American NIUs. Using the methods of analytic ethnography, we identify, describe, and explain variations in the social networks, specifically family and peer networks among Mexican American NIUs in San Antonio, Texas (Lofland 1995). Furthermore, we explore how the interaction with specific aspects of Mexican American culture affects drug use practices and risk behaviors.

## **The Influence of Social Networks on Risk Behaviors**

Social network analysis focuses on a network of social relationships as a means of comprehending behavior and different types of interactions among network members (Knoke and Kuklinski 1982). As such, social networks can be understood as the pattern of social linkages among people in an informal direct personal relationship, such as friendships, acquaintances, kinship relations, and more formal relationships like teachers or work supervisors (Friedman et al. 1999; Moore 1994; Neaigus et al. 1994). Risk networks are composed of people who engage in risk behaviors such as using heroin, multiple sex partners, sharing needles, and so on. One of the relevant findings of a New York network study (Neaigus et al. 1998) is the high level of convergence of risk and social networks that were based on long-standing and multiplex relationships such as kinship, friendship, and marital and sexual ties.

While a number of factors may influence whether a person engages in risk behaviors, social networks play an important role (Des Jarlais et al. 1992; Neaigus et al. 1998; van Ameijden et al. 1994). In this sense, the social context in which individuals engage in risk behaviors in this street-based environment is an important causal factor in their exposure. In the proposed study, our explanatory analysis of the relationship of risk behaviors and social networks is based on "network facilitation" theory. Network facilitation theory or a "kind of group" model argues that the risk behavior is the result of being involved in a network of relations that facilitates this kind of behavior. This network does not only include peer group associates of a deviant subculture, but may also include family, neighbor, and intimate partner relations that in multiple ways provide opportunities to engage in deviant behavior.

Most studies on social network facilitation have focused on friends or sex partners who reinforce behaviors such as HIV risk behaviors and drug

cessation and/or relapse (Gamella 1994). These studies indicate that social influence is likely to have a greater effect in relationships that have strong affective ties. Friedman and associates (1997) found a strong association between subjects' reports that they had attempted to reduce their drug-related risks and reports that their friends had also done so. In another study, Magura et al. (1989) found that syringe sharing is influenced by friends' attitudes about it. Having a close friend who is an injector has been found to be a risk factor in the transition from heroin "sniffing" to injecting (Des Jarlais et al. 1992) as has having a regular sex partner who recently injected drugs (van Ameijden et al. 1994). Intravenous drug using sex partners may function as network "facilitators" in promoting transitions to injecting among NIUs with increased individual susceptibility.

Geographic differences in a national multicity study of HIV risk behaviors suggest that multiple HIV risk models are needed to explain risk behaviors and the social context of risk behaviors (Battjes et al. 1994). Increased risk among racial/ethnic groups has been documented in these multicity studies to be independent of individual risk behaviors. These comparative results underscore the need to investigate potential social and environmental factors such as the characteristics of social networks in which injecting and sexual risk behaviors occur. For instance, other studies have found that a higher personal network density (actual social ties among network members as a proportion of all possible social ties among them) and larger drug network size were associated with syringe sharing and the size of the material aid network (indicating fewer economic resources) (Latkin 1995). Trotter, Baldwin, and Bowen (1995) in a study of 550 active drug users in the southwestern United States found that network density (as defined above in Latkin 1995), and transitivity (the proportion of transitive triplets in a network), were positively associated with the frequency of drug use, the use of injection drugs, and polydrug use.

## Method

The West Side community in San Antonio is composed predominantly of Mexican-origin persons living in one of the poorest urban areas in the United States (U.S. Census Bureau 2003a, 2003b, 2002). The area of focus is the near West Side consisting of eight census tracts with a population of approximately fifty thousand persons (Brischetto 2000). Neighborhoods in the study area are characterized as having the highest concentration of low-income Mexican-origin persons in the city. This area has the highest unemployment rates, lowest educational attainment, high-school dropout rates, teen-age pregnancies, delinquency, and other "underclass" indicators (Brischetto 2000).

The ethnographic data were collected as part of a prospective cohort epidemiologic survey study of non-treatment-recruited Mexican American NIUs in San Antonio, Texas. The purpose of the study is to determine the incidence and risk factors for making a transition to injecting and the prevalence, incidence, and risk factors for infection with HIV and hepatitis B and C. To be eligible to participate in the study, participants had to have used noninjected heroin in the past thirty days, to have never injected, or to have last injected more than six months prior to entry into the study. Extensive ethnographic data were obtained to assist the development of the survey sampling, recruitment strategy, and instrument development. These data were also used to better understand the specific drug risk practices that NIUs engaged in, the drug market and other social context and circumstances of their drug, and other health risks. Finally, these data were used to understand the meanings participants attributed to such context, circumstances, and risk.

As part of our field intensive outreach data collection strategy, a targeted respondent driven sampling design was implemented. The initial phase of this design consisted of identifying, observing, and mapping potential recruitment sites of NIUs. Two outreach fieldworkers under the supervision of the authors conducted extensive fieldwork in the targeted community. This fieldwork resulted in the identification and observation of sites that were mapped based on spatial (neighborhoods) and temporal (time of day, day of the week) characteristics. Approximately thirty distinct recruitment sites were identified, including low-income housing projects, neighborhood hangouts, public parks, recreational centers, bars, and neighborhood businesses.

In-depth multiple ethnographic interviews were conducted with twenty subjects. The interviews were semistructured using an interview guide that focused on obtaining an in-depth understanding of the contextual and cultural factors associated with NIU. For the purposes of this article, specific relevant topics covered included their heroin and other drug acquisition and patterns of use, the social and physical context in which they used drugs, the characteristics of their risk and other social and family networks, their socioeconomic circumstances, and their involvement in legal and illegal activities. Four interviews were conducted by one of the authors of this article and the rest (sixteen) by two community outreach specialists and the project director. Data were also obtained from four focus groups that were conducted with NIUs prior to implementing the baseline survey and ethnographic interviews. The authors also conducted focus groups that had an average of eight NIUs composed of both males and females. Finally, field notes were collected by the outreach specialists based on their observations

in the community while recruiting the targeted baseline sample.<sup>1</sup> The ethnographic interviews and focus group were recorded and transcribed. These textual data sources were combined into an electronic qualitative database. The data were then analyzed and contextualized for themes and commonalities using NVivo software.

Based on identified interactional features, the analysis of the ethnographic data consists of defining the broad dimensions and specific variations that distinguished the social networks of these Mexican American NIUs. The interview and field note data were transcribed and checked for accuracy. The transcripts were inputted into the NVivo software system for coding and conceptual mapping of emergent dimensions. The candidate dimensions that defined the types were inspected and evaluated on several formal social network interaction categories (e.g., content, directedness, durability, strength of ties, frequency of contact). These categories were assessed on the following criteria guiding the typology construction: overall similarity, define an absolute point of reference and overlap among categories (Bailey 1994). Once the broad types were constructed, specific subtypes were defined by their distinctive features specified from the "in vivo" categories. These specific categories reflect Mexican American cultural and drug subcultural constructs.

