Inside the Gate:

Insiders' Perspectives on Marijuana as a Gateway Drug

Rashi K. Shukla

University of Central Oklahoma, School of Criminal Justice

rshukla@uco.edu

Abstract

Marijuana is often referred to as a gateway drug due to its placement in the stage-like progression of drug use (Kandel, 2002; Zimmer & Morgan, 1997). This study examines the gateway drug concept from an insiders' perspective. Qualitative, semi-structured interviews were conducted with 51 current and former users of marijuana. Data were collected between 2000 and 2002. Data on drug histories and perceptions about marijuana as a gateway drug were analyzed. While 80.3% (n = 41) of participants initiated their drug use experiences with alcohol or tobacco, one-third (n = 15) used an illicit drug other than marijuana prior to initiating marijuana. The adults in this study varied with regard to their perceptions about whether or not they thought marijuana was a gateway drug. Forty-five percent (n = 23) expressed viewpoints characterized as mixed or conflicting, 35% (n =18) did not support the idea that marijuana was a gateway drug, and 19.6% (n = 10) strongly supported the notion.

There is an on-going debate about the notion that marijuana is a gateway drug. While marijuana is commonly referred to in discussions of gateway drugs (e.g., Golub & Johnson, 1994, 2002; Hall & Lynskey, 2005; Kandel, 1989, 2002; Rebellon & Van Gundy, 2006; Vaughn, Wallace, Perron, Copeland, & Howard, 2008), the importance of marijuana in the progression of drug use continues to be disputed. The academic literature is replete with studies aimed at elucidating the nature of the relationship between gateway drugs, including alcohol, tobacco and/or marijuana, and the subsequent use of other illicit substances (e.g., Golub & Johnson, 1994, 2002; Kandel, 1989, 2002; Tarter, Vanyukov, Kirisci, Reynolds, & Clark, 2006).

Marijuana use is viewed as being important in the development of the drug career due to its placement in the stage-like progression of drug use (Kandel 2002; Zimmer & Morgan, 1997). Marijuana is typically the first *illicit drug* initiated (see Golub & Johnson, 1994; Kandel, 1975; Kandel & Faust, 1975; Kandel & Jessor, 2002; Yamaguchi & Kandel, 1984a, 1984b); it has been referred to as "the bridge in the sequence between licit and other illicit drugs" (Kandel & Jessor, 2002, p. 365). The considerable attention given to marijuana in political and academic arenas is in part fueled by its prevalence. In the US, marijuana is the most commonly used illicit drug (Johnston, O'Malley, & Bachman, 2002; National Institute on Drug Abuse [NIDA], 2009; Office of National Drug Control Policy [ONDCP], n.d.). Arrests for marijuana-related violations exceed, and continue to surpass arrests for other illicit drugs (see Federal Bureau of Investigation [FBI] 2007, 2008, 2009, 2010, 2011, 2012).

While the idea that marijuana is a gateway drug has been influential on federal drug control policy in the US (Choo, Roh, & Robinson, 2008), the issue is increasingly being challenged at both the state and international levels. In 2012, Colorado and Washington became the first US states to legalize the sale of marijuana and permit recreational use (Szalavitz, 2012). At the international level, Dutch policy distinguishes between soft drugs (e.g., cannabis) and hard drugs (e.g., cocaine, heroin, amphetamines, etc.); marijuana has been decriminalized and the retail sales of small quantities are tolerated (de Kort & Cramer, 1999). In an analysis of data from the Netherlands, Europe and the US, MacCoun (2011) found that "cocaine and amphetamine use are below what one would predict for the Netherlands" (MacCoun, 2011, p. 1902). MacCoun noted that "although hardly conclusive, these data are consistent with the notion that the [Dutch] coffeeshop system might 'weaken the gateway'" (p. 1902). In the United Kingdom, the controversies regarding marijuana became evident when cannabis was reclassified from a Class C drug to a Class B drug in 2008 (Home Office, 2009). The reclassification was significant because Class B drugs are considered more harmful than Class C drugs and have higher penalties (i.e., a maximum of five years in prison versus two years) for possession (Home Office, n.d.). In response to public outrage, officials have called for the reclassification of cannabis to Class C (HM Government, 2008).

The gateway concept remains problematic. Not only is the concept vague (Kandel, 2002), but drug use trajectories vary. Research has shown that individuals tend to initiate drug use with licit substances such as alcohol or tobacco (see Donovan & Jessor, 1983; Kandel, 1975; Kandel & Faust, 1975; Kandel, Yamaguchi, & Chen, 1992; Yamaguchi & Kandel, 1984a, 1984b). However, once marijuana is initiated, progression to other illicit substances is not inevitable (Golub & Johnson, 1994; Kandel, 1989; Yamaguchi & Kandel, 1984b). Finally, not all illicit drug users use marijuana prior to initiating other illicit drugs. The problematic nature of the marijuana gateway hypothesis was noted by Zimmer and Morgan (1997):

> Marijuana does not cause people to use hard drugs. What the gateway theory presents as a causal explanation is a statistical association between common and uncommon drugs, an association that changes over time as different drugs increase and decrease in prevalence (p. 32)...In the end, the gateway theory is

---

[1]The terms *cannabis* and *marijuana* are used interchangeably

[2]MacCoun (2011) notes that "heroin is too rarely reported in the surveys to permit a similar estimate" (p. 1902).

> not a theory at all. It is a description of the typical sequence in which multiple-drug users initiate the use of high-prevalence and low-prevalence drugs. (p. 37)

There is a need to develop a more grounded understanding of the role of marijuana in the drug career. The present study examines the topic of marijuana as a gateway drug from the insiders' perspective. This paper seeks to answer the following questions: What are current and former marijuana users' thoughts and perceptions about marijuana as a gateway drug? How do their perceptions about the gateway concept compare to their own drug initiation experiences? The views of those with illicit drug use experiences represent an untapped source for insightful information on the potential significance of marijuana in the drug career.

