Application of a General Theory of Deviant Behavior: Self-Derogation and Adolescent Drug Use

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The applicability of a general theory of deviant behavior to explaining drug use among junior high school students (N=3,148) is tested using data from a three-wave panel. The five-stage path model consists of eleven constructs measured at two points in time and one construct (drug use) measured at three points in time. The results of the analyses are consistent with the representation of drug use as the outcome of: (1) student's recognition of the self-devaluing implications of membership group experiences, (2) exacerbation of the self-esteem motive; and of the effects of these two concurrent processes, including decreased identification with the normative structure, increased perception of the self-enhancing potential of deviant responses, increased perception of the prevalence of drug use, and increased association with friends who use drugs.

The past decade has seen a resurgence of interest in theoretical perspectives on the etiology of drug use (Kandel, 1980; Lettieri et al., 1980). Recent empirical work has begun to focus on testing theoretical perspectives in an explanatory framework (Akers et al., 1979; Clayton and Voss, 1981; Jessor and Jessor, 1977; Johnson, 1979; Kandel, 1978; Kaplan, 1980a). We extend this line of analysis by elaborating a general theory of deviant behavior that can be applied to drug use and can be related to other work in social deviance and substance abuse. We then test the theory with data drawn from a longitudinal study of junior high school students.

THEORETICAL ORIENTATION

A General Theory of Deviant Behavior

The theory has been described in detail elsewhere (Kaplan, 1972, 1975b, 1980a, 1980b).

Deviant responses, in general, are regarded as responses motivated by the earlier development of self-rejecting attitudes in the course of normative participation in any of a variety of interpersonal or social interactions (membership-group experiences), and as functioning more or less effectively to assuage the intrinsically distressful self-rejecting attitudes. Central to the theory is the postulate of the self-esteem motive, according to which people characteristically behave so as to minimize the experience of negative self-attitudes and to maximize the experience of positive self-attitudes. Self-attitudes refer to the person's positive and negative emotional experiences consequent to perceiving and evaluating his or her own attributes and behaviors.

Attitudes of self-rejection are the end-result of a history of membership-group experiences in which the person was unable to defend against, adapt to, or cope with circumstances having self-devaluing implications (that is, disvalued attributes and behaviors or negative evaluations of the person by valued others).

The fact that self-devaluing experiences in membership groups are influential in the development of intrinsically distressful negative self-attitudes increases the likelihood that the individual will associate these experiences *in his or her own mind* with a failure to attain or maintain self-accepting attitudes. Consequently, the person will lose motivation to

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conform to the normative patterns that in the past were ineffective in facilitating the achievement of valued attributes and the performance of valued behaviors, and in mitigating the resultant experience of self-rejecting attitudes. Furthermore, as those normative patterns and any other normative patterns apparently related to them are subjectively associated with the genesis of emotionally distressful self-rejecting attitudes, these patterns come to be experienced as highly distressing in their own right. To continue to conform to these patterns would be to continue to engage in activities that not only were unrewarding in the past, but also are now intrinsically distressing. Not only does the individual lose motivation to conform to normative expectations, but also he becomes motivated to deviate from these distressful patterns.

Concurrent with these processes, the individual becomes increasingly motivated to behave in ways that minimize the experience of negative self-attitudes and maximize the experience of positive self-attitudes. The exacerbation of the self-esteem motive results from the person's continued exposure to the same normative environment that led to self-derogating attitudes in the first place, and a consequent loss of motivation to conform to, and development of motivation to deviate from, the normative structures of his or her membership groups. Because normative patterns are no longer motivationally acceptable responses, deviant patterns represent alternative responses by which the person can act effectively to subserve the intensified self-esteem motive.

Given this motivation to deviate from the normative expectations of the individual's membership group(s) and the need to find alternate patterns that will enhance self-esteem, the person becomes increasingly aware of deviant alternatives. Which of the available deviant patterns is then adopted is a function of the person's history of experiences with respect to the *visibility* of a particular alternative and his or her subjective evaluation of the *self-enhancing potential versus the self-devaluing potential* of the pattern(s) in question. A particular drug use/abuse pattern is more likely to be "visible" if, because of the availability of drugs, their use is prevalent among peers at school or in the neighborhood.

A particular deviant pattern is also more likely to be considered by the individual if it is not subjectively recognized as being associated with the genesis of self-rejecting attitudes. The individual's subjective perception of the likelihood of self-enhancing consequences resulting from a particular pattern of drug abuse, for example, will reflect such variables as: his or her subjectively perceived attitudes toward the illicit drug-abuse pattern that are held by members of positive and negative reference groups (peers, family, authority figures, authorities and associates at school); the visibility of more or less prevalent adverse consequences of the use of the illicit drug (such as arrest or loss of control); the perceived compatibility of the consequences and concomitants of the drug abuse pattern with behavior appropriate to valued social roles that are not themselves the basis of one's self rejection (for example, the behavior is appropriately masculine); and the ability to mitigate, with appropriate self-justifications, residual guilt or the expectation of negative sanctions from valued others.

To the extent that the onset of deviant responses is the outcome of the processes we have delineated, the adoption of deviant responses may be anticipated to enhance self-attitudes, insofar as it: facilitates intrapsychic or interpersonal *avoidance* of self-devaluing experiences associated with the membership groups that fostered the deviant behavior pattern; serves to *attack* (symbolically or otherwise) the perceived basis of the person's self-rejecting attitudes (that is, representations of the normative group structure); and offers *substitute* patterns with self-enhancing potential for behavior patterns associated with the genesis of self-rejecting attitudes.

Relationship to Other Theories and Previous Research

The theoretical statement incorporates a number of concepts other than those of self-attitudes and deviant behavior. Nevertheless, all of the factors are more or less directly related to self-attitudes. It is the central explanatory significance of self-rejecting attitudes that distinguishes this theory of deviant behavior from others.

Yet this general theory is congruent with

aspects of numerous theories of deviant behavior, whether as applied to explanations of illicit drug use or to other modes of deviant behavior. Thus, it has been described by Kandel (1980:251) as one of four theoretical frameworks that have been developed, "to account for an individual's decision to become involved in drugs. . . ." The other three are: Jessor and Jessor's (1977) social-psychological field theory of problem behavior, which has its intellectual origins in the social-structural approach to deviant behavior or in social learning theory; Akers' (1977) social learning theory, an amalgam of differential association theory and of operant conditioning; and Kandel's adolescent socialization theory (Kandel, 1973, Kandel et al., 1978), which is based on social learning and control, as well as on other theoretical perspectives.

These four frameworks clearly overlap. The general theory that guides our research is not diametrically opposed to the other three theoretical perspectives, nor to more general perspectives on deviant behavior. Indeed, one reviewer (Wells, 1978:190) cites the theory as a rapprochement between the viewpoints of structural interactionism and socialization-control analyses that, in the 1960s, were the "dominant perspectives on the use of the self-concept in the study of deviance."

Other researchers have explicitly tried to tie together features of major theories of deviance; for example Johnson's (1979) attempt to integrate features of strain, subculture, and control theory, and Clayton and Voss's (1981) representation of aspects of differential association, social control, anomie, containment, and opportunity theories along with the labeling perspective. Although we did not purposely incorporate other theories into the theoretical statement that guides our research, there are broad areas of agreement with earlier general perspectives on deviance. Elements of the structured strain perspective (Cloward and Ohlin, 1960; Merton, 1938), the subcultural perspective (Cohen, 1955; Miller, 1958), control theories (Briar and Piliavin, 1965; Hirschi, 1969; Polk and Halferty, 1966), containment theories (Reckless, 1967; Reckless et al., 1956; Voss, 1969), and labeling (Becker, 1963; Kitsuse, 1962; Lemert, 1951) all are integrated in our approach.[1]

Thus, our general theory does not contradict extant social theories of substance abuse or other more general theories of deviant behavior. It does suggest that characteristic self-attitudes underlie the adoption of deviance and that these should be taken into account in any attempts to explain deviant behavior in conjunction with other determinants.