## Results

Two broad types of social networks are identified in the analysis. The paramount dimension defining this typology is the place of family in the composition of the network. Thus, family-centered and non-family-centered are found to comprise a generic typology of Mexican American NIUs' social networks. The two family subtypes include *cholo* and non-*cholo* social networks. Cholo families are characterized by generations of drug use, criminality, incarceration, and street connections among its members (Moore 1994). Non-*cholo* or conventional families are those in which deviant behavior is not multigenerational and is concentrated primarily among the adolescents and young adults. Peer networks include those centered on residential proximity, criminal associations, and female sex exchangers. We use the descriptor "peer" networks in a wider sense than is normally used in the literature on generation-specific friendly relations. In our modification of the definition, we also use "peer" to suggest wider reference groups of the individual distinguished by common geographic and/or occupational (criminal) identifications. Embedded in these social networks are persons

engaged in drug use and other behavioral and health risk behaviors that form risk networks.

### A Cholo Family: The Cortezes

The *tecato* subculture is reinforced by the social isolation of multigenerational cholo family networks. Like other cholo families, the Cortez family is characterized by drug use, criminality, incarceration history, and street connections. The family lives in a wood-frame, one-story four-bedroom home, similar to others in this West Side neighborhood. What distinguishes this house from others is that there always seems to be a number of cars parked in front of the house and people milling around the yard and in the street at all hours.

Living in this house were the mother, grandparents, two sisters (twenty-two and nineteen years old), brother (seventeen years old), niece, and three small children of the sisters. This family provides a clear case of the multigenerational cholo family in that all siblings were current heroin users while the parent and male grandparent had a history of heroin use and criminality. Also living in the house is a twenty-three-year-old brother with his young wife and baby. He is a heroin sniffer (and former injector) and is the illicit drug supply source for the two sisters and "aunt" Cindy. Cindy is the former wife of her uncle, who is in prison for heroin use. On most days, the house is filled with all these individuals since most are unemployed. Most of their activities, getting high and partying, occur in and around this household among mostly family members.

Most of the adult males in the Cortez family have sold drugs, and many have been to prison, including the absent father. Sara, the twenty-two-year-old daughter, stated,

My father went to prison when I was about fourteen-fifteen years old. He was selling "*chiva*" [heroin] out of my grandfather's house. I remember *tecatos* were always coming over. I used to see used needles in the street and empty balloons and needles down El Monte. That's a field across the street from where we lived. My father was in prison for about four-five years. He was with the Texas Brotherhood [Chicano prison gang]. My uncle he went to prison too.

Growing up within this social context exposed Sara and other children in these types of cholo families to an environment where drug use and selling was normative, especially with heroin being sold out of her own house by



adult family members. In many of these neighborhoods, this was a general phenomenon among cholo families.

Sara has been snorting heroin for about three years. She did heroin for the first time when she was eighteen years old. "My friend and I bought a 'dime' [\$10]. It made me feel sweaty, ugly and high. We were just hanging out at the Cassey Courts with the guys and we decided to buy it. It was a better buzz (than other drugs). A good high." She reported that she has been intermittently doing heroin ever since.

During the course of the fieldwork, Sara's twenty-three-year-old brother was released and enrolled in a drug treatment facility for heroin addiction. "He was shooting up two-three times a day. I hope he gets his life back together. They told him, if he escaped, they wouldn't take him back. This is his last chance." This brother was currently working at a downtown restaurant. "After he got paid he would buy some bags [heroin; a bag usually refers to \$10] and he would share them with me. That's how I get most of my drugs." She reported snorting heroin six or seven times this week. Usually it is only a small line. "I woke up with a headache this morning. I felt like I wanted to do another line. I thought I better stop." In this context, Sara's access to heroin is facilitated by her brother who has a reliable heroin connection. Also, he may be one of the key family relational influences on her making a transition to injecting if he himself transitions back to his own earlier injecting heroin.

One of Sara's other heroin sources (other than her brother) is a neighbor who lives right across the street. She states,

I went over to his house the other day. I was going to buy some weed from his nephew who I know. They are always partying over there. Watching the games, playing basketball in the street with my brothers. They are just neighbors. When I went over there, I met their uncle [about thirty-five years old]. He had a balloon in his mouth. I ask, what is that a balloon? He said, "Do you know what it's for?" I said, for chiva. He said, "Do you want some?" I said, yes. So, he hooked me up with a couple of lines. He has been giving me some ever since then.

Sara described this man as an injecting heroin user who seemed to always have large quantities of heroin.

He sometimes comes over and asks me if I want any. Sometimes I go over there and he gives me some. When I get it, I bring it back here. Sometimes I share it with my sister or I just do it by myself.

When asked, "Why do you think that he is giving it you?" she answered, "For sex, but he's not going to get any. I am not that way. Exchange sex for drugs, never."

Drug and sexual risk are implicit in the exchange that Sara has with the man. Moreover, this example illustrates how the intersection of a family-cholo network with other types of risk networks. The intersections of risk networks through relatively weak ties engaged in common risk behaviors within this social context contributes to the initiation, continuation, or dispersion of heroin use and other risks. In this case, Sara was acting as a middleman for her sister's access to heroin.

Norma and her sister Patsy are both on public assistance. One afternoon Patsy had just returned from the public assistance offices where the social workers demanded that she get a job. "I told them that I didn't graduate from high school and didn't even have a GED. They told me that there were lots of jobs for people like me. Maybe, I will get a job and move out of here." The house they live is rented by her mother through a federal housing entitlement program for low-income families. "On the lease are my mother, my sister and her two kids and myself and my two kids, also, my brother. My grandparents are not on the lease even though they live here."

Both sisters receive about \$230 a month from a public assistance program. Patsy stated, "This month they only gave me \$180 because they said I wasn't cooperating enough with them about finding the father of my youngest child [about two years old]. I gave them everything they asked for." She went on to talk about her older baby's father (a different person) with whom she keeps in contact and has sex about once a month. "He doesn't care about the baby. I tell him if he loved her, he would send money. He makes like \$170 a week. You think he could send over \$20 or something?" Patsy goes on talking about her economic situation. "When I get paid, all I can afford to buy is shampoo, detergent, diapers and maybe give \$20-30 to my mom. Sometimes I help to pay a bill. And that's it. I can sometimes buy an outfit or two for the kids. That's all the money I have." The economic context of the Cortez family members create a dependency and a mutual reciprocity that make it difficult for members to become autonomous and leave the family's collective sphere of influence on risk behaviors associated with heroin use.

### **The Montoya Family: Sibling-Centered Drug-Using Family**

The Montoyas are distinct from the former family in that their illegal drug patterns are isolated among the children in the family. The Montoya

family lives in a residential area adjacent to one of the public housing projects. The parents are not involved in the use of illegal drugs but are heavy drinkers. Living in the house are five siblings, mother, stepfather, and common-law spouses of two of the older children. The children consist of the oldest daughter Blanca (twenty-two years old), Diego, Casey, Alonso (ages twenty-one to sixteen years old), and a ten-year-old boy. Blanca lives there with her husband Freddy and their three children. These include a six-month-old baby, a one-and-a-half-year-old boy, and a two-and-a-half-year-old girl. Casey resides at this residence with his common-law wife Imelda. Both are eighteen years of age. Casey is an active member of a local gang. He does not have any visible means of support, and neither does Imelda. The mother works two jobs at a nursing home and a school cafeteria and the stepfather is a construction worker. As a result of their work schedule and patronizing local bars, both are seldom at home.

The two couples, other brothers, and an assortment of friends are all heroin sniffers. The friends are longtime neighborhood and school acquaintances of the siblings. Several of these relations are former members of one of the local street gangs. The money this clique of friends has come from shoplifting, burglaries, and small-time street-level drug selling. This network of family and friends usually pool their money and send one of the brothers out to buy heroin. In most instances, it has been Casey who goes out and makes the buys from members of the adult prison gang that controls the heroin market in this neighborhood. This illustrates the importance that family networks have some ties to other heroin-using or selling networks if heroin use is to take place among family members. The Montoya family, like the Cortez family, also shows that in the Mexican American cultural context, the intersection of family networks with nonkin links who are longtime friends is common.

One network member made this remark about heroin using behaviors: "We snort up the heroin and sit around the house or yard and nod out for an hour or so." This activity is what they describe as "partying." This goes on at least three to four times a week. The mother (and the father) is seldom around to witness these activities, and when she is, she usually chooses to ignore it. This is often the case in many of these types of families where the adults are seldom home because of work schedules or drinking patterns. In either case, it shows how the lack of supervision of children and influence over their activities may contribute to heroin use among young family members within the context of this community.

Casey's girlfriend Imelda did not do any heroin before having to move in with him out of economic necessity. She describes how residing in this

household facilitated her initiation to heroin. "In my old neighborhood no one used *brown*, they all did coke. I never used it, until Blanca [her boyfriend's sister] introduced me to snorting." She reported not liking living in the West Side because of the violence and because "drugs are always around you and you cannot help but start using." The influence of the neighborhood and family in-laws was too much for Imelda to resist using heroin.

Rick is one of Freddy's (Blanca's husband) close friends, and like others in this network he is always at the house getting high. But what is distinct about Rick and Freddy is that they are former injecting heroin users. Rick started injecting heroin more than two years ago; shortly thereafter he was arrested and sent to prison for drug selling. Freddy is a former heroin injector but transitioned out of injecting about a year ago. During the course of the fieldwork, Freddy transitioned to injecting heroin and passed away from an infection that caused a cardiac arrest. This clearly shows once again that family networks are not composed of exclusively blood relations, but also incorporate longtime friends of the family who influence heroin use and other risk behaviors. These families become the social incubator for heroin use and other behaviors for both family and associates.

Cholo and sibling-centered family networks are different in the degrees to which they influence heroin use and other drug and health risk behaviors. Presumably, cholo family members are more influential in promoting and reinforcing heroin use because of strong intergenerational family ties. Cholo family members are also around a lot more, increasing their influence on each other. On the other hand, there may be an opposite reaction to the influence of family members who have caused various problems that discourage heroin use. In sibling-based families, heroin use is less intergenerational, resulting in a less pervasive influence on network members. Clearly, in both types of families the economic interdependency is a major factor in the group's social solidarity. When there is a long association with heroin within the family (either collectively or individually), it increases the risk for the initiation of heroin use. Also, the strong attachments to and identification with feelings of loyalty and reciprocity toward one's family may influence heroin use.

## Peer-Based Social Networks

### Residential/Neighbor-Based Networks

In economically marginalized communities social networks are often based on residential proximity, sustained by continual face-to-face contact, and become sources of social capital and mutual assistance. The members

of these networks often replace the absence of blood relatives with “fictive kin” (Stack 1975). These families develop relationships with each other that are symmetrical, instrumental, and dependent. These networks function to satisfy needs such as emotional support, economic assistance, information, and allies. If these neighbors are mutually involved in using illegal drugs, their association may increase their risk behaviors.

### *Rico and Jennifer Saucedo's Residence*

Rico and Jennifer Saucedo are approximately twenty years old and live with two small children in one of the largest public housing projects on San Antonio's West Side. Jennifer is responsible for the lease of the apartment they are occupying. Their close friends are Johnny Pulido and his girlfriend (and child) who live in a unit directly across from the Saucedo's. Living with Johnny are his brother and girlfriend who also have a child. These apartments are located in an isolated corner of the housing complex. All of these young adults sniff heroin as well as use of marijuana, cocaine, and beer.

Rico's source of income is twofold. He works for minimum wage at a popular tourist restaurant located on San Antonio's River Walk located about a mile east of the projects. These types of jobs consist of working in the “back” as kitchen helpers, assistant cooks, and bar backs, often the only ones available to these young men from the West Side (Bauder 2002). Wage levels are so low that many West Siders employed in entry-level work drop out of the workforce altogether or do not even bother looking for work in the first place. Rico's other source of income is committing burglaries that he does with his neighbors. During the day, the women in this network center their activities on household tasks and visiting the required public entitlement offices. Child care among this group is structured along gender roles, with the women having the responsibility of caring for the children, which they often share with their female neighbors.

All the drugs are purchased from neighborhood street-level sellers. These young neighbors often pool their resources and buy drugs that they then share among themselves. For instance, it is cheaper to buy larger quantities of drugs rather than the smaller amounts mentioned earlier. For instance, in the case of heroin, one-eighth of an ounce sells for \$50 and can be broken into seven \$10 bags. Sharing also includes the drug use paraphernalia such as straws that increases health risks.

This type of neighborhood-based network has a relatively short-lived lifespan. Often public housing officials target these types of residents for eviction because of their age, drug use, excessive noise, late hours, and criminal activities. One reason for the breakup of this particular network

was the arrest and incarceration of Rico (for burglary). While Rico was in jail, his friend Johnny started “messaging around” (having sex) with Jennifer. However, she was having sex with others in the neighborhood for money even before Rico was arrested. During this time Jennifer, Johnny, and his girlfriend were evicted by the housing authorities along with most of the other residents in this corner area of the projects.

