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ABSTRACT

Project Decide is a 3-year study of adolescent moral reasoning and drug and alcohol use. Project Decide includes two studies. The first is a cross-sectional study of adolescents ranging in age from 13 to 19 and from grade 6 to college freshmen. In all 600 students will be individually interviewed to assess Kohlberg stage of moral reasoning and Turiel domain categorization of drug behavior. They will also complete an inventory of personal drug and alcohol use, as well as demographic information. At this point data has been collected from 135 6th- to 8th-graders; 9th- to 12th-graders are currently being interviewed. The second study is a one-year longitudinal study of 13- to 19-year-old adolescents and their parents. Each adolescent and at least one parent are interviewed individually to assess their stages of moral reasoning and their domain categorization of drug and alcohol behavior. Data was collected from 146 families, including 133 mothers and 146 adolescents. The preliminary findings tend to confirm the hypothesis that the relation between moral reasoning and drug and alcohol use is not direct. Some relations do exist but a relativistic ideology seems even more strongly associated with drug use than does the Kohlberg moral stage. It is also clear that domain categorization of drug use is a promising means of explaining the relation between sociomoral reasoning and drug use. (ABL)

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Adolescent Moral Thinking and Drug Use

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Adolescent Moral Thinking and Drug Use

We've got good news and we've got bad news. The good news is that most measures of adolescent drug and alcohol use indicate a steady decline for nearly a decade. The bad news is that cigarette use has not declined for nearly a decade and that nearly half of adolescents have tried an illegal drug (Johnson, O'Malley, & Bachman, 1991). Furthermore, the U.S. Inspector General and Surgeon General have recently reminded us of the remarkable link between adolescent alcohol use and other adolescent problem behaviors, most notably crime (Kusserow, 1992). Hence, while the picture is becoming rosier, it still retains more than its share of thorns.

Adolescent use of drugs and alcohol can be construed as yet another example of a long list of adolescent problem behaviors, including delinquency, school cheating, unprotected sexual activity, suicide, and violence. Many of these behaviors have been related to underdeveloped sociomoral reasoning capacities. For example, Gibbs (1991) has provided extensive evidence of the effectiveness of moral reasoning interventions with juvenile delinquents, and Hernandez and DiClemente (in press) have provided empirical evidence of the relation between moral stage and unsafe sexual practices. However, the relation between moral reasoning and substance use is less clear.

In a recent review of the rather scarty literature, Berkowitz, Guerra, and Nucci (1991) have reported that the results are highly contradictory at face value. A more detailed analysis suggests that the methods employed were sufficiently questionable

to permit no meaningful conclusions from the limited data available.

We have begun to address the question of the relation of sociomoral reasoning to adolescent drug and alcohol use. A review of the literature (Berkowitz, et al., 1991) led us to take two initial steps prior to commencing the larger research project, which we have called Project Decide. The first step was to conduct a small study with college students. The second step was to reconceptualize the relation between sociomoral reasoning and substance use. First, the empirical study will be described, then the reconceptualization, and finally preliminary data from the larger study.

#### Pilot Study

In order to generate valid data on the relation of moral reasoning to adolescent drug and alcohol abuse, 111 college students were asked to complete a variety of measures, including Rest's (1979) Defining Issues Test (DIT), Forsyth and Pope's (1984) Ethics Position Questionnaire (EPQ), and a survey of drug and alcohol behavior and attitudes (DAS). The DIT measures stage of moral reasoning. The EPQ measures Idealism and Relativism, two ethical ideologies. Relativism represents the degree to which moral principles are believed to be absolute vs. relative. Idealism represents whether morally acceptable behaviors are expected to invariably result in good consequences. The subjects were 60% female, 87% Caucasian, and had a mean age of 20 years, 4 months (cf. Berkowitz, Gimenez, Begun, & Zweben, 1991).