Just as our theoretical orientation shares common ground with other social theories of deviance, empirical findings from other research are congruent with the general theory. This is the case whether one focuses on studies dealing with substance abuse patterns or those dealing with other modes of deviant behavior. Such empirical support is evident in reviews of factors implicated in drinking and drug use among youth, including attitudes toward social institutions, school performance, peer influence, and parental relationships (Kandel, 1980), and in discussions of delinquency research in which such factors as family and school experiences, future expectations, and delinquent associates and values are observed to be influential (Johnson, 1979). As Kandel (1980:251) observes, however, "few investigators have empirically tested a causal model that both specifies the variables that correlate with or predict a particular behavior and explains how these variables are interrelated in a causal sequence."

Earlier analyses of our present data set supported the existence of many of the bivariate relationships predicted by the general theory. These include hypotheses relating to the self-esteem motive (Kaplan, 1975d), antecedents of negative self-attitudes (Kaplan, 1976a), self-derogation and the subsequent adoption of deviant responses (Kaplan, 1975a, 1976b, 1978, 1979; Kaplan and Pokorny, 1976, 1977), and factors intervening between self-derogation and deviant responses (Kaplan, 1975c, 1977). In this analysis we begin the process of testing a complex causal model in a multivariate longitudinal framework.

METHODS

Sample

The data are drawn from a three-wave panel survey performed in the Houston Independent School District in 1971, 1972, and 1973. Ques-

tionnaires were administered to all the seventh grade students in 18 of the 36 junior high schools in Houston. The questionnaires were completed in class; however, students were guaranteed confidentiality and were given a code number paired with a separate cover sheet to permit matching with later waves of the panel. Usable questionnaires were returned by 7,727 students (83 percent) at Time 1. Students were surveyed again in 1972 and in 1973. A total of 3,148 students were present for all three administrations, constituting 41 percent of the sample interviewed at Time 1. The sample is 43 percent male, 57 percent female; 61 percent white, 29 percent black, and 11 percent Hispanic.

The process of selecting respondents and administering questionnaires is detailed elsewhere (Kaplan, 1980a). The issue of sample attrition, however, is potentially troublesome to the application of a causal model, and deserves consideration.

Efforts were made to resurvey all students remaining in the same junior high school in 1972 who had been there for the survey administration at Time 1 in 1971. Makeup appointments were scheduled for absent students, but no effort was made to contact students who had moved or changed schools. It is well documented that a sizeable portion of the population moves every year; Kish (1965) estimated this rate to be 20 percent on a national basis. To further compound the loss, the Houston Independent School District increased the use of busing during this period to meet court-ordered desegregation criteria. In addition, several hundred questionnaires could not be matched with earlier data because of inconsistent matching information or because students had removed their code number from the questionnaire.

We cannot as yet assess characteristics of the 17 percent of the initial target sample who were never interviewed,[2] but we can examine respondents present at Time 1 but missing at Time 2 and/or Time 3 ("missing") and compare them to respondents present at all three times "present"). The students "missing" are lower in self-esteem, feel more rejected by peers, family, and school, and see more self-enhancing potential in adopting a deviant response than do students present at all three times. The "missing" students are more likely

to have friends who use drugs, and more often use drugs themselves, than do the "present" students. Most of these differences are insignificant, or at best marginally significant. Nevertheless, the differences may affect the generalization of our data.

Differences in mean levels, however, do not necessarily imply a different structure among the variables relevant to our model. We examined the correlations among the 12 variables relevant to our model for the "missing" and the "present" groups (Table 1).[3] A comparison of the correlations between the two groups reveals a remarkable similarity. In fact, the average difference between correlations is only 0.026.[4]

The congruence of the correlational structure between the "present" and "missing" samples lends confidence to our use of "present" sample in our study. In fact, the bivariate relationships that would be predicted by the general theory are, if anything, stronger in the "missing" sample. As we cannot know if there would be differences between samples in change of relationships over time, we remain cautious in suggesting that our "present" sample could be generalized to the entire junior high school population.

Variables

Our analyses examined the fit between the empirical relationships among 25 measured variables on the one hand, and the relationships specified in the general theory of deviant behavior on the other hand. The 25 variables reflect 12 analytically distinct concepts, 11 of which are measured at two points in time, and one of which (drug use) is measured at three points in time. The theoretical model reflects the putative interrelationships among the variables said to influence drug use at Time 3.

Although we have data for three points in time, we postulate five stages to the causal model by predicting paths among several of the Time 2 indicators. Figure 1 indicates the causal ordering among the variables. Given our desire to control for a baseline on all the concepts, we enter all 12 Time 1 variables at Stage 1.[5] The Time 2 variables are distributed among Stage 2, Stage 3, and Stage 4. Drug use at Time 3 is our final outcome measure, and is temporally sepa-

TABLE 1. Pair-Wise Correlations among 12 Time 1 Variables Used in Analyses for Complete Sample Cases (below diagonal) and for Cases Missing from Complete Panel (above diagonal)*

	1	2	3	4	5	6	7	8	9	10	11	12
1. Felt rejection by peers	—	.33	.33	-.15	-.21	.42	.09	.02	.28	.16	.03	.09
2. Felt rejection by family	.33	—	.52	-.35	-.11	.43	-.10	.20	.49	.32	.14	.28
3. Felt rejection by school	.36	.49	—	-.47	-.14	.36	-.19	.23	.48	.34	.13	.31
4. Adult-endorsed attributes	-.15	-.34	-.46	—	.16	-.23	.23	-.23	-.36	-.26	-.08	-.24
5. Peer-endorsed attributes	-.21	-.09	-.09	.14	—	-.20	.04	-.02	-.04	-.02	.05	-.01
6. Self-derogation	.42	.38	.35	-.23	-.20	—	.12	.09	.34	.20	.11	.18
7. ID with normative structure	.07	-.10	-.17	.19	-.01	.12	—	-.12	-.09	-.10	-.03	-.13
8. Narcotics use	.03	.17	.21	-.22	-.02	.04	-.08	—	.19	.18	.17	.36
9. Self-enhancing potential of deviance	.28	.47	.48	-.35	-.02	.32	-.10	.14	—	.35	.10	.28
10. Friends get into trouble	.13	.30	.30	-.26	-.04	.15	-.13	.18	.33	—	.14	.32
11. Kids at school use narcotics	.08	.15	.19	-.13	-.01	.14	-.02	.14	.13	.15	—	.30
12. Friends use narcotics	.03	.19	.24	-.21	-.01	.10	-.06	.29	.20	.28	.31	—

* Complete sample panel cases include respondents present at all three points in time (N = 3,148). Cases missing from complete panel include respondents present at Time 1, but not present at Time 2 and/or Time 3 (N = 4,470).

rated from all predictors at Stage 5. We define each of the 12 constructs, specifying the theoretically anticipated causal linkages.

Felt rejection by peers, Felt rejection by family, Felt rejection by school. These three constructs are understood to reflect both the experience of self-devaluing responses by membership groups and the subjective awareness of the self-devaluing implications of the membership-group experiences. Use of these three membership groups permits differentiation between primary (family, peers) and secondary (school) group influences, and between peer and adult (family, school) influences.

As measured at Time 1, felt rejection by peers, family, and/or school is expected to increase feelings of self-derogation at Time 2. As measured at Time 2, these constructs are expected to be outcomes of Time 1 self-derogation, and as such, to reflect increased awareness of the self-devaluing influence of the student's membership groups. Awareness of the self-devaluing implications of these groups should lead to decreased emotional identification with the sources of the self-devaluation, increased rejection of the normative structure, increased awareness of and association with alternative groups, and increased deviant activity. In the case of awareness of past rejec-

tion by family and school, this poses expectations that high scores on these variables at Time 2 are predictive of: (1) higher scores on Time 2 recognition of the self-enhancing potential of deviant responses reflecting contranormative attitudes); (2) lower identification with the normative structure at Time 2; (3) greater awareness of the prevalence of drug use among the kids at school at Time 2; (4) increased association with drug-using peers at Time 2; and (5) increased drug use at Time 2 and Time 3. In the case of awareness of the self-devaluing implications of peer group experiences, high scores on this measure also should influence higher recognition of the self-enhancing potential of deviant responses at Time 2. However, because the students are expected to seek affiliations not associated with self-devaluing experiences, felt rejection by peers at Time 2 is predicted to lead to increased identification with adult figures at Time 2 (as reflected in the measure of identification with the normative structure). Moreover, earlier analyses and supporting literature suggest that drug use is compatible with the normative structure of many peer groups, and that the peer group may provide the social occasions for and otherwise facilitate drug use. Therefore, the student who feels re-