Residential/neighbor-based networks can be transient, but they also create a social and geographic setting that can lead to the mixing of networks. This is similar to shooting galleries or gay bathhouses. That is, housing projects in particular create the social and physical environment for efficient mixing of drug users and nonusers, injectors and noninjectors, allowing for the diffusion of high-risk practices and infections. Fictive kin contain both strong and weak ties, with the weak ties creating bridges for the introduction of drug use “innovations” and the strong ties (with associated social density) for rapid diffusion. This sort of network structuration has been described in an ethnographic study in Spain that found drug users’ social networks played an important role in the initiation of injecting (Gamella 1994). Those who helped others to initiate injecting or who provided support, which reinforced the decision to inject, included friends, neighbors, schoolmates, relatives, and lovers. A young polydrug user who is embedded in a conventional family may be less likely to engage in other risk behaviors compared to his street risk network.

## Criminal Activity Networks

As an alternative means of economic sustenance, many residents in these communities, especially the young men and women, are involved in criminal-based social networks. These networks consist of ties among individual peers involved in robberies, theft, prostitution, carjacking, and drug selling and dealing. These activities are what contribute primarily to the maintenance of the networks.

### *The Killing Crew*

This group of young men is a loosely organized criminal network in the Las Colonias barrio on the western edges of the West Side. This neighborhood has a long history dating back to the 1950s of having a high concentration of *tecatos*. The members of this small criminal network in this community are the remnants of the Killing Crew, a street gang that has been dissolved due to incarceration of some members and the maturation of others. What remains are these neighborhood-based youth who identify themselves as a gang but

lost their organizational structure. The members of this network range from sixteen to nineteen years old. The core of this network consists of two sets of brothers: John Martinez and his younger sibling David, and Nate and his brother Ruben. Others include Taz, Alonso, Jay, and the latter's cousin George.

The primary activities of the network revolve around involvement in shoplifting, car theft, breaking and entering, and drug selling (marijuana and cocaine). Some members and other accomplices are also involved in armed robberies of small grocery stores and fast-food restaurants. Stolen merchandise (radios, DVDs, appliances, jewelry) is sold out of their homes to customers who were constantly stopping by to make purchases and check out the newest products. Persons outside the primary network are allowed to hang with them if they are able to generate enough money from their own illegal activities, which can be shared with the others.

All of the members of this network are active polydrug users. They are frequent users of cocaine and heroin, although not to the extent that they consume marijuana and beer. This constraint on their cocaine and heroin use may be because high levels of intoxication interfere with their other, more valued criminal and conventional activities. For example, it is not unusual for these members to smoke a *blunt* (Sifaneck et al. 2003) and have a couple of beers and then go play a pickup game of basketball. This is not possible if they are high on heroin. One respondent stated, "The guys just want to chill out when you're on brown." What is germane here is that they self-regulate heroin and cocaine use because they have to take care of business. This is another indication of the importance of socioeconomic context—the role of employment, legal or illegal, in shaping drug use patterns.

There is plenty of partying in this network of thieves and burglars and an assortment of others who just hang out with them, especially young women interested in partying. Young women attracted to this network are those interested in the availability of the drugs. In exchange, some of the "party girls" will have sex with the young men. However, some of the sex is not voluntary, and incidents of rape are sometimes reported. Although not the primary focus of this article, this practice illustrates how gender differences increase the risks for women within this context.

When this network was first contacted they were all occasional NIUs. Although some had tried heroin intravenously, most stated they did not like using needles. This is a common expression among this young population of NIUs who want to avoid becoming addicted to heroin and labeled *tecatos*. Moreover, the strength of criminal activity serves as a constraint for injecting. In the six months that fieldworkers observed this group, several young men transitioned to injecting. These men were associated more with

older *tecatos* than the Killing Crew members that tended to discourage injecting drug use given their criminal involvement. For example, Jay is an eighteen-year-old core member of the crew who recently had been a gunshot victim. Since then, Jay has been spending less time with the crew, preferring to hang out at his mother's house and shoot up with a new set of injector friends. According to several of his acquaintances, "Jay is shooting up everyday; they speedball [combination of heroin and cocaine] and when they want to come down they just shoot up heroin."

What this case illustrates is that the gang imposes obligations and activities that may act as a deterrent to injecting drug use. However, when this social integration and regulation mechanism is weakened, gang members may increase their heroin use, leading to injecting. As has been previously observed, many of the area's gangs were disseminated by heroin use either through addiction or incarceration (Valdez 2005).

### *Smiley and Running Partner Network*

The running partner criminal networks tend to be highly exclusive and composed of long-term friendships based on key life events. These networks are composed of smaller groups that are linked by strong social ties, such as childhood friendships, former gang affiliations, neighborhood ties or mutual incarceration experiences in juvenile facilities or prisons. A key characteristic of running partner networks is the strong influence of norms of reciprocity (Grund et al. 1996; Preble and Casey 1969). The focal person of one such NIU network is Smiley, an OG (Old Gangster).

Smiley's network consists of several members of his old gang, the LA Dudes. The gang is still together, but does not have a territory anymore since their leadership was recently arrested for drug trafficking. When asked about the gang Smiley said, "I am not sure exactly what they are doing but I still got pride for them [the gang]." Smiley had a reputation of being extremely violent and was the designated shooter on gang drive-bys and other gang related assaults. "Some of them want me to do some crimes with them. I tell them, 'Why should I? If you get caught, you are just going to snitch on me. I'd rather do the crimes myself. . . . I want to straighten out my life.'" Smiley's running partners or close friends in this gang network consist of several other older gang members who are trying to distance themselves from gang based affiliations activities. OGs are not expected to fulfill any of the obligations of being a full-fledged gang member. They spend most of their time hanging at each other's homes getting high on marijuana and drinking beer. When there is enough extra money they pool



their money and buy heroin. Like his other running partners, Smiley was using heroin more than the other active members of his former gang.

Smiley lives with his pregnant common-law wife and his younger brother in their mother's modest home located about a block away from the San Jose Courts. These projects are home to the LA Dudes, one of the largest youth street gangs, and a notorious adult prison gang that controls drug selling and dealing in this area. Living within this social context and these influences makes it difficult for Smiley to stay away from using heroin or engaging in crime. Over the course of the past twelve months, Smiley became noticeably thinner, indicating to those around him he was using more heroin than when he was first contacted for the study. Others familiar with his current drug patterns confirmed this speculation.

During Smiley's last interview he was neatly dressed in a freshly pressed unbuttoned plaid shirt over a sleeveless T-shirt and a large Christian medallion. His head is shaved except for strands of long hair above the base of his neck that reached his shoulders. As the interview began, Smiley said that the last time he had done brown was yesterday. He had bought a dime bag and did it all himself. He said, "I got three or four lines." I asked why he had done it that day. "I was feeling depressed," he said. "I can't even get a job. I don't want to go back to stealing and robbing."