Literature

Much of the evidence in support of marijuana's critical role in the progression of drug use comes from research on the stage-like progression of drug use (Kandel, 1975; Kandel & Faust, 1975; Yamaguchi & Kandel, 1984a, 1984b). Four typical stages of drug use have been recognized: the use of one or more legal drugs (i.e., alcohol or tobacco), followed by the use of marijuana, other illicit drug use (Esbensen & Elliott, 1994; Kandel, 1975, 1978; Kandel & Faust, 1975; Kandel & Yamaguchi, 1993; Welte & Barnes, 1985), and later prescription drug use (Kandel et al., 1992; Kandel & Yamaguchi, 1993; Yamaguchi & Kandel, 1984b;).

The initiation of licit substances typically precedes involvement with marijuana. The link between licit drug use (e.g., alcohol and tobacco) and illicit drug use is one of the most consistent findings in the literature (Donovan & Jessor, 1983; Kandel 1975, 1989; Kandel & Faust, 1975; Kandel & Yamaguchi, 1993; Kandel et al., 1992; Miller, 1994; Yamaguchi & Kandel, 1984a, 1984b). Studies have found that the majority of individuals begin their drug use experiences with alcohol and/or tobacco. This pattern has been identified through cross-sectional (Adler & Kandel, 1981; Kandel & Yamaguchi, 1993) and longitudinal (Kandel 1978; Kandel & Faust, 1975; Kandel & Logan, 1984) studies within the U.S. and abroad (Adler & Kandel, 1981). Involvement with licit substances often precedes marijuana use and may play an important role in drug progression (see Donovan & Jessor, 1983). While a number of studies support this typical sequencing of initiation, issues with the notion that marijuana is a gateway drug remain. These are briefly discussed.

Progression from marijuana to other illicit drugs is not inevitable. While marijuana use tends to precede involvement with other illicit drug use (Gergen, Gergen, & Morse, 1972; Kandel, 1978; Kandel & Faust, 1975; Kandel & Yamaguchi, 1993; Kandel et al., 1992; Yamaguchi & Kandel 1984a, 1984b), the majority of marijuana users do not progress on to other illicit drug use (Gergen et al., 1972; Zimmer & Morgan, 1997). According to one estimate, for every 100 people who reported having tried marijuana, only 28 ever tried cocaine, with even fewer progressing to more regular cocaine use (see Zimmer & Morgan, 1997). It is important to note however, that such estimates of drug use are limited due to their reliance on self-report data (see Mosher, Miethe, & Hart, 2011).

In research on the issue, Kandel (1989) clearly distinguishes between the concept of *stages* and the gateway or stepping stone (see Baumrind, 1983; Cohen, 1972; O'Donnell & Clayton, 1982) hypotheses. Arguing that stages are conceptually different, Kandel (1989, 2002) emphasizes that stages are hierarchical.   Not all users must progress through them; progression is not inevitable. Different factors influence transitions between the different

stages of drug use (Kandel, 1978). Stages are facilitative. Only a subsample of users progress at any given stage. Those at highest risk for progression at any particular stage are those who have reached the preceding stage (Kandel, 1989).

Variations in sequencing of drug initiation have been identified in studies of diverse samples, providing evidence of the limited generalizability of typical stages of progression. With atypical progression, marijuana may be initiated before licit substances, after other illicit drugs, or not at all. Variations have been identified in studies of homeless youth (Ginzler, Cochran, Domenech-Rodríquez, Cauce, & Whitbeck (2003), serious drug users (Mackesy-Amiti, Fendrich & Goldstein, 1997) high-risk African-American youths (Vaughn et al., 2008), and international groups (Blaze-Temple, & Lo, 1992; Yen, Yang, Ko, & Yen, 2005). This growing body of research on the variability of sequencing raises further questions about the validity of the gateway hypothesis.

The supposition that patterns of drug initiation sequencing can serve as indicators of causality is problematic. Causality is difficult, if not impossible, to establish scientifically (Cook & Campbell, 1979). The challenges associated with establishing causality are exacerbated in studies on human behaviors such as drug use. Multiple factors, including individual decision-making, influence behaviors. In a commentary on the issue, Kandel, Yamaguchi and Klein (2006) discussed the difficulties involved in testing the gateway hypothesis. Potential connections between involvement with one substance (i.e., drug) and another may be spurious. As noted by Kandel (2002), "showing that there is a causal sequence of initiation is not the same as showing there is a causal link in the use of different drugs" (p. 7).

Finally, alternative explanations for observed associations (Miller, 1994; Morral et al., 2002) and other interpretations of the gateway influence exist (see Choo et al., 2008; Hall & Lynskey 2005; Lynskey, Vink, & Boomsma, 2006). Unique individual risk factors (Choo et al., 2008) and shared environmental factors (Lessem et al., 2006) may influence the likelihood of progression from marijuana to other illicit drug use. In their analysis of household and arrestee samples, Golub and Johnson (2002) summarized the problem inherent in the assumption that gateway drug use somehow causes hard-drug use and related problems by noting the following: "(1) extremely few members of the general population become persistent daily hard-drug-using criminal offenders; and (2) an increasing percentage of daily hard-drug-using criminal offenders did not follow the gateway sequence of substance use progression" (p. 5).

Much remains to be learned about patterns of drug initiation and the possible linkages between early substance use experiences and later ones. A greater understanding of the role of marijuana in the drug career is needed. This study describes the sequencing of drug initiation among a sample of current and former marijuana users and examines their thoughts and perceptions about marijuana as a gateway drug. This research contributes to the growing body of literature by presenting data from an insider's perspective.

Methods

The data presented here were originally collected as part of a larger study of marijuana use and decision-making (see Shukla, 2003). Institutional Review Board (IRB) approval for this research project was obtained from Rutgers University while the author was a doctoral student.

Qualitative data were collected through semi-structured, retrospective interviews. Data were gathered in Oklahoma City and the surrounding area between 2000 and 2002. In the present study, both induction and deduction were used. A deductive approach was taken in the early stages of the research, with the rational choice perspective (Clarke & Cornish, 1985, 2001; Cornish & Clarke, 1986) serving as the theoretical framework that guided initial questions. An inductive approach was utilized during data analysis so that foci, coding and analyses were grounded in and emerged from the data.