FIGURE 1. Variables to Be Included at Each of Five Stages of the Causal Model

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Felt rejection by peers, Time 1	Felt rejection by peers, Time 2			
Felt rejection by family, Time 1	Felt rejection by family, Time 2			
Felt rejection by school, Time 1	Felt rejection by school, Time 2			
Adult-endorsed attributes, Time 1	Adult-endorsed attributes, Time 2			
Peer-endorsed attributes, Time 1	Peer-endorsed attributes, Time 2			
Self-derogation, Time 1	Self-derogation, Time 2			
Identification with normative structure, Time 1		Identification with normative structure, Time 2		
Drug use, Time 1			Drug use, Time 2	Drug use, Time 3
Self-enhancing potential of deviance, Time 1		Self-enhancing potential of deviance, Time 2		
Friends get into trouble, Time 1			Friends get into trouble, Time 2	
Kids at school use drugs, Time 1			Kids at school use drugs, Time 2	
Friends use drugs, Time 1			Friends get into trouble, Time 2	

jected by peers and is motivated to reject them as a reference group may be deprived of the opportunity to use drugs, and is thus less likely to use drugs. This poses the expectations that felt rejection by peers at Time 2 leads to decreased affiliation with drug-using peers at Time 2, and to a lower probability of drug use.

The individual items constituting the measures of felt rejection by peers, felt rejection by family, and felt rejection by school are listed in the Appendix. Each index was factorally derived in earlier work (Kaplan, 1980a). Felt rejection by peers is a summative index of four items with good internal validity ($\alpha_{\text{Time 1}} = .65$, $\alpha_{\text{Time 2}} = .66$). Felt rejection by family includes seven items ($\alpha_{\text{Time 1}} = .72$, $\alpha_{\text{Time 2}} = .76$). Felt rejection by school includes seven items ($\alpha_{\text{Time 1}} = .68$, $\alpha_{\text{Time 2}} = .71$).

Self-attribution of adult-valued qualities, Self-attribution of peer-valued qualities. These two constructs relate to the self-attribution of traits and behaviors presumed to be valued by the respondents' membership groups. On the assumption that such attributes are intrinsically valued by the respondent and evoke positive responses from valued others, high scores on these variables at Time 1 are expected to

lead to lower levels of self-derogation at Time 2. No specific predictions are made for the antecedents and consequences of these two constructs at Time 2; however, the Time 2 variables are included in the saturated model estimates.

The individual items that compose the measures of valued attributes are listed in the Appendix. The measure of adult-endorsed attributes is composed of five items ($\alpha_{\text{Time 1}} = .53$, $\alpha_{\text{Time 2}} = .59$). The measure of peer-endorsed attributes comprises three items ($\alpha_{\text{Time 1}} = .30$, $\alpha_{\text{Time 2}} = .33$).

Self-derogation. This construct reflects the person's affective responses consequent to self-perceptions and self-evaluation of not possessing attributes and performing behaviors that are valued by the groups with which he or she identifies, and of being the object of rejecting attitudinal responses by the groups with which he or she identifies. Hence, self-derogation at Time 2 should be predicted by increases in felt rejection by peers, family, and school, by decreases in adult- and peer-endorsed attributes, and by an increase in identification with the normative structure at Time 1.

Assuming that self-derogation at Time 1 results from processes similar to those that anticipate self-derogation at Time 2, it is expected that self-derogation at Time 1 leads to increased subjective awareness of the sources of self-derogation; that is, to higher scores on felt rejection by peers, family, and school at Time 2. Concurrently, it is expected that whatever characterological deficiences and social circumstances produced self-derogation at Time 1 will be reflected in the direct influence of self-derogation at Time 1 on self-derogation at Time 2.

The exacerbation of the self-esteem motive, reflected in the continued influence of Time 2 self-derogation net of Time 1 self-derogation, is expected to lead the student to search for alternate deviant patterns that might satisfy the self-esteem motive and replace the normative patterns that failed in this respect. Specifically, higher levels of self-derogation at Time 2 are predicted to lead to the student's increased awareness of the prevalence of drug use at Time 2, to increased affiliation with deviant others (as reflected in increased affiliation with drug-using friends at Time 2), and to increased deviant activity (as reflected in Time 2 and Time 3 drug use).

The measure of self-derogation is a weighted sum of seven items, listed in the Appendix. The derivation of this scale has been reported elsewhere (Kaplan, 1976a). In our sample, the internal consistency of these seven items is good ($\alpha_{Time\ 1}= .60$, $\alpha_{Time\ 2}= .67$).

Identification with the normative structure. Conceptually, this variable reflects the student's emotional ties to the three membership groups. Since identification with the normative structure measures sensitivity to the evaluative responses of others, it is expected that high Time 1 scores on this variable will influence higher levels of self-derogation at Time 2. On the one hand, perceived negative responses to the subject by group members are more likely to influence self-rejection in students for whom such responses are affectively significant. On the other hand, the marked sensitivity to others' disvaluing responses may indicate an inability to defend against the self-devaluing implications of others' responses.

Identification with the normative structure intervenes between felt rejection by peers, family, and school membership groups and

drug use. Identification with normative membership groups should be weakened as a result of prior subjective identification of the membership groups as sources of self-derogation. As the measure reflects primarily emotional dependence on family and school, it is expected that increases in felt rejection by family and school at Time 2 lead to decreases in identification with the normative structure at Time 2, and that an increase in felt rejection by peers at Time 2 leads to an increase in identification with the normative structure at Time 2, reflecting a shift in reference groups from a rejecting group to groups with apparently more self-enhancing potential.

Decreased identification with the normative structure diminishes the effectiveness of social sanctions against deviant responses. Hence, the student becomes less inhibited about expressing deviant dispositions. This poses the expectation that decreased identification with the normative structure at Time 2 will influence increased drug use at Time 2 and Time 3.

The measure of identification with the normative structure sums responses to six questions, listed in the Appendix ($\alpha_{Time\ 1}=.60$, $\alpha_{Time\ 2}=.65$).

Drug use. As a deviant pattern, drug use results from the loss of motivation to conform and the development of motivation to deviate from the normative structures of groups implicated in the genesis of self-rejecting feelings. Therefore, increased felt rejection by family and school at Time 2 is expected to increase the probability of drug use at Time 2 and Time 3. However, when drug use is identified with or contingent on acceptance by the peer group, felt rejection by the group should decrease the likelihood of performance of this behavior in the future. Hence, felt rejection by peers at Time 2 is expected to decrease the probability of drug use at Time 2 and Time 3.

Decreased identification with the normative structure at Time 2 is also expected to increase the probability of drug use at Time 2 and Time 3. Concurrently, the inability to satisfy the self-esteem motive influences the adoption of alternative deviant responses toward the goal of reducing self-derogating feelings. Thus, self-derogation at Time 2 is expected to lead to higher levels of drug use subsequently.

As the availability of a deviant pattern is prerequisite to its adoption, drug use is ex-

pected to be anticipated by a high level of awareness of the prevalence of drug use among the kids at school. Additionally, as learned behavior is influenced by the behaviors of those with whom one associates intimately, it is also expected that narcotics use will be influenced by associations with friends who use drugs.

Drug use is indicated at Time 2 and Time 3 by a response of "yes" to, "Within the last *year* did you take narcotic drugs?". At Time 1, drug use was indicated by a "yes" response to "Within the last *month* did you take narcotic drugs?". The incidences of reported drug use are 3 percent at Time 1, 10 percent at Time 2, and 17 percent at Time 3.

