

CULTURAL AND ETHNIC PATTERNS OF ALCOHOL CONSUMPTION  
IN A UNIVERSITY ENVIRONMENT

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Submitted to the Faculty of the Graduate College  
of the Oklahoma State University  
in partial fulfillment of the requirements  
for the Degree of  
DOCTOR OF PHILOSOPHY  
December, 1981



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## PREFACE

This study was concerned with the measurement of drinking patterns and related behaviors in a racially and ethnically diverse university population. Objectives of the research were to establish baseline data for future investigation and to examine drinking patterns as they related to problems of alcohol abuse.

The author wishes to express appreciation to Dr. Richard A. Dodder for his very competent guidance as major adviser for this dissertation. His cooperation, encouragement and assistance were always generously given and his positive attitude most helpful. Appreciation is also expressed to other committee members, Dr. Werner Gruninger, Dr. Richard H. Leftwich, and Dr. Edgar L. Webster, for their helpful suggestions throughout the study and invaluable assistance in preparation of the final manuscript.

In addition, a note of thanks is extended to those who helped with administration of the questionnaires: Paul Stafford who polled American Black students; Mildred Hudson and James Jordan, Native Americans; James Adigun, Nigerians; and Sandy Heh, Chinese students. Their suggestions were most welcome and gave valuable insight into several areas of the investigation.

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## CHAPTER I

### PROBLEM DEFINITION

#### Introduction

The consumption of alcoholic beverages and problems concomitant to this activity have increasingly attracted public concern in the United States. In 1965 approximately 70 percent of the adult population were classified as drinkers (Cahalan and Cisin, 1968), and indications are that this percentage has continued to rise. Alcohol usage has grown in popularity among young people, according to the Department of Health, Education and Welfare. They claim that teenage drinking is almost universal, with 93 percent of twelfth-grade boys and 87 percent of twelfth-grade girls using alcohol (Alcohol, Youth, Money and Cancer, 1974). Alcohol consumption has found even more widespread acceptance with college-age populations, and a recent study indicated drinking figures as high as 96 percent at this age level (Hill and Biegen, 1979).

Along with an increase in alcohol consumption, there has been a similar rise in problems relating to alcohol abuse. A 1978 Gallup study found one quarter of the population showing concern that alcohol had in some way adversely affected family life, an increase of 100 percent from the 12 percent figure of 1974 (Gallup, 1978). There have been indications also that the younger drinkers are becoming aware that a problem exists. Strange and Schmidt (1979) discovered 35 percent of their college-age sample feeling somewhat uneasy over the long-range consequences of drinking.

Alcohol abuse may be damaging to individuals and their families, and it is also expensive for the society as a whole. In 1974 the annual cost to the country from alcohol-related traffic accidents, illnesses and decreased industrial production totaled approximately \$25 billion (National Institute on Alcohol Abuse and Alcoholism, 1974), and alcohol has been implicated in over half of the nation's fatal traffic accidents. A variety of treatment strategies have been implemented in an effort to reduce this high cost and to alleviate some of the impact of alcohol abuse, but most cannot report a high rate of success. Ludwig (1972), in a sample of 176 hospitalized alcoholics on drug therapy, found that 90 percent had resumed drinking by the end of 12 months. Gallant et al. (1973) indicated only a six percent treatment success with 210 group therapy patients. Aversive therapy appears to have had a somewhat better success rate, although only with selected subjects. Lemere and Voegtlin (1950) reported that of 5,000 patients treated with this procedure, 51 percent continued abstinent over a 13 year period. Nationwide, however, the majority of alcoholics remain either untreated or untreatable with currently employed techniques.

Developing an effective treatment approach depends to no small extent on knowledge of the etiology of the problem. A great deal of research in the past has been centered on the basis of alcohol abuse. Physiological, psychological and social origins of alcoholism have been examined with little consensus as to the actual causative factors involved. Many individuals or groups of individuals are able to consume alcoholic beverages without developing problems of abuse, while others become alcoholic, or in other ways contribute to the statistics causing concern. Researchers have looked at differences in both the physical and the psychological make-up of alcoholics and nonalcoholics. Some inherited tendencies toward

alcoholism seem to be evident (Goodwin, 1971); also, alcohol abuse has been linked to high levels of anxiety or depression (Overall, 1973) and to personality types (Jones, 1971). In addition, there are indications that race or ethnic background could be influential in alcohol consumption and abuse (Pittman and Snyder, 1962; Cahalan, Cisin and Crossley, 1969). Social factors, too, have been implicated in misuse of alcohol, although somewhat less extensively. MacAndrew and Edgerton (1969) found that the effects of alcohol consumption have different cultural interpretations for different peoples resulting in different learned forms of drunkenness, and Lurie (1971) attributed North American drinking pattern to a protest against the dominant White culture. Although there is supportive evidence for each of these theoretical bases, none can explain more than a small or isolated segment of the problem; and a great deal more investigation may be necessary before alcohol abuse becomes effectively treatable.

Beverage alcohol has been a part of the human scene for thousands of years--since before the time of recorded history. Evidence indicates that Stone Age cultures made and consumed alcoholic drinks (Tongue, 1978), and mankind's earliest writings mentioned alcohol consumption as a part of daily life (Sandars, 1960). Egyptian clay tablets dating from 6,000 B.C. described the process involved in making beer (Ewing and Rouse, 1979), and the code of Hammurabi from the 18th century B.C. set down rules and regulations for tavern operations and the sale of alcoholic beverages (Tongue, 1978).

Not only do we have evidence of extensive usage of alcoholic beverage in ancient cultures, but anthropologists today are reporting this phenomenon to be widespread and quite diversified in both form and effect.

Societies differ as to the amount and extent of drinking activity, where and under what circumstances drinking will take place, which members are permitted or encouraged to participate, reasons for engaging in drinking behavior, and the way in which alcohol consumption affects members of the group. Although a majority of the world's societies use beverage alcohol, many do so only sparingly and some, not at all. The Bushmen of South Africa, probably because of their nomadic life style, rarely make or consume alcoholic drinks (Schapera, 1960); and many tribes of India value abstinence as a way of life (Rao and Rao, 1977).

Within the United States, various ethnic groups have displayed divergent rates of both alcohol consumption and alcoholism. Those of Irish and Scandinavian extraction show a disproportionately high rate of alcohol abuse, while Jewish people and southern Italian descendants contribute relatively little to these statistics; both groups tend to exhibit a greater than average alcoholic consumption rate (Pittman and Snyder, 1962). Certain Asian-Americans only infrequently have problems with alcoholism, and this has been attributed to low consumption rates among these people. It has been postulated that this drinking behavior could be a manifestation of learned cultural patterns. Singer (1972) described the Chinese in Hong Kong as being infrequent drinkers with only a small percentage of the population actually drinking and a very low incidence of alcoholism. Alcohol consumption with these people was concluded as being primarily a masculine expression and used to mark special occasions and activities.

Some research has indicated that cultural definitions may dictate tolerance for alcohol, the effect it will have on members of a society, and the behavior of these people during and after drinking. Although

most Western cultures report a lowering of inhibitions with alcohol consumption, and the pharmacological evidence seems to support this reaction, members of some societies appear to consume large quantities of alcohol with few if any disinhibiting effects. McAndrew and Edgerton (1969) examined ethnographic literature and found evidence of five separate tribes from different parts of the world that practiced drinking to the point of intoxication without displaying any affectual change. These authors also noted that in some societies the social reactions to alcohol have undergone marked changes over time.

#### Statement of the Problem

The wide diversity of drinking patterns and practices has led to a variety of theories as to the etiology of alcohol abuse. No theory has been found adequate to explain the actual causation involved because when these are applied to treatment strategies, the problem still remains intractable. As young people have begun drinking at increasingly earlier ages and as the quantity and frequency of consumption for this group has escalated, more concern has been generated as to the consequences for them of this activity. The question arises as to whether the orientation of college youth is such that these young people will tend to develop drinking patterns leading to alcohol abuse and if differences in drinking behavior patterns can be used to predict problem drinking.

#### Purpose of the Study

The purpose of this research was twofold. The primary objective was to investigate some of the social and cultural factors that are thought to accompany alcohol consumption in a racially and ethnically divergent

college-age population, and to attempt to determine if the different patterns of drinking are related to the phenomenon of alcohol abuse. A second objective was to establish baseline data that could be used for future research. In our rapidly changing society drinking patterns and behaviors also change, and these variables cannot be measured with any degree of accuracy without first establishing reliable baseline data. The total sample was taken from a population that varies in several respects from those of many prior studies. The social orientation of this population was both religiously and legally restrictive, in the only remaining state to limit the purchase of liquor and prohibit the sale of mixed drinks. In this context baseline data will be particularly valuable in evaluating the effects of future legislation and changing social standards.

#### Research Goals

The objectives of the research were to examine the relationship of various patterns of alcohol consumption to other variables.

1. Since one purpose of the research was to establish baseline data, the nature of the investigation was somewhat exploratory. For this reason some of the results are in the form of sample description--that is, a delineation of the actual drinking patterns and behavior of university students. The patterns investigated were: (1) quantity and frequency of drinking, (2) pre-college drinking, (3) type of beverage preferred, and (4) where and when alcohol consumption took place.

2. A second concern was to examine these drinking patterns as they related to a number of associated variables such as: (1) perceived parental attitudes toward drinking, (2) religious orientation as reported

by the student, (3) the respondent's perception of college or ethos of college life; (4) personal and social characteristics of the individual, (5) reasons given for drinking, and (6) reported problems associated with alcohol consumption.

3. The research also focused upon the relationship of a number of variables within a theoretical framework, and it was assumed that this relationship was causal, linear, and additive. Reported religiosity and parental attitudes toward drinking as seen by the student were believed to have an effect on the individual's neutralization of drinking behavior which in turn would influence pre-college drinking, how the student perceived college life, his or her social orientation after coming to college, and drinking behavior patterns. All variables together, each controlled for those prior items, would have an impact on problem drinking.

4. A final objective was to evaluate these drinking patterns and related variables and the theoretical, causal relationship as they applied to differing racial and cultural groups within the same economic and geographic social structure.

## CHAPTER II

### REVIEW OF THE LITERATURE

The research relating to beverage alcohol has had a wide range and has been quite diversified in an attempt, however unsuccessful, at understanding the phenomenon of alcohol consumption and its effects on the human population. A majority of these investigations have dealt with the pathologies of drinking, although a great many have examined alcohol consumption in its cultural context. Probably the largest single area of research, and one that is not within the scope of this study, has been concerned with the treatment of problems resulting from alcohol abuse. The magnitude of this type of investigation only serves to heighten and give added meaning to the inquiries into the many other aspects of drinking behavior, because an understanding of the reasons for drinking and the variables relating to it are essential to formulating successful treatment strategies. Much research has dealt with these reasons and variables, and other studies have looked at the conditions under which drinking will occur or under which drinking patterns will change. Additional investigations have examined reasons for problem drinking and related these to individual personality types, cultural determinants, or a genetic predisposition toward alcohol abuse. Within this context a variety of racial and ethnic categories have been studied as to their differing patterns of alcohol consumption and the effect of alcohol upon the individuals in these groups.



## Demographic Variables

The typical demographic variables of age, sex, race, marital status, and socioeconomic class that are central to many sociological investigations have appeared also in relation to alcohol research. Others, such as religion or religiosity and college-related variables, have been examined as well. Although the results of these studies have not always been in agreement, some trends have appeared; and a basis upon which to evaluate change is being developed. The emphasis of this study is upon the college-age population; however, other age groups will be considered briefly in this review because each age category reflects the patterns and influences the development of drinking in other age groups. College students are particularly important, for as Maddox (1972:21) noted,

. . . collegians stand out in the social portrait of our society as a vivid cross section of prevailing attitudes, customs, and trends. College students are a commentary on the generation that rears them; they are a prophecy about the generation that will inherit the future.

### Age and Sex

Reliable, systematic data have been available on teenage drinking since the early 1940's (Maddox, 1962). Studies done in the 1950's using almost 2,000 eleventh and twelfth graders from three midwestern high schools found fewer than half to be classified as drinkers (Maddox and McCall, 1964).<sup>1</sup>

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<sup>1</sup>Comparisons among studies regarding incidence of drinking could be questionable since there has been a lack of uniformity in separating drinkers from abstainers. See Appendix A for summary of how these terms have been defined.

Of these drinkers 13 percent of males and only two percent of females drank over six bottles of beer a week. Today's teenagers are much more liberal in their views toward alcohol consumption, and current studies have found drinking at this age level to be "almost universal" (Alcohol, Youth, Money and Cancer, 1974:59). Not only did this research find more teenagers to be drinking, but there has been a sharp rise in the number of 13- to 18-year-olds who have been classified as moderate to heavy drinkers. An article in Psychology Today (Our Wayward Youth--Drinking, Drugs and Smoking are on the Increase, 1976) reported that one-fourth of those sampled in three national surveys consumed between 2 and 12 drinks at least once a week. These surveys included 13,122 students in 643 junior and senior high schools across the country. Maddox and McCall (1964:4) observed that adolescent drinking is learned behavior and something that should be anticipated in our society, for

. . . the acceptability and desirability of some drinking behavior is continually suggested to a young person by the elaborate integration of alcohol use with North American culture and adult social behavior.

Increased teenage drinking could, then, reflect changes in the patterns of alcohol usage in the adult society.

College-age drinking has been examined extensively, with the most important initial study probably being that of Straus and Bacon conducted between 1949 and 1951. This research utilized 27 colleges selected to represent a nationwide cross section of various types of educational institutions, and the final sample included 15,747 students (Straus and Bacon, 1953). Seventy-four percent of total participants were found to be drinkers; however, the variation was quite large. Male drinkers ranged from a high of 98 percent to a low of 55 percent, and these figures for females were from 90 percent to 20 percent. This disparity was due to

the fact that some schools were sponsored by religious denominations that did not approve of the use of alcoholic beverages. The authors noted that in order to study the effects of proscriptive religions, these groups were somewhat overrepresented, a fact which could have made the total percentage figure lower than it should have been. In this study alcohol usage was found to increase with age and peak at about age 21.

More recent inquiries into drinking behavior among college students have revealed a trend toward a higher percentage of respondents in all categories of users. During the academic year 1970-1971, a nationwide study comparable to that of Straus and Bacon was undertaken; and a questionnaire was administered to 3,696 students at 37 colleges and universities (Hanson, 1974). This was not a probability sample but utilized introductory sociology students. The author found that compared with the Straus and Bacon study, a higher proportion of freshmen were drinkers, the older males drank at about the same rate, and more females used alcohol than they did in 1950. Those classified as drinkers comprised 83.5 percent of the total sample. Five years later Hanson (1977) administered the same questionnaire to 17 of the original institutions in order to observe any changes during that time period. About the same percentage of students were drinkers, and the sex ratios remained constant.

In reviewing studies since 1950, Engs (1977) also noted that the change in drinking statistics had been produced by an overall increase in the number of female drinkers; and her own research substantiated these findings. Engs compared students in 13 United States colleges with those polled in previous studies and used a sample which included 1,128 students (48.1% male and 51.9% female). Eighty-two percent of the males and 75 percent of the females in this study were classified as drinkers.

Hill and Biegen (1979) sampled 326 students at a Texas university and found 89 percent to be nonabstainers; and although males in this study did not drink in greater numbers than females, they consumed larger quantities of alcohol and became drunk more frequently. Wechsler and McFadden (1979) surveyed over 7,000 New England students in 34 colleges and reported abstainers to comprise less than five percent of the total. Frequency of drinking increased with age for both men and women, although women drank less frequently than men at each age level. A study which examined 230 undergraduate students at Arizona State University also found alcohol usage to be widespread (Kaplan, 1979) with 90 percent reporting pre-college drinking and 84.6 percent current consumption.

An adult drinking survey conducted nationwide in 1946 by the National Opinion Research Center reported 65 percent of the sample of 2,677 to be users of alcohol (Riley, Marden and Lifshitz, 1948). These figures were 75 percent among men and 65 percent among women. In 1962, Knupfer and Room (1964) conducted a cross-sectional survey of 1,268 San Francisco adults and found 76 percent to be nonabstainers (81% for males and 72% for females). The proportion of drinkers was found to decrease with age --the 21 to 29 age category having the highest percentage of drinkers (86%). Only 59 percent of those over 60 were classified as users.

A national survey conducted in 1964 and 1965, polling 1,746 randomly selected adults, found 68 percent of the total to drink alcohol at least once a year (77% of males and 60% of females) (Cahalan and Cisin, 1968). Forty-seven percent, however, drank either not at all or infrequently; 12 percent were classified as heavy drinkers. Klatsky et al. (1977) questioned 91,659 Californians and found 76.3 percent to be drinkers (82.4% for males and 71.4% for females).

Gallup Poll figures for comparable dates have run somewhat lower than research studies published elsewhere. According to Gallup (1980), 63 percent of the population were classified as drinkers in 1964; and the most recent poll taken in August of 1979 cited 69 percent of the population as being drinkers (74% of males and 64% of females). As with other polls, Gallup found drinking to decrease with age. Eighty percent of those in the 18 to 29 age bracket were users, 74 percent of those from 30 to 49, and 56 percent of those 50 years of age or older. Gallup also found some regional differences which may account for research dissimilarities. The highest percentages of drinkers were found in the East and the West (75%), followed by the Midwest (72%); and the South had the lowest percentage of the population classified as drinkers (55%).

Several studies have shown that frequency and quantity of drinking do not increase together; young adults have been found to consume larger quantities of beverage alcohol while older adults reported drinking in lesser amounts but drinking more frequently (Cahalan, Cisin and Crossley, 1969; Vogel-Sprott, 1974; Fillmore, 1974).

Since most of the research utilizing college populations indicated that this group had a higher proportion of drinkers than found in the society as a whole, it has been assumed that something endemic to college life has influenced this phenomenon. Cultural variations and differences in life style could account for the disparity, but it is also possible that the younger collegiate age could be responsible.

#### Academic Standing and Social Class

Several studies have indicated a relationship between lower academic standing and heavier drinking (Engs, 1977; Wechsler and McFadden, 1979;

Kaplan, 1979; Hill and Biegen, 1979). This was true for frequency as well as amount of drinking and among both men and women, the relationship being less strong with women. Kaplan (1979) found a considerable difference among moderate drinkers and male heavy drinkers. In his study 17.3 percent of the total sample reported a grade point average (GPA) of 3.4 or better, but none of the heavy drinkers were in this category. Conversely, 1.2 percent of the total had a GPA of under 2.0 with a figure of 5.3 percent for male heavy drinkers. None of the female heavy drinkers had a GPA below 2.49.

The relationship between drinking patterns and social class has been demonstrated by additional studies, both among college students and in the general population. Most found that those in the higher social strata were more apt to be classified as drinkers but less inclined to be heavy drinkers (Riley and Marden, 1947; Straus and Bacon, 1953; Wechsler and McFadden, 1979). Kaplan (1979) found more students from lower income families to be abstainers and the incidence of moderate and heavy drinking to increase with family income, particularly among male students. Farm owners have been reported least likely to be drinkers, professional people to have a higher proportion of drinkers than business people, and unskilled or semiskilled workers to indicate above average percentages of heavy and heavy-escape drinkers (Cahalan and Cisin, 1968; Riley and Marden, 1978). The 1979 Gallup Poll found a higher proportion of drinkers among the higher income groups and among those with a college background. College-trained persons were reported twice as likely to be drinkers as persons with only a grade school education.

## Religion

From the beginning research has documented an association between religious variables and alcohol consumption patterns. Some religious groups prohibit alcohol usage, others condone it, and still others openly encourage drinking. These varying attitudes have appeared to be reflected in differing patterns of alcohol use and abuse. One of the better known and more comprehensive studies relating alcohol consumption patterns to religion has been that of Skolnick (1958) using the data collected by Straus and Bacon during the years 1979 to 1951. Skolnick randomly sampled 387 male student drinkers from the total of 15,747 subjects in the original study. These were chosen from both prescriptive (Jewish and Episcopalian) and proscriptive (Methodist and non-affiliate) backgrounds in order to measure the effects of this variable on drinking behavior patterns. Findings indicated that religious affiliation seemed to have more of an impact on drinking behavior than other variables such as age, regional background, social status, or even religious participation. Those from abstinent backgrounds reported a higher incidence of social complications as a result of drinking and higher rates of intoxication. Four percent of the Jewish students admitted to social problems from drinking. This figure was 39 percent for Episcopalians, 50 percent for Methodists, and 57 percent for non-affiliates of abstinent backgrounds. Drinking problems, however, varied inversely with religious participation; that is, frequent religious participation seemed to mitigate social complications of drinking. Skolnick (1958:466) suggested that the genesis of drinking problems may well be in religious group attitudes for these "lead to the development of different kinds of drinking behavior

systems, which in turn seem to augment or retard the development of drinking difficulties."

Research as a whole has substantiated the contention that Jews have a high incidence of drinking and a low rate of alcohol abuse problems (Riley and Marden, 1947; Straus and Bacon, 1953; Snyder, 1958). From this, Riley and Marden (1947:271) concluded that the proportion of any cultural group that drinks is not necessarily an indicator of the amount of alcoholism within that group, and "it suggests that moderation can become a central and powerful force within the mores of drinking." Episcopalians have also indicated a high percentage of drinkers with a lower than average occurrence of problem drinking, and high rates of heavy drinkers have been found among Catholics (Cahalan and Cisin, 1965).

Several studies have noted a relationship between church attendance and drinking. Regardless of denomination, abstainers and light drinkers consistently have been found more likely to be among those who attend religious services most frequently (Wechsler and McFadden, 1979; Burkett, 1980). Middleton and Putney (1962) examined Protestant college students and found those leaning toward agnosticism to drink more often than believers. Burkett and White (1974) confirmed Skolnick's inverse relationship between religious participation and drinking. Schlegal and Sanborn (1979) examined 842 Canadian high school students and found those not affiliated with a religious denomination to have the highest proportion of drinkers, followed by Roman Catholics and liberal Protestants. Those Protestants whose doctrine prohibited alcohol usage had the lowest percentage of drinkers. These data were true both for those who attended church regularly and those who did not.



In summary it would appear that some demographic trends in drinking patterns could be noted. Indications are that alcohol consumption in the United States is quite widespread, begins at a fairly young age, and is increasing in incidence. Both quantity and frequency of alcohol consumption were found to be inversely related to academic standing and to increase with social class. Research studies have found males to indicate a higher incidence of drinking than females, but this difference has been decreasing in recent years. Drinking behavior appears to have been influenced by both religious preference and commitment, with most studies finding proscriptive denominations to be associated with a higher rate of abstainers but also with more drinking problems among those who did drink.

#### Motivational Variables

The behavioral psychologists tell us that many, if not most, of mankind's activities are the result of learning; and this learning occurs along with a trial-and-error manipulation of the environment. This manipulation produces results that are either favorable or unfavorable, with the unfavorable responses being avoided in the future and the favorable ones sought and cultivated. Thus that behavior which rewards the individual will be repeated; and behavior which has no reward, or a negative one, will be terminated. These psychologists also tell us that in order to abrogate undesirable behavior, it is necessary to determine what rewards accompany the activity and eliminate these rewards.

With this framework both alcohol consumption and alcohol abuse could be considered learned behavior because they can be rewarding. Bacon (1962:78) listed some of these positive effects:

For the individual, alcohol can reduce tension, guilt, anxiety, and frustration. . . . In relation to the total society, alcohol can make possible association and interpersonal activity which may ordinarily be barred; it can permit variations in ideas and activities also . . .; and it can allow an escape valve for socially frustrated individuals, an escape which can be relatively safe.

Bacon named several functions of alcohol: to satisfy hunger or thirst, for medicinal needs, for attainment of religious ecstasy, and for social jollification. The first three, according to Bacon, have minimal, if any, application to our complex society. This very complexity, however, enhances the role of alcohol in social situations. Bacon observed that individuals in our society are independent, fairly ignorant of each other's activities and interests, and tend to develop relationships that are competitive or even aggressive. Humans, nevertheless, need to dispense with tension in order to engage in pleasant, unsuspecting joint activities. Alcohol is an easy and effective means to accomplish this end and therefore is functional for our society.

Most of the research undertaken to test the theories of motivation have involved asking people why they drink or why they thought others did so. Maddox and McCall (1964) asked teenagers why they thought adults drank, and the responses fell roughly into three categories: (1) sociability or being part of the group, celebrating special occasions, and continuation of what habitually has been done; (2) self-expression or relaxation and enhancing self-concept; and (3) anxiety reduction or relief from problems. To these teenagers anxiety reduction appeared to be the most important reasons for adult drinking. This was followed by drinking for self-expression and then sociability. When responding to reasons why they themselves drank, this group reported doing so to enhance self-concept, to avoid being left out, and to be one of the group.

Anxiety reduction was not considered highly influential to teenage drinking.

Cahalan, Cisin and Crossley (1969) found adult drinking to fit into two categories--sociability and escape. This sample gave more importance to social reasons for drinking. Seventy-five percent drank to celebrate special occasions, 72 percent to be sociable, 59 percent to be polite and 31 percent because acquaintances drank. When responding to escape reasons, 45 percent said they drank to relax, 25 percent because it helped to cheer them up, 18 percent to reduce tension and 15 percent to forget worries. Seven percent indicated that they drank to forget everything. A miscellaneous category of enjoyment-oriented reasons found 51 percent drinking because they like the taste and 36 percent to improve appetite. Few differences were found between men and women in this study; however, men were more inclined to say they liked the taste of alcohol.

Using the same type of categorization, Hanson (1974) reported that 16 percent of his sample drank to forget worries, 25 percent when they felt low or down; and over half said that alcohol made them feel less self-conscious. Kaplan (1979) found a majority of those studied, both male and female, to drink for reasons of sociability or for enjoyment of taste. Over half said that drinking helped them relax, and 15 percent indicated that it helped to diminish cares or worries.

Instead of using the categories of "social" and "escape" drinking, Jung (1977) divided his sample of 113 college students into "mature" and "immature" drinkers depending upon their relevance scores for 16 drinking motives. Three of the motives had been independently judged to be "mature" (drinking to be friendly, for special occasions or celebrations, and to be polite). The remaining items were "immature" motivations and included

such things as drinking for relief from pain, to diminish feelings of tension or anger, to get "high", to be part of the crowd, boredom, etc. Immature drinkers were found to consume more alcohol; and in a follow-up study one year later, this group had increased their consumption while mature drinkers had not.

In a somewhat different approach, Russell and Bond (1979) sampled 200 Canadian undergraduate students who were all users of both alcohol and marijuana. These subjects were shown a series of color photographic slides depicting a variety of settings (urban or rural, with or without people, etc.). Some of the settings were pleasant, others unpleasant; some were designed to elicit feelings of dominance, others emotion. With each slide the students were asked to rank how much they felt like having a drink (or smoking marijuana), the quantity of alcohol they would like to drink, and how intoxicated they wanted to become. The investigative hypothesis was that students would desire alcohol more in unpleasant settings; however the opposite was found to be true. A pleasant setting or mood proved most conducive to alcohol (and also marijuana) usage.

It would appear, then, from the research cited that as a whole drinkers use alcohol primarily for social reasons and not to escape from problems or forget worries. Some studies, however, found escape reasons to be associated with larger quantities of alcohol consumption.

#### Racial and Ethnic Variables

It is apparent in reviewing the literature that although alcohol consumption may be a human phenomenon, there are marked differences in the drinking behaviors and patterns of various racial and ethnic groups. Rates of alcohol abuse problems have not been equally distributed among

these peoples, even when drinkers alone were considered. Chinese, Italians and Jews, for example, have shown a disproportionately low rate of alcohol-related problems while the Irish, Native Americans and American Blacks have indicated an alcoholism rate considerably higher than the average (Pittman and Snyder, 1962; Cahalan, Cisin and Crossley, 1969; Cahalan, 1970).

### American Blacks

Much of the earlier research that dealt with a wide spectrum of alcohol consumption patterns has made only brief mention of the drinking behavior of the American Black. Straus and Bacon (1953) reported Black males to be users of alcohol at a slightly higher rate than White males (81% compared with 75%), while fewer Black females than White females were drinkers (43% compared with 61%). However, Black females who drank were more likely than White females to be heavy drinkers (11% compared with 4%).

Maddox (1968) examined data available at the time and concluded that there were indications of almost universal drinking among Black males and a high rate of heavy and problem drinking among both males and females. Maddox samples 262 Black males from a state-supported, predominantly Black college and found that compared with White youth from the same area of the country, more of these young adults were classified as drinkers and a considerably higher percentage reported drinking heavily. Students in this survey were freshmen, and the author noted that they indicated an orientation to drinking that could presage later problems in that many drank for reasons other than social. Using the same sample Maddox and Williams (1968) found 76 percent to be classified as drinkers, 44 percent

said they had been drunk, 16 percent had passed out while drinking, 20 percent had experienced at least one social complication as a result of drinking, and 89 percent indicated some concern over their drinking.

Not all research has implicated Blacks as being excessively heavy or problem drinkers. A study done in California reported fewer Black than White drinkers (Klatsky et al., 1977). Seventy-six percent of Black males in the sample were classified as drinkers, with a comparable figure of 84.5 percent for White males. The same percentages were 58.3 and 75.0 for Black and White females. A higher proportion of young Black than White males consumed three or more drinks per day (4.8% compared with 2.2%). The age range of those in the study was from 15 to 19 years.

Brunswick and Tarcia (1974) examined a sample of 752 Black adolescents in Harlem and found 56 percent of those in the 16 to 17 age range to be drinkers. Compared with non-drinkers, drinkers reported more health problems, particularly psychosomatic complaints, more sleep disturbances, more worries, and more smoking among males and early pregnancy among females. Research involving 1,383 adolescents in Atlanta, Georgia, found Black adolescents somewhat less likely than Whites to be involved in drinking behavior (Higgins, Albrecht and Albrecht, 1977). Blacks who did drink were more likely than Whites to drink at home and with their families. Globetti, Alsikafi and Morse (1980) reported similar findings among rural Black females in a sample that included 196 seventh through twelfth grade youth.

#### Native Americans

North American Indians as a group have received a great deal of attention in relation to how they have perceived and used alcoholic

beverages. American historians from the earliest stages of our settlement have described the Indian as both having a craving for alcohol and being ill-equipped to handle it; and the intoxicated Indian was often pictured as angry, violent, destructive, and inclined toward antisocial behavior. McAndrew and Edgerton (1969) related several such descriptions of Indian drunken behavior dating back to the 1600's and from all parts of the North American continent.

A variety of alcohol-abuse problems have also been apparent with Native Americans. In 1960, federal crime statistics showed that a greater proportion of this group were arrested for all alcohol-related crimes than any other ethnic category in the United States (Steward, 1964), and there are some indications that these types of problems among Indians are not declining. The Indian death rate from cirrhosis of the liver, an alcohol-related disease, increased from 14.2 deaths per 100,000 population in 1955, to 42.5 deaths per 100,000 in 1975, and was the fourth leading cause of death in that year (Indian Health Trends and Services, 1978). In 1975, accidents were the leading cause of death (156.4 per 100,000 population), and the majority of these were motor vehicle deaths--many involving alcohol.

Because of the magnitude of the problem and its cost both to the Indian and to the public as a whole, there has been a sizeable concern for the reason behind Native American drinking behavior and for a better understanding of the factors involved. A variety of cultural, psychological, and physical theories have emerged. McAndrew and Edgerton (1969) cited anthropological studies finding beverage alcohol to be widely used in Central and South America, and some indications that alcohol was used by a few tribes in Mexico and the southern part of the United States.

However, this substance appeared to be unknown to most of the North American Indian tribes, and they lacked the cultural patterns of religious or secular alcohol usage common to peoples in many other parts of the world. These authors noted that the first recorded instances of alcohol consumption by the North American Indians in 1534 related no unfavorable reactions, and later accounts of Indian drinking to the point of intoxication did not describe the Indian as destructive or as exhibiting changes in personality.

McAndrew and Edgerton suggested that two factors were involved in changing the Indian's earlier drinking patterns to those of the drunken Indian who exhibits destructive and antisocial behavior. First, Indians, as a people, were characterized by a high degree of self-control and little outward display of emotion. The lowering of inhibitions that frequently accompanies alcohol consumption, along with a belief that alcohol was the embodiment of an evil spirit which took possession of the drinker, allowed the Indian to act out the hostilities and aggression that were a part of his nature but kept tightly controlled by his cultural need for restraint. The second factor was that the fur traders both presented a model of drunken behavior and encouraged the Indian to drink in order to have a desirable and needed commodity to trade for furs.

Leland (1976) examined over 100 studies concerning the "firewater myth" of Indian drinking and she too concluded that Indians are not constitutionally prone to the development of a craving for liquor and a loss of control over behavior when drinking. The author suggested the possibility that true alcohol addiction may be rare among American Indians. Using a set of symptoms of alcohol addiction based on Jellinek's (1952) criteria, Leland found in the literature three of the criteria definitely



present, two absent or rare, and three showing conflicting evidence of existence. The remaining 36 criteria presented insufficient evidence for a definitive opinion.

Unlike McAndrew and Edgerton, Leland decided that no causative factors could be deduced from the literature because studies among American Indians did not compare populations of heavy drinkers with abstainers and because measures of social stress, such as anomie, had not utilized validated scales. She also observed that the concept of "alcohol addict" could not be measured because there was no consensus as to the meaning of the term and as to which behaviors were relevant to its definition.

Another popularly held theory has been that the Indian drinks because of an identity crisis. It has been suggested that the traditional Native American culture has vanished, leaving nothing in its place; and the Indian drinks excessively in order to blot out feelings of rejection, low self-esteem, and inferiority due to prejudice and material deprivation. Lurie (1971:315) rejected this theory. Her hypothesis was that

Indian drinking is an established means of asserting and validating Indianness and will be either a managed and culturally patterned recreational activity or else not engaged in at all in direct proportion to the availability of other effective means of validating Indianness.

Lurie theorized that the Indian recognized and accepted the negative stereotype of himself and used it as a means of communicating protest. The message intended was that Indians are different from Whites. The author agreed with those who believe that drunken behavior on the part of the Indian may be an excuse or outlet for aggressive feelings which normally are not tolerated. She cited the high arrest rate among Indians which is characterized by offenses that are usually unplanned and frequently alcohol-related.

Anthropological literature has identified a number of drinking patterns, both positive and negative, utilized by the various North American Indian tribes. Price (1975) found that for some tribes alcohol had a positive social purpose in that it promoted integration and allowed for "time-out" behavior. Other tribes used it as a release for repressed feelings of aggression, hostility, and inhibition. For some Indians intoxication had a somewhat spiritual significance similar to a dream experience, and for others alcohol consumption--particularly in a barroom setting--was useful in facilitating learning about and adjusting to urban life. The author classified negative functions of alcohol as primary, or those things, such as alcoholism, that the drinker does to himself in the process of drinking; secondary, or those things actively done to self and others, such as murder, suicide, accidental death, assault, injury, or theft; and tertiary, or societal dysfunctions such as social discord, divorce, or unemployment. Many Indian tribes have found that these negative functions tend to override the positive consequences of alcohol consumption, and the author suggested a need for enhancement of social controls within the Indian societies.

Oklahoma Indians are in a somewhat unique position because unlike many other states, Oklahoma has an extremely diverse Indian population. Although the Osage are the only group owning tribal land in Oklahoma, many others are represented in various areas throughout the state. Stratton, Zeiner and Paredes (1975) identified at least 11 major Indian Nations in Oklahoma, and found these groups to have quite different drinking patterns and rates of alcoholism, arrest, and alcohol-related death. The latter ranged from 2 per 100,000 population in the Cherokee area to 294 per 100,000 population in the Cheyenne-Arapaho region.

These authors noted that as a whole, western Oklahoma tribes showed a much higher incidence of alcohol-related difficulties than did their counterparts in the eastern part of the state, and a hypothesized explanation for this disparity was found in the differences in life style and cultural origin of the two groups. Eastern tribes historically were farmers and stockmen and had adopted the majority culture by 1830, when they were moved from their homes east of the Mississippi to what was then Indian Territory. This group took their culture with them and reestablished farms and businesses in the new land. Western tribes, in contrast, primarily had been hunters and could no longer continue their old way of life on the reservation. The authors suggested that these findings could support the contention that Indian drinking behavior could be "retreatist or escape responses to acculturational stress, i.e., to social disintegration caused by exposure to White society" (Stratton, Zeiner and Paredes, 1975:1171). The change in life style produced, for the plains Indian, a more intense form of culture shock which was expressed in alcohol-related behavior.

### Chinese

Although it is well documented that the Chinese have shown low rates of alcoholism and alcohol-related problems, comparatively little has been written about this group; and much of the research that has been done has been of an observational nature. The Whole College Catalog About Drinking (1976) noted that the Chinese are able to use alcohol, and in some cases use it heavily, without suffering the alcohol-abuse problems found with many other societies. This was attributed to the fact that alcohol consumption, for these people, has had well-defined guidelines and has

been used along with other activities in a relaxed social or family environment. The Chinese typically have used alcohol with food and as a part of the meal.

Singer (1972) observed that the Chinese in Hong Kong believed alcohol to be harmful in excess but in moderate amounts could be beneficial. He also noted that alcohol was regarded as food by these people; and although large amounts were consumed on occasion, the Chinese prided themselves on being able to "hold their liquor." Singer found only a small percentage of Chinese to be regular drinkers, mostly in the lower class; and in the majority of families, drinking was done by males only. The author observed that although traditionally alcoholism had been considered rare among the Chinese, the proportion of first hospital admissions for alcoholic psychosis had been rising steadily. This figure had climbed from 0.4 percent in 1961 to 6.1 percent in 1970. A 1950 figure for the United States was 5.1 percent; however, diagnostic policies were not comparable.

Consumption levels and per capita consumption for a five-year period were examined, and the author concluded that the Chinese male drank almost as much as the American male. The number of drinkers during that five-year period remained constant; consumption of Western beverages increased and that of Chinese beverages decreased slightly. In total consumption, however, Chinese wine was still the predominant beverage. From 1968 to 1969, alcohol-related offenses comprised 1.75 percent of all arrests. The figure for the same period in the United States was 45 percent; however, police policy in the two countries could not be assumed to be equivalent.

Singer cited some possible reasons for the low rate of alcoholism among the Hong Kong Chinese: (1) the socio-cultural structure of the Chinese, based on Confucianism, which denounces excess and stresses intellectual control rather than an outward display of emotion; (2) few if any public drinking places along with the practice of restricting alcohol consumption to meals; and (3) the absence of strong ambivalent feelings about drinking.

A few studies have compared Chinese Americans with Caucasian Americans, finding the former group to have a lower incidence of alcohol abuse problems. Sue, Zane and Ito (1979) looked at Chinese, Japanese, and Caucasian Americans and found the three groups to exhibit differing patterns of drinking. The sample included 23 Chinese, 24 Japanese, and 77 Caucasian students at the University of Washington. Asians as a whole reported drinking less than the Caucasian group, although consumption increased with the number of generations in the United States and decreased with the ability to speak their native language, indicating a cultural influence upon drinking. Asian-Americans and Caucasians also differed in attitude toward drunkenness and the morality of drinking. Asians were more inclined to disapprove of drunkenness but less likely to feel drinking to be morally wrong. Asians were more likely to report regulating or controlling drinking for physiological reasons (e.g., face flushing) and Caucasians for behavioral reasons (e.g., loss of self-control), which the authors concluded could have a genetic basis. Overall, however, it was felt that the cultural explanations of drinking behavior were more significant.

Among the sample of 91,659 Californians polled by Klatsky et al. (1977), the 4,319 Orientals were found to have the lowest incidence of

drinkers. A comparison of Oriental males and females with Caucasian males and females showed that 63.2 percent of the Oriental males and 42 percent of the Oriental females were drinkers, while 84.5 percent of the Caucasian males and 75 percent of the Caucasian females were drinkers; and among drinkers the Orientals also were found to consume lesser quantities of alcohol. This sample included adults of all age ranges and would appear to indicate that Orientals as a whole exhibited drinking patterns that differed from those of Caucasians.

Many people of Oriental descent report physical discomfort or facial flushing as a result of alcohol consumption, and it has been hypothesized that this response could be indicative of physiological differences relating to alcohol abuse. Wolff (1972) compared Japanese, Taiwanese, and Koreans with Caucasians and found some physiological differences between the two groups. Full-term infants were also compared in an effort to eliminate any psychological or post-natal dietary differences. The Orientals responded to drinking by flushing (measured by inspection of the face and by optical densiometry of the ear lobe). This reaction was noted in 83 percent of the Oriental group and only 6 percent of the Caucasians. Changes in pulse pressure were also measured, and these correlated with the flushing response. In addition, most of the Orientals reported feelings of intoxication and discomfort which the others did not experience. The author concluded that these differences could reflect a genetic disparity in autonomic nervous system responses, and that the lower rate of alcohol consumption among some Orientals could be due to the physical discomforts associated with drinking.

In summary, the literature reviewed for this research would seem to indicate an equivocal position regarding Black drinking. Earlier studies

have found a higher rate of both drinking and problem drinking among Blacks; however, some research reported a lower incidence of drinking with this group. Almost all researchers tend to implicate Native Americans in problem drinking, although the position of the Native American collegian has not been adequately explored in this respect. The small number of investigations that have been done with the Chinese in relation to drinking patterns has indicated a low incidence of both problem drinking and female drinking and a fairly high percentage of male drinkers.

#### Consequences of Drinking

It has been estimated that about 5 percent of adults in the United States are alcoholic; or among drinkers, 1 adult in every 14 (Jones, Shainberg and Byer, 1969). Since there are a variety of definitions as to what constitutes alcoholism, however, this figure could vary considerably. The general belief is that several years of drinking precede the condition of alcoholism; therefore, relatively few college students would fall into this category. Many areas of problem drinking have been identified, and there has been some feeling that a number of these may preface or predict actual alcoholism. During recent years there has been increasing concern with the problem areas that may indicate later alcohol addiction or alcoholism, and current researchers are asking young people questions about the things they are doing in relation to alcohol usage that are causing them concern or actually getting them into trouble.

Straus and Bacon (1953) formulated a four-item Guttman-type scale of drinking complications to measure the extent of involvement in problem behavior. The lowest point on the scale included questions concerning failure to meet academic or social obligations; the second position

involved loss of friends or damage to friendship due to drinking; next was drinking which caused accident or injury; and last were the questions involving formal punishment, such as loss of job, arrest, etc. It was assumed that those suffering consequences in the fourth position had also experienced those lower on the scale. According to this measure, two-thirds of the males and 85 percent of the females were classified as zero types because they had no reported consequences from drinking. Seventeen percent of the males and 8 percent of the females were scale type 1; 11 percent of males and 6 percent of females were type 2; 4 percent of males were type 3; and 2 percent were type 4. Less than 1 percent of females were scale type 3, and none were type 4. It was found that a person's position on this scale correlated with quantity and frequency of drinking, frequency of intoxication, and with age up to age 18. With women the probability of complications decreased as family income decreased, and with men the highest incidence of complications occurred in the highest income bracket.

Included in the questionnaire were some items which were analyzed separately because they were considered to be warning signs of potential problems. These included "blacking out," reported by 18 percent of male and 5 percent of female users; becoming drunk when alone, reported by 13 percent of men and 3 percent of women; drinking before or instead of breakfast, reported by 16 percent of men and 7 percent of women; and aggressive or destructive behavior while or after drinking, reported by 11 percent of men and less than 1 percent of women. The authors considered "blacking out" to be particularly serious as an indicator of later alcoholism because this phenomenon had been implicated by alcoholics as being one of the first positive signs of problem drinking. An additional



question concerning anxiety over drinking found 17 percent of males and 10 percent of females indicating concern over the consequences of their drinking, fear of dependence on alcohol, or both.

Hanson (1974) found relatively few drinkers experiencing problems as a result of drinking. Fourteen percent indicated trouble with friends because of drinking, 12 percent reported problems with family, 7 percent had come into contact with police or the law, 6 percent had gotten into trouble with school officials, and only 1 percent had had job-related problems.

The sample collected by Engs (1977) was somewhat more problem prone. Only 20 percent indicated no difficulties as a result of drinking, 29 percent had suffered one or two adverse consequences, and 22 percent reported having had three or four problems. Almost 74 percent admitted to having had a hangover; 69.7 percent nausea and vomiting; 68.4 percent driving after drinking; 24.2 percent missing class after drinking; 18.6 percent fighting after drinking; 17.6 percent damaging property; 9.2 percent getting into trouble with the law; and 2.5 percent being arrested for impaired driving.

Other researchers have found somewhat similar rates of various problems as a result of drinking. Wechsler and McFadden (1979) reported almost twice as many men as women indicating adverse consequences of drinking. These did not increase with age, for freshmen admitted to some consequences at a higher rate than did seniors. Loss of memory was reported by 15.3 percent of males and 7.6 percent of females; losing a friend or damaging a friendship, 9.8 percent of males and 4.7 percent of females; and getting into a fight, 20.6 percent of males and 2.1 percent of females.

Using a sample of 1,150 from the University of Iowa, Strange and Schmidt (1979) compared those students who were concerned about the long-range consequences of their drinking with those who were not. Thirty-one percent were classified in the concerned category, and those students were found to use alcohol more frequently and in larger quantities and to have a higher percentage preferring wine and liquor to beer. The concerned group also reported a higher rate of problems as a result of drinking, and 24.5 percent felt that they might have a drinking problem. This was compared with 0.5 percent of the non-concerned group.

Although information on Native American collegians has been lacking in the literature, statistics tell us that these people as a whole have a high arrest rate for alcohol-related offenses. The FBI Reports for 1972 on arrest rates for drunkenness indicated 21.3 percent of White arrests were for this offense, while the comparable figure for Indians was 61.8 percent (Cockerham, 1977). Forslund (1979) found the Indian adolescents in his study to experience more serious consequences from drinking than did White youth in the same area. He examined such effects as being drunk, getting high, passing out, and loss of memory.

Black male students in the Maddox and Williams (1968) sample exhibited somewhat fewer complications from drinking and fewer warning signs associated with drinking than did Whites in some of the other studies. Only 3 percent of the Blacks reported having had trouble with the police. The FBI Reports for 1972 placed the arrest rate among Blacks for drunkenness at 15.2 percent, considerably lower than the figures for other Americans.

Although some of the literature has reported only a small amount of problem drinking, a number of studies found rather high rates of behavior

that could be considered dangerous for those individuals involved or could be precursive of more pathological patterns of drinking. The fact that the more recent research seems to have indicated a higher rate of reported problem behavior could indicate that the observed increase in the incidence of drinking has also been accompanied by an increase in complications as a result of drinking.

## CHAPTER III

### THEORETICAL BACKGROUND

The proposed theoretical framework, or causal pattern, presented in Chapter I postulated a relationship among a number of variables. It was anticipated that the social climate of the student's home life, which included parental attitudes toward drinking, would have an impact on that individual's orientation toward use of alcoholic beverages, the need for neutralization of drinking behavior, a conception of what college is all about and the social life engaged in after coming to college. These, then, would be reflected in patterns of drinking behavior and in any resultant problems from that activity. All of the above variables are closely related to the socialization which occurred as the individual matures and they are a representation of the norms and values which dominated his or her background. This socialization is a life-long process during which human beings are continually facing change and the necessity of resocialization to accept new roles, statuses, norms and values. The adolescent period is a very active one in terms of this process, for it is during these years that young people are preparing to assume adult roles and to take a responsible place in the adult world.

This socialization process occurs primarily through close association with members of the family and will generally be most influenced by the norms and values of parental figures in this group. It is probably during these years that attitudes toward alcohol consumption are

formalized and the decisions made regarding individual drinking patterns.

According to Barnes (1977:572-573):

the development of drinking behavior by youth in the formative years may be viewed as learned, social behavior which is part of the socialization process, anticipatory to the transition from childhood status to adult status.

Barnes (1977:573) also contended that problem drinking is a "manifestation of incomplete, inadequate socialization within the family."

For many young people, entering college is an important part of the socialization for adulthood because college not only is an agent for career development, but it also facilitates the shift from dependence upon and protection by the family to a more independent autonomous existence. This resocialization is not something that occurs only after the individual enters college, but in preparation for this change the young person has been developing new attitudes and ways of thinking all during the adolescent years. Thus young people come to college with preconceived ideas of what college life is all about and what kinds of activities will be most attractive to them. Anticipation of college life, for most new students, will include not only learning a profession and preparing for a career but looking forward to such social aspects as sports events, dating, partying and, perhaps, drinking.

A common picture of the American college scene is one that is closely associated with beverage alcohol. A number of well-known college songs and traditions describe drinking as an integral part of this way of life, an activity which has been a legendary part of the relaxation period when students are not attending lectures or studying. This is true not only of today's collegians but is an inheritance from our earlier European ancestry. Rouse and Ewing (1978:171) cited an eighteenth century student drinking song which describes the philosophy of that time

and still is appropriate for many of today's college students:

Loud let the glasses clink  
Drink deep, nor spare the flowing bowl  
The man who fears to drink  
Has no true soul.

This is the student's hour  
The stern professor's work is done  
We have no other power  
Save wine and song.

These authors also examined a number of studies involving adult as well as college populations and concluded that the characteristics of the region involved are also important in determining individual collegiate drinking patterns. The highest rates of adult abstinence were reported to be in the East-South-Central region, the lowest in the Middle Atlantic area of the country; and educational institutions in each section tended to reflect this trend. Thus the ethos of college life is to some extent a continuation of the mores of the larger society.

Campbell (1970) also maintained that how a student behaves after coming to college will depend to some extent upon the norms that have been internalized during the process of being socialized for this event. In relation to alcohol consumption, he examined 1,575 college freshmen who had come from homes where abstinence was the norm and who had not been pre-college drinkers. He found that those who identified with abstaining parents and had largely internalized this kind of normative behavior were more likely to continue to be abstinent in college, to choose nondrinkers for friends, and not to be affiliated with Greek organizations. The internalization of religious norms is also important in this respect. Jessor and Jessor (1975) found with high school students that as religiosity increased, so did abstinence; and Skolnick (1958) discovered that religious orientation toward drinking influenced

such things as age of beginning to drink, quantity and frequency of alcohol consumption, parental knowledge of drinking habits and drinking companions.

Although drinking appears to be a part of the college scene, some young people come to college from homes or communities where alcohol is rarely, if ever, consumed and where the activities surrounding alcohol consumption are looked upon with disfavor; still others adopt drinking patterns in college that are quite different from the moderate practices of families and friends at home. Behavior of this nature, as a rule, must be neutralized or rationalized in some way so that the individual can situationally qualify his or her prior moral norms and accept the current situation.

A number of theories of neutralization have been developed (e.g., England, 1960), however that of Sykes and Matza (1957) has been the most widely used and accepted. Sykes and Matza were attempting to explain the ability of some juveniles to be both law-abiding and delinquent while seeming to accept the conforming values of the larger society, and they identified several forms of justification or rationalization for actions that may be contrary to the person's earlier moral standards.

1. Denial of Responsibility. This might serve to shift accountability from the individual to the environment, friends, home life, or social pressures; and the delinquent could deny personal responsibility because of conditions causing his behavior.

2. Denial of Injury. This technique could be used when the delinquent defined as wrong only those actions which actually hurt someone. Stealing a car is only borrowing and vandalism hurts no one since the person who owns the property could probably afford the loss.

3. Denial of a Victim. The delinquent may say that the person wronged is really not a victim since he deserved to be punished for some reason.

4. Condemnation of the Condemners. Attention is shifted to others in the society, perhaps those in a power position, who have been accusing the delinquent, but whose actions are seen as just as bad if not worse than those of the accused.

5. Appeal to Higher Loyalties. A pull toward peer loyalty may override the social controls of the larger society and cause the young person to engage in delinquent acts because of the demands of friends. Friends or companions must come first, and a conflict of norms or values will be resolved by choosing the ones that hold the most importance for the individual.

Sykes and Matza believed that those who violate society's norms or their own previously held values systems would do so not because they rejected these norms and values but because they were able to neutralize them using one or more of the above techniques. It is possible that changes in patterns of alcohol consumption may be a part of this neutralization process.

A limited number of studies have examined the relationship of neutralization to forms of behavior that could be considered socially deviant, morally questionable or even totally delinquent; but little if any research has addressed the neutralization aspects of the activities surrounding alcohol consumption.

Following publication of Sykes and Matza's theory of neutralization, some efforts were made to develop scales for testing its utility. Ball (1965) did so with a sample size of 400 and found that delinquent



boys scored higher on the neutralization scale than did nondelinquents. Rogers and Buffalo (1974) also developed a scale for measuring this concept and found the technique to be readily utilized by a group of 164 institutionalized delinquent boys. Some racial differences were noted also in this study with Black youth indicating a higher rate of neutralization than their White counterparts.

A behavioral continuum extending from a moral absolute position through situational ethics, neutralization and a rebellious absolute was developed by Norris and Dodder (1979) who found 18 percent of their sample of 351 (mostly nondelinquents) to be predominantly using the neutralization position on the scale. Of the 13 scale items "being drunk" was neutralized by 26.2 percent of the sample, second only to truancy in incidence of neutralization.

Most of the research with neutralization has been in explaining how this technique could relate to delinquency; however, the theory has some relevance to nondelinquent behavior as well, for many situations in life call for decisions that cause conflict among differing value systems within the individual. Brennan (1974) explained how these techniques could be used in rationalizing involvement in abortion, both from the standpoint of the patient and those performing the surgery.

1. Denial of responsibility could occur when those involved blamed lack of information on or failure of birth control devices, high economic or psychological costs of rearing unwanted children or social pressures from contributing to problems of overpopulation.

2. Denial of a victim would be present when the aborted infant is referred to in nonhuman terminology such as fetal material, abortus, etc. or when the fetus is considered an intruder deserving of punishment.

3. Denial of injury is the natural consequence of denial of a victim--thus once the fetus becomes nonhuman, it cannot be injured.

4. Condemnation of condemners would occur when those who do not approve of the abortion are categorized as hypocrites who desire power over others or chauvinists who are against the freedom of women.

5. Appeal to higher loyalties would occur when the emergence of abortion as a legal phenomenon made it possible for women to identify with the feminist movement, at least on this issue, and orient themselves with a group rather than face the issue alone.

Although the author applied these techniques to abortion, similar procedures could be used to neutralize behaviors associated with alcohol consumption: (1) denial of responsibility--drinking is a part of college life, (2) denial of a viction--drinking is all right as long as no one is hurt or annoyed, (3) denial of injury--drinking is all right as long as the drinker does not bother others, (4) condemnation of condemners--drinking is no worse than other things people do today, and (5) appeal to higher loyalties--one must drink because friends do.

Entrance into college life often constitutes a period of radical change in the life of a young person. These changes can involve making new friends, adjustments in life style, and additional opportunities for responsibility or decision making. The theoretical background for this research suggests the possibility that drinking behavior patterns could be acquired much as are other forms of social living and that the neutralizing techniques used to rationalize delinquent behavior also could be employed to justify the activities that commonly are believed to accompany the consumption of beverage alcohol.

## CHAPTER IV

### RESEARCH DESIGN

#### Populations

This study measures some of the behavioral patterns accompanying the consumption of beverage alcohol in a university environment. Sampling was done from the student body of Oklahoma State University, a co-educational institution with an on-campus enrollment of 20,739 students during the spring semester of 1981. Of these, 12,080 (58.2%) were male and 8,659 (41.8%) were female. A sample was drawn from the total enrollment and, in addition, several ethnic and racial groups within the population were examined. These included Black, Native American, Iranian, Nigerian, and Chinese students. The total Black population for the given semester was 573, and of this 301 (52.5%) were male and 272 (47.5%) were female. The Native American enrollment was 329, 195 of whom were male (59.1%) and 134 female (40.9%). All international students numbered 1,458 (1,090 male and 268 female). Within the international group, Iranians comprised the largest national representation with 339 students. Nigerian students totalled 95 and Chinese 63. No male-female divisions were available among the individual international groups.

Oklahoma State University is located in Stillwater, Oklahoma, which listed a population of 38,268 in the 1980 census, a figure that included students. Of this number, 1,409 were black, 739 were Native American, and 648 were Asian. The university is situated near the center of the

city and is its largest single industry. Most students live within walking distance of the university, and the bulk of their working and leisure activities while there take place in a relatively small area, making it possible to examine the various cultural and ethnic patterns within the same geographic, economic, legal, and social structure.

#### Samples and Sampling Procedures

Random sampling frequently is considered to be the optimum approach to data collection because simple random selection, where each subject has an equal probability of being chosen from the total population, allows for the most accurate estimation of sampling error. This type of sampling, however, would not yield an adequate number of minority or international students. Native Americans, for example, constituted less than two percent of the student body, and their proportion in the study would be well below the minimum required for many statistical analyses. It was determined, therefore, that a purposive sample, or sampling separately from each group, would be required.

A basic problem with most kinds of sampling is how best to reach those individuals selected, and a variety of procedures could be utilized. The personal interview technique was discarded, both because it would be time and cost prohibitive and because the personal nature of the information being elicited could inhibit a truthful response. The more anonymous procedure of a mail-out questionnaire also has some methodological problems; for this type of information gathering is usually random only in its inception, not in the final return. Mail-out questionnaires traditionally have an attrition rate of around 50 percent, and

there is no way of determining that those actually completing and returning the forms truly represent the ones who do not.

There are some who believe that social science has been overly concerned with statistical significance in research. Willer (1967), as an example, maintained that limiting research to random sampling also restricts the scope of what is being examined and this in turn limits the validation of universal propositions. Willer (1967:102) further stated that it is not possible to study a representative sample from all cultures at all times and that "generalizations not limited by specific culture or social organizations are invariably based upon a nonrepresentative sample." He contended that we should not equate scientific significance with statistical significance, but should utilize all available means of induction in order to obtain conditional predictions.

Despite its alleged shortcomings from a statistical standpoint, classroom polling has some practical advantages, and this was chosen as the method for gathering baseline data. Students in a classroom setting reportedly respond well to questionnaires, giving a high return rate of useable materials and thus avoiding the problems of omitting a block of nonresponders from the data. Since a fairly large proportion of the minority and international groups would be needed for data analysis and because it was believed that a reluctance to respond to questions of a somewhat personal nature could prove to be a problem in gathering information from these individuals, it was decided to have a member of each group administer the questionnaire to students in that category. Those doing the polling were encouraged to contact as many respondents as they could and to attempt to diversify their sample as much as possible. All pollsters were drinkers.

A total sample of 963 was taken from the entire student population; and of these, 800 were retained and used for purposes of analysis. The largest sample, and the one utilized in obtaining baseline data, came from polling 14 introductory sociology classes during the month of January, 1981. A total of 553 completed questionnaires were obtained; five were discarded because of printing or collating defects and one because of patterned response schemes, suggesting that the respondent had checked answers without reading or thinking. Thirteen international students from these classes completed the questionnaire, and these also were deleted. The remaining 534 subjects constituted the university classroom sample which included 7 Native Americans and 22 Blacks.

A Black female student sampled the Black population and returned 100 completed questionnaires. One of these was discarded because of printing errors and two because of inconsistent answers,<sup>1</sup> leaving a sample size of 97.

Although several hundred Native Americans enrolled in the university each semester, many, if not most, of these are students of Indian ancestry whose life style is similar to that of the majority population. Efforts were made, therefore, to acquire a pollster who could separate the "cultural Indians" who considered themselves to be Indian, attended Indian cultural functions, associated with other Indians, etc. from the Indians who primarily identified with the majority culture. Native Americans were polled by a female who described herself as belonging to

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<sup>1</sup>Inconsistency was determined by answers that were not compatible with responses on similar questions--e.g., quantity and frequency that did not match or a page of answers that were identical. It is recognized that any valid questionnaire could contain some inconsistent responses; therefore, more than one or two questionable areas were required for rejection.

the "cultural Indian" group. She had been active in the Native American organizations and was able to sample from this type of individual. Completed questionnaires from Native Americans numbered 97, but of these only 60 were useable. Nine were discarded because of inconsistent answers and 28 because the respondent had checked a racial category other than Native American.

One hundred Iranians were sampled, but the majority of these forms were not useable due to inconsistent answers and patterned response schemes indicating an unreliable answer. It was decided that Iranians could not be included in the data analysis, and this group was therefore omitted from the study. Sixty-three Nigerians were sampled by a male Nigerian student; one questionnaire was discarded because of inconsistent responses; and the remaining sample numbered 62. The Chinese sample was obtained by a female Chinese student who returned 49 questionnaires. Two of these were discarded because of patterned responses, leaving a sample size of 47.

Although the above groups are referred to as "samples," it is recognized that none constitute a true probability representation. However, it can be argued that to some extent each gives evidence of the quality of the whole. The number of available students in the minority and international groups was small, and those polled for this research constituted a fairly large percentage of the total. With the cultural Native Americans, Nigerians, and Chinese, pollsters were instructed to present the questionnaire to as many of the group as they could reach; and attempts were made to diversify the Black representation by including a variety of different types of individuals.

### Instrumentation

Data were gathered by use of a 133-item questionnaire (see Appendix B), which elicited several types of information: (1) basic demographic data, (2) the meaning of college life for the individual, or ethos of college life, (3) religious commitment or religiosity, (4) the degree to which the student neutralized his or her drinking behavior, (5) social orientation, (6) drinking habits and patterns, (7) reasons for drinking, and (8) problems relating to drinking.

The demographic section of the questionnaire was designed to give information about the respondent's social and economic background and included the variables of age, sex, marital status, type of school residence, Greek affiliation, race, college classification and major, grade point average, size of community of origin, parental occupational level, native country and length of time in the United States if an international student, and religious preference. The question on occupational category followed the format used in the College Student Questionnaire (1965). The remaining information was measured on a five-point Likert-type scale, and several sets of items were summated to give single scale values for each individual on these data. Scale values were calculated in terms of mean scores and could range in value from one to five, "one" being the negative and "five" the positive ends of the scale. Factor analysis of the classroom sample was used to assess scale validity, and some items were eliminated from the scales due to low loadings on the first extracted factor. A summary of all factor analyses along with loadings on the original first factor can be found in Table 1.



TABLE I  
RESULTS OF FACTOR ANALYSIS

Scale Items	Mean	Unrotated First Factor	Unrotated Final Factor	Orthogonal Varimax Rotation		
				I	II	III
<u>1. Ethos of College Life</u>						
When you were anticipating going to college, how attractive did the following features appear to you as a part of college life?						
a. Sports events	3.24		0.54	0.61		0.03
b. Academic environment	3.88		0.31	-0.05		0.64
c. Drinking and partying	2.84		0.58	0.78		-0.15
d. Dating	3.75		0.75	0.80		0.12
e. Preparing for a career	4.50		0.37	-0.10		0.83
f. Making a better life	4.25		0.53	0.18		0.68
<u>2. Religiosity</u>						
a. Religious preference	11.82	0.07	---	---		
b. Religion is especially important to me because it answers many questions about the meaning of life.	3.75	0.86	0.86	0.86		
c. It is important to me to spend periods of time in private religious thought and meditation.	3.10	0.78	0.78	0.78		
d. Quite often I have been keenly aware of the presence of God or a supreme being.	3.85	0.76	0.76	0.76		

TABLE I (Continued)

Scale Items	Mean	Unrotated First Factor	Unrotated Final Factor	Orthogonal Varimax Rotation		
				I	II	III
e. If not prevented by unavoidable circumstances, how often do you attend church or other places of worship?	3.46	0.84	0.84	0.84		
f. How often do your parents attend church or religious services?	3.58	0.58	0.58	0.58		
<u>3. Neutralization</u>						
a. Getting drunk is wrong.	2.96	-0.76	---	---	---	
b. Drinking is as much a part of college as attending classes.	2.14	0.41	0.53	0.19	<u>0.50</u>	
c. It is no one's business how much I drink as long as I don't annoy others.	3.06	0.55	0.59	<u>0.82</u>	0.13	
d. Having one beer or one drink is OK, but not more than that.	2.45	-0.38	---	---	---	
e. I have to drink to stay in good with my friends.	1.22	0.14	0.36	-0.24	<u>0.76</u>	
f. Drinking is always wrong.	1.76	-0.58	---	---	---	
g. Getting drunk is no worse than many other things people do today.	3.02	0.58	0.65	<u>0.73</u>	0.05	
h. Drinking is part of becoming an adult.	1.43	---	0.61	0.15	<u>0.66</u>	
i. Getting drunk is OK as long as I don't drive while drunk.	2.57	0.75	0.72	<u>0.54</u>	0.37	
j. A little drinking is OK, but only on special occasions (weddings, etc.)	2.86	-0.22	---	---	---	

TABLE I (Continued)

Scale Items	Mean	Unrotated First Factor	Unrotated Final Factor	Orthogonal Varimax Rotation		
				I	II	III
<u>4. Social</u>						
How often do you						
a. Attend a party?	3.21	0.45	0.45	0.04	<u>0.72</u>	
b. Pick up a date at a party?	2.02	0.35	0.35	-0.10	<u>0.75</u>	
c. Have a headache?	2.16	0.54	0.55	<u>0.60</u>	<u>0.06</u>	
d. Feel nervous or tense?	2.40	0.62	0.62	<u>0.83</u>		-0.16
e. Have a rapid heart beat when not exercising?	1.60	0.58	0.59	<u>0.62</u>		0.09
f. Take tranquilizers or sleeping pills?	1.15	0.46	0.47	0.39		0.23
g. Feel depressed or unhappy?	2.29	0.60	0.59	<u>0.69</u>		-0.001
h. Oversleep and miss class?	1.69	0.49	0.50	<u>0.27</u>		0.45
i. Drive a car over 80 miles per hour?	1.68	0.31	0.31	-0.03	<u>0.57</u>	
j. Cheat on exams?	1.40	0.35	0.34	0.09	<u>0.45</u>	
k. Feel on top of the world?	3.51	-0.18	---			
<u>5. Quantity-Frequency</u>						
a. How often, on the average, do you usually drink beer?	2.63	0.75	0.77			
b. How often, on the average, do you usually drink wine?	1.97	0.20				
c. How often, on the average, do you usually drink liquor?	2.30	0.68	0.67			
d. When you drink beer, how many drinks, on the average, do you have at any one time?	3.05	0.77	0.80			

TABLE I (Continued)

Scale Items	Mean	Unrotated First Factor	Unrotated Final Factor	Orthogonal Varimax Rotation		
				I	II	III
e. When you drink wine, how many drinks, on the average, do you usually have at any one time?	2.19	0.56	0.51			
f. When you drink liquor, how many drinks, on the average, do you usually have at any one time?	2.65	0.83	0.84			
<u>6. Reasons for Drinking</u>						
How often do you drink for the following reasons?						
a. It helps me relax or to be less nervous.	2.10		0.65	0.17	<u>0.60</u>	-0.13
b. To get along better on dates or other social occasions.	1.90		0.71	<u>0.54</u>	0.44	0.03
c. To relieve aches, pains, or fatigue.	1.40		0.53	-0.13	<u>0.76</u>	-0.14
d. To improve appetite for food.	1.27		0.44	0.02	<u>0.77</u>	0.13
e. To be sociable.	2.56		0.66	<u>0.72</u>	-0.02	-0.10
f. To celebrate special occasions.	3.59		0.65	<u>0.17</u>	-0.07	-0.70
g. Because friends drink.	2.07		0.59	<u>0.85</u>	-0.17	-0.02
h. For enjoyment of taste.	3.14		0.49	-0.32	0.08	-0.87
i. For a sense of well-being or to feel good.	2.58		0.78	0.33	0.07	-0.57
j. To get high.	1.95		0.68	0.32	0.15	-0.40
k. To get drunk.	2.14		0.68	0.32	-0.08	-0.58
l. It is the adult thing to do.	1.28		0.50	<u>0.55</u>	0.22	<u>0.11</u>

TABLE I (Continued)

Scale Items	Mean	Unrotated First Factor	Unrotated Final Factor	Orthogonal Varimax Rotation		
				I	II	III
<u>7. Problem Drinking</u>						
How often has your drinking led to the following situations?						
a. Given you a hangover.	2.16		0.64	-0.05	<u>0.85</u>	-0.002
b. Caused nausea and/or vomiting.	1.87		0.55	-0.001	<u>0.89</u>	0.19
c. Caused you to "black out" or not to remember what has happened.	1.44		0.65	-0.11	<u>0.53</u>	-0.38
d. Interfered with school or work.	1.49		0.74	0.11	<u>0.40</u>	<u>-0.41</u>
e. Caused problems in human relationships.	1.57		0.70	-0.03	0.06	<u>-0.81</u>
f. Drinking while driving or driving after having several drinks.	2.02		0.70	<u>0.46</u>	0.37	-0.06
g. Being arrested for DWI (driving while impaired), DUI (driving under the influence), or PI (public intoxication).	1.06		0.46	<u>0.57</u>	-0.13	-0.15
h. Being criticized by someone you were dating because of your drinking.	1.35		0.51	-0.09	-0.11	<u>-0.79</u>
i. Getting into a fight after drinking.	1.48		0.59	<u>0.79</u>	0.01	<u>0.05</u>
j. Damaging property after drinking.	1.35		0.62	<u>0.87</u>	-0.005	0.06
k. Doing something while or after drinking which you later regretted.	2.08		0.78	0.27	0.21	<u>-0.48</u>
l. Thinking you might have a problem with drinking.	1.28		0.62	0.18	-0.10	<u>-0.67</u>

The ethos of college life section attempts to delineate and differentiate those attributes of college life that might appeal to individual students, and respondents ranked the five items of this scale from "Not at All Attractive" to "Very Attractive." Factor analysis determined that the items did measure the same dimension and could be summated to yield a single index number. The unrotated factor matrix showed all items loading in excess of 0.30 on the first factor, which explained 28 percent of the total variation. An orthogonal varimax rotation identified two factors: (1) social environment, or partying, which included such things as sports events, drinking and partying, and dating; and (2) academic environment, or studying, which involved preparing for a career and making a better life, etc. Three scales were then formed: total ethos items, social ethos, and academic ethos.

The section on religion was derived from Bhushan's (1970) dimensions of religiosity. Bhushan identified three components of religiosity: theoretical, the individual's belief in God; practical, his faith in observing rituals or duties, such as prayer, or in his belief in life after death; and emotional, the individual's feeling of devotion, dedication, and pleasure in religion. It was felt that these elements could be cross-cultural in that they would apply to a variety of religious forms and practices. The actual wording was taken from Allport and Ross' (1967) intrinsic subscale measuring religious orientation, and responses ranged from "Strongly Disagree" to "Strongly Agree" on a five-point scale. These included: (1) Religion is especially important to me because it answers many questions about the meaning of life; (2) It is important to me to spend periods of time in private religious thought and meditation; (3) Quite often I have been keenly aware of the presence of God or

a Supreme Being; (4) If not prevented by unavoidable circumstances, how often do you attend church or other places of worship; and (5) How often do your parents attend church or religious worship services. The items were factor analyzed; and after elimination of the question concerning religious preference, all loaded in excess of 0.58 on a single unrotated factor which accounted for 59 percent of the total variation.

Neutralization was measured by a series of questions following Sykes and Matza's (1957) justifications for behavior: (1) denial of responsibility (Drinking is as much a part of college as attending classes), (2) denial of harm (Getting drunk is OK as long as I don't drive while drunk), (3) denial of a victim (It is no one's business how much I drink as long as I don't annoy others), (4) condemnation of condemners (Getting drunk is no worse than many other things people do today), and (5) appeal to a higher authority (I have to drink to stay in good with my friends). This scale was ranked from "Strongly Disagree" to "Strongly Agree." Another group of questions was included in the first factor but was rejected because it did not load with the other neutralization items. These were more in the area of position statements--"Drinking is always wrong," "a little drinking is OK, but only on special occasions," "getting drunk is wrong," and "having one beer or one drink is OK, but not more than that." Loadings on the final unrotated first factor ranged from a low of 0.36 to a high of 0.72 and identified 35 percent of the total variation.

The behavior section was included to determine something about the respondent's personality and social orientation. These items are similar to variables utilized by Moos et al. (1976), who were attempting to gain information on social interaction (introversion vs. extroversion),

impulsive-deviancy behavior and self-concept. Factor analysis with data from the current study, however, separated the items into only two categories. The first factor included those questions concerning things of an unpleasant physical nature such as feeling nervous or tense, having a headache, being depressed and having a rapid heart beat when not exercising. The second involved activities of a more social or active disposition--attending a party, picking up a date at a party, cheating on exams, driving a car over 80 miles per hour and oversleeping and missing class. These items were measured in frequencies ranging from "Never" to "Very Often." After removal of one item (feeling on top of the world) all loaded above 0.30 on the first unrotated factor which accounted for 24 percent of the total variation of the ten items. Three scales were formed: (1) total social items, (2) social anxiety items, and (3) social hedonistic items.

Questions on alcohol behavior were designed to gain information on student drinking patterns and included questions about reasons for drinking, what students drink and when and where they drink. Some questions were taken in part from Engs' (1975) Student Alcohol Questionnaire and from Calahan and Cisin's (1968) survey of American drinking practices. The items concerning quantity and frequency of beer, wine and liquor consumption were factor analyzed to determine if they could be scaled. All questions loaded highly on the first unrotated factor with the exception of frequency of wine drinking. As can be seen in Table I, these students did not drink wine often; and it is possible that those who did do so did not drink either beer or liquor. When this item was eliminated from the scale, all loaded between 0.51 and 0.84 on a single factor with 53 percent of the total variation explained.



Following Cahalan and Cisin's model, the section concerning reasons for drinking was divided into three response areas. Some items reflect escape reasons for drinking; others are social in implication; and still others, hedonistic. Cahalan and Cisin reported that the escape reasons constituted a Guttman scale with a reproductibility of 0.96. Factor analysis for these data indicated the same divisions in the rotated factor pattern with all items loading in excess of 0.44 on the first unrotated factor which explained 39 percent of the total variation. Four scales were subsequently formed: (1) total reasons for drinking; (2) social reasons, which included drinking to get along better on dates, drinking because friends do and drinking to be sociable; (3) escape reasons--drinking to improve appetite for food, to relax or to be less nervous and to relieve aches, pains or fatigue; and (4) hedonistic reasons, such as drinking to celebrate special occasions, drinking for enjoyment of taste, drinking to get drunk and drinking for a sense of well-being or to feel good. Items were checked on a five-point frequency continuum ranging from "Never" to "Very Often."

In order to assess the adverse effects of alcohol consumption upon individual students, a series of situational statements was included. These involved the commonly encountered problems of drinking, and factor analysis determined that these constituted a single entity. Loadings on the first unrotated factor ranged from a low of 0.46 to a high of 0.77 and accounted for 40 percent of the total variation. The entire section was combined to form a scale of problem drinking for each respondent, and some of the items from each factor were used to make sub-scales. The first of these involved the "acting out" types of behavior which often typify drinking--being arrested, fighting and damaging property. The

second included the physical effects of drinking upon the individual--a hangover and nausea or vomiting. "Blacking out" as a result of drinking also loaded on this factor, but since this effect has been implicated as an indicator of future alcoholism, it was not included in the scale but examined separately. The third scale included items of a social interaction nature: causing problems in human relationships, being criticized by friends, and being concerned about having a problem with drinking. Two other items were also analyzed separately as they were reported by a number of students--drinking while driving or driving after having several drinks and doing something while or after drinking which was later regretted.

#### Description of Samples

In order to describe the samples and to delineate similarities and differences, the five groups were examined in terms of a number of demographic variables such as age, sex, marital status, residence, college orientation, religion, drinking categorization, etc. Since they are quite distinct, each group will be described separately as to these variables, and a brief comparison will be made among them.

#### Classroom Sample

Those examined from introductory sociology classes, as stated previously, consisted of 534 students, 217 of whom were male (40.6%) and 317 female (59.4%). Eighteen-year-olds comprised the largest single age group, and almost three-fourths (73.6%) were 19 or younger, giving the sample an age mean of 19.2. Approximately 95 percent were single, and the group was predominantly White, or Caucasian (93.6%). The majority

lived in a college residence hall (65.9%), and less than one-fourth claimed sorority or fraternity affiliation. Over half the sample (52%) came from rural or small town areas, and 71.6 percent were from homes where the major support person had a professional or ownership type of occupation.

All of the university's undergraduate colleges were represented in the sample; and although the ratios between the population and the sample were not identical, they were similar, as can be seen in Table II. As would be expected, the majority were freshmen (67.2%). The mean grade point average for this group was 2.8 with non-drinkers indicating a significantly higher mean than drinkers ( $t = 2.78$ ,  $df = 529$ ,  $p < 0.005$ ).<sup>2</sup>

A wide variety of religious preferences were listed by respondents, the largest single group being Baptists who comprised 27.5 percent of the sample. Methodists were next with 19 percent, followed by Catholics with 15.2 percent of the total. The large number of religious preferences, 28 in all, made it infeasible to analyze them separately; therefore, several denominations were combined. A fundamentalist category was formed by joining denominations such as Jehovah's Witness, Assembly of God, etc. (8.8% of the total), and a non-Christian group included those who indicated that they were athiest, agnostic, Buddhist, etc. (4.4%). In addition, and because of doctrinal similarities, Congregationalists were added to Presbyterians and Wesleyans to Methodists. For purposes of analysis, the religious categories were further collapsed into two groups, the proscriptive denominations which impose restrictions upon their members regarding the consumption of beverage alcohol and the

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<sup>2</sup>Category means were used in calculating the value of  $t$ .

TABLE II  
COMPARISON OF COLLEGE COMPOSITION:  
UNIVERSITY AND SAMPLE

College	University (%)	Sample (%)
Agriculture	10.7	2.8
Arts and Science	30.9	36.4
Business	27.1	42.4
Education	6.4	4.3
Engineering	19.0	5.6
Home Economics	5.8	8.4

prescriptive religions which do not prohibit its use. Those included in the former were Baptists, Methodists and the fundamentalist category (55.4% of the total); and the remaining groups made up the prescriptive division. The question arose as to whether proscription should be included in the data analysis of the international students since there is no assurance that proscription has the same meaning for people from from dissimilar cultures; however after discussing this concept with a number of people knowledgeable in religion, it was decided to rate all non-Christian religions as prescriptive and to include this category in the analysis of international samples.

When asked to describe their drinking behavior, 68 (12.7%) said that they did not now drink and never had drunk alcoholic beverages. Seventy-four (13.9%) indicated that they did not drink but used to occasionally, and 17 (3.1%) said that they did not now drink but used to frequently. Three hundred seventy-five students (70%) considered themselves to be drinkers. Some respondents who classified themselves as non-drinkers, however, indicated by giving a drinking frequency or quantity in excess of "never" or "none" in the quantity-frequency section of the questionnaire that they did use beverage alcohol to some extent. It is possible that these students used alcohol only infrequently or for some other reason did not consider themselves to be drinkers; nevertheless, it would appear that they did drink. When the quantity-frequency questions were used as a criteria for drinking, 462 students (86.5%) were classified as drinkers (89.9% of males and 84.2% of females) and 72 students (13.5%) were labeled abstainers. It was determined that since this categorization utilized actual drinking habits rather than the respondent's self image regarding drinking, it constituted a more accurate

description of drinking status and was the one used in delineating drinkers and non-drinkers for purposes of data analysis. Most of the sample (78.5%) started drinking between the ages of 15 and 18, and the mean age for beginning to drink was 15.9 years. A more detailed description of the sample can be found in Table III.

### Black Sample

This category totaled 97 students, 42.3 percent male and 56.7 percent female, with a mean age of 20.6 years. Almost 90 percent were single, but less than half (43.3%) lived in a university residence hall. The largest category consisted of those who lived in their own home or apartment (48.5%) and about one-fourth were affiliated with a sorority or fraternity. These students were predominantly urban in origin, as almost 65 percent listed a hometown size of over 250,000; and less than half (41.8%) indicated that they came from homes where the major support person had an occupation involving ownership or a professional degree.

Freshmen were somewhat under represented in this sample, but the remainder were quite evenly distributed among the other classifications. The mean grade point average for the total was 2.67, but this figure for abstainers was significantly higher than that of drinkers ( $t = 3.65$ ;  $df = 94$ ,  $p < 0.0004$ ).<sup>3</sup>

A large majority (58.5%) categorized themselves as Baptist in religious preference, and almost 75 percent were included in the proscriptive drinking category. When describing drinking behavior, 10.3 percent indicated that they did not drink and never had drunk alcohol; 34 percent

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<sup>3</sup>Category means were used in calculating the value of  $t$ .

TABLE III  
 DEMOGRAPHIC INFORMATION: CLASSROOM SAMPLE

Variable	Level	Drinkers n = 462 (%)	Abstainers n = 72 (%)	Total n = 534 (%)
Age	17	1.1	0.0	0.9
	18	43.3	45.8	43.6
	19	30.3	27.8	30.0
	20	11.5	13.9	11.8
	21	7.6	5.6	7.3
	21+	6.3	6.9	6.4
Sex	Male	69.4	30.6	40.6
	Female	57.8	69.4	59.4
Marital Status	Single	95.4	91.7	94.9
	Married	2.6	6.9	3.2
	Divorced	1.9	1.4	1.9
Residence	Residence Hall	64.3	76.4	65.9
	Greek Housing	13.4	1.4	11.8
	Married Student Housing	0.9	4.2	1.3
	Own Home or Apt.	20.6	13.9	19.7
	Commute	0.9	4.2	1.3
Greek Status	Non-Member	76.2	90.3	78.1
	Pledge	18.0	8.3	16.7
	Member	5.8	1.4	5.2
Parent Occupation	Low	28.4	37.5	29.2
	High	71.6	62.5	70.9
Home Community	Rural	19.5	26.4	20.5
	5,001-50,000	31.0	36.1	31.7
	50,001-250,000	10.4	6.9	9.9
	250,001-500,000	22.6	15.3	21.6
	500,001+	16.5	15.3	16.3
Class	Freshman	67.3	66.7	67.2
	Sophomore	17.3	26.4	18.5
	Junior	9.7	4.2	9.0
	Senior	5.6	2.8	5.2
	Special	---	---	---
	Graduate	---	---	---

TABLE III (Continued)

Variable	Level	Drinkers n = 462 (%)	Abstainers n = 72 (%)	Total n = 534 (%)
College	Agriculture	3.2	0.0	2.8
	Arts and Science	37.7	27.8	36.4
	Business	41.2	50.0	42.4
	Education	4.1	5.6	4.3
	Engineering	6.1	2.8	5.6
	Home Economics	7.6	13.9	8.4
Grade Point Average	2.0	7.2	11.1	7.7
	2.0-2.49	26.6	6.9	23.9
	2.5-2.99	30.9	26.4	30.3
	3.0-3.49	23.7	36.1	25.4
	3.5-4.0	11.5	19.4	12.6
Drinking Age	-10	1.8	0.0	1.7
	10-14	14.6	15.8	14.7
	15-18	78.4	78.9	78.5
	19-21	23.7	5.3	4.7
	21+	11.5	0.0	0.4
<u>Religious Denomination</u>				
Baptist		25.7	38.9	27.5
Methodist		19.4	16.7	19.0
Catholic		17.2	2.8	15.2
Fundamentalist		6.5	23.6	8.9
Disciples of Christ		8.5	8.3	8.5
Presbyterian Congregational		5.4	4.2	5.2
Non-Christian		5.1	---	4.4
Protestant (Non-Denominational)		4.7	2.8	4.4
Lutheran		4.5	2.8	4.2
Episcopalian		3.1	---	2.7
Proscriptive		51.6	79.2	55.4
Prescriptive		48.4	20.8	44.6



said that they did not drink but used to occasionally; 6.2 percent did not drink but used to frequently; and 49.5 percent claimed that they did drink. When using quantity-frequency as a criterion, however, 77 students (76.3%) were classified as drinkers--this was 80.5 percent of males and 78.2 percent of females--and 20 students (20.6%) as abstainers. Most (66.3%) began drinking between the ages of 15 and 18; the mean age for beginning drinking being 17.1 years. A more detailed description of these variables for the Black sample can be found in Table IV.

#### Native American Sample

The 60 Native Americans studied (56.7% male and 43.3% female) indicated a mean age of 23.6 years (see Table V). Over half (58.3%) were single, 30 percent were married and 11.7 percent divorced. Most (63.3%) lived in their own home or apartment, and only a few (5.2%) were members of a sorority or fraternity. In origin this sample was predominantly rural, as 61.7 percent came from farms or communities of under 50,000 population. Only 21.7 percent listed a parental occupation in the professional or ownership range. The largest proportion of the sample classified themselves as juniors or seniors, and most (71.2%) listed Arts and Science or Business as a major. The mean grade point average for this group was 2.8.

The religious denomination most often listed was Methodist (29.3%). Catholics and Baptists each made up 17.2 percent of the total, and 15.5 percent were in the non-Christian category which included students who had listed "other," "Indian Traditional," "Peyote," or "Native American

TABLE IV  
DEMOGRAPHIC INFORMATION: BLACK SAMPLE

Variable	Level	Drinkers n = 77 (%)	Abstainers n = 20 (%)	Total n = 97 (%)
Age	18	6.5	10.0	7.2
	19	24.7	25.0	24.7
	20	14.3	30.0	17.5
	21	35.1	20.0	32.0
	21+	19.5	15.0	18.6
Sex	Male	43.4	40.0	42.7
	Female	56.6	60.0	57.3
Marital Status	Single	93.5	75.0	89.7
	Married	5.2	20.0	8.3
	Divorced	1.3	5.0	2.1
Residence	Residence Hall	40.3	55.0	43.3
	Greek Housing	2.6	---	2.1
	Married Student Housing	2.6	10.0	4.1
	Own Home or Apt. Commute	53.3	30.0	48.5
		1.3	5.0	2.1
Greek Status	Non-Member	77.9	60.0	74.2
	Pledge	2.6	10.0	4.1
	Member	19.5	30.0	21.7
Parent Occupation	Low	62.3	55.0	58.2
	High	37.7	45.0	41.8
Home Community	Rural	11.7	5.0	10.3
	5,000-50,000	16.9	15.0	16.5
	50,001-250,000	5.2	20.0	8.3
	250,001-500,000	27.3	35.0	28.9
	500,001+	39.0	10.0	36.1
Class	Freshman	10.4	10.0	10.3
	Sophomore	32.5	30.0	32.0
	Junior	24.7	30.0	25.8
	Senior	28.6	25.0	27.8
	Special	2.6	---	2.1
	Graduate	1.3	5.0	2.1

TABLE IV (Continued)

Variable	Level	Drinkers n = 77 (%)	Abstainers n = 20 (%)	Total n = 97 (%)
College	Agriculture	1.3	---	1.0
	Arts and Science	28.6	25.0	27.8
	Business	52.0	50.0	51.6
	Education	9.1	5.0	8.3
	Engineering	3.9	5.0	4.1
	Home Economics	5.2	15.0	7.2
Grade Point Average	2.0	2.6	---	2.1
	2.0-2.49	46.1	15.0	39.6
	2.5-2.99	35.5	35.0	35.4
	3.0-3.49	13.2	40.0	18.8
	3.5-4.0	2.6	10.0	4.2
Drinking Age	-10	2.7	---	2.3
	10-14	4.1	5.0	4.7
	15-18	67.6	35.0	66.3
	19-21	24.3	20.0	25.6
	21+	1.4	---	1.2
<u>Religious Denomination</u>				
Baptist		62.2	25.0	58.5
Methodist		9.5	5.0	9.6
Catholic		9.5	5.0	9.6
Fundamentalist		2.7	2.0	6.4
Non-Christian		6.8	5.0	6.4
Disciples of Christ		1.4	1.4	1.1
Protestant (Non-Denominational)		6.8	1.0	7.4
Lutheran		1.4	1.4	1.1
Proscriptive		75.7	75.0	75.5
Prescriptive		24.3	25.0	24.5

TABLE V  
 DEMOGRAPHIC INFORMATION: NATIVE AMERICAN SAMPLE

Variable	Level	Drinkers n = 58 (%)	Abstainers n = 2 (%)	Total n = 60 (%)
Age	18	3.5	---	3.3
	19	1.7	---	1.7
	20	15.5	---	15.0
	21	24.1	50.0	25.0
	21+	55.2	50.0	55.0
Sex	Male	58.6	---	56.7
	Female	41.4	100.0	43.3
Marital Status	Single	58.6	50.0	58.3
	Married	29.3	50.0	30.0
	Divorced	12.1	---	11.7
Residence	Residence Hall	8.6	50.0	10.0
	Greek Housing	1.7	---	1.7
	Married Student Housing	8.6	---	8.3
	Own Home or Apt.	63.8	50.0	63.3
	Commute	17.2	---	16.7
Greek Status	Non-Member	94.6	100.0	94.8
	Pledge	---	---	---
	Member	5.4	---	5.2
Parent Occupation	Low	77.6	100.0	78.3
	High	22.4	---	21.7
Home Community	Rural	27.6	100.0	30.0
	5,001-50,000	32.8	---	31.7
	50,001-250,000	6.7	---	6.7
	250,001-500,000	17.2	---	16.7
	500,000+	15.5	---	15.0
Class	Freshman	7.0	50.0	8.5
	Sophomore	15.8	---	15.3
	Junior	36.8	---	35.6
	Senior	33.3	---	32.2
	Special	3.5	---	3.4
	Graduate	3.5	50.0	5.1

TABLE V (Continued)

Variable	Level	Drinkers n = 58 (%)	Abstainers n = 2 (%)	Total n = 60 (%)
College	Agriculture	5.3	---	5.1
	Arts and Science	49.1	---	47.5
	Business	22.9	50.0	23.7
	Education	17.5	---	17.0
	Engineering	3.5	---	3.4
	Home Economics	1.8	50.0	3.4
Grade Point Average	2.0	1.8	---	1.7
	2.0-2.49	22.8	---	22.0
	2.5-2.99	52.6	50.0	52.5
	3.0-3.49	17.5	50.0	18.6
	3.5-4.0	5.3	---	5.1
Drinking Age	-10	---	---	---
	10-14	10.3	---	3.5
	15-18	3.5	---	68.4
	19-21	86.2	---	21.1
	21+	---	---	7.0
<u>Religious Denomination</u>				
Baptist		14.3	100.0	17.2
Methodist		30.4	---	29.3
Catholic		17.9	---	17.2
Fundamentalist		7.1	---	6.9
Non-Christian		-16.1	---	15.5
Protestant (Non-Denominational)		10.7	---	10.3
Episcopalian/Unitarian		3.6	---	3.4
Proscriptive		51.8	100.0	53.4
Prescriptive		48.2	---	46.6

Church." Over one-half (53.5%) were classified as belonging to proscrip-  
tive denominations.

Those who indicated that they had never drunk alcohol numbered only two, six said that they did not drink but used to occasionally, two used to drink frequently and the remainