Marijuana Use and Social Relationships

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through a process of interaction with more experienced users. Although it was not designed as a test or demonstration of Sutherland's differential association theory, Becker's study confirmed the importance of primary group relationships in the development of this pattern of deviant behavior.

The next research illustration builds upon Becker's work to examine further the utility of Sutherland's differential association theory as an explanation of marijuana use. The data for this report were taken from questionnaire surveys conducted among students at two large universities by the author of this book. In addition to its scientific objectives, the following research illustration has been written to introduce you to some of the methods and problems typically encountered in sociological analyses of survey data. We will be particularly concerned with the ways that researchers attempt to gain insight into the operations and outcomes of social processes when they lack the kind of direct, processual evidence on deviant behavior presented in the exceptional studies by Short and Strodtbeck and by Becker.

RESEARCH ILLUSTRATION 7–B

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Social research on marijuana use is commonplace today. However, prior to the 1960s, few social scientists considered this activity to be of much importance as a topic for deviance research. As is so often the case, scholarly disinterest in this phenomenon was a reflection of a general lack of public concern with marijuana use as a social problem in the United States. The passage of state and federal laws initially prohibiting the sale and possession of marijuana in the 1930s provoked little controversy or public interest, and received only brief attention in the mass media (Galliher & Walker, 1977). To be sure, prohibitionist propaganda during that time depicting marijuana as a powerful narcotic and killer drug had been widely accepted as fact. But, as long as strict laws appeared to contain the marijuana habit within the shadowy underworld of jazz musicians and urban minorities, the majority of Americans remained apathetic about this distant menace. Researchers were similarly inclined to insulate themselves from the social world of marijuana smokers. Occasional studies were conducted on captive populations of users who had been committed to prisons or federal hospitals for drug treatment. Not surprisingly, most of these studies ignored the social nature of marijuana use and

concentrated, instead, on a search for pathological traits or motivations in the personalities of users that drove them to their "habit."

Considering the times in which it was carried out, Howard S. Becker's (1953; 1963) investigation of the process of becoming a marijuana user seems all the more remarkable. Nearly two decades before marijuana use became defined as a controversial and researchable social problem in the Vietnam era, Becker was able to grasp its significance as an intriguing sociological problem. In contrast to prevailing scientific conceptions of the marijuana habit as an expression of individual pathology, Becker provided a sensitive description of marijuana smoking as a fundamentally social activity shared by normal people. Whereas other early studies have long been forgotten, Becker's insights are still theoretically relevant and consistent with recent evidence on marijuana use.

Becker's account of marijuana use as an interpersonal process has particularly clear implications for a theoretical formulation that has likewise survived over the years, Sutherland's differential association theory (1947). Becker's study not only provides support for differential association theory but also offers valuable guidance for further empirical applications of Sutherland's general framework to the specific phenomenon of marijuana use. Based on Becker's novel answer to the seemingly obvious question, "what is a marijuana user?," an attempt will be made here to test some precise predictions derived from Sutherland's theory about marijuana use and social relationships among college students in the 1970s.

BECKER'S STUDY

Even before he began his research, Becker had a far different outlook on the social world of marijuana users than did other investigators during the 1940s and 1950s. An accomplished and active jazz pianist, Becker had an insider's view of a marginal occupation in which marijuana use was a routine activity (see 1963: 79–119). Many of the marijuana smokers interviewed by Becker were, in fact, jazz musicians with whom he had played or was personally acquainted. Clearly, Becker was in a much better position to observe and understand marijuana use as a normal social process than were researchers whose only contacts with their subjects were in hospital or prison settings. From Becker's perspective, marijuana smokers did not appear as inherently pathological individuals set apart from ordinary people by distinctive traits or deviant motives, but as ordinary people who had successfully acquired the ability to use the drug for pleasure. In order to answer the question of how one *becomes* a marijuana user, then, Becker focused on the social experiences of his respondents rather than on their personalities.

Starting with some of his musician acquaintances who then introduced him to other marijuana users, Becker eventually interviewed 50 people about their interpersonal relationships and histories of marijuana use (1963: 45–46). As these interviews progressed, Becker employed the method of *analytic induction* to arrive at a general, uniform description of the process of becoming a marijuana user. Initial hypotheses and impressions suggested by early interviews were checked out and modified, if necessary, on the basis of later interviews. By the completion of his interviewing, Becker had identified three basic steps or stages that *every* person in his sample had undergone when first learning to use marijuana for pleasure. Most importantly, Becker found that social interaction between the new user and more experienced users was essential for the accomplishment of each stage in this learning process.

First, the new user must *learn the technique* of smoking marijuana properly. Becker's respondents usually did not experience any effects from marijuana the first time they tried it. He concluded that one of the main reasons for this is that a novice user does not know how to smoke and inhale the drug "in a way that insures sufficient dosage to produce real symptoms of intoxication" (1963: 46). All of the respondents reported that, either through direct teaching or by observation and imitation, they learned the proper technique from more experienced users.