It is obvious from the number of respondents reporting drug use at Time 3 that students were counting drugs other than true narcotics when responding to this question. This question is the only measure of use or abuse of substances, other than marijuana or alcohol, available in these data. We can get some sense of which drugs they probably are referring to by examining responses from a subsample of our 3,148 respondents who have thus far been interviewed in a fourth wave of data collection (N=991) in 1980–1982. In the most recent survey, respondents were asked when they first used any of a wide variety of different drugs. Although the comparisons cannot be exact, in view of problems of recall over an 8-year period and considering that the question does not elicit mutually exclusive responses,[6] it appears that the drugs most likely to have been used by respondents between 1971 and 1973 are barbituates, amphetamines, quaaludes, and hallucinogens. If we make some allowance for respondents' diminished recall and create a measure of report (at Time 4) of first use of such drugs in 1974 or before, we find a strong relationship between this measure and students' report of narcotic drug use in 1973. (γ = .79, ϕ = .38).[7]

Self-enhancing potential of deviant responses. This construct reflects attraction to contranormative patterns. Awareness of the self-enhancing potential of deviant responses derives from the contemporaneous processes of: (1) losing motivation to conform to, and gaining motivation to deviate from, the normative structure of membership groups implicated in the genesis of distressful self-rejecting attitudes; and (2) exacerbation of the self-esteem motive that continues to be unsatisfied in the context of normative membership-group experiences. Hence, it is anticipated that higher scores on felt rejection by peers, family, and school at Time 2 and self-derogation at Time 2 will correspond with increased awareness of the self-enhancing potential of deviant responses at Time 2. Such increased awareness is expected to sensitize students to the availability of deviant behaviors in their environments, and to attract them to those who perform such behavior. Thus, it is anticipated that increased awareness of the self-enhancing potential of deviant responses will result in an increased awareness of the prevalence of drug use among the kids at school, in an increased association with drug-using friends, and in the use of drugs.

Data regarding the derivation and construct validity of the scale are reported elsewhere (Kaplan, 1980a). The 11 items used in constructing the scale are listed in the Appendix. In our sample, the internal validity is good ($\alpha_{\text{Time 1}}$=.66, $\alpha_{\text{Time 2}}$=.65).

Kids at school use drugs. An affirmative response to the single item, "Do many of the kids at school take narcotic drugs?" is interpreted as indicating the student's perception of the prevalence of drug use among the kids at school. Increased awareness of the availability and use of drugs among the kids at school is theoretically anticipated by loss of motivation to conform to, and motivation to deviate from, the normative structure, and by the increased need for deviant response patterns with self-enhancing potential to replace the normative patterns associated with exacerbation of the self-esteem motive. This poses the expectation that increases in the following Time 2 variables will be predictive of increases in the student's awareness of the prevalence of drug use among the kids at school at Time 2: felt rejection by family, felt rejection by school, awareness of self-enhancing potential of deviant responses, and self-derogation.

Awareness of drug use among the kids at school, in turn, is expected to be related to increased drug use, on the basis that the variable reflects both the objective and subjective availability of the pattern. In addition the real or distorted perception of the prevalence of the pattern provides a measure of self-justification for using drugs.

Friends get into trouble. Agreement with the single item, "Most of my close friends are the kinds of kids who get into trouble a lot," is used as an indicator of the student's present involvement in a general deviant peer subculture. This variable is included in the analysis (along with other Time 1 measures such as self-enhancing potential of deviant responses, kids at school use drugs, and good friends use drugs) to permit demonstration that the influences of our theoretical variables on drug use are independent of the influence of prior involvement in a subculture that defines drug use as acceptable.

Good friends use drugs. An affirmative response to the single item, "Do many of your good friends take narcotic drugs to get high?" is used as an indicator of involvement in a drug-using friendship group. Affiliation with drug-using friends is expected to reflect a shift in reference groups away from those recognized as sources of self-derogation. Since drug use is presumed to be deviant from the perspective of the family and school, and more acceptable from the perspective of peers, felt rejection by family and school at Time 2 is expected to influence increased Time 1 association with drug-using friends, and felt rejection by peers at Time 2 is predicted to influence decreased association with drug-using friends at Time 2. Concurrently, higher levels of perceived self-enhancing potential of deviant responses at Time 2 and higher levels of self-derogation at Time 2 should imply increased association with drug-using friends: (1) on the expectation that such affiliation will offer the opportunity to avoid or attack the basis of one's feelings of self-derogation and/or offer substitute sources of self-gratification; and (2) independent of this assumption, out of a need to seek alternate deviant patterns that might offer self-enhancing opportunities. Affiliation with drug-using friends at Time 2, in turn, is expected to lead to drug use at Time 3, as a result of processes whereby students imitate the behaviors of new role models and, in so doing, earn the rewards of social approval and consequent self-acceptance.

Analysis

The full theoretical pattern predicated for the variables is not easily tested in an empirical

framework. Besides the complexities introduced by the large number of distinct concepts, the theory allows for nonrecursive effects and endogenous interactions between indicators. Nevertheless, it is possible to estimate a recursive model that approximates important aspects of the theoretical structure.

There are a number of advantages to applying a path model to these data. The availability of longitudinal data assures us that all the independent variables temporally precede the dependent variable of drug use at Time 3. Regression estimation of paths permits us to represent a more complex model than would be possible with discrete analysis techniques. The inclusion of Time 1 indicators of all the constructs establishes a baseline for assessing real change from Time 1 to Time 3 in the reported use of drugs. And allowing for the problems of sample attrition that we have mentioned, the large sample size gives us confidence in the stability of our estimates.

There are statistical and conceptual difficulties with this model. Goldberger (1964), Nerlove and Press (1973), and Hanushek and Jackson (1977), among others, document the problems inherent in regression analysis with a dichotomous dependent variable. While we recognize the potential for error in regression estimates and the more desirable properties inherent in other models (such as logit models), we believe that, with a large sample and only a moderate skew in the dependent variable (17 percent report drug use at Time 3), a multiple regression is a robust technique (Hanushek and Jackson, 1977:209). Also important for our concerns is that there are no easily interpretable analogs to standardized path coefficients in logit models. Although Lizotte and Bordura (1980) have proposed a novel solution to this problem by combining ordinary least squares (OLS) paths with a logit modeling of the final stage in a path model, we would still have a problem with their method when regressing an endogenous dichotomous variable on prior variables. Therefore, for purposes of approximating causal linkages in our model, we present the standardized paths. We do however, estimate the logistic equation for each dichotomous dependent variable to demonstrate that the OLS paths are reproduced in the logit models.

There is also the potential for problems with

TABLE 2. Pair-Wise Present Correlations Among 25 Variables Tested in the Model*

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Felt rejection by peers T1												
2. Felt rejection by family T1	.33											
3. Felt rejection by school T1	.36	.49										
4. Adult endorsed attributes T1	-.15	-.34	-.46									
5. Peer endorsed attributes T1	-.21	-.09	-.09	.14								
6. Self-derogation T1	.43	.38	.35	-.23	-.20							
7. Identification with normative structure T1	.07	-.10	-.17	.19	-.01	.12						
8. Drug Use T1	.03	.17	.21	-.22	-.03	.04	-.08					
9. Self-enhancing potential deviance T1	.28	.47	.48	-.35	-.01	.32	-.10	.15				
10. Friends get into trouble T1	.13	.30	.30	-.26	-.04	.15	-.13	.18	.33			
11. Kids at school use drugs T1	.08	.15	.19	-.13	-.01	.14	-.02	.14	.13	.15		
12. Friends use drugs T1	.03	.19	.24	-.21	-.01	.10	-.06	.29	.20	.28	.31	
13. Felt rejection by peers T2	.43	.26	.25	-.14	-.16	.29	.05	-.00	.22	.11	.04	.04
14. Felt rejection by family T2	.23	.47	.32	-.23	-.09	.28	-.03	.06	.32	.23	.10	.13
15. Felt rejection by school T2	.23	.32	.47	-.33	-.10	.26	-.09	.12	.34	.24	.12	.15
16. Adult-endorsed attributes T2	-.12	-.25	-.34	.44	.10	-.13	.15	-.12	-.25	-.20	-.10	-.11
17. Peer-endorsed attributes T2	-.16	-.08	-.07	.08	.52	-.15	-.03	-.02	.02	-.03	-.01	.02
18. Self-derogation T2	.31	.28	.25	-.13	-.16	.46	.09	.00	.20	.13	.09	.05
19. Identification with normative structure T2	.01	-.11	-.14	.16	-.01	.03	.43	-.07	-.13	-.11	-.05	-.08
20. Drug use T2	.00	.16	.17	-.15	-.01	.07	-.07	.21	.10	.14	.18	.26
21. Self-enhancing potential deviance T2	.20	.32	.34	-.25	-.03	.22	-.08	.07	.51	.28	.12	.15
22. Friends get into trouble T2	.09	.21	.24	-.20	-.03	.13	-.08	.13	.23	.30	.11	.19
23. Kids at school use drugs T2	.01	.07	.09	-.06	.05	.06	.03	.05	.08	.07	.28	.14
24. Friends use drugs T2	.03	.17	.20	-.16	.01	.09	-.06	.16	.17	.20	.19	.27
25. Drug use T3	.01	.17	.19	-.18	-.02	.08	-.07	.15	.13	.12	.15	.21

* Paired N's vary from 2,707 to 3,128.

multicollinearity. The theory expects conceptual overlap among many of the elements of the model, and the correlations among the independent variables confirm the existence of multicollinearity. These correlations are generally modest and do not bias the estimates of explained variance, but they can affect the estimates of the path coefficients, particularly when the same variable is entered at two points in time. Although it is possible that multicollinearity can lead to erroneously high estimates of standardized regression coefficients (Pindyek and Rubinfield, 1976), this is not likely with our data. In fact the finding of a significant standardized path in a model of this complexity is more likely a conservative test of the significance of the predictor.