A purposeful (Schwandt, 1997) theoretical (Glaser & Strauss, 1986) sampling strategy was employed in this study. The initial sampling strategy included individuals with a diverse range of perceptions about and experiences with marijuana use including current users, ex-users, and non-users (i.e., persons who had never used marijuana). In the earliest stages of the research, the inclusion criteria were very broad; participants were only screened out if they did not meet the minimum age requirement (i.e., 18). After four interviews with non-users of marijuana, the sampling strategy was revised to exclude non-users from the sample because of the limited information being provided on the topic of study. Theoretical sampling was used to enhance the diversity of the sample in terms of involvement with marijuana use. This was done throughout the study as data were collected by asking informants and study participants if they knew of persons with specific patterns of marijuana use not yet included in the study. The diverse patterns of involvement were based on patterns identified in the literature and conversations with participants. When a specific gap was identified, a description of the type of marijuana user that had not yet been identified was discussed with key informants and study participants to help identify additional participants.

The final sample consisted of 51 current and former marijuana users who were 18 years of age or older. A snowball sampling strategy (Biernacki & Waldorf, 1981) was used to identify study participants. Sampling chains were initiated from a few, key informants. Due to the hidden nature of the population, no sampling frame was utilized. The majority of these adults were identified from a limited number of sampling chains (see Shukla, 2003). While this resulted in a potential sample bias, the data from the sample is appropriate for the exploratory nature of this research. Data from the 51 study participants, including 29 current marijuana users and 22 ex-users of marijuana, are presented here. The sample consists of 27 males and 24 females. Eighty percent of the sample is Caucasian. Participants ranged in age from 18 to 52 years old, with a mean age of 31.52. Thirty-six participants (70.5%) had some college or higher, and 33 (64.7%) reported no previous contact with the criminal justice system. Each subject was given a pseudonym.

In the original study, participants were asked approximately 100 open-ended questions on their involvement with marijuana use, backgrounds, and drug-related decisions. A more structured qualitative approach was utilized to allow for the gathering of data on key topics of interest. While respondents were provided with opportunities throughout the interview to introduce their own topics when responding to questions, each respondent was asked the same general set of questions. The more structured in-depth interview was designed specifically to allow for the gathering of data that could be compared between respondents.

The data presented here are based on responses to specific questions about individual drug histories (e.g., age of initiation, sequence of drug initiation) and marijuana as a gateway drug. Drug history data were collected for the following: alcohol, tobacco, marijuana,

inhalants, hallucinogens, cocaine, other illicit drug use including PCP, heroin, opium, and the non-medical use of prescription pills. Any drug use (i.e., experimental or regular) was counted in the drug history data. The data were collected retrospectively and are subject to the limitations of self-report data (see Harrison, 1995). The adults in this study varied in the extent to which they remembered specific details about their drug experiences.

Data on thoughts and perceptions about marijuana as a gateway drug are based on interview data bits provided in answer to the question, "Do you think marijuana is a gateway drug?" and follow-up questions aimed at probing for clarification on the topic. The specific wording of questions and follow-up probes varied due to the conversational nature of the interviews. Individuals were encouraged to provide information on their own thoughts, perceptions, and experiences. Probes were used primarily to obtain more in-depth information from research participants. In general, the probes included questions about whether or not individuals thought their involvement with marijuana made it easier to try and/or access other drugs as well as their thoughts on potential connections or linkages between their early drug use experiences and later ones. Due to the exploratory nature of the study, participants were not provided with a specific definition for the term "gateway drug."

Data were managed using the following software programs: Word, Excel, and AskSam. Data were analyzed thematically using the compare and contrast method. Initial coding focused on categorizing responses to the main gateway question; responses were coded as "yes," "no," and "conflicted." Axial codes (Strauss & Corbin, 1998) were then generated to develop a more in-depth understanding of the themes within the data.

Drug histories.

The drug histories of the adults in this study are provided to place their experiences into a broader context. By design, all of the adults in this sample had histories of marijuana use. An overwhelming majority of the adults in this study (n = 50, 98%) had histories of drug use that included the use of illicit drugs other than marijuana. Fifty-five percent (n = 22) reported past use of inhalants, 78% (n = 40) reported past use of cocaine or methamphetamines, 76% (n = 39) reported past use of hallucinogens, and 78% (n =40) reported past use of prescription pills for non-medical reasons. At the time of the interview, five individuals reported current cocaine use, five reported current prescription pill use (i.e., for non-medical reasons), two reported current use of hallucinogens, and one reported current heroin use. In the majority of these situations, the frequency of the individual's drug use had decreased significantly from previous times in their lives. A few persons indicated that while they were currently non-users of a drug (e.g., pills, hallucinogens, inhalants, crank), they might use the substance in the future.

Results

Drug initiation sequencing.

Information on the mean age of initiation and patterns of initiation sequencing are presented to develop a better understanding of the drug experiences of the individuals in this study. The majority of drug initiation experiences occurred during adolescence and early

adulthood (see Table 1). Aggregate data on average age of initiation supports the fact that the sequencing of initiation in this sample is similar to typical sequences identified in research on the stage-like progression of drug use. Drugs were typically initiated in the following sequence: alcohol, tobacco, marijuana, inhalants, non-medical use of prescription pills, hallucinogens, and other illicit drug use (e.g., cocaine, heroin). However, within-individual variations in initiation sequencing existed.

Table 1

Mean Age of Drug Use Initiation

Drug Type	Mean Age of Initiation
Alcohol	13.61
Tobacco	13.80
Marijuana	15.24
Inhalants	16.08
Hallucinogens	18.40
Other Illicit Drugs	19.73
Non-Medical Use of Prescription Pills	18.11

Note: This table has been reprinted from the dissertation (Shukla, 2003).