Second, once new users could smoke marijuana properly, they had to *learn to perceive the effects* of the drug. As Becker points out (1963: 49), the pharmacological actions or "symptoms" produced by marijuana "do not automatically provide the experience of being high." A person must also be able to notice these symptoms, to associate them with the drug, and to interpret them as a high. However, the novice user is initially unable to do this and typically reacts as follows (1963: 49–50):

> His failure to get high worries him, and he is likely to ask more experienced users or provoke comments from them about it. In such conversations he is made aware of specific details of his experience which he may not have noticed or may have noticed but failed to identify as symptoms of being high. . . . The novice . . . picks up from other users some concrete referents of the term "high" and applies these notions to his own experience.

Whereas the first stage in Becker's learning process involved *physical techniques* for smoking marijuana, this stage involves the social acquisition of *subjective techniques* necessary for the perception of effects. Interactionally shared conceptions of the marijuana high function as tools that enable the novice to identify, organize, and give meaning to his or her subjective experiences. In the same sense that a person who

cannot smoke the drug properly does not become a marijuana user, a person who cannot learn the subjective techniques for perceiving a high does not succeed in becoming a marijuana user. For Becker's respondents, both of these steps were socially accomplished through participation and interaction in marijuana-using groups.

Finally, having acquired the ability to get something from the drug, the new user must also *learn to enjoy the effects* that are experienced. There is nothing intrinsically pleasurable about sensations of numbness or dizziness; altered perceptions of music or time are not necessarily enjoyable. For many of Becker's respondents, in fact, the newly discovered effects of marijuana were downright frightening. Unless the novice can somehow redefine these ambiguous and anxiety-provoking experiences as pleasurable, the motivation to become a user will be lacking. Becker (1963: 54–55) found that this redefinition occurs socially,

> in interaction with more experienced users who, in a number of ways, teach the novice to find pleasure in this experience which is at first so frightening. They may reassure [the novice] as to the temporary character of the unpleasant sensations and minimize their seriousness, at the same time calling attention to the more enjoyable aspects.

That is, to the extent that "favorable definitions of the experience that one acquires from others" can alter or outweigh feelings of discomfort or anxiety, the novice will become motivated to use marijuana for pleasure (1963: 56). Continued use will be possible as long as the user maintains this positive, socially defined conception of the marijuana high.

What, then, is a marijuana user? For Becker, only a person who has become *able* and *willing* to get high on the drug has reached the point of *being* a user. Use of marijuana for pleasure is not possible for those who have failed to acquire the techniques and motivations necessary for that experience. While pharmacological factors such as the dosage or strength of the drug affect the symptoms of intoxication, Becker makes it clear that the user's ability to fashion an enjoyable marijuana high from these raw materials is essentially a socially acquired skill.

MARIJUANA USE AND DIFFERENTIAL ASSOCIATION THEORY

Viewed within the immediate context of research on marijuana use, Becker's study represented a substantial advance beyond other early work on this topic. However, we will mainly be concerned here with some broader implications of Becker's analysis for sociological theorizing on deviant behavior. Among other things, his three-stage description of the social process of becoming a marijuana user clearly

demonstrates the empirical relevance of Sutherland's differential association theory (1947; Sutherland & Cressey, 1974) to at least one form of norm-violating behavior. For instance, Becker's findings are completely in accord with the basic position presented in the first three statements of Sutherland's micro-normative explanation (1974: 75): (1) individual deviant behavior is *learned* (2) through *interpersonal interaction* (3) within *intimate personal groups*. More importantly, Becker provides detailed empirical insights into the two major *products* of social learning that are subsequently distinguished in the fourth statement of Sutherland's theory: (*a*) "techniques of committing" the deviant act and (*b*) "motives, drives, rationalizations, and attitudes" that support the act. On the one hand, the first two stages of Becker's processual model confirm that techniques for getting high must be acquired from other people before one can be a user. On the other hand, Becker shows that the socially learned motive of enjoyment is a distinct but equally necessary requirement for marijuana use.

Additional motives, rationalizations, and attitudes that affect an individual's use of marijuana receive attention in another report from Becker's research, "Marijuana Use and Social Control" (1963: 59–78). A person who has *become* a user must still come to grips with questions of the illegality or immorality of the act in deciding whether to continue doing it. Just like many people who never try the drug in the first place, a beginner may discontinue use out of concern with being caught or because of fears inspired by conventional moral viewpoints on marijuana. Here, too, Becker found that social interaction with other users was the key factor in overcoming these moral and legal barriers (1963: 74):

> In the course of further experience in drug-using groups, the novice acquires a series of rationalizations and justifications with which he may answer objections to occasional use if he decides to engage in it.

The beginner learns to define the risk of arrest or discovery by nonusers as minimal. Moral stereotypes about the dangers of becoming a dope fiend are seen as groundless and are replaced by positive attitudes toward the drug. Becker summarizes the net result of this socially induced change in the individual's attitudes and definitions in the final sentence of his report (1963: 78):

> a person will feel free to use marijuana to the degree that he comes to regard conventional conceptions of it as the uninformed views of outsiders and replaces those conceptions with the "inside" view he has acquired through his experience with the drug in the company of other users.