In sum, we recognize that the model estimated is an accommodation between the intricacies of the theory and the limitations of the available analysis strategies. It does, however, allow us to approximate a complex pattern of direct and indirect paths predicting drug use.

RESULTS

Table 2 presents the pair-wise present correlation matrix of the variables used to estimate the model: 12 Time 1 variables, 12 Time 2 variables, and one variable, drug use, at Time 3.[8]

The correlations were used as input to an OLS regression program. We first estimated the saturated regression model of Time 3 drug use regressed on all 24 Time 2 and Time 1 variables. We then regressed each endogenous variable on all variables conceived as causally

TABLE 2. *(Continued)*

Variables	13	14	15	16	17	18	19	20	21	22	23	24
1. Felt rejection by peers T1												
2. Felt rejection by family T1												
3. Felt rejection by school T1												
4. Adult endorsed attributes T1												
5. Peer endorsed attributes T1												
6. Self-derogation T1												
7. Identification with normative structure T1												
8. Drug Use T1												
9. Self-enhancing potential deviance T1												
10. Friends get into trouble T1												
11. Kids at school use drugs T1												
12. Friends use drugs T1												
13. Felt rejection by peers T2												
14. Felt rejection by family T2	.34											
15. Felt rejection by school T2	.36	.51										
16. Adult-endorsed attributes T2	−.18	−.35	−.49									
17. Peer-endorsed attributes T2	−.24	−.12	−.16	.13								
18. Self-derogation T2	.46	.41	.36	−.19	−.26							
19. Identification with normative structure T2	.06	−.15	−.21	.25	−.01	.09						
20. Drug use T2	.04	.25	.25	−.23	−.03	.11	−.13					
21. Self-enhancing potential deviance T2	.30	.49	.50	−.38	−.03	.31	−.16	.20				
22. Friends get into trouble T2	.16	.33	.35	−.31	−.04	.18	−.15	.29	.36			
23. Kids at school use drugs T2	.06	.14	.14	−.12	−.02	.12	−.02	.18	.16	.13		
24. Friends use drugs T2	.07	.27	.29	−.24	−.05	.15	−.11	.46	.28	.38	.32	
25. Drug use T3	.04	.23	.23	−.20	−.03	.13	−.13	.41	.18	.21	.18	.36

prior. Finally, we trimmed the model to include only significant predictors ($p < .05$) of each regressand and reestimated each of the equations. The trimmed estimates presented in Table 3 are substantially unchanged from those estimated in the saturated model. The average reduction in explained variance is only two-tenths of 1 percent.

Table 3 shows successive stages of the path model with each columnar grouping representing constructs considered contemporaneous and each grouping antecedent to the grouping to the left. Each of the Time 2 Stage 2 endogenous variables is regressed on the Time 1 Stage 1 variables; each of the Time 2 Stage 3 endogenous variables is regressed on the Stage 1 variables and the Time 2 Stage 2 variables; and each of the Time 2 Stage 4 variables is regressed on the Stage 1 variables, the Time 2 Stage 2 variables, and the Time 2 Stage 3 vari-

ables. The column to the far right shows the direct effects on the ultimate dependent variable—drug use at Time 3.

Since each of the Stage 5 and Stage 4 dependent variables is dichotomous, we repeat the steps with logistic equations. Only four coefficients, marginally significant in the OLS equations, fail to achieve significance in the logistic equations. We have indicated these coefficients in Table 3. The remaining 42 variables are significant in both the OLS and logit models. To be conservative, we will discuss only coefficients significant in both forms of analysis.

The OLS model accounts for 24 percent of the variance in drug use at Time 3. The largest direct effects, as expected, come from previous use of drugs (drug use at Time 2) and from being in the social milieu of drug users (friends use drugs at Time 2). Modest direct effects of

TABLE 3. Path Coefficients for the Trimmed Model Predicting Drug Use at Time 3

| | Endogenous Time 2 Stages | | | | | | | | | | | |
| | Stage 2 | | | | | | Stage 3 | | Stage 4 | | | Dependent Variable Stage 5 |
Independent Variables	Felt rejection by peers T2	Felt rejection by family T2	Felt rejection by school T2	Adult-endorsed attributes T2	Peer-endorsed attributes T2	Self-derogation T2	Identification with normative structure T2	Self-enhancing potential of deviance T2	Drug use T2	Kids at school use drugs Time 2	Friends use drugs Time 2	Drug use T3
Felt rejection by peers T1	.33	.04	ns	ns	-.06	.09	-.04	ns	-.05	-.06	-.05	-.04
Felt rejection by family T1	.08	.35	.04	-.04	-.05	.09	ns	-.08	ns	ns	ns	ns
Felt rejection by school T1	.05	.05	.31	-.12	ns	.05	ns	ns	ns	ns	ns	.04
Adult-endorsed attributes T1	ns	-.03	-.11	.34	ns	ns	ns	.05	ns	ns	ns	-.06
Peer-endorsed attributes T1	-.07	ns	-.04	.04	.50	-.06	ns	ns	ns	.08	.05	ns
Self-derogation T1	.07	.07	.06	ns	ns	.34	ns	ns	ns	ns	ns	ns
Identification with normative structure T1	.04	ns	ns	.05	ns	.06	.38	ns	ns	ns	ns	ns
Drug use T1	-.05	-.04	ns	ns	.06	-.04	ns	ns	.12	ns	.06	ns
Self-enhancing potential of deviance T1	.05	.06	.10	-.04	ns	.04	ns	.34	ns	ns	ns	ns
Friends get into trouble T1	ns	.07	.06	-.04	ns	ns	ns	.06	-.08	ns	ns	ns
Kids at school use drugs T1	ns	ns	ns	ns	ns	ns	ns	ns	.08	.25	.04**	.05
Friends use drugs T1	ns	ns	ns	ns	ns	ns	ns	ns	.16	.04	.08	.05
Felt rejection by peers T2							.10	.07	-.05**	ns	-.07	-.05
Felt rejection by family T2							-.11	.23	.16	.04	.10	.05
Felt rejection by school T2							-.13	.18	.10	ns	.11	.04**
Adult-endorsed attributes T2							.12	-.14	-.09	-.05	-.07	ns
Peer-endorsed attributes T2							ns	.06	ns	-.04	-.05**	ns
Self-derogation T2							.14	.05	ns	ns	.03	-.05
Identification with normative structure T2									ns	ns	ns	ns
Self-enhancing potential of deviance T2									-.03	.08	.12	-.05
Drug use T2									.06			.27
Kids at school use drugs T2												.05
Friends use drugs T2												.16
R²	.22	.25	.26	.23	.28	.24	.26	.45	.17	.11	.19	.24

* Reported coefficients are beta-weights. Only significant coefficients ($p < .05$, one-tailed) are included. The coefficients were generated from the correlations reported in Table 2, using N = 2,900 to judge significance, an average of the pairwise correlations.

** Coefficient not significant in logistic equations.

several of the psychometric measures are also present, notably the felt-rejection measures and self-derogation. However, it is the pattern of the paths, particularly tracing the indirect paths predicting drug use, that are relevant to our theoretical concerns.