While 41 individuals (80.3%) initiated their drug use experiences with alcohol and/or tobacco (i.e., licit substances), variations existed. Five individuals (9%) reported that they had used marijuana the very first time they ever tried drugs. Of these, three had initiated their drug use experiences with marijuana only and two with marijuana and alcohol at the same time. Mark, a 33 year-old marijuana user, - recalls his first drug-using experience, "I would have to say marijuana, over cigarettes and alcohol, it was the first, first drug, no, I was smoking pot before I was smoking cigarettes." Five individuals reported initiating other illicit substances prior to initiating alcohol, tobacco, or marijuana; of these, four initiated their drug use experiences with inhalants and one with cocaine. Zacharias, a 29-year-old ex-user of marijuana, describes the sequence in which he initiated drugs:

> Tobacco first, alcohol, and then all these things at the same time [referring to Valium, Quaaludes, Rohypnol, Dilaudid] and marijuana, and then probably hallucinogens next, and then the inhalants, and then hard drugs [referring to speed, methamphetamine and heroin]...well it all overlaps.

While Zacharias experiences some difficulties clearly separating out the specific sequences of

his early drug use experiences, the placement of marijuana in his drug career was not unique. Heather, an 18-year-old female marijuana user similarly described the sequence in which she initiated substances, albeit more specifically:

> First to last? Cigarettes, that was first, I know that. Actually, I think I can, cigarettes, alcohol, coke, marijuana and meth. It was probably cigarettes first, I know that, and then alcohol, and then the first time I tried coke was probably then, next, and then marijuana and then the crystal meth.

With regard to the placement of marijuana in drug initiation sequencing more specifically, 33 (64.7%) individuals indicated that they had used marijuana before the initiation of any other illicit drug use. Fifteen (29.4%) participants however, reported that their initiation of an illicit drug other than marijuana had preceded their involvement with marijuana. In all but one of these cases only one other illicit drug (e.g., an inhalant, cocaine, pills) preceded the use of marijuana. Only one individual reported experimenting with several illicit substances prior to her initiation of marijuana. Stacy, a 21-year-old marijuana user described her sequence of initiation:

> Uh huh (yea). LSD was first. LSD was first, and then cocaine, no, I'm sorry, alcohol, I'm sorry, alcohol was first, and then the valiums and xanaxes, the pills, was second, and then the LSD, then the cocaine, then the mescaline, I'm tryin' to, then, the mar-, then the marijuana, no, no, no, I'm sorry, then the ecstasy, and then the marijuana, and then the crank, and then the mushrooms.

Of the remaining individuals, one reported no other illicit drug use, one reported using marijuana with opium the first time he tried it, and one individual could not accurately remember the sequence of his illicit drug experiences. When asked about his sequence of initiation he stated, "they're all kind of right around there in the same time…they all just kind of came into play at once. [Q: And no specific order for the hard drugs?] No, not really. They all just, all kind of hit at once."

The distinction between legal and illegal substances was minimized by some participants and yet,viewed as significant for others. Sam, a 48-year-old male ex-user of marijuana, discussed how his substance use experiences were connected, "It's just like the first cigarette, leads to the first beer, leads to the first joint. It's a, it's kind of a *step*. Each one of 'em's *a step."* Others shared similar sentiments as well. When discussing her drug use progression, Kathryn, a 29-year-old marijuana user stated, "I think alcohol is a gateway drug more than anything else. Because I have never heard of someone smoking pot before they drank alcohol. I don't think of marijuana as a gateway drug, I think of alcohol as being a gateway drug."

Perspectives on marijuana as a gateway drug.

Individual perspectives on marijuana as a gateway drug were mixed and multi-

dimensional. All study participants provided some insight into the inter-connections between involvement with marijuana and other drug use experiences. Reports on perceptions about marijuana as a gateway drug were varied. Of the 51 adults, 10 (19.6%) strongly supported the idea that marijuana is a gateway drug. This group included five current and five ex-users of marijuana. Eighteen adults (35%) did not believe that marijuana is a gateway drug. This group included 12 current and six ex-users of marijuana. Twenty-three (45%) adults, including 13 current and 10 ex-users of marijuana, reported having mixed viewpoints regarding marijuana as a gateway drug.

When discussing their thoughts and perspectives, individuals often compared and contrasted what they had learned or heard about gateway drugs from others (e.g., drug prevention programs, parents etc.) to what they understood based on their own experiences and the experiences of others within their lives. The following categorizations of responses are grounded in and emerged from the data. Responses often included multi-dimensional considerations on the role of marijuana in the drug career. Individuals discussed weighing numerous factors when making decisions about drug use. This has been described elsewhere (see Shukla & Kelley, 2007). The responses demonstrated the complexity inherent in understanding possible linkages between the various substance use experiences.

Some individuals supported the idea that marijuana was a gateway even when it contradicted their own experiences. Justin, a 21-year-old ex-user of marijuana, demonstrates:

> [Do you think marijuana is a gateway drug?] Yea, sure, just as much as any other drug. [Does it make you want to try other drugs?] I mean, I could see how it could, for someone that's, I mean, I don't know if that was the way it was for me, but I can see how someone could smoke pot, and get high, and get bored with it kind of easily, and move on to other drugs.

While Justin seemed to understand why some people might be enticed to try other illicit drugs after trying marijuana, he was unsure about whether or not this had been the case in his own experience. It was not uncommon for individuals who believed marijuana was a gateway drug to discuss other substances, such as alcohol and tobacco, as gateway drugs as well. Carla, a 35-year-old ex-user of marijuana, talked about the various types of gateway drugs she encountered:

> I don't think it's [marijuana] any more of a gateway drug than cigarettes are for alcohol and alcohol is for pot, and it's just you've got this degree of, of dangerousness, in terms of the drug itself and in terms of the consequences legally, and I just think you take one risk, you like it, you continue to escalate your risk until you get to a point in which the risks outweigh the costs, and people just have different stopping points, so I think pot, alcohol is a gateway to pot, and not everybody jumps that gate because the legal issue is enough of a deterrent, and then you go from pot to cocaine, and it's like, it's the same thing.

Two main themes describing the potential link between marijuana use and the subsequent use of other illicit drugs emerged from the data. These included: crossing the line, and the availability and access to other illicit drugs. Theo, a 37-year-old ex-user of marijuana, discussed the importance of crossing the line between licit and illicit substances:

> I think that, um, marijuana has more of a, a…it's more acceptable to people, as an illegal drug, than the other drugs are, but I believe, if you make the decision to do that   (marijuana), it's easier to make the decision to do other things (other illicit drugs),   and, you know, true of anything else in your life too, once you cross over a certain line, it makes things easier.