Analyses were calculated for five drug items: use of marijuana, use of cocaine and crack, use of alcohol, use of

"uppers", and having ever been high on drugs. Stage of moral reasoning from the DIT and scores on the two scales of the EPQ, Idealism and Relativism, were correlated with each of the five drug use variables (see Table 1). Stage of moral reasoning was negatively correlated with use of alcohol ( $r=-.26$ ,  $p<.005$ ) and marijuana ( $r=-.18$ ,  $p<.05$ ), but did not correlate significantly with cocaine/crack use, use of uppers, or having been high on drugs. The Idealism scale of the EPQ was not significantly related to any drug use item; however, the Relativism scale was positively correlated to three of the items: having been high on drugs ( $r=.30$ ,  $p<.001$ ), use of marijuana ( $r=.34$ ,  $p<.001$ ), and use of uppers ( $r=.18$ ,  $p<.05$ ).

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Insert Table 1 about here

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Subjects were also asked about both their willingness and past practices concerning behaviors related to driving while under the influence of alcohol and/or marijuana (see Table 2). Stage of moral reasoning was significantly related to only one of the 11 items: frequency of having been a passenger with a drunk driver ( $r=-.18$ ,  $p<.05$ ). Idealism was also significantly correlated with only one item: willingness to stop a drinking person from driving ( $r=.20$ ,  $p<.05$ ). On the other hand, Relativism correlated positively with five of the 11 items: willingness to drive while under the influence of marijuana ( $r=.20$ ,  $p<.05$ ), willingness to be a passenger with a marijuana-influenced driver ( $r=.23$ ,  $p<.01$ ), having driven under the influence of both alcohol and marijuana ( $r=.19$ ,  $p<.05$ ), having been a passenger with a

driver under the influence of marijuana ( $r=.18$ ,  $p<.05$ ), and having been a passenger with a driver under the influence of both marijuana and alcohol ( $r=.24$ ,  $p<.01$ ).

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Insert Table 2 about here

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We can conclude from these results that there are systematic, but limited, relations between moral reasoning and behaviors related to substance use. Higher stage moral reasoners are less likely to use alcohol and marijuana, but there is no relation for harder drugs (cocaine/crack and uppers) and little relation to DWI behavior or attitudes. Relativists are more likely to use marijuana and uppers and to report having been high on drugs. They also are more likely to engage in most marijuana-related DWI behaviors. Interestingly, alcohol use is the only drug category that did not even approach a significant relation with Relativism.

#### Reconceptualizing the Relation

Based on these uneven results and the confusing state of the literature, we decided to rethink this relation (cf. Berkowitz, Guerra, & Nucci, 1991). In doing so, we recalled an anomalous pattern in the application of the Kohlberg Just Community approach to high school education (Power, Higgins, & Kohlberg, 1989). The issue of illegal drug use in the Just Community school in Cambridge (MA) was particularly difficult to get the students to tackle seriously. They would pay lip service to curtailing such behavior and even to enforcing such rules amongst themselves, but in reality they simply tried to avoid being caught in the act.

They would even profess the social virtues of alcohol and marijuana, reasoning that it was a necessary social lubricant for the amelioration of other community problems, such as strained race relations among the students. As Power, Higgins, and Kohlberg (1989) report:

Perhaps the most severe test of whether the Cluster community could learn to make and stand by its own rules centered around the issue of drug use...

Students who were willing to accept rules in Cluster about curbing disturbances in classes and limiting the cutting of classes because they saw them as necessary for running the school were not willing to accept a self-imposed agreement that would impinge upon that great adolescent freedom: the right to get high when you want. (p. 70)

It was clear that they often did not perceive substance use, even when illegal, as a moral issue.

Therefore, it was reasoned that the decision to use or not use alcohol and/or drugs would only be affected by the level of one's moral reasoning development if substance use was construed as a moral issue. We attempted to use Turiel's (1983) social knowledge domain distinctions to generate a phenomenological model of substance use decision-making (see Table 3). Turiel defines the moral domain as encompassing actions that are ethically prescribed based on principles derived from the intrinsic features of the act (e.g., assault). The conventional domain concerns actions that are consensually prescribed for purposes of social functioning within a social system and that are arbitrary and

alterable (e.g., proper forms of address with representatives of the law). The personal domain concerns those acts which have no impact upon others and are outside the realm of social regulation (e.g., decisions about food selection).