DISCUSSION

The results are discussed with primary regard to their compatibility with the specified theoretical antecedents and consequences of self-derogation, although serendipitous observations will not be ignored. Only the significant paths that are relevant to the theoretical model (that is, the Time 1 antecedents of Time 2 self-derogation, and the direct/indirect effects of Time 1 and Time 2 self-derogation on drug use) are shown in Figure 2. The paths of the Time 1 antecedents to Time 2 self-derogation are presented as broken lines, and some of the manifold indirect effects of Time 2 felt rejection by peers, family, and school are presented as insets.

Antecedents of Self-Derogation

The general theory asserts that self-derogation is a consequence of self-perceptions

of not possessing valued attributes and not performing valued behaviors and of self-perceptions of not being the object of positive attitudes held by valued others. These expectations are operationalized in the valued attributes and felt-rejection items, and in identification with the normative structure. We consider in turn the effects of these indicators on self-derogation.

Valued attributes. Self-perceived deficits in what are interpreted as peer-endorsed attributes at Time 1 are related to self-derogation at Time 2. It is noteworthy that there is no effect of adult-endorsed attributes at Time 1. This suggests that, insofar as self-perceptions of attributes contribute to self-attitudes, peer-relevant attributes are the more significant influence on self-attitudes.

Self-attribution of possessing adult-endorsed attributes may have indirect inhibitory effects on self-derogation by first evoking positive attitudes of adult groups toward the subject. Adult-endorsed attributes at Time 1 is related to a decrease in felt rejection by school and family. Peer-endorsed attributes, as well, may have indirect effects. Peer-endorsed attributes at Time 1 is related to lower levels of felt rejection by peers and school at Time 2. These subjective perceptions of felt rejection by
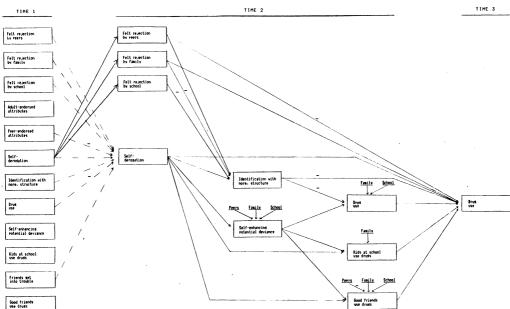
FIGURE 2. Antecedents and Consequences of Self-Derogation as Predictors of Drug Use

membership groups, as we will indicate, have effects on subsequent levels of self-derogation.

Perceived rejection by membership groups. Net of all the Time 1 indicators, there are positive and direct effects of felt rejection by peers, family, and school at Time 1 on self-derogation at Time 2. The effects of rejection by the primary social groups (family and peers) are somewhat stronger than those of rejection at school in inducing self-derogation.

Identification with the normative structure. The antecedents of self-derogation considered up to this point are presumed to have implications for feelings of self-acceptance for a variety of reasons, not the least significant of which is that they provide cognitive cues for self-evaluation (for example, "If others like me, I must be likeable.") and have instrumental value in evoking self-accepting attitudes (for example, "good-looking people have more resources and evoke more favorable attitudinal responses which, in turn, results in valued outcomes."). These effects should occur regardless of the intrinsic emotional significance of the attributes and attitudinal responses to the student. However, insofar as the person values the groups that endorse those attributes and attitudes, the attributes and attitudes should exert independent effects on self-attitudes. If the student does not care how the group feels, not possessing group-endorsed attributes or attitudes will not adversely influence self-attitudes.[9] And as anticipated, identification with the normative structure at Time 1, net of the effects of the variables that have been discussed, is associated with an increase in self-derogation at Time 2.

The effects of all of the variables discussed so far support the predictions of the theoretical model regarding antecedents of self-derogation. Before turning to consequences of self-derogation, we discuss two observed predictors of self-derogation, one of which was unanticipated.

Deviant friends. The observed effect of having friends who get into trouble on self-deogation was not predicted, but is consistent with the more general expectation that violation of membership group norms evokes rejecting attitudes toward the individual (see Table 3 and Fig. 1, paths between having friends get into trouble at Time 1 and felt rejec-

tion by family and school at Time 2) that in turn induce self-rejecting attitudes.

Drug use. Drug use at Time 1 is inversely related to self-derogation at Time 2. This apparent self-enhancing effect of drug use was explicitly anticipated (Kaplan, 1980a), and is compatible with reports by others of a lessening of the depressive mood that is a known correlate of self-derogation associated with use of illicit drugs (Paton et al., 1977). This finding is presented here only in passing, however, as our major purpose is to consider the viability of the general theory of deviant behavior as an account of the antecedents rather than the consequences of drug use. It is left to future analyses to consider how drug uses evokes self-enhancing, as well as other, effects.[10]

Early drug use has various implications for the continuity and discontinuity of drug use at Time 3. Time 1 drug use decreases felt rejection by the family at Time 2 and self-derogation at Time 2, and thereby lessens the probability of drug use at Time 3. Drug use at Time 1, through its inverse influence on felt rejection by peers at Time 2 and its positive relationship with Time 2 drug use and affiliation with drug-using friends, increases the probability of drug use at Time 3.

Consequences of Self-Derogation Leading to Drug Use

The basic premise of the general theory delineates two major routes by which self-derogation leads to deviant behavior: (1) the individual comes to recognize the self-devaluing implications of present membership-group experiences; and (2) the continued existence of self-rejecting feelings. The first route postulates effects of self-derogation at Time 1 on felt-rejection by peers, family, and school at Time 2. The second route expects self-derogation at Time 1 to predict self-derogation at Time 2. As Figure 2 illustrates, each of these operationalizations of the theoretical consequences of self-derogation are present in the data. We discuss each of these two routes, tracing the paths from Time 1 self-derogation to drug use at Time 3 and examining the fit of the data to the general theory.

Awareness of self-devaluing implications of membership groups. We examine the expecta-

tion that self-derogation at Time 1 leads to increased awareness of the self-devaluing influences of membership groups at Time 2. Since these self-devaluing implications are reflected in felt rejection by membership groups at Time 2, net of the felt-rejection measures at Time 1, the theory in effect posits a nonrecursive process between self-derogation and felt rejection by membership groups. By using data from both Time 1 and Time 2, we see evidence of these predicted nonrecursive relationships within the context of the path model. Figure 2 shows the pattern of reciprocal cause and effect between self-derogation and the felt-rejection measures. The findings relating to the further expectation that felt rejection by peers, family, and school more or less directly influence the adoption of deviant responses will be considered, first with regard to family and school, and second with regard to peers.

Consistent with the expectation that increased awareness of the self-devaluing influences of family and school will decrease the effectiveness of these groups' social control functions, felt rejection by family and school at Time 2 are directly associated with drug use at Time 2. Felt rejection by family also has a direct effect on drug use at Time 3. The anticipated mediation of the relationship by loss of motivation to conform to normative expectations appears warranted in light of the observed inverse relationship between felt rejection by family and school and identification with the normative structure at Time 2—which in turn has a inverse effect upon drug use at both Time 2 and Time 3. As anticipated, the relationship between increased felt rejection by family and school and subsequent drug use is mediated by the increased perception of self-enhancing potential of deviant responses at Time 2. Self-enhancing potential of deviant responses, in turn, predicts drug use at Time 2 and increased awareness of and association with drug-users at Time 2, each of which variables exercises direct influence on drug use at Time 3. Finally, felt rejection by family and school at Time 2 leads to increased association with drug-using peers, and felt rejection by family leads to increased sensitivity to the use of drugs by the kids at school. These variables in turn have positive effects on subseqent drug use.

In all, these findings are consistent with un-

derlying theoretical premises.[11] As a consequence of self-derogation, the increased awareness of the self-devaluing significance of family and school leads both directly and indirectly to drug use.

We now consider the influence of increased felt rejection by peers on drug use. On the same theoretical grounds as we have just described, felt rejection by peers is expected to behave similarly to felt-rejection by family and school in its positive association with perceived self-enhancing potential of deviant responses (that is, contranormative attitudes). Individuals who develop contranormative attitudes tend to become aware of the existence of deviant peers (increased affirmation that many of the kids at school use drugs), to affiliate with these deviant peers (increased affirmation that close friends use drugs), and, through these processes, to use drugs. Such paths are observed in the data.