He said later that he had been using brown three or four times a week. He went on,

Before brown, I shot heroin up two-three years. I don't fuck with it. But when I was on it, I wanted to steal from my mom. I tried to stop but I couldn't. Right now, I am just sniffing heroin.

However, according to him he spends \$25 a day on brown.

Smiley went on to explain that coke made him too "wired." "When I am on coke I sometimes feel like hurting someone. It's too much of a rush. Brown doesn't make me feel that way." Smiley's girlfriend who was living with him and his mom along with her child were also snorting heroin. She only did it when it was provided by him or his brother. His brother was an infrequent NIU and did it only when it was given to him by Smiley. He continued, "But, I am not *prendido* [addicted] yet. But, I think I am getting there. I am starting to feel a little sick. But, I don't need no methadone [to kick] or any of that shit. I will just get under the covers and sweat it out for two or three days to break it."

He emphasized that he was done with the criminal life. "I want to find a job. I'd like to get a good construction job or maybe a roofer. But, I can't

because of my injury.” He said he needs a job so that he can raise the child he is going to have with his girlfriend. “I am waiting right now for a call from a fast food restaurant.” He said,

I don’t have any money. I don’t even have a Lonestar card [food stamps] because I couldn’t fill out all the paper work. Same with the SSI, I can’t get it. I am thinking of getting a lawyer to help me out.

Despite these pleas, it is known in the streets that Smiley is involved in low-level drug selling and burglaries that he commits with his other running partners. A few months later he was in the county jail awaiting his arraignment for old warrants. Just before he was incarcerated he was using two dime bags of heroin a day, which was an increase from when he was first interviewed. Smiley’s increased heroin use during these past few months may have been associated with the fact that he was despondent about his injuries and inability to get a steady job. One of the last things he said was, “I just feel like shit.” Smiley’s heroin use seems to be a form of self-medication for his feelings of depression and low self-esteem.

### **Sexual Partnering/Exchange Networks**

Another type of peer NIU network are those composed of semiautonomous groups of young females whose activities are centered on an informal exchange of sex for drugs. These networks correspond with more recent research findings that stress how greater autonomy and independence from traditional gender roles have contributed to wider diversity of young Mexican American women’s risk networks than previously identified (Ramos et al. 1999; Valdez, Kaplan, and Cepeda 2000). This change increases the possibilities of illicit as well as licit activities that generate greater opportunities for income, but simultaneously may expose these women to higher risk behavior.

#### *Angela, Lucy, Tina, and Denise’s Network*

This network of young females between the ages of nineteen and twenty-one years old live in a deteriorating apartment complex on the fringes of the West Side, although they are all from the old neighborhood. All members are daily polydrug users and involved in some level of exchanging sex for drugs with older men. Some of the sex-for-drugs relationships are more subtle and disguised as boyfriend-girlfriend relations, but others are more direct. The most frequently reported drug is marijuana,

as it is with most of this NIU population. All use cocaine, heroin, and different forms of amphetamines and designer drugs such as *ice* (a form of amphetamine). Initiation and access to these drugs is linked almost exclusively to male acquaintances and sex partners except for marijuana, which is highly accessible and normalized in this social environment.

At present all of these girls are living in separate apartments. However, it is not unusual for these girls to live in each other's residence (or their boyfriends') when one is experiencing some type of crisis. For instance, recently Angela and Denise were living in Roger's (Angela's boyfriend) apartment along with Eric, his best friend. Denise moved into Roger's after she was evicted from her own apartment and her three children were taken from her by child protection services. While Denise was staying with Eric in one bedroom, Angela and Roger were staying in another bedroom. During this time they were "partying," consuming marijuana, cocaine, and snorting heroin and having sex. Roger and Eric were involved in selling small quantities of marijuana, cocaine, and heroin. The girls thought they were becoming too dependent on the guys for drugs and other economic resources so they started to *hustle*. One girl began working at a topless bar. This was the easiest and fastest way to generate resources since these young women did not have a high school degree and limited job experiences. A field note illustrates this situation:

The way they obtained money was for Angela to go out and *hustle* with guys she knew or some of Roger's friends. Eventually Roger found out what Angela was doing and he would run her off. She would go to Eduardo's house. After a while Eduardo would run her off and she would come back to Roger's house. This went on for about a year.

Eduardo is a former boyfriend of Angela's and the father of at least one of her children. Eduardo is an NIU, as are several of his family members, including his "mom who is forty-one years old and also does crack on a regular basis."

Recently, Denise found herself without someone to supply her with drugs to sell until Eduardo started coming around. He was a street-level dealer that started to supply Denise with *dimes* of heroin in exchange for hanging out with her and having sex. Denise was turning on Tina and Angela to heroin to impress them that she could *hustle* even though she was the youngest one in the group. The primary form of heroin ingestion was sniffing. A field note describes the relationship between Denise and Eduardo:

Whenever I was around them Eduardo was always grabbing her in front of everyone. He would put his hand on her ass around her waist and kiss her

(Denise). Eduardo then started to bring over some of his friends and they would give the girls (Angela, Denise, Lucy, Tina, and another friend) heroin and have sex and party all night with them.

Eduardo and his friends were exchanging drugs and some money for sexual favors with these girls, but in a more party context that was not understood by the girls as prostitution. This relationship did not last long, about three weeks, and then the girls moved on to other men.

Tina's drug use and sexual behavior is distinct from the other girls. She first snorted heroin about a month before she was recruited into the project, but by that time she was using it on a daily basis. Tina attributes her initiation to heroin to her friend Angela. She said, "I didn't like it. It made me sick and I would throw up. I also would feel really down and I did not want to feel like that." She was introduced to *ice* by a Lawrence, an older African American friend who was hanging out and partying and having sex with her. She liked *ice* because "it can keep you awake for nights." Tina explained what ensued:

I hooked up Lawrence with Angela and Denise. We would have all night parties with me, Denise and Lawrence. Last time they did *ice*; then a bunch of Xanax and then me and Denise took their clothes off and started dancing for Lawrence and gave him a good time.

Despite the occasional use of *ice* by all of these girls, they continued to use heroin during this time. Tina, however, uses heroin less than the others except when she is around her old friends. Before Denise was incarcerated, many thought that she was actually getting addicted to heroin. Nonetheless, Lawrence still maintains contact with these women and continues to be their main source of *ice* which he provides in exchange for what the girls describe as "*party sex*."