Thus, Becker reaches a conclusion that seems to confirm the central principle of Sutherland's differential association theory (1974: 75–76): "A person becomes [deviant] because of an excess of definitions favorable to violation of law over definitions unfavorable to violation of law."

Despite the apparent consistency of his evidence with differential association theory, Becker never explicitly links his findings to Sutherland's general explanation of deviance. Becker's disinclination to view his research as a test of differential association might reflect his dissatisfaction with the *deterministic* approach of Sutherland's theory (see Matza, 1969: 101–142). Becker's theoretical goal is to provide an interpretive understanding of marijuana use as a choice that is made possible—not inevitable—by the techniques and social definitions that one learns from others. Becker does imply, of course, that *nonuse* of marijuana is assured or determined by the *absence* of these necessary social and subjective conditions. Can the *use* of marijuana be explained with equal certainty given the *presence* of a sufficient excess of associations and definitions favorable to the act? This is a legitimate and empirically testable implication of Sutherland's theory. We will examine this and other important questions raised by Becker and Sutherland following a brief discussion of the self-report surveys from which the data for this study were taken.

SURVEY METHODS

Samples

The survey data for this report were obtained from questionnaires administered to samples of undergraduate students at two large state universities, University of Minnesota and Florida State University (FSU). The Minnesota survey was conducted during winter quarter 1972 while the FSU survey was carried out during spring quarter 1973.

The procedures for sampling and administering questionnaires to students in the two surveys were similar in many respects. Neither sample was selected randomly or through other probability techniques. Rather, questionnaires were administered to students attending regular meetings of undergraduate courses that had been purposely selected to cover all the major colleges in the universities and to include students at all four class levels. Thus, these samples were diverse, but not necessarily representative, cross sections of the undergraduate populations at the two schools.

To prevent an abnormal drop in attendence on the day that questionnaires were administered to a class, instructors were asked not to

make a prior announcement of the survey. However, students attending class on the day of the survey were informed that their participation was voluntary and that their answers would be strictly confidential. Of the undergraduates attending classes on the days questionnaires were administered, 92 percent completed questionnaires at Minnesota while a 97 percent completion rate was obtained at FSU.

At each university, two slightly different versions of the basic questionnaire were distributed alternately to students in each class. Half of the students filled out a version—the Alcohol Form—that dealt with drinking behavior and attitudes toward alcohol. The other half of each class completed the Marijuana Form, which was identical to the first version except for appropriate changes in the wording of items to ask about marijuana use and attitudes toward that drug. Only data from students who completed the Marijuana Form at each school are used in this report. Thus, the analyses below will be based on 460 Minnesota undergraduates and 544 Florida State University undergraduates.

Measures

We will focus on three variables that are crucial to an evaluation of differential association theory: (1) social relationships with users or nonusers of marijuana, (2) definitions favorable or unfavorable to use, and (3) personal use of marijuana to get high. The Minnesota and FSU questionnaires included virtually identical measures of each of these three variables.

The dependent variable for this study, *marijuana use*, was measured by the following item at both schools:

> Which of the following statements best describes the approximate number of times you have gotten "high" on marijuana during the past year?
>
> 1. I did not use marijuana during the past year.
> 2. I used marijuana during the past year but did not get "high."
> 3. I got "high" on marijuana during the past year but only once or twice.
> 4. I got "high" on marijuana at least 3 times during the past year, but not more than 12 times.
> 5. I got "high" on marijuana more than 12 times during the past year.

An important feature of this item is that it measures a respondent's self-reported ability to get high, which is, for Becker (1953), a defining characteristic of a marijuana user. Therefore, according to Becker's conception, respondents who checked *either* of the first two state-

ments should be classified as *nonusers*. Indeed, for many of the analyses below, responses to this item will be combined or collapsed into two broad categories, nonusers (statements 1 or 2) versus users (statements 3, 4, or 5), distinguishing respondents who did not get high from those who did.

Sutherland, of course, places special emphasis on social relationships or associations in primary groups as a causal or independent variable in deviant behavior. In both the Minnesota and FSU surveys, the following item was used to measure respondents' degrees of participation in deviant or nondeviant relationships: "Of your *four closest friends*, how many would you say use marijuana at least once a month?: (1) One; (2) Two; (3) Three; (4) Four; (5) None." Note that this question measures respondents' *perceptions* of their friends rather than the *actual* extent of marijuana use by friends. Later, we will consider some possible problems that may be involved in the use of this indirect, perceptual measure of respondents' associations with patterns of marijuana use in primary groups.

Finally, to obtain a general measure of the favorable (or unfavorable) definitions that Becker and Sutherland see to be a necessary condition for marijuana use, respondents were asked the following question: "How would you generally characterize your opinions toward marijuana?" Responses to this question were recorded on a five-point scale that ranged from highly positive to highly negative at Minnesota and from positive to negative at FSU. The midpoint of these Likert-type scales was undecided in both surveys. In the analyses below, responses to this item will be collapsed into three categories describing respondents' overall definitions as positive, neutral, or negative.