However, independent of these effects, the individual's recognition of the self-devaluing implications of peer associations has effects that *inhibit* the subsequent use of drugs. Subjects who feel rejected by a peer group are not expected to adopt drug use that is endorsed by, ordinarily performed in the company of, or otherwise facilitated by the rejecting peer group. Drug-using peer networks do exist, as is implicit in the abundant literature on peer-related factors in illicit drug use (Kandel, 1980), and such peer groups require conformity to group norms, including those relating to illicit substance use. That drug use frequently is compatible with the normative structure is suggested by the observed effect of drug use at Time 1 on reduced felt rejection by peers at Time 2 (Table 3). Peer groups often may be the source of an individual's self-rejecting feelings. Hewitt (1970) notes the tenuous basis for self-esteem provided by the delinquent peer group and questions how self-esteem can be achieved among peers whose own need for self-esteem leads them to derogate others.

In view of the foregoing, it is not surprising to observe instances of peer group rejection to which the individual responds by deviating from the expectations of the peer group in question, either in the direction of conforming to the expectations of alternative membership groups (family, school) or by adopting deviant patterns that have the self-devaluing source as

a target (Kaplan, 1980a). With the preceding discussion as background, we describe the findings concerning the direct and indirect effects of felt rejection by peers on drug use.

Felt rejection by peers at Time 2 is inversely related to drug use at Time 3. Higher antecedent levels of felt rejection by peers are associated with subsequent lower levels of drug use.[12] Either of two explanations is consistent with the observed paths. The recognition that peer rejection contributes to self-rejection may occasion the rejection of patterns associated with the peer group; one such pattern may be experimentation with illicit drugs. In rejecting the behaviors associated with the peer group, the student rejects a source of his self-rejection. On the other hand, felt rejection by peers, rather than indicating awareness of the self-devaluing implications of past experiences in this group, may instead reflect the fact of rejection by the group. To the extent that the peer group provides the occasion for, or otherwise facilitates, drug use, the student, in being rejected by and in turn rejecting the peer group, loses the opportunity as well as the motivation to use drugs.

These interpretations are relevant also to the indirect paths from felt rejection by peers at Time 2 to drug use at Time 3 through greater identification with the normative structure and decreased association with drug-using friends. These paths suggest the rejection of peer group patterns that are subjectively associated with the geneses of distressful self-rejecting feelings in favor of alternate positive reference groups, such as family and school. In this regard it should be recalled that the variable identification with the normative structure is weighted with items reflecting attachment to parental and school authority figures. The latter groups are presumably more likely to disvalue illicit drug use and to invoke social control mechanisms against drug use.

In sum, felt rejection by a membership group does lead to a disposition to deviate from the normative structure in ways that are specifically *not* associated with, or contingent on acceptance by the rejecting group. In a case in which the peer membership group endorses and facilitates drug use, individuals who are rejected by this group may have reduced motivation and opportunity to use drugs, and indeed may have increased motivation to shun such behavior. In rejecting these and other peer-endorsed patterns, the rejected persons deviate from the expectations of the rejecting group. The analyses discussed earlier provide results consistent with the presence of these multiple paths.

Exacerbation of the self-esteem motive. We now turn to the second major route through which self-derogation influences the subsequent adoption of deviant responses. Contemporary with the consequences of self-derogation in stimulating awareness of the role of the family, school, and peers in inducing feelings of self-rejection, the continuing inability of membership-group experiences to reduce self-rejecting feelings (that is, the exacerbation of the self-esteem motive) is expected to precipitate the individual's increased search for, attraction to, and adoption of deviant response patterns (such as drug use) that may serve self-enhancement. Consistent with the theoretical expectations, self-derogation at Time 2 predicts drug use at Time 3. With regard to the theoretically specified intervening variables, consider the following three relationships.

First, self-derogation leads to increased awareness of the self-enhancing potential of deviant responses. This increased awareness, in turn, is associated with increased association with drug-using friends, and an increased probability of early (Time 2) drug use. Each of these outcomes of increased awareness of the self-enhancing potential of deviant response increases the likelihood of subsequent drug use.

Second, self-derogation leads to increased awareness of drug use among the kids at school, presumably reflecting the increased need to seek alternate, deviant patterns with the potential for self-enhancement. Increased sensitivity to the prevalence of the pattern, in turn, is related to greater probability of subsequent drug use.

Third, self-derogation leads to increased affiliation with drug-using peers, reflecting an intrinsically self-enhancing change of membership groups and/or a vehicle for the provision of a potentially self-enhancing drug-use pattern. In any case, an increased association with drug-using peers results in increased drug use.

While the preceding paths are consistent with the theoretical structure, two other obser-

vations deserve comment. These concern the influence of Time 2 self-derogation on Time 2 drug use, and self-derogation's influence on Time 2 identification with the normative structure.

First, although self-derogation at Time 2 has direct effects on Time 3 drug use, neither Time 1 nor Time 2 self-derogation has direct effects on Time 2 drug use. This finding may be accounted for in either of two ways. On the one hand, earlier use of drugs may be indicative of membership in groups in which drug use is somewhat more acceptable (such as a drug-using peer group). Thus, variables indicating social influence rather than self-derogation-relevant processes will be more likely to have proximal effects on drug use. Consistent with this point of view is that drug use at Time 2 is anticipated by having drug-using friends at Time 1 (the strongest single predictor, stronger even than early use of drugs), by being aware of the prevalence of drug use by the kids at school at Time 1, and by *not* feeling rejected by the kids at school at Time 1, as well as by the students' earlier use of drugs. Also consistent is that perceived self-enhancing potential of deviant responses at Time 2 leads to drug use at Time 2. Alternatively, the failure to observe a direct effect of self-derogation at Time 1 on drug use at Time 2 may be owing to insufficient time having passed to permit mediation of this relationship by awareness of the self-devaluing implications of membership-group experiences, and the concomitant continuing failure of normative group structures to provide self-enhancing opportunities.

Second, we turn to the observed effects of Time 2 self-derogation on identification with the normative structure. As noted above, the exacerbation of the self-esteem motive is related, both directly and indirectly, to subsequent drug use that may serve self-enhancing functions (in lieu of the normative patterns that apparently failed to serve such functions). However, intensification of the self-esteem motive is related to another outcome that is *inversely* related to drug use at Time 3. Self-derogation at Time 2 is related to an *increase* in identification with the normative structure at Time 2; and, identification with the normative structure leads to lower probability of drug use at Time 3.

Apparently, when self-derogation leads to awareness of the normative source of the self-derogation, the indirect effect of self-derogation is to attenuate identification with the normative structure, and thereby to increase the likelihood of deviant outcomes. However, when the relationship between self-derogation and identification with the normative structure is not so mediated, *and* when the opportunity for deviant alternate routes to self-enhancement is not apparent or available, the effect of continuing self-derogation is to increase the need for approval from (that is, to increase emotional dependence on) the normative structure, and thereby to decrease the probability of subsequent deviant behaviors. It is a challenge to future research activities to delineate the conditions (such as continuing physical presence of authoritative others, restricted mobility) under which such intensified dependence on the normative structures occurs.

Time 1 Predictors of Time 3 Drug Use

Four Time 1 variables exercise direct effects on Time 3 drug use. Drug use at Time 3 is inversely predicted by adult-endorsed attributes and felt rejection by peers; drug use is positively predicted by association with drug-using friends and felt rejection by school. Although these variables cannot be demonstrated to be consequences of self-derogation, measures of all but one of these variables at later points in time are related to antecedent self-derogation, suggesting that the Time 1 influences may be products of antecedent self-rejection.

Although the Time 1 direct effects on drug use can be interpreted as later stages of unobserved antecedent self-derogation-initiated processes, an alternative explanation is possible and, indeed, is adumbrated in early discussions of the applicability of the general theory of deviant behavior (Kaplan, 1972, 1975b, 1978, 1980a). It was noted that the theory is generally appropriate to explain the adoption of behavioral responses that are deviant from the perspective of the individual's membership groups. It is further specified that in cases in which the behavior in question is not deviant, the response may be more easily accounted for in terms of a subcultural/social learning perspective that may or may not be the outgrowth

of self-derogation-initiated processes. In the present analysis, it is possible that two of the Time 1 predictors of drug use at Time 3 (felt rejection by peers and drug-using friends) are indicative of early involvement in a drug-using peer subculture that influences later adoption or continuation of drug use patterns. In like manner, Time 1 felt rejection by school and lack of adult-endorsed attributes may reflect the influence of identification with a contranormative or alternative subculture where drugs are used. Whether the subcultural affiliation is independent of or consequent to any earlier self-derogation-related processes is problematic.