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Insert Table 3 about here

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The argument was that an individual's moral reasoning capacity should be a significant factor in the ultimate decision to use or not use drugs if that individual categorized drug use in the moral domain. On the other hand, if the individual did not consider drug use to be a moral issue, then stage of moral reasoning should be irrelevant to the decision to use or not use. With the assistance of Larry Nucci, we adapted a card-sort task used by Judy Smetana (1982) to measure the domain categorizations of our subjects. A set of cards was generated, with each card listing either a substance use related behavior (such as "smoking marijuana regularly" or "having an occasional drink of alcohol") or a filler item (see Table 4). The filler items were taken from prior work by Nucci (personal communication) and were chosen because they tended to load strongly on one of the domain categories.

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Insert Table 4 about here

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The cards were to be placed by the subject on a sorting board with three statements (see Table 5) representing the three domains: moral ("This action is wrong whether or not there is a

rule or law against it."); conventional ("This action is wrong only if there is a rule or law against it. It would be all right if there were no rule or law against it."); and personal ("This is not an issue of right or wrong. There should be no rules or laws about this action. It should be the person's own business.").

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Insert Table 5 about here

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#### Project Decide

Having reconceptualized the relation between substance use and moral reasoning stage, we then proceeded with Project Decide, a three-year study of adolescent moral reasoning and drug and alcohol use funded by the National Institute on Drug Abuse. The final phase of this study has just begun, and the data presented here represent the first empirical reports of the study. A description of the basic design of the Project will be followed by some preliminary findings about the domain categorization of drug behavior and self-reported drug use.

#### Design

Project Decide is actually comprised of two studies. The first is a cross-sectional study of adolescents ranging in age from 13 to 19 and from grades 6 to college freshmen. In all, 600 students will be individually interviewed to assess Kohlberg stage of moral reasoning and Turiel domain categorization of drug behavior. They also complete an inventory of personal drug and alcohol use, as well as providing demographic information. At this point, we have collected data from 135 6th to 8th graders and are currently interviewing 9th to 12th graders.

The second study is a one-year longitudinal study of 13- to 19-year-old adolescents and their parents. Each adolescent and at least one parent are interviewed individually to assess their stages of moral reasoning and their domain categorizations of drug and alcohol behavior. Each individual also completes an extensive battery of questionnaires assessing past and present personal drug and alcohol use, coping style, family dynamics, parenting style, and intelligence. Finally, each family also engages in a videotaped discussion of three moral problems. One is a hypothetical family moral drug dilemma and the other two are real distributive justice dilemmas. Time 1 data collection from 189 families is complete and Time 2 data collection has begun.

#### Results

The data reported here represent 146 families from the Time 1 data collection in the family study. The data involve (1) the domain categorizations of drug and alcohol behavior from adolescents and their parents, and (2) the relation of these categorizations to their self-reported use of tobacco, alcohol, marijuana, and cocaine. These data represent the Turiel domain categorizations of ten drug behaviors (see Table 6).

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Insert Table 6 about here

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The data will be reported separately for mothers ( $n=133$ ) and adolescents ( $n=146$ ). Not enough fathers have been analyzed for meaningful results. The patterns of responding for the two groups are remarkably similar. Let us discuss them separately for the four drug groups, beginning with the two tobacco items. Both

groups consider "smoking cigarettes" to be largely a matter of personal choice (mothers and adolescents, respectively, 50% and 63%), with the moral domain the second most common assignment (mothers and adolescents, respectively, 31% and 20%). "Smoking cigarettes regularly when you are pregnant" was categorized nearly identically by both groups. Such behavior was deemed morally wrong by 72% of mothers and 73% of adolescents, and a matter of personal choice by approximately 22% of mothers and 19% of adolescents.