RESULTS

Response distributions by sample

An appropriate place to begin an analyses of these survey data is by comparing the responses of the Minnesota and FSU students to the items discussed above. Table 1 shows how these samples compare on the dependent variable, marijuana use, as it was originally measured and as it has been collapsed here according to the absence or presence of the marijuana high. Quite clearly, marijuana use was more widespread among the FSU students in 1973 than among the Minnesota students in 1972. Based on responses to the original questionnaire item, slightly more than three out of five (60.8 percent) Minnesota respondents did not even try marijuana during the past year, while less than half of the FSU sample (46.4 percent) fell in this

Table 1
Response distributions by sample for marijuana use as originally measured and as collapsed into a two-category variable

	Marijuana use as originally measured					
Sample	Did not use	Used, but not high	High 1–2 times	High 3–12 times	High 12+ times	Total
Minnesota (1972)	60.8% (278)	5.0% (23)	10.7% (49)	10.9% (50)	12.5% (57)	100.0% (457)
Florida State University (1973)	46.4% (252)	6.1% (33)	8.5% (46)	11.4% (62)	27.6% (150)	100.0% (543)
	Somers' d = .18					

	Marijuana use as collapsed variable		
	First two categories in original measure combined	Last three categories in original measure combined	
Sample	Nonuser	User	Total
Minnesota (1972)	65.9% (301)	34.1% (156)	100.0% (457)
Florida State University (1973)	52.5% (285)	47.5% (258)	100.0% (543)
	Somers' d = .13		

category. At the other extreme, FSU students were twice as likely as Minnesota respondents (27.6 percent versus 12.5 percent) to report having gotten high more than 12 times during the past year. In the bottom half of Table 1 where the first and second categories of the original measure are collapsed into a more general class of nonusers, we find that nearly two thirds of the Minnesota respondents (65.9 percent) did not get high as compared to slightly more than half of the FSU respondents (52.5 percent).

Such comparisons of percentage differences in Table 1 do indicate that there is a statistical relationship between sample and marijuana use—i.e., being an FSU student is associated with increased chances of use. However, some important questions are difficult to answer by simply comparing percentages. How *strong* are the relationships between sample and marijuana use in the two percentage or contingency tables shown in Table 1? Is the statistical relationship between these variables strengthened or weakened when marijuana use is treated as a collapsed, two-category variable? To aid in answering these and other questions about the overall strength and nature of

Table 2
Response distributions by sample for number of respondent's four closest friends who use marijuana

	Number of friends who use marijuana					
Sample	0	1	2	3	4	Total
Minnesota (1972)	46.2% (212)	19.0% (87)	14.2% (65)	8.5% (39)	12.2% (56)	100.0% (459)
Florida State University (1973)	31.4% (171)	17.5% (95)	13.8% (75)	14.3% (78)	23.0% (125)	100.0% (544)
	Somers' d = .21					

relationships between variables, survey analysts typically use various *measures of association*. One such measure, Somers' d (see Somers, 1962; Reynolds, 1977), is reported beneath the two sections of Table 1 and in later tables. This measure of association for ranked or ordinal variables will be useful in comparing the relative strengths of relationships in different percentage tables. For instance, the weak to moderate $d = .18$ in the top half of Table 1 decreases in strength (get closer to zero) to $d = .13$ for the relationship where marijuana use is in two categories. Thus, a comparison of these measures of association shows that when some information is lost by collapsing the dependent variable, the statistical relationship between sample and marijuana use is weakened.

Tables 2 and 3 show how the Minnesota and FSU samples compare on responses to the two independent variables: number of friends who use and definition of marijuana. Not surprisingly, Minnesota respondents tend to have fewer friends who use and more negative definitions of the drug than do the FSU respondents. As revealed in Table 2, nearly half of the Minnesota sample (46.2 percent) reported

Table 3
Response distributions by sample for respondent's definition of marijuana

	Definition of marijuana			
Sample	Negative	Neutral	Positive	Total
Minnesota (1972)	47.5% (213)	15.4% (69)	37.1% (166)	100.0% (448)
Florida State University (1973)	38.2% (208)	12.1% (66)	49.6% (270)	100.0% (544)
	Somers' d = .12			

having *no* close friends who use, while less than one third of the FSU respondents (31.4 percent) reported a similar lack of close social relationships with marijuana users. At the other extreme, almost twice the proportion of FSU students as Minnesota students (23.0 percent versus 12.2 percent) indicated that *all* of their four closest friends use marijuana at least once a month. Likewise in Table 3, the proportion of respondents endorsing positive definitions of marijuana increases from 37 percent in the Minnesota sample to virtually half (49.6 percent) of the FSU sample.