One other distinction about Tina is that she is involved in commercial prostitution. Prior to this time, she was exchanging sex for drugs on a more informal basis with customers at a topless nightclub where she occasionally worked. But as her heroin and *ice* problem became more severe she needed more income. During the past few months she has developed a steady clientele of young Mexican American attorneys. Clients call her house and she arranges to meet them at local motels. Others were those she met at the topless nightclub. Many of these *dates* she met while she was dancing at clubs throughout the city. Tina was getting so busy that she has recruited the other girls in her network (Angela, Denise, and Lucy) into these prostitution activities. Increased access to this cash-based activity made it easier for these women to purchase drugs and party that continued their exposure to risk behaviors. This female network's ties to outside networks facilitated

their introduction to heroin, and ice and sex behaviors that increased their exposure to risk behaviors.

## Discussion

The ethnographic findings in this article underscore the importance of the characteristics of social networks in facilitating or impeding high-risk behaviors among NIUs. A culturally relevant social network typology composed of two abstract ideal types, family-based and peer-based, emerged in the analysis. The network types demonstrates a variability of risks for initiating NIU of heroin and other drugs, increasing the frequency of heroin use, transitioning to injecting heroin, high-risk sex, crime, and other deleterious behaviors. However, criminal behavior and membership in a criminal organization (besides selling and buying drugs) itself seems also to function as a constraint on unregulated heroin use in most of these networks. The variability observed in the individual pathways and risk behaviors were found to be based on the distinctive interactional features of social networks embedded in the context of Mexican American street culture.

The family-based networks were found to have the strongest ties, are symmetrical in their relationships, are longer in duration, have the highest frequency of interaction, and have a relatively greater size when compared with the peer-based social networks. Family-based networks were in the paradoxical position of having both the highest and lowest propensity for engaging in risk behaviors. Behaviors unacceptable to family norms and values were difficult to be introduced into the network because of the nature of their interactional characteristics mentioned earlier. However, these family networks are linked to external friends, neighborhood acquaintances, and so on, by *familismo*. These external network members can act as potential/actual bridges outside the family. Having strong ties with family blood relations, they become a potential pathway by which risk behaviors are introduced into the family such as a new drug (for example, "brown,") or new routes of drug administration. Once introduced, these same interactional characteristics may facilitate the likelihood of members adopting these behaviors. Importantly, family-based social networks composed of members with numerous external multiplex relationships are more likely to be associated with social risk networks in this cultural environment. Furthermore, the cultural percept of *collectivismo* enhances the likelihood that once a specific risk behavior is introduced from a bridge, it will be adopted by all members in the network (Marin and Triandis 1985). In addition, the intergenerational nature of heroin and other drug use, and the

within-generation use of heroin and other drugs among family members (especially siblings, but also cousins), suggests that there are longitudinal processes within families and cross-sectional (contemporaneous) processes that can influence family-based networks of NIUs. The family then acts as a social “crucible” for the reproduction and maintenance of patterns of this drug use and other risks behaviors. This increases the likelihood of family-based NIU networks such as cholo families adversely influencing the behavior of the members of other types of social networks in these communities.

Peer-based networks are distinct from the family networks in that relationships between members are more often relatively short in duration and instrumentally directed, depending on the capacity of the others to provide social capital such as emotional support, information, allies, and connections to resources (Fischer et al. 1977). These networks are also more susceptible to the introduction (if not their maintenance) of risk behaviors in that they are generally more open, asymmetrical, of a shorter duration, and less frequent. In these networks more disassortative mixing is present, creating potential and actual bridges of transmission of risk behaviors (i.e., constitute mixing of distinct groups based on age, criminality). This disassortative mixing increases the likelihood of the diffusion of risk behaviors from broader drug and sexual subcultures to peer networks. It is the “weaker” ties of these networks that may create network bridges and increase the diffusion of risk behaviors not previously engaged in by other network members (Granovetter 1973). If these risk takers are in a powerful or influential position, they may influence others to adopt or encourage risk behaviors, that is, engaging in multiple or serial sex partners.

Neighbor-based peer networks are based on exchange of mutual services and the acquisition and use of drugs. These neighbors share common interests such as “heavy partying” and engaging in heavy alcoholic and poly-drug use, crime, mutual and multiple sex partners, and drug selling. If the needs of participants are not being mutually met, or if members move, then these networks can quickly break up. If relationships become too contested, the networks also tend to dissolve. In this regard, these networks are often identified as networks of “opportunity” in that they are embedded in frequent and asymmetrical relations. Such networks may also be more dynamic than family networks not because of their size, but rather the in- and out-mobility of their individual members. These networks may also overlap with family networks if kin live in the same locations. These residential-based peer networks tend to be susceptible to the diffusion of a wide variety of different types of risk behaviors. They also increase disassortative mixing patterns across ages and sexual activity classes.

Like other studies of young females involved in similar social networks, this study found risk behaviors were largely shaped by gender relations (Dunlap, Johnson, and Manwar 1995; Jacobs and Miller 1998). More important, females' participation in street-based activities required them to engage in an unequal exploitative exchange process with males, often exchanging sex for material commodities. Connectiveness to these men is more asymmetrical, rather short-lived and instrumental (i.e., a relationship based on one's own self-interests). This exchange process, we argue, makes these females highly vulnerable to risk behaviors.

Last, these family and peer networks are embedded within a socioeconomic environment that is an exposure risk factor, independent from the risks stemming from behaviors facilitated by the networks (Rankin and Quane 2000). The scarcity of meaningful employment and social opportunities within the community shapes the behaviors of network members. Within this context, economic realities necessitate that family and peer networks create and maintain bonds and share resources. Networks characterized by high drug use and other risks behaviors make it difficult for members not to be influenced by these behaviors. Repeatedly, these data have shown how risk behaviors are often encouraged or introduced to network members by family members or close acquaintances. With limited societal resources or social capital outside the network, members are constrained and limited in opportunities to escape this environment (Rankin and Quane 2000).

An interesting hypothesis for future research is that the behavior of individuals with high proportions of multiplex ties with network members may be more likely to be influenced by the risk network than individuals with low proportions of multiplex ties. For example, heroin-using partners who are also family members or are lovers are more likely to influence each other's behavior than others in the network. The degree to which a network has both these characteristics (multiaffiliation and multiplexity) increases the likelihood of diffusion of risk behavior within this population. This conclusion corresponds to the theories of George Simmel and more recently Bernice Pescosolido, both of whom have postulated that the extent of one's web of group affiliations shapes the attitudes and behavior of individuals (Levine 1971; Pescosolido and Rubin 2000). It also underscores the specific significance of dyads in understanding the mechanism of group affiliations and for evaluation (Neaigus et al. 1995).

A methodological point is warranted. A limitation of studying interactional characteristics of social networks is that they are not easily and directly observable and often must be inferred by the researcher. In this respect, our findings need to be confirmed by other studies to determine if

the typology can be transferred to another setting without major modification (Lincoln and Guba 1985). Furthermore, a triangularization strategy using a combination of ethnographic and survey methodologies to assess the influence of NIU network characteristics on individual risk behaviors in this population should be applied in future studies (Denzin and Lincoln 1994). This strategy will be more responsive to the requirement of cultural relevance of ethnographically based conclusions pertaining to the explanation of individual risk behavior by social, environmental, and cultural factors.