Data for four alcohol use items are reported here, again with remarkably similar patterns for both groups, although with mothers a bit more willing to assign such behaviors to the moral domain and less likely to place them in the personal domain for three of the four items. "Having an occasional drink of alcohol" was considered to be largely a personal choice, by 78% of mothers and 65% of adolescents. "Drinking alcohol heavily regularly" was placed in the moral domain by 91% of mothers and 73% of adolescents. "Getting drunk on alcohol" was placed in the moral domain by 70% of mothers and 50% of adolescents. Thirty-five percent of adolescents placed it in the personal domain, as did 19% of mothers. "Buying or supplying alcohol to a minor" was considered a moral issue by 95% of mothers and 78% of adolescents (nearly all of whom are minors). Sixteen percent of adolescents, but only 3% of mothers, felt it was wrong only if illegal (conventional domain).

Data for two marijuana and hashish items are reported. While still highly similar, some minor disagreements appear between the two groups for both marijuana and cocaine items.

Approximately 53% of both groups felt "smoking a little marijuana (taking a few puffs)" was predominantly a moral issue. About a quarter of mothers (27%) felt it was a personal issue, and approximately one-fifth (19%) felt it was a conventional issue. One-third of the adolescents believed it was a personal issue, and only 14% felt it was conventional. "Smoking marijuana regularly" was a moral issue for both groups (82% of mothers, 75% of adolescents), but whereas only 8% of mothers felt it was a personal issue, 18% of their kids did.

Finally, data on two cocaine and crack items are presented. "Trying cocaine or crack" loc. . very much like regular use of marijuana as far as domain categorization patterns. Eighty-seven percent of mothers and 77% of their kids consider trying cocaine or crack to be a moral issue, but, once again, whereas only 9% of mothers consider it a personal issue, 17% of their kids do. A similar pattern holds for "using cocaine or crack regularly". Ninety-six percent of mothers and 86% of their kids consider it a moral issue, but whereas only 2% of mothers consider it a personal issue, 10% of their kids do.

In conclusion, nearly all (8 of 10) of the drug items are predominantly categorized as morally wrong. Only smoking cigarettes or taking an occasional drink of alcohol are considered to be largely matters of personal choice and therefore exempt from social regulation. Adolescents are more likely to employ the personal domain than are their parents across all of these behaviors, with the two exceptions being smoking while pregnant and drinking occasionally. In other words, adolescents see the use of drugs as either a matter of morality or purely an issue of

personal discretion, whereas parents may also see it as a matter of social convention.

The second set of findings concerns the relation of these domain categorizations of drug behavior to self-reported drug behavior. Five drug behavior items were selected for analysis: number of cigarettes smoked in the past week, number of beers drunk in the past month, number of drinks of hard liquor in the past month, number of times smoking marijuana or hashish in the past month, and number of times using cocaine or crack in the past month. Too few subjects reported cocaine or crack use in the past month for the analyses to be meaningful. Similarly, too few parents reported use of marijuana or hashish in the past month, and too few adolescents reported drinking hard liquor in the past month. Therefore, we will report results for both mothers and their adolescents for cigarette smoking and beer drinking, but only for the adolescents on marijuana and hashish use and only for the mothers on hard liquor consumption. One-way ANOVAs were computed for each of these dependent variables for the corresponding domain categorization variables (see Table 7).

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Insert Table 7 about here

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The only significant relation for weekly tobacco use was for the adolescents' domain categorization of regular cigarette smoking. Those placing it in the personal domain smoked significantly more cigarettes than those placing it in the moral domain ( $p < .005$ ).

Nearly all relations (6 out of 8) were significant for monthly beer consumption. Mothers who chose the personal domain for regular heavy drinking reported drinking significantly more beer in the past month than did mothers who chose the moral or conventional domains (both  $p < .001$ ). Mothers who chose the personal domain reported significantly more "getting drunk" in the past month than did mothers choosing the personal domain ( $p < .01$ ). No relation was found for either occasional drinking or supplying alcohol to a minor. All four relations were significant for adolescents. Similar to their mothers, adolescents who chose the personal domain reported more monthly beer consumption than those who chose the moral domain for both regular heavy drinking and getting drunk (both  $p < .001$ ). There was significantly more beer consumption reported by those who felt occasional drinking was a personal issue than by those who felt it was either a moral or conventional issue ( $p < .01$ ). Finally, those who felt it was a conventional issue to supply alcohol to a minor reported more beer drinking than did those who considered it a moral issue. Those who viewed supplying alcohol to a minor as a personal choice reported a middle level of consumption; however, those data are based only on the eight adolescents who assigned this behavior to the personal choice domain.