Relationship between friends' use and respondents' use

The preceding comparisons of responses to single items across samples are of less theoretical interest and importance than are relationships between the independent variables and marijuana use. In this section we will examine one of the major empirical relationships implied by differential association theory: *friends' use of marijuana should be strongly and positively related to one's own use of marijuana.* A number of previous survey investigations have found support for this generalization (see, for example, Goode, 1970; Johnson, 1973; Kandel, 1978; Akers et al., 1979; Andrews & Kandel, 1979). The present study is no exception. Table 4 reveals that as the perceived number of marijuana-using friends increases from 0 to 4 in each sample, the percentages of respondents classified as users according to Becker's criterion also increase dramatically. Of those respondents who reported having *no* close friends who use marijuana, over 9 out of 10 at both Minnesota (95.2 percent) and FSU (91.2 percent) are themselves nonusers. This contrasts markedly with respondents whose four closest friends *all* use marijuana. In the latter category, approximately 88 percent of the Minnesota respondents and 94 percent of the FSU respondents are users. Therefore, in those cases where this pattern of deviant behavior is overwhelmingly *absent or present* among one's primary group associations, the individual's own behavior can be predicted with a high degree of certainty.

The results in Table 4 also point to an interesting and theoretically significant limitation of differential association as an explanation of deviant behavior. As Sutherland himself pointed out (in Cohen et al., 1956: 40), the differential association "hypothesis becomes increasingly uncertain in its operation" as the ratio of associations with deviant and nondeviant patterns "approaches unity." That is, in those cases where a person's associations with patterns of marijuana use are approximately equal to or balanced by associations with patterns of nonuse, Sutherland's theory cannot make a prediction and the chances that the individual will be a user or nonuser should be

Table 4
Marijuana use (collapsed) by number of closest friends who use marijuana within samples

	Sample and number of friends who use marijuana				
	Minnesota (1972)				
Marijuana use (collapsed)	0	1	2	3	4
Nonuser	95.2% (199)	64.4% (56)	46.2% (30)	23.1% (9)	12.5% (7)
User	4.8% (10)	35.6% (31)	53.8% (35)	76.9% (30)	87.5% (49)
Total	100.0% (209)	100.0% (87)	100.0% (65)	100.0% (39)	100.0% (56)
	Somers' d = .47				
	Florida State University (1973)				
	0	1	2	3	4
Nonuser	91.2% (155)	70.5% (67)	42.7% (32)	29.5% (23)	6.4% (8)
User	8.8% (15)	29.5% (28)	57.3% (43)	70.5% (55)	93.6% (117)
Total	100.0% (170)	100.0% (95)	100.0% (75)	100.0% (78)	100.0% (125)
	Somers' d = .48				

roughly 50/50. This argument would apply to respondents in the middle category of Table 4 who have two close friends who use and two who do not use. As the results show, these respondents are, in fact, fairly evenly split between nonusers and users at both Minnesota (46.2 percent versus 53.8 percent) and FSU (42.7 percent versus 57.3 percent).

The overall strength of the relationship between friends' use and respondents' use is indicated within each sample in Table 4 by Somers' d. The values of d within the Minnesota sample (d = .47) and the FSU sample (d = .48) not only reflect a strong, positive relationship in each case but these measures of association are also remarkably similar in magnitude. In other words, the empirical relationship between friends' use and respondents' use that was initially observed in the 1972 Minnesota survey is almost exactly *replicated* in the 1973 FSU survey. The fact that this finding is so consistent or reliable across two surveys conducted at different times in different popula-

tions increases confidence in the generality of this relationship and adds further support to Sutherland's theory.

Friends' use, respondents' use, and definitions of marijuana

Although the evidence in Table 4 is important to an assessment of Sutherland's theory, we should remember Cressey's (1960) argument that differential association is not simply a bad companions explanation of deviant behavior. In fact, the variable that Sutherland identifies as the immediate determinant of norm-violating behavior is the ratio of favorable and unfavorable definitions held by the individual toward the deviant act. As Becker's research suggested, once a person has learned from others the necessary techniques for smoking marijuana and perceiving its effects, the decision to put these techniques to use depends ultimately on whether positive meanings are attached to the drug experience. Again, both Becker and Sutherland imply that a person whose general definition of the drug is unfavorable or negative will not become a user no matter how many close social relationships he or she has with marijuana smokers. In contrast, individuals with predominantly positive definitions of marijuana should be more readily influenced by primary group associations with marijuana users. Therefore, according to this line of argument, the empirical relationship between respondents' use and friends' use should *vary in strength within different categories of the mediating variable, definition of marijuana.*

These conditional or contingent relationships and other empirical implications of Sutherland's theory can be examined through the three-way classification of respondents by friends' use, own use, and definition of marijuana presented in Table 5. The Minnesota and FSU samples have been combined in this analysis in order to increase the number of respondents in each cell of the three-variable classification. Percentage comparisons and other results can be very misleading and unreliable when a substantial number of cells in such complex tables are empty or contain very few cases.