CONCLUSION

The results of the analyses suggest that the general theory of deviant behavior has promise as an explanation of drug use. Self-derogation appears to be the outcome of an inability to forestall or assuage self-perceptions of lacking valued attributes and felt rejection from valued membership groups. The awareness of the self-devaluing implications of membership-group experiences leads to loss of motivation to conform and to the motivation to deviate from membership group norms, as well as to the attenuation of effective social controls in these groups. All of these consequences encourage behaviors such as drug use that are deviant from the point of view of those membership groups. If drug use is deviant to the rejecting groups, the effect will be increased awareness of drug use in other groups, increased affiliation with drug-using friends, and increased use of drugs. In self-devaluing groups where drug use is normative, the effect will be attraction to alternative groups with decreased affiliation with drug using peers, and decreased drug use.

The continuing inability of membership groups to assuage self-devaluing feelings leads to exacerbation of the self-esteem motive, and thereby to increased sensitivity to the potential of deviant responses to yield self-enhancement, increased awareness of the prevalence of drug use among the kids at school, increased affiliation with groups using drugs, and increased drug use.

Self-derogation is involved in all of the di-

rect effects of Time 2 variables on drug use at Time 3: self-derogation at Time 1 is antecedent to felt rejection by peers, family, and school, awareness of kids at school using drugs, and association with drug-using friends at Time 2; and, of course, there is the direct path from self-derogation at Time 2 to drug use at Time 3.

The Time 1 variables that have direct effects on Time 3 drug use may be interpreted as effects of earlier self-derogation-relevant processes. However, definitive conclusions in this regard must await longitudinal studies that are begun earlier in the developmental process.

The nature of the effects observed are generally as predicted. However, we did observe unanticipated findings that, although not contradictory to the theory, suggest possibilities for new refinements to the theory and new measures operationalizing the constructs of the theory. We will explore these discoveries in future analyses, particularly using data from the new wave of the panel reported here. The exceptions notwithstanding, the fit between the observed paths and the theoretical structure guiding the analysis suggest that the general theory deserves further consideration as an explanation of why people adopt and continue in deviant response patterns.

NOTES

1. See Kaplan (1980a:ch.8) for a detailed consideration of the points of overlap of these perspectives with the general theory.
2. We are now attempting to recontact the initial sample, including those respondents in the seventh grade in 1971 who were not interviewed at Time 1.
3. The variables are explained in detail below. The correlations are pair-wise present with no abnormally low N for any pair of variables.
4. We do not make a maximum likelihood test (e.g., using COFAMM) here because the sample sizes virtually assure a highly significant chi-square.
5. We enter the Time 1 variables into the regressions rather than controlling for their effects with residuals because we also want to illustrate the antecedents of self-derogation and the reciprocal patterns of effects between Time 1 and Time 2 variables. The benefit of illustrating these paths, however, involves some trade-offs. Having indicators of the same concept at two points in time entered into the regressions for Stage 3, Stage 4, and Stage 5 raises potential problems of multicollinearity that ideally should be examined in stepwise regressions for each construct, controlling on all other constructs. We defer such

detailed analysis for later work examining change in constructs over time.

6. For example, a respondent could report not taking drugs "within the last year" in 1973 and be counted as taking drugs in the 1980–1982 measure if they first used drugs in 1971 but did not use drugs in 1972.

7. We also investigated including use of marijuana in this measure. The measure including marijuana, however, is not as strongly related to drug use reported in 1973. For comparison, the relationship between marijuana use reported in 1973 and the 1981 measure of marijuana use in 1974 or before is $\gamma = .78$, $\phi = .43$.

8. We do not include the effects of sex and race in the model predicting drug use. Addition of dummy classifications for sex and race to the overall regression adds only four-tenths of 1 percent to the variance explained in drug use. It is likely that such demographic characteristics are significant antecedents to the Time 1 measures and may reveal different patterns in the adoption of drug use. We plan to examine these questions in future work.

9. From a slightly different point of view, this sensitivity to group attitudes reflects a limitation of the subject's ability to defend against the self-devaluing implications of perceived deficits in group-endorsed attributes or against felt rejection by membership groups.

10. For example, it appears drug use at Time 1 has both positive and negative influences on subsequent drug use. Drugs may become habitual, but they also tend to lead to decreased felt rejection by primary membership groups. The influence of drug use on increased affiliation with drug-using membership groups is consistent with reports from other researchers (Britt and Campbell, 1977; Ginsberg and Greenley, 1978; Kandel, 1978).

11. We note that while felt- rejection by peers, family, and school at Time 2 are influenced by self-derogation at Time 1, they are also influenced by Time 1 self-enhancing potential of deviant responses. As well, rejection by family and school are influenced by having friends who get into trouble. These findings suggest effects relating to antecedent involvement in a deviant subculture.

12. Felt rejection by peers at Time 1 also anticipates lower levels of drug use at Time 2 and Time 3. Here we can only speculate that antecedents of felt rejection at Time 1 are the same as the demonstrated antecedents at Time 2.

APPENDIX

Components of Indices

1. "Felt rejection by peers" is measured as a count of "true" responses to these four items:

> More often than not I feel put down by the kids at school.
> I am not very good at the kinds of things the kids at school think are important.
> The kids at school are usually not very interested in what I do or say.
> Most of the kids at school do not like me very much.

2. "Felt rejection by family" is a count of "true" responses to these seven items:

> My parents hardly ever trust me to do something on my own.
> At home I have been more unhappy than happy.
> My family can't give me the chance to succeed that most kids have.
> I would like to leave home.
> As long as I can remember my parents have put me down.
> My parents are usually not very interested in what I say or do.
> My parents do not like me very much.

3. "Felt rejection by school" is a count of affirmative responses to these seven items:

> Would you like to quit school as soon as possible?
> My teachers are usually not very interested in what I say or do.
> By my teachers' standards I am a failure.
> My teachers do not like me very much.
> I have never been very happy in school.
> I probably will not go to college and graduate.
> My teachers usually put me down.

4. The measure of "adult-endorsed attributes" is a count of the number of "yes" responses to these five items:

> Are you usually kind to others?
> Do you usually have good manners?
> Do you usually obey your teachers?
> Are you a fairly honest person?
> Do you usually get good grades?

5. The measure of "peer endorsed attributes" is a count of the number of "yes" responses to these three items:

> Are you fairly good looking?
> Are you good at sports?
> Do you paint or draw well?

6. "Self-derogation" is measured by a weighted seven-item scale. The items are as follows:

> I wish I could have more respect for myself. (true)
> On the whole, I am satisfied with myself. (false)
> I feel I do not have much to be proud of. (true)
> I'm inclined to feel I'm a failure. (true)
> I take a positive attitude toward myself. (false)
> At times I think I'm no good at all. (true)
> I certainly feel useless at times. (true)

7. "Identification with the normative structure" is measured as a count of "true" responses to the following six items:

> It is very important to me what my parents think of me.
> It is very important to me what my teachers think of me.
> When my parents dislike something I do it bothers me very much.
> When the kids at school dislike something I do it bothers me very much.

It is very important to me what the kids at
school think of me.

When my teachers dislike something I do it
bothers me very much.

8. "Self-enhancing potential of deviant responses" is
measured as the count of "yes" responses to
these 11 items:

I have a better chance of doing well if I cut
corners than if I play it straight.

The kids who mess up with the law seem to be
better off than those who play it straight.

There isn't much chance that a kid from my
neighborhood will ever get ahead.

If you want people to like you, you have to tell
them what they want to hear even if it isn't
the truth.

Most of the adults I know got what is important
out of life without getting an education.

If you stick to law and order you will never fix
what is wrong with this country.

As long as I stay with the straight life I will
never make it.

The law is always against the ordinary guy.

A smart lawyer can usually get a criminal free.

I have never been able to accomplish as much
as my family wanted me to.

I would like to take a more active part in social
protest groups.

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