Michael, a 19-year-old marijuana user, further expanded on why he thought it might be easier to try other illicit drugs after using marijuana:

> I guess it made it easier, because once you tried that, you're pretty much involved in the drug world. If you try marijuana, then it's pretty much easy to get anything else. If you wanted to try hard enough, it's easy, it's easy enough to get it (other illicit drugs). [It becomes easier to get other drugs once you get marijuana?] Yeah, because usually the people who will sell you marijuana, either know people, or will sell them themselves, harder stuff, because marijuana's just something they use for the smaller money, you know, the other stuff, is a lot stronger, and it's a lot more money, so that's what they try to sell more of.

Data from the 18 adults (35%) who did not perceive marijuana as a gateway drug shed light on the complexity inherent in understanding factors that influence drug use experiences. Andrea, a 36-year-old marijuana user challenged the idea that using marijuana makes people want to try other illicit drugs without the presence of other contributing factors:

> No. No, it (marijuana) doesn't make me want to do something else (other illicit drugs). I don't do it and think, 'Oh, this isn't cutting it for me, I'd better try heroin.' I don't know, I think that if you look at the people who use, of course you're going to find people who abuse marijuana, and then go on to use other drugs, but I can't remember what the statistic is, it's just an incredibly small proportion, nowhere near significant. And I suppose there are people who would take the view that, well, if even one out of a hundred people uses marijuana and then goes on to use heroin or coke or something like that, then that's enough of an indication of a gateway, but that doesn't cut it for me. But it's also, if you look at the people who use marijuana and then go on to use other drugs, or who use marijuana and other drugs, they have, you know, certain background characteristics, certain social-psychological variables that are related to that, to their drug use, and it doesn't have anything to do with marijuana. If it hadn't been marijuana, it was going to be cigarettes,

or alcohol, or LSD. Their lives are just, they have something else going on.

Her perspective was shared by others as well. Matthew, a 47-year-old with a history of heavy involvement with illicit drugs similarly expressed his belief that the gateway concept was invalid:

> That's propaganda by William Randolph Hearst and his buddies. [So you don't think marijuana use leads to other drug use?] No, I think the propaganda leads to other drugs. [Do you think that if you find someone that has marijuana, you can find other illicit drugs?] Yeah, but I think I can find somebody that has cocaine, and they can probably get marijuana, you know. It's, you know, it's not a gateway drug on its own. Gateway is a term coined by the Establishment. It's only a gateway drug because they call it a gateway drug.

Kevin, a 35-year-old marijuana user, expanded why he did not believe marijuana was a gateway drug, using his own experiences as an example:

> No, gateway to other drugs? No, because the marijuana itself didn't lead me to other drugs. It really didn't, no, because a lot of times, I discovered the other drugs, that's on your list there, (referring to interview instrument) completely separated from the people I knew that smoked marijuana. And a lot of people I knew that smoked marijuana, frowned on those other drugs.

The adults in this study discussed the fact that many different factors influenced their drug use experiences. This is illustrated by the comments from Kyle, a 39-year-old marijuana user:

> Well, that's difficult to answer, um, I feel like the, the easy answer, the surface answer, would be yes, but I think that it's an over-simplification of how human beings create their realities, and that, to say, just with a broad statement, that marijuana is a gateway drug, I don't, I don't really agree with that.

Andrew, a 30-year-old self-described social marijuana user, expanded on the complexity of the issue:

> I don't buy the gateway drug. I think no, I think you run the gateway, circle of friends. I really believe your circle of friends are your gateways, because you start running around, you know you see kids, inner-city, urban black kids whatever, Hispanic kids smoking pot on the street, well they're also drinking a lot of beer, they're also smoking a lot of pot, you know, their lifestyle is the gateway. It's not the drug that's a gateway, it's the lifestyle, that's the gateway.

In his situation, Andrew attributed his lack of progression to other illicit drug use to the types of peers he associated with as an adolescent.

Several themes emerged from the data obtained from those who disagreed with the marijuana gateway hypothesis. These themes included the following: that alcohol or other drugs were more of a gateway than marijuana, that the different drug use experiences involved separate decision-making processes, and that the link between the use of marijuana and other illicit drugs is overstated because different drugs have different groups of users. The limitations of overly-simplistic explanations for drug experiences represented a consistent theme throughout the responses from these individuals.

The difficulties inherent in understanding the diverse factors that influence drug experiences were evident from the responses of the 23 (45%) adults who discussed being conflicted or uncertain about whether or not they viewed marijuana a gateway drug. Individuals expressed conflicting viewpoints, often discussing opinions that simultaneously supported and disagreed with the gateway concept. The importance of the illegality of marijuana was a common theme discussed by these adults. T.J., a 50-year-old marijuana user, explains:

> I don't think it (marijuana) causes anybody to use harder drugs, but I think, I mean I definitely, if you use marijuana, you've shown a willingness to cross a line that other people won't cross. [What is the line?] I guess the illegality of it, yeah.

Talia, a 31-year-old marijuana user, reiterated the belief that other contributing factors must be taken into account when explaining involvement with illicit drug use, stating:

> I'm sure it is for some people. Again, for the people who I consider have addictive personalities, I think it's probably a gateway drug. But I've seen so many people that, all they ever did was smoke marijuana and they never touched anything else. So, I, as far as marijuana itself, um, on its own merits, no, I don't think it is. I think it has to do with the person.

David, a 32-year-old ex-user of marijuana, expressed uncertainty about his thoughts:

> I want to say no, but, um, I'm, I'm not sure my path refutes that. [Did trying marijuana make it easier to try other drugs? How is it connected to other drug use?] I think, probably, you've made this small step, the biggest step is going from, I guess, legal to illegal, other illegals, not such a big step, so I can see it in that respect.

While David talked about the importance of illegality, he remained adamant that not all illicit drugs could be considered to be the same, stating: "Even though there are levels, like crack, in my world, crack is taboo, you know."