The top third of Table 5 shows the relationship between friends' use and own use among those respondents who hold *negative* definitions of marijuana. As expected within this particular category of definition, the percentage of users does not change substantially as number of friends using marijuana increases. Respondents who, coupled with their negative definitions of the drug, have *no* close friends using marijuana do stand out somewhat in that they are virtually certain to be nonusers (97.4 percent). This is not surprising since these particular respondents lack both the favorable definitions and the interpersonal opportunities for learning the techniques that are

Table 5
Marijuana use (collapsed) by number of closest friends who use within categories of respondent's definition of marijuana for Minnesota and FSU samples combined

	Definition of marijuana and number of friends who use				
	Negative definition				
Marijuana use (collapsed)	0	1	2	3	4
Nonuser	97.4% (258)	85.2% (69)	77.5% (31)	81.8% (18)	33.3% (3)
User	2.6% (7)	14.8% (12)	22.5% (9)	18.2% (4)	66.7% (6)
Total	100.0% (265)	100.0% (81)	100.0% (40)	100.0% (22)	100.0% (9)
	Somers' d = .17				
	Neutral definition				
	0	1	2	3	4
Nonuser	91.4% (53)	76.3% (29)	50.0% (11)	50.0% (5)	42.9% (3)
User	8.6% (5)	23.7% (9)	50.0% (11)	50.0% (5)	57.1% (4)
Total	100.0% (58)	100.0% (38)	100.0% (22)	100.0% (10)	100.0% (7)
	Somers' d = .27				
	Positive definition				
	0	1	2	3	4
Nonuser	74.0% (37)	38.7% (24)	23.0% (17)	10.7% (9)	5.5% (9)
User	26.0% (13)	61.3% (38)	77.0% (57)	89.3% (75)	94.5% (156)
Total	100.0% (50)	100.0% (62)	100.0% (74)	100.0% (84)	100.0% (165)
	Somers' d = .29				

necessary to become a marijuana user. However, other respondents who have one, two, or even three close friends who use are only slightly more likely to report behavior that is inconsistent with their own negative definitions, with roughly four out of five students in these three categories being classified as nonusers. A greater ten-

dency to use appears to characterize respondents with four close friends who use; but it is important to note that this category includes a total of only nine respondents holding negative definitions of marijuana and a shift of just three cases could completely reverse the current proportions of users and nonusers. Nonetheless, with this one questionable exception, the results in the top third of Table 5 indicate that a negative definition of marijuana is generally sufficient to deter use even when many friends engage in this pattern of behavior. The relatively weak Somers' $d = .17$ for the relationship between friends' use and own use bears out this conclusion about the overriding influence of negative definitions.

Moving to the bottom third of Table 5 and focusing on respondents who hold *positive* definitions of marijuana, we find further evidence of the contingent relationships predicted by differential association theory. Respondents who have no close friends who use are still unlikely to be users despite their own positive definitions of marijuana. Since persons having no user friends lack the necessary interpersonal opportunities to learn the techniques to get high, the fact that three out of four respondents in this category did not get high is quite consistent with Becker and Sutherland. Significantly, the presence of just one close friend who uses marijuana is associated with a dramatic increase in the proportion of users among respondents with positive definitions of the drug (26.0 percent for zero friends versus 61.3 percent for one friend). That is, students with positive definitions are able to act on their willingness to get high when at least one friend can introduce them to the necessary techniques for smoking and perceiving effects. As expected, each increase in the proportion of one's friends that use is accompanied by an increase in the percentage of marijuana users among respondents with positive definitions, with use being virtually certain (94.5 percent) in the final category of four marijuana using friends. Under the condition of positive definition, then, a rather substantial empirical relationship remains between friends' use and respondents' use of marijuana (Somers' $d = .29$).

Finally, the results in the middle third of Table 5 for respondents with a *neutral* definition (i.e., undecided) of marijuana are very interesting. As was the case with other definitional categories, respondents with no close friends who use are highly unlikely to be users of marijuana (8.6 percent). This finding suggests, again, that the absence of interpersonal opportunities for learning is almost sufficient to insure nonuse of the drug. The presence of one friend who uses does increase the likelihood of use among neutral respondents (23.7 percent), but not nearly to the extent that it did among positive respondents. However, it is the results for respondents with two,

three, or four close friends who use that are most intriguing. As long as respondents' personal definitions of marijuana are neutral, their chance of becoming a marijuana user does not appear to increase beyond 50/50, even when every one of their closest friends are users. Although this finding was not anticipated and is based on a relatively small number of cases, it highlights another implication of Sutherland's theory: when there is no excess of favorable or unfavorable definitions, the theory yields no prediction, and the chances of deviant or nondeviant behavior should generally be equiprobable or 50/50. Therefore, as Table 5 indicates, increased social participation with marijuana users beyond the minimum amount necessary for learning techniques will not have an impact as long as the immediate determinant of marijuana use—definition—is neutral or balanced.