As noted, only mothers' responses to hard liquor consumption will be reported, due to the lack of variance in adolescent responses (over 88% reported no more than one drink in the past month). The mothers' pattern of responses is identical to their responses concerning monthly beer consumption. Of the four categorized alcohol items, two were significant. Those

categorizing getting drunk as a matter of personal choice reported more hard liquor consumption than those considering it a moral issue (both  $p < .01$ ). Those categorizing regular heavy drinking as a matter of personal choice reported more hard liquor consumption than those considering it a moral or conventional issue ( $p < .001$ ). Neither occasional drinking nor supplying alcohol to a minor was significant.

Only adolescent data will be reported for marijuana and hashish use in the past month, because mothers reported too little use (only 2 of 133 mothers reported any use in the past month). Both marijuana/hashish items were significant for the adolescents. Those placing trying marijuana or hashish ( $p < .01$ ) and those placing regular use ( $p < .001$ ) in the personal domain reported significantly more use than those considering it to be a moral issue.

In conclusion, it appears that both adolescents and mothers who more frequently use a particular substance are less likely to consider it a moral issue than do less frequent users. This pattern is stronger for the adolescents than it is for their mothers, due largely to the lack of a relation for mothers and tobacco use.

#### Conclusions

These preliminary findings tend to confirm the hypothesis that the relation between moral reasoning and drug and alcohol use is not direct. Some relations do exist, as the college student study reveals, but a relativistic ideology seems even more strongly associated with drug use than does Kohlberg moral stage. It is also clear that domain categorization of drug use is a

promising means of explaining the relation between sociomoral reasoning and drug use, given that we have observed a strong relation between domain categorization and self-reported use. Further analyses will explore the relations between Kohlberg stage, domain categorization, and drug use.

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Table 1

Correlations of Moral Reasoning Variables with Drug Usage

Drug Usage	Moral Reasoning		
	DIT (Stage)	EPQ	
		Idealism	Relativism
Been High on Drugs	-	-	.30****
Alcohol	-.26***	-	-
Marijuana	-.18*	-	.34****
Uppers	-	-	.18*
Cocaine/Crack	-	-	-

\* p<.05

\*\* p<.01

\*\*\* p<.005

\*\*\*\* p<.001

Table 2

Correlations of Moral Reasoning Variables with Willingness to Engage in and Experience with DWI Behavior

DWI Behavior	Moral Reasoning		
	DIT (Stage)	EPQ	
		Idealism	Relativism
<b>Willingness</b>			
Would drive after 2 drinks	-	-	-
Would drive after smoking marijuana	-	-	.20*
Would ride with someone who has been drinking	-	-	-
Would ride with someone who has been smoking marijuana	-	-	.23**
Would try to stop someone from driving after drinking or smoking marijuana or from riding with a driver who was drinking or smoking marijuana	-	.20*	-

\* p<.05

\*\* p<.01

(continued)

Table 2 (continued)

Correlations of Moral Reasoning Variables with Willingness to Engage in and Experience with DWI Behavior

DWI Behavior	Moral Reasoning		
	DIT (Stage)	EPQ	
		Idealism	Relativism
<b>Experience</b>			
Passenger with drinking driver	-.18*	-	-
Passenger with marijuana-smoking driver	-	-	.18*
Passenger with drinking & marijuana-smoking driver	-	-	.24**
Drove while or after drinking	-	-	-
Drove while or after smoking marijuana	-	-	.19*
Drove while or after drinking <u>and</u> smoking marijuana	-	-	-

\* p<.05

\*\* p<.01

Table 3

Turiel's Domains of Social Knowledge

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Moral

Prescriptive, categorical judgments  
Based on ethical principles  
(justice, beneficence, rights, duties)  
Not arbitrary  
Stem from intrinsic features of act  
Not culture-specific