## Conclusion

The analysis shows, as has prior research, that at least for Mexican American drug users, general cultural proscriptions such as *familismo* and *collectivismo* influence the interactional contents of risk networks. These proscriptions may function as latent structures that determine or influence the manifest relationships of interactional content (Lazarsfeld and Henry 1968). *Familismo*, therefore, may cut across all of the types accounting for the fact that the intersection between family and peer ties were observed across all types of networks. This underlies the proposition that social networks can function as specific mechanisms by which cultural and class structures along with urban context in influence individual risk behavior (National Institute on Drug Abuse 2001). Results parallel other social network studies that associate risk behaviors and negative consequences with the individual's immediate social relationships and level of relationship, rather than focusing only on the individual's attributes (Friedman et al. 1999). The explanatory power of this approach is enhanced by grounding it within the living conditions of Mexican American culture and gender expectations imbedded in the social economic context of this community. Social network observations cannot be exclusively relied upon to fully explain risk behavior susceptibility. A mutual reinforcing influence of culture and social network factors was observed in this study, suggesting that future research should focus more on the specific interaction of these two domains. In understanding the interactional features, these networks allow us to identify the social processes that make some networks and their individual members susceptible to risk behaviors associated with the onset of heroin use, transitioning to injecting, and other risks such as multiple sex partners.

Furthermore, the analysis reveals that the types of networks identified in this study are highly permeable. Any given individual NIU may be



anchored in a specific network type, but when looked at from a dynamic perspective, his or her affiliation often overlaps with associations with non-NIU multiple risk networks and nonrisk networks in the community. Furthermore, among persons who constitute these networks, there is often an intersection of roles or a multiplexity, for example, an individual may be someone's kin as well as a criminal associate. This dynamicism highlights the need in future research to develop ethnographic methods of directly observing risk networks and their influence on individual risk behaviors.

## Note

1. The study design includes a cohort of three hundred Mexican American noninjecting heroin users (NIUs) that will be interviewed and tested for HIV and hepatitis B and C at baseline and at two follow-ups at six-month intervals. The design also contains an ethnographic component that includes observations and interviews with three cohorts of twenty subjects and follow-up interviews twice each year through the fourth year.

## References

- Bailey, Kenneth B. 1994. Typologies and taxonomies: An introduction to classification techniques. In *Quantitative applications in the social sciences*, ed. M. S. Lewis-Beck. Thousand Oaks, CA: Sage.
- Battjes, R. J., R. W. Pickens, H. W. Haverkos, and Z. Sloboda. 1994. HIV risk factors among injecting drug users in five US cities. *AIDS* 8 (5): 681-87.
- Bauder, Harald. 2002. *Work on the west side: Urban neighborhoods and the cultural exclusion of youth*. Boulder, CO: Lexington Books.
- Brischetto, Robert R. 2000. *Making connections on San Antonio's West Side: The Neighborhood Transformation/Family Development Project*. Baltimore: Annie E. Casey Foundation.
- Bullington, Bruce. 1977. *Heroin use in the barrio*. Lexington, MA: Lexington Books.
- Casavantes, Edward. 1976. *El tecato: Cultural and sociologic factors affecting drug use among Chicanos*. Washington, DC: National Coalition of Spanish Speaking Mental Health Organizations.
- Denzin, Norman K., and Yvonna S. Lincoln. 1994. *Handbook of qualitative research*. Thousand Oaks, CA: Sage.
- Des Jarlais, Don C., Cathy Casriel, Samuel R. Friedman, and Andrew Rosenblum. 1992. AIDS and the transition to illicit drug injection—Results of a randomized trial prevention program. *British Journal of Addiction* 87 (3): 493-98.
- Desmond, David P., and James F. Maddux. 1984. Mexican-American heroin addicts. *American Journal of Drug & Alcohol Abuse* 10 (3): 317-46.
- Dunlap, Eloise, Bruce Johnson, and Ali Manwar. 1995. Female crack dealers in New York City: Who they are and what they do. Unpublished manuscript.
- Fischer, Claude S., R. M. Jackson, C. A. Stueve, K. Gerson, and L. M. Jones. 1977. *Networks and places*. New York: Free Press.

- Freeman, Robert, Frederick R. Snyder, Yvonne P. Lewis, John P. Young, and Jeanene McCoy-Young. 1998. *Researcher's handbook for conducting drug abuse research with ethnic/racial minority populations*. Bethesda, MD: NOVA Research Company.
- Friedman, Samuel R., Richard Curtis, Alan Neaigus, Benny Jose, and Don C. Des Jarlais. 1999. *Social networks, drug injectors' lives, and HIV/AIDS*. New York: Kluwer Academic/Plenum.
- Friedman, Samuel R., Alan Neaigus, Benny Jose, Richard Curtis, Marjorie Goldstein, Gilbert Ildefonso, Richard B. Rothenberg, and Don C. Des Jarlais. 1997. Sociometric risk networks and risk for HIV infection. *American Journal of Public Health* 87 (8): 1289-96.
- Gamella, Juan F. 1994. The spread of intravenous drug use and AIDS in a neighborhood in Spain. *Medical Anthropology Quarterly* 8:131-60.
- Granovetter, Mark S. 1973. The strength of weak ties. *American Journal of Sociology* 78 (6): 1360-80.
- Grund, J.-P.C., Samuel R. Friedman, L. S. Stern, Benny Jose, Alan Neaigus, Russell Curtis, and Don C. Des Jarlais. 1996. Syringe-mediated drug sharing among injecting drug users: Patterns, social context and implications for transmission of blood-borne pathogens. *Social Science and Medicine* 45 (5): 691-703.
- Jacobs, Bruce A., and Jody Miller. 1998. Crack dealing, gender, and arrest avoidance. *Social Problems* 45 (4): 550-69.
- Knoke, David, and James H. Kuklinski. 1982. Network analysis. In *Quantitative applications in the social sciences* (Sage University Papers Series). Beverly Hills, CA: Sage.
- Latkin, Carl A. 1995. A personal network approach to AIDS prevention: An experimental peer group intervention for street-injecting drug users: The SAFE Study. In *NIDA Research Monograph*, ed. R. H. Needle, S. Genser, and R. Trotter. Bethesda, MD: National Institute of Mental Health.
- Lazarsfeld, Paul F., and Neil W. Henry. 1968. *Latent structure analysis*. Boston: Houghton Mifflin.
- Levine, Donald N. 1971. *Georg Simmel: On individuality and social forms*. Chicago: University of Chicago Press.
- Lincoln, Yvonna S., and Egon G. Guba. 1985. *Naturalistic inquiry*. Beverly Hills, CA: Sage.
- Lofland, John. 1995. Analytic ethnography: Features, failings, and futures. *Journal of Contemporary Ethnography* 24 (1): 30-67.
- Magura, S., J. I. Grossman, D. S. Lipton, et al. 1989. Determinants of needle sharing among intravenous drug users. *Am J Public Health* 79 (4): 459-62.
- Marin, G., and H. C. Triandis. 1985. Allocentrism as an important characteristic of the behavior of Latin Americans and Hispanics. In *Cross-cultural and national studies in social psychology*, ed. R. Diaz-Guerrero. Amsterdam: Elsevier Science.
- Maxwell, Jane Carlisle. 1999. *Heroin addicts in Texas: The nature and size of a hidden population*. Austin: Texas Commission on Alcohol and Drug Abuse.
- Moore, Joan W. 1978. *Homeboys: Gangs, drugs, and prison in the barrios of Los Angeles*. Philadelphia: Temple University Press.
- . 1994. The chola life course: Chicana heroin users and the barrio gang. *International Journal of the Addictions* 29 (9): 1115-26.
- National Institute of Justice. 1996. *1995 Drug use forecasting: Annual report on adult and juvenile arrestees*. Rockville, MD: National Institute of Justice, Office of Justice Programs, U.S. Department of Justice.
- National Institute on Drug Abuse 2001. Meeting proceedings: May 3-4, 2001. In *The network paradigm in research on drug abuse, HIV, and other blood-borne and sexually transmitted*