DISCUSSION AND CONCLUSION

On the surface, the differences between this study and Becker's (1963) are striking. The data presented here were gathered nearly a quarter of a century after his—a quarter of a century that witnessed dramatic changes in the extent and control of marijuana use in the United States. The middle-class college students surveyed for this research typically move in quite different social worlds than did the jazz musicians and other "outsiders" contacted by Becker. Above all, this quantitative analysis of three questionnaire items stands at the opposite extreme methodologically from Becker's insightful, qualitative analysis of the rich and detailed accounts of marijuana use provided by his informants.

Yet, when viewed from the abstract theoretical perspective of differential association, the differences between these studies become less prominent than do the common implications of their results. Both studies amply justify the emphasis that Sutherland (1947) placed on primary group relationships as the principal source of individual deviant behavior. Less vividly than Becker but, perhaps, more precisely, this study has revealed the particular importance of having at least one close acquaintance from whom one can learn the necessary techniques to get high on marijuana. Of all the students in both samples who reported that none of their close friends were monthly users of marijuana, less than 7 percent indicated that they had gotten high during the past year. This small percentage would undoubtedly have been even lower if the survey measure of friends' use had been more restrictive and had made it possible to identify respondents who were *never* exposed to patterns of marijuana use in their primary group relationships.

The more subjective side of differential association theory—the

"motives, drives, rationalizations, and attitudes" discussed by Sutherland as immediate determinants of deviant behavior—emerged as a crucial factor in this study as it did in Becker's work. Just as Sutherland's theory and Becker's analysis of the third stage of enjoyment implied, very few individuals who held a negative definition of marijuana reported having gotten high during the past year. While an excess of negative definitions strongly discouraged use even when a number of one's friends used marijuana, positive definitions of the drug were found to lead to the opposite result. Under the condition that individuals held positive definitions of marijuana, social relationships with other users were clearly associated with increasing chances of getting high.

Perhaps the most impressive demonstration of the predictive power of differential association theory appears in two corner cells of Table 5 where the combined effects of social relationships and subjective definition are strongest. In the upper left-hand corner of this table, over 97 percent of the students holding negative definitions and having zero close friends who use report that they were nonusers of marijuana. However, when these two factors switch to the opposite extreme in the bottom right-hand corner of Table 5—i.e., positive definition and all four closest friends use—nearly 95 percent of the respondents report having been users. The virtually perfect predictions in these two cases would seem to add credence to Sutherland's implicit assumption that deviant (as well as nondeviant) behavior is *determined* by the associations and definitions with which persons come into contact in their social environment. This implication is, of course, inconsistent with Becker's interpretive, insider's conception of marijuana use as a *choice* that one acquires socially but exercises *freely*. This study certainly cannot resolve these alternative views of human nature; however, the results in Table 5 indicate that the choice to use or not to use marijuana is highly predictable, if not strictly determined, under certain conditions specified by Sutherland.

As noted earlier, a number of previous surveys have provided similar evidence for the ability of differential association theory to explain much of the statistical variation in marijuana use among young people (Johnson, 1973; Kandel, 1973; 1974; 1978; Krohn, 1974; Burkett & Jensen, 1975; Griffin & Griffin, 1978; Ginsberg & Greenley, 1978; Thomas et al., 1975). Unlike other investigations in this area, however, the current study has also focused on the special circumstances under which the theory should be *incapable* of yielding a clear-cut statistical prediction. Two cases were examined that seem to approximate Sutherland's hypothetical condition of "unity" or balance in the ratio of deviant and nondeviant associations (in Cohen et al., 1956: 30–41). First, when an individual's four closest friends were

evenly divided between users and nonusers, the respondent's own chances of being a user were only slightly better than the even odds of 50/50. Second, the odds of being a user remained exactly even among students with a majority of marijuana-using friends as long as their own definition of the drug was undecided or neutral. Thus, in these special cases where there appears to be no excess of deviant or nondeviant associations or definitions, differential association theory predicts an individual's use of marijuana no better than does a random toss of a coin. In short, Sutherland's critical speculation about the limitations of his own theory seems to be born out by these survey data.

Yet, this study itself has some significant limitations that warrant caution in making inferences to Sutherland's theory from results presented here. As in other self-report surveys of drug use, there is reason for concern about the validity and reliability of the single-item indicators used to measure concepts in Sutherland's framework (see Single et al., 1975). In particular, respondents' answers to the question about their best friends' use of marijuana may not only have involved unreliable guesswork but also systematic error introduced by a tendency to make perceptions of others' use consistent with one's own use. Since this systematic perceptual bias could account for at least some of the statistical relationships reported here, additional research measuring the actual use of marijuana among respondents' primary group associates is needed to increase confidence in the findings of this study (see, for example, Kandel, 1973; 1974; 1978).