Individuals talked about their different drug use experiences as separate from one another. They often discussed their decisions to use different types of drugs as distinct from one another. When asked whether her marijuana use made her want to try LSD later on, Gretchen, a 27-year-old ex-user of marijuana, said,

> I think they're separate because they're so, those two drugs are so different, you know, the effects of them are so different, and marijuana's to make you relax, and LSD's just the opposite, you know, so. [So you don't know if it's a gateway drug or not?] It's hard to say. It was probably, well you know, once you use something illegal it's probably easier to switch to other illegal, you know.

Brenda, an 18-year-old marijuana user, discussed the importance of differences between different types of illicit drugs when explaining why she thought marijuana was a gateway drug:

> Well, once you smoke, that (marijuana), and you get used to smoking that, it's more like smoking cigarettes, you know, and then you need to go on to something bigger, or, it just makes you feel more comfortable, once you've smoked marijuana, if somebody comes up and offers you coke (cocaine), it's going to be easier for you to take coke, once you've smoked marijuana, than if you've never smoked marijuana before. [Why is that? It is related to the illegality?] Yeah, there's like a line, coke, and everything other than marijuana, is like real, real, real illegal, will never be legal, is not legal, anywhere, you know, marijuana is like, some places it's legal, some places it's not, you know, for some reasons it's legal, for some reasons it's not, and so, its…

These responses demonstrate the complexity inherent in understanding the links between different illicit drug use experiences. Major themes that were discussed included: the belief that any drug use leads to other drug use, the view that marijuana may be a gateway for some people but was not for me, and the significance of the failure of drug education efforts and drug policies to distinguish between different types of illicit drugs.

Discussion

Understanding potential connections between marijuana use and other illicit drug use is both challenging and important. Despite the vast literature on gateway drugs, much remains to be known. The data presented here sheds light on the topic of marijuana as a gateway drug by providing insight from those who have experienced marijuana and other illicit drugs. While the initiation sequences for some of the adults follows the stage-like progression identified in the literature, variations in sequencing existed. The majority of adults in this study initiated their drug experiences with alcohol and/or tobacco. Most of them initiated their involvement with illicit drugs with marijuana. However, one-third of the adults in this study reported the use of other illicit drugs prior to marijuana. The data on thoughts and perceptions regarding

the gateway hypothesis lends support to the idea that this concept is oversimplified; perceptions about the idea that marijuana is a gateway drug were mixed. While some individuals clearly supported the idea that marijuana is a gateway drug, others did not. Still others presented viewpoints expressive of conflict and uncertainty. The data presented here demonstrates the types of insight that can be gained from understanding involvement with drugs from an insider's perspective. It is evident that various types of factors and considerations that influence drug behaviors. In reality, purported linkages between the use of one drug and another are complex.

The drug histories of these adults present an interesting picture of how involvement with illicit drug use changes over time. In the later stages of the drug use career (i.e., in adulthood), only some individuals continued to use illicit drugs other than marijuana. It is possible that relationship between marijuana use and other illicit drug use may be different in the later stages of the drug use career than posited by the gateway concept. Some of the adults in this study strongly supported the belief that marijuana is a gateway drug. Indeed, it may be for some. More research into the specific personal factors that may lead marijuana to function as a gateway for some but not others is needed. The majority of the adults in this study expressed uncertainty about the gateway hypothesis. As their responses demonstrated the issue is multi-faceted and personal experiences can vary between one individual and the next. These data demonstrate the utility of taking an insider's perspective into account in explanations of drug use. The significance of the legal/illegal distinction was a common theme that was discussed. Individuals talked about the importance of crossing the line, or demonstrating a willingness to try an illegal drug as being important to explaining other illicit drug use experiences. They spoke about the significance of acquiring access to illicit drugs as another factor.

It is important to note that the findings from this study are limited. The drug history data is based on self-reports of the individuals interviewed and is subject to the limitations of self-report data. The findings are based on a small sample of adults from Oklahoma who were identified through snowball sampling techniques. The sample may be biased due to the sampling strategy utilized. The findings are further limited because of the fact that some of the individuals in this study were involved with marijuana use at the time of their interview. Their viewpoints may be biased. While the findings from this study are not generalizable, generalizability was not the goal. Rather, the purpose of this research was exploratory. The findings presented here illuminate the types of information that can be gleaned from examining involvement with drug use from an insiders' perspective. In general, the data from the adults in this study indicate that the gateway hypothesis fails to account for the multitude of factors, including individual decision-making and choice that increasingly influence drug experiences over time (McIntosh, MacDonald & McKeganey, 2006; Shukla & Kelley, 2007).

This study demonstrates the value of taking an insiders' perspective into account. Individuals discussed the different types of factors that influenced their drug experiences, further challenging attempts to identify simplistic associations or causal linkage between the use of one substance and another. The findings provide insight into complexity of inter-connections between substance use experiences. These data represent a starting point to better understand connections between the use of certain substances and subsequent ones. The value of examining such questions with a qualitative approach is demonstrated.

It is evident that much can be gained through the examination of illicit drug use from the perspective of those involved. The divergent, often conflicting perspectives demonstrate the challenges that exist in understanding complex human behavior such as involvement in illicit drug use. The variations in perspectives and experiences reiterate the limitations inherent in overly-simplistic explanations of illicit drug use.

While the gateway hypothesis is useful for describing possible linkages between early substances that are used and later ones, it is problematic for a number of reasons. Variations in patterns of initiation and progression, and changes in drug involvement in later stages of the drug use career are likely to be overlooked by those promoting the validity of the gateway hypothesis. In the present study, the majority of individuals tried illicit drugs other than marijuana. While some continued to use other illicit substances in adulthood (i.e., at the time of the interview), a number of them only continued to use legal drugs (i.e., alcohol and/or tobacco) and marijuana. More research on the role of marijuana in the later stages of the drug career is needed. Future studies need to continue to examine the relationship between different forms of illicit drug use. Drug research can only be strengthened by continuing to take into account the experiences and perspectives of those involved. Given that marijuana policy is changing, continues to capture national attention, and remains controversial internationally, it is clear that more research is needed.

References

Adler, I., & Kandel, D. B. (1981). Cross-cultural perspectives on developmental stages in adolescent drug use. *Journal of Studies on Alcohol, 42(9)*, 701-715.