---

Social convention

Consensually-determined  
Coordinate interactions within social systems  
Arbitrary  
Alterable  
Relative to social context

---

Personal

No consequential impact on others  
Outside realm of social regulation or moral obligation  
(Prudential)  
Potentially harmful to oneself

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Table 4

Domain Categorization Items

- 
1. Stealing
  2. Not allowing someone else to read your diary
  3. Diving into shallow water in a rocky area
  4. ~~Drinking alcohol heavily regularly~~
  5. Not wearing seatbelts when riding in a car
  6. Hitting and hurting another person
  7. Using stimulants (for example, speed, diet pills, amphetamines) to study for final exams
  8. A kid going to school without a school uniform
  9. Listening to music that a person's parents don't want them to listen to
  10. ~~Buying or supplying alcohol to a minor~~
  11. Riding a motorcycle without a helmet
  12. ~~Smoking marijuana regularly~~
  13. Skydiving without a spare parachute
  14. ~~Having an occasional drink of alcohol~~
  15. Calling a teacher by the first name instead of by the title Mr. or Mrs.
  16. ~~Using cocaine or crack regularly~~
  17. Driving a car when high on alcohol or drugs
  18. ~~Smoking cigarettes regularly when you are pregnant~~
- 

= Items analyzed for this report

(continued)

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Table 4 (continued)

Domain Categorization Items

- 
19. Using stimulants (for example, speed, diet pills, amphetamines) regularly (2 or more times a month)
  20. ~~Smoking cigarettes~~
  21. ~~Trying cocaine or crack~~
  22. Selling drugs
  23. ~~Getting drunk on alcohol~~
  24. ~~Smoking a little marijuana (taking a few puffs)~~
- 

= Items analyzed for this report

Table 5

Domain Categories for Card Sort Task

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1. This action is wrong whether or not there is a rule or law against it.
  
  2. This action is wrong only if there is a rule or law against it. It would be all right if there were no rule or law against it.
  
  3. This is not an issue of right or wrong. There should be no rules or laws about this action. It should be the person's own business.
-

Table 6

Percentages of Domain Categorization of Drug Behaviors

Drug Item	Group: Mothers (n = 133)			Adolescents (n = 146)		
	Moral	Conventional	Personal	Moral	Conventional	Personal
Tobacco						
Smoke cigarettes	31	20	50	20	17	63
Smoking regularly while pregnant	72	6	22	73	8	19
Alcohol						
Having an occasional drink	4	18	76	10	25	65
Getting drunk	70	11	19	50	15	35
Drinking heavily regularly	91	2	7	73	10	16
Supplying alcohol to a minor	95	3	2	78	16	6
Marijuana or hashish						
Taking a few puffs	54	19	27	53	14	33
Smoking regularly	82	9	8	75	7	18
Cocaine or crack						
Trying it	87	5	9	77	6	17
Using regularly	96	3	2	86	4	10



Table 7

Relation of Domain Categorization to Reported Tobacco, Alcohol and Drug Use

Dependent Variable	Independent Variable	Group	
		Mothers ( $n = 133$ )	Adolescents ( $n = 146$ )
# of cigarettes smoked in past week	Smoke cigarettes	NS	P>M**
	Smoke regularly while pregnant	NS	NS
# of beers in past month	Having an occasional drink	NS	P>M,C*
	Getting drunk	P>M*	P>M***
	Drinking heavily regularly	P>C,M***	P>M***
	Supplying alcohol to a minor	NS	C>M**
# of drinks of hard liquor in past month	Having an occasional drink	NS	—
	Getting drunk	P>M*	—
	Drinking heavily regularly	P>C,M***	—
	Supplying alcohol to a minor	NS	—
# of times smoking marijuana or hashish in the past month	Taking a few puffs of marijuana or hashish	—	P>M*
	Smoking marijuana or hashish regularly	—	P>M***

## Key:

Significance

\*  $p < .01$   
 \*\*  $p < .005$   
 \*\*\*  $p < .001$

Domains

M = Moral  
 C = Conventional  
 P = Personal

NS = Not significant  
 — = Not analyzed