Inferences about time-order or direction of causality between the variables in this study are unjustified since the data from the two student surveys are *cross-sectional* and the results are merely *correlational*. That is, measures of all three variables were gathered from each student respondent at a single point in time, making it impossible to determine the sequence or timing of changes in those variables. Therefore, to repeat an example used earlier in this chapter, there is no way to determine from these data which came first, marijuana-using "bad companions" or one's personal use of the drug. Several *longitudinal* surveys—that measure these variables at two or more points in time—have tended to support the time order implied by Sutherland's theory: (1) association with marijuana-using friends precedes the onset of one's own use (Kandel, 1978; Ginsberg & Greenley, 1978) and (2) favorable definitions of the drug precede initiation of marijuana use (Andrews & Kandel, 1979). However, other studies in addition to Becker's suggest that this mechanical sequence does not adequately or accurately convey the complex, processual relationships between marijuana use, social definitions, and

group participation (Heise, 1977; Zimmerman & Wieder, 1977; also see Britt & Campbell, 1977).

These and other shortcomings of this study can also be found to a greater or lesser degree in virtually all sociological investigations of marijuana use since Becker's groundbreaking work. Taken as a whole, however, research in this area has, despite its imperfections, provided considerable support for Sutherland's general perspective on deviant behavior. As this report has attempted to show, research on marijuana use and social relationships is one area where empirical work can have an important bearing on the growth of theoretical knowledge.

REFERENCES

Akers, Ronald L., Marvin D. Krohn, Lonn Lanza-Kaduce and Marcia Radosevich
1979 "Social learning and deviant behavior: A specific test of a general theory." *American Sociological Review* 44 (August): 636–655.

Andrews, Kenneth H. and Denise B. Kandel
1979 "Attitude and behavior: A specification of the contingent consistency hypothesis." *American Sociological Review* 44 (April): 298–310.

Becker, Howard S.
1963 *Outsiders: Studies in the Sociology of Deviance.* New York: Free Press.
1953 "Becoming a marihuana user." *American Journal of Sociology* 59 (November): 235–243.

Britt, David W. and Ernest Q. Campbell
1977 "Assessing the linkage of norms, environments, and deviance." *Social Forces* 56 (December): 532–550.

Burkett, Steven R. and Eric L. Jensen
1975 "Conventional ties, peer influence, and the fear of apprehension: A study of adolescent marijuana use." *Sociological Quarterly* 16 (Autumn): 522–533.

Cohen, Albert K., Alfred Lindesmith and Karl Schuessler (eds.)
1956 *The Sutherland Papers.* Bloomington: Indiana University Press.

Cressey, Donald R.
1960 "Epidemiology and individual conduct: A case from criminology." *Pacific Sociological Review* 3 (Fall): 47–54.

Galliher, John F. and Allynn Walker
1977 "The puzzle of the social origins of the marihuana tax act of 1937." *Social Problems* 24 (February): 367–376.

Ginsberg, Irving J. and James R. Greenley
1978 "Competing theories of marijuana use: A longitudinal study." *Journal of Health and Social Behavior* 19 (March): 22–34.

Goode, Erich
1970 *The Marijuana Smokers.* New York: Basic Books.

Griffin, Brenda S. and Charles T. Griffin
1978 "Marijuana use among students and peers." *Drug Forum* 7: 155–165.

Heise, David
1977 "Group dynamics and attitude-behavior relations." *Sociological Methods and Research* 5: 259–288.

Johnson, Bruce D.
1973 *Marihuana Users and Drug Subcultures.* New York: Wiley.

Kandel, Denise B.
1978 *Longitudinal Research on Drug Use: Empirical Findings and Methodological Issues.* Washington: Hemisphere-Wiley.

1974 "Inter- and intragenerational influences on adolescent marijuana use." *Journal of Social Issues* 30: 107–135.
1973 "Adolescent marihuana use: Role of parents and peers." *Science* 181 (September 14): 1067–1070.

Krohn, Marvin D.
1974 "An investigation of the effect of parental and peer associations on marijuana use: An empirical test of differential association theory." Pp. 75–89 in Marc Reidel and Terrence P. Thornberry (eds.), *Crime and Delinquency: Dimensions of Deviance*. New York: Praeger.

Matza, David
1969 *Becoming Deviant*. Englewood Cliffs, N.J.: Prentice-Hall.

Reynolds, H. T.
1977 *The Analysis of Cross-Classifications*. New York: Free Press.

Single, Eric, Denise Kandel and Bruce D. Johnson
1975 "The reliability and validity of drug use responses in a large scale longitudinal survey." *Journal of Drug Issues* 5 (Fall): 426–443.

Somers, Robert H.
1962 "A new asymmetric measure for ordinal variables." *American Sociological Review* 27 (October): 799–811.

Sutherland, Edwin H.
1947 *Principles of Criminology* (4th ed.). Philadelphia: Lippincott.

Sutherland, Edwin H. and Donald R. Cressey
1974 *Criminology* (9th ed.). Philadelphia: Lippincott.

Thomas, Charles W., David M. Petersen and Matthew T. Zingraff
1975 "Student drug use: A re-examination of the 'hang-loose ethic' hypothesis." *Journal of Health and Social Behavior* 16 (March): 63–73.

Zimmerman, Don H. and D. Lawrence Wieder
1977 "You can't help but get stoned: Notes on the social organization of marijuana smoking." *Social Problems* 25 (December): 198–207.