Baumrind, D. (1983). Specious causal attributions in the social sciences: The reformulated stepping-stone theory of heroin use as exemplar. *Journal of Personality and Social Psychology, 45*(6), 1289-1298.

Biernacki, P., & Waldorf, D. (1981). Snowball sampling: Problems and techniques of chain referral sampling. *Sociological Methods and Research, 10*(2), 141-163.

Blaze-Temple, D., & Lo, S. K. (1992). Stages of drug use: A community survey of Perth teenagers. *British Journal of Addiction, 87*, 215-225.

Clarke, R. V., & Cornish, D. B. (2001). Rational choice. In R. Paternoster, & R. Bachman (Eds.), *Explaining criminals & crime* (pp.23-46). CA: Roxbury.

Clarke, R. V., & Cornish, D. B. (1985). Modeling offenders' decisions: A framework for research and policy. In M. Tonry, & N. Morris (Eds.), *Crime and justice: An annual review of research* (pp. 147-185). Chicago, IL: The University of Chicago Press.

Choo, T., Roh, S., & Robinson, M. (2008). Assessing the "Gateway Hypothesis" among middle and high school students in Tennessee. *Journal of Drug Issues, 38*(2), 467-492.

Cohen, H. (1972). Multiple drug use considered in the light of the stepping-stone hypothesis. *The International Journal of the Addictions*, *7*(1), 27-55.

Cook, T. D. & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings.* Boston, MA: Houghton Mifflin Company.

Cornish, D. B., & Clarke, R. V. (1986). *The reasoning criminal.* New York, NY: Springer-Verlag.

De Kort, M., & Cramer, T. (1999). Pragmatism versus ideology: Dutch drug policy continued. *Journal of Drug Issues, 29*(3), 473-492.

Donovan, J. E., & Jessor, R. (1983). Problem drinking and the dimension of involvement with drugs: A Guttmann Scalogram analysis of adolescent drug use. *American Journal of Public Health, 73,* 543-552.

Esbensen, F., & Elliott, D. S. (1994). Continuity and discontinuity in illicit drug use: Patterns and antecedents. *Journal of Drug Issues*, *24*(1), 75-97.

Federal Bureau of Investigation. (2007). *Crime in the United States, 2006.* Washington, D.C.: Federal Bureau of Investigation. Retrieved from http://www.fbi.gov/ucr/cius2006/arrests/index.html

Federal Bureau of Investigation. (2008). *Crime in the United States, 2007.* Washington, D.C.: Federal Bureau of Investigation. Retrieved from http://www.fbi.gov/ucr/cius2007/arrests/index.html

Federal Bureau of Investigation. (2009). *Crime in the United States, 2008.* Washington, D.C.: Federal Bureau of Investigation. Retrieved from http://www.fbi.gov/ucr/cius2008/arrests/index.html

Federal Bureau of Investigation. (2010). *Crime in the United States, 2009.* Washington, D.C.: Federal Bureau of Investigation. Retrieved from http://www2.fbi.gov/ucr/cius2009/arrests/index.html

Federal Bureau of Investigation. (2011). *Crime in the United States, 2010.* Washington, D.C.: Federal Bureau of Investigation. Retrieved from http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2010/crime-in-the-u.s.-2010/persons-arrested

Federal Bureau of Investigation. (2012). *Crime in the United States, 2011.* Washington, D.C.: Federal Bureau of Investigation.   Retrieved from http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2011/crime-in-the-u.s.-2011/persons-arrested

Gergen, M. K., Gergen, K. J., & Morse, S. J. (1972). Correlates of marijuana use among college students. *Journal of Applied Social Psychology*, *2*(1), 1-16.

Ginzler, J. A., Cochran, B. N., Domenech-Rodríquez, M., Cauce, A. M., & Whitbeck, L. B. (2003). Sequential progression of substance use among homeless youth: An empirical investigation of the gateway theory. *Substance Use and Misuse, 38*(3-6), 725-728.

Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory – strategies for qualitative research*. Chicago, IL: Aldine Publishing Co.

Golub, A., & Johnson, B. D. (1994). The shifting importance of alcohol and marijuana as gateway substances among serious drug abusers. *Journal of Studies on Alcohol*, *55*, 607-614.

Golub, A., & Johnson B. D. (2002). The misuse of the 'Gateway Theory' in US policy on drug abuse control: A secondary analysis of the muddled deduction. *International Journal of Drug Policy*, *13,* 5-19.

Hall, W. D., & Lynskey, M. (2005). Is cannabis a gateway drug? Testing hypotheses about the relationship between cannabis use and the use of other illicit drugs. *Drug and Alcohol Review, 24,* 39-48.

Harrison, L. (1995). The validity of self-reported data on drug use. *Journal of Drug Issues, 25* (1), 091-111.

Home Office. (n.d.). Drugs and the law. Retrieved from http://www.homeoffice.gov.uk.drugs/drug-law

Home Office. (2009). Controlled drugs: Reclassification of cannabis. Retrieved from http://www.homeoffice.gov.uk/about-us/corporate-publications-strategy/home-office-circulars/circulars-2009/001-2009/

HM Government. (2008). Government response to the recommendations made by the Advisory Council on the Misuse of Drugs in its report *Cannabis Classification and Public Health.* Retrieved from http://ahfh.co.uk/ldngov/Substance%20Misuse%20%5BDrugs%5D/Cannabis/HM.G%20-%20Cannabis%20Reclassification%20&%20Public%20Health.pdf

Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2002). *Monitoring the Future – National results on adolescent drug use: Overview of key findings, 2001.* NIH Publication No. 02-5105. Bethesda, MD: National Institute on Drug Abuse.

Kandel, D. B. (1975). Stages in adolescent involvement in drug use. *Science*, *190*, 912-914.

Kandel, D. B. (1978). Convergences in prospective longitudinal surveys of drug use in normal populations. In D.B. Kandel (Ed.), *Longitudinal research in drug use,* (pp. 3-38). New York, NY: John Wiley & Sons.

Kandel, D. B. (1989). Issues in sequencing of adolescent drug use and other problem behaviors. In B. Segal (Ed.), *Perspectives on adolescent drug use* (pp.55-76), New York, NY: Haworth.

Kandel, D. B. (2002). Examining the gateway hypothesis: Stages and pathways of drug involvement. In D.B. Kandel (Ed.), *Stages and pathways of drug involvement: Examining the gateway hypothesis* (pp. 3-15). NY: Cambridge University Press.

Kandel, D. B., & Faust, R. (1975). Sequence and stages in patterns of adolescent drug use. *Archives of General Psychiatry*, *32*, 923-932.

Kandel, D. B., & Jessor, R. (2002). The gateway hypothesis revisited. In D.B. Kandel (Ed.), *Stages and pathways of drug involvement: Examining the gateway hypothesis* (pp. 365 -372). New York, NY: Cambridge University Press.

Kandel, D. B., & Logan, J. A. (1984). Patterns of drug use from adolescent to young adulthood: I. Period of risk for initiation, continued use and discontinuation. *American Journal of Public Health*, *74*(7), 660-666.

Kandel, D. B., & Yamaguchi, K. (1993). From beer to crack: Developmental patterns of drug involvement. *American Journal of Public Health*, *83*(6), 851-855.

Kandel, D. B., Yamaguchi, K., & Chen, K. (1992). Stages of progression in drug involvement from adolescence to adulthood: Further evidence for the gateway theory. *Journal of Studies on Alcohol*, *53*, 447-457.

Kandel, D. B., Yamaguchi K., & Klein, L. C. (2006). Testing the gateway hypothesis. *Addiction, 101,* 470-472.

Lessen, J. M., Hopfer, C. J., Haberstick, B. C., Timberlake, D., Ehringer, M. A., Smolen, A. et al. (2006). Relationship between adolescent marijuana use and young adult illicit drug use. *Behavior Genetics, 36*(4), 498-506.

Lynskey, M. T., Vink, J. M., & Boomsma, D. I. (2006). Early onset cannabis use and progression to other drug use in a sample of Dutch twins. *Behavior Genetics, 36*(2), 195-200.

MacCoun, R. J. (2011). What can we learn from the Dutch cannabis coffeeshop system? *Addiction, 106,* 1899-1910.

Mackesy-Amiti, M. E., Fendrich, M., & Goldstein, P. J. (1997). Sequence of drug use among serious drug users: Typical vs. atypical progression. *Drugs and Alcohol Dependence*, *45*, 185-196.

McIntosh, J., MacDonald, F., & McKeganey, N. (2006). Why do children experiment with illegal drugs? The declining role of peer pressure with increasing age. *Addiction Research and Theory, 14*(3),   275-287.

Miller, T. Q. (1994). A test of alternative explanations for the stage-like progression of adolescent substance use in four national samples. *Addictive Behaviors*, *19*(3), 287-293.

Morral, A. R., McCaffrey, D. F., & Paddock, S. M. (2002). Reassessing the marijuana gateway effect. *Addiction*, *97,* 1493-1504.

Mosher, C. J., Miethe, T. D., & Hart, T. C. (2011). *The mismeasure of crime* (2nd ed.). Los Angeles, CA: Sage.

National Institute on Drug Abuse. (2009). *NIDA Info facts: Marijuana.* Retrieved from:

http://drugabuse.gov/infofacts/marijuana.html

O'Donnell, J. A. & Clayton, R. R. (1982). The stepping-stone hypothesis – marijuana, heroin and causality. *Chemical Dependencies: Behavioral and Biomedical Issues, 4,* 229-241.

Office of National Drug Control Policy. (n.d.). *Marijuana facts and figures.* Retrieved from:

http://www.whitehousedrugpolicy.gov/drugfact/marijuana/marijuana_ff.html

Rebellon, C. J., & Van Gundy, K. (2006). Can social psychological delinquency theory explain the link between marijuana and other illicit drug use? A longitudinal analysis of the gateway hypothesis. *Journal of Drug Issues*, *36*(3), 515-540.

Schwandt, T.A. (1997). *Qualitative inquiry.* Thousand Oaks, CA: Sage.

Shukla, R. (2003). *A rational choice analysis of decision-making and desistance from marijuana use.* (Doctoral Dissertation, Rutgers University, 2003). D*issertation Abstracts International, 64*, 1417.

Shukla, R. & Kelley, M. (2007). Examining how decisions to use marijuana change over time. *SubstanceUse and Misuse, 42*(9), 1401-1425.

Strauss, A. & Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.)*.* Thousand Oaks, CA: Sage.

Szalavitz, M. (2012, November 7). Two U.S. states become first to legalize marijuana. *Time.* Retrieved from http://healthland.time.com/2012/11/07/two-u-s-states-become-first-to-legalize-marijuana/

Tarter, R. E., Vanyukov, M., Kirisci, L., Reynolds, M., & Clark, D. B. (2006). Predictors of marijuana use in adolescents before and after licit drug use: Examination of the gateway hypothesis. *American Journal of Psychiatry, 163*, 2134-2140.

Vaughn, M., Wallace, J., Perron, B., Copeland, V., & Howard, M. (2008). Does marijuana use serve as a gateway to cigarette use for high-risk African-American youth? *The American Journal of Drug and Alcohol Abuse, 34,* 782-791.

Welte, J. W., & Barnes, G. M. (1985). Alcohol: The gateway to other drug use among secondary school students. *Journal of Youth and Adolescence, 14*(6), 487-498.

Yamaguchi, K. & Kandel, D. B. (1984a). Patterns of drug use from adolescence to young adulthood: II. Sequences of progression. *American Journal of Public Health, 74*(4), 668-672.

Yamaguchi, K. & Kandel, D. B. (1984b). Patterns of drug use from adolescence to young adulthood: III. Predictors of progression. *American Journal of Public Health, 74*(4), 673-681.

Yen, C. F., Yang, Y. H., Ko, C. H., & Yen, J. Y. (2005). Substance initiation sequences among Taiwanese adolescents using methamphetamine. *Psychiatry and Clinical Neurosciences, 59,* 683-689.

Zimmer, L., & Morgan, J. P. (1997). *Marijuana myths marijuana facts*. New York, NY: The Lindesmith Center.