- infections: New perspectives, approaches, and applications*. Arlington, VA: National Institute on Drug Abuse, National Institute of Health.
- Neaigus, Alan, Samuel R. Friedman, Richard Curtis, Don C. Des Jarlais, R. T. Furst, Benny Jose, P. Mota, B. Stepherson, M. Sufian, T. Ward, and J. W. Wright. 1994. The relevance of drug injectors' social and risk networks for understanding and preventing HIV infection. *Social Science and Medicine* 38 (1): 67-78.
- Neaigus, Alan, Samuel R. Friedman, M. F. Goldstein, G. Ildefonso, R. Curtis, and B. Jose. 1995. Using dyadic data for a network analysis of HIV infection and risk behaviors among injection drug users. In *Social networks, drug abuse, and HIV transmission*, ed. R. H. Needle, S. Coyle, S. G. Genser, and R. T. I. Trotter. Washington, DC: Government Printing Office.
- Neaigus, Alan, Anna Gyarmathy, Maureen Miller, Veronica M. Frajzyngier, Samuel R. Friedman, and C. Des Jarlais Don. 2006. Transitions to injecting drug use among noninjecting heroin users: Social network influence and individual susceptibility. *JAIDS: Journal of Acquired Immune Deficiency Syndromes* 41 (4): 493-503.
- Neaigus, Alan, Debra L. Hagen, Samuel R. Friedman, Maureen Miller, and Don C. Des Jarlais. 1998. Transitions to injecting drug use among non-injecting heroin users. Paper read at 126th American Public Health Association Meeting, November 17, Washington, DC.
- Ouellet, Lawrence J., Afsaneh Rahimian, and W. Wayne Wiebel. 1998. The onset of drug injection among sex partners of injection drug users. *AIDS Education and Prevention* 10 (4): 341-50.
- Pescosolido, Bernice A., and Beth A. Rubin. 2000. The web of group affiliations revisited: Social life, postmodernism, and sociology. *American Sociological Review* 65 (1): 52-76.
- Preble, Edward, and John J. Casey. 1969. Taking care of business—The heroin user's life on the street. *International Journal of the Addictions* 4 (1): 1-24.
- Quintero, Gilbert A., and Antonio L. Estrada. 2000. Cultural models of masculinity and drug use: "Machismo," heroin, and street survival on the US-Mexico border. In *Contemporary drug problems*. Tucson: University of Arizona Press.
- Ramos, Reyes, Irma Aguilar, Magdalena Anderson, and Virginia Caudillo. 1999. Tecatas: An ethnotheoretical look at Mexican American female injecting drug users. *Substance Use & Misuse* 34 (14): 2015-2055.
- Ramos, Reyes, and Rochelle N. Shain. 1995. "Men I mess with don't have anything to do with AIDS": Using ethno-theory to understand risk perception. *Sociological Quarterly* 36 (3): 483-505.
- Rankin, Bruce H., and James Quane. 2000. Neighborhood poverty and the social isolation of inner-city African American families. *Social Forces* 79 (1): 139-64.
- Sherman, Susan Gail, L. Smith, G. Laney, and Steffanie A. Strathdee. 2002. Social influences on the transition to injection drug use among young heroin sniffers: A qualitative analysis. *International Journal of Drug Policy* 13 (2): 113-20.
- Sifaneck, Stephen, Charles D. Kaplan, Eloise Dunlap, and Bruce D. Johnson. 2003. Blunts and blowtjies: Cannabis use practices in two cultural settings and their implication for prevention. *Free Inquiry in Creative Sociology* 31 (1): 3-13.
- Stack, Carol E. 1975. *All our kin*. New York: Harper Colophon Books.
- Trotter, R., J. Baldwin, and A. Bowen. 1995. Network structure and proxy network measures of HIV, drug, and incarceration risks for active drug users. *Connections: Bulletin of the International Network for Social Network Analysis* 18 (1): 89-104.

- U.S. Census Bureau. 2002. *Poverty in the United States: 2001, Current population reports*. Washington, DC: Government Printing Office.
- . 2003a. *Annual demographic survey march supplement: Table 2. Age, sex, household relationship, race and Hispanic origin by ratio of income to poverty level: 2001*. [http://ferret.bls.census.gov/macro/032002/pov/new02\\_001.htm](http://ferret.bls.census.gov/macro/032002/pov/new02_001.htm) (accessed July 17, 2003).
- . 2003b. *Quick tables: QT-PL. Race, Hispanic or Latino, and age: 2000 for San Antonio city, Texas*. <http://factfinder.census.gov> (accessed July 16, 2003).
- Valdez, Avelardo. 2005. Mexican American youth and adult prison gangs in a changing heroin market. *Journal of Drug Issues* 35 (4): 843-67.
- Valdez, Avelardo, Charles D. Kaplan, and Alice Cepeda. 2000. The process of paradoxical autonomy and survival in the heroin careers of Mexican American women. *Contemporary Drug Problems* 27 (Spring): 189-212.
- van Ameijden, Erik J. C., Johanna Anneke van den Hoek, Christina Hartgers, and Roel A. Coutinho. 1994. Risk factors for the transition from noninjection to injection drug use and accompanying AIDS risk behavior in a cohort of drug users. *American Journal of Epidemiology* 139 (12): 1153-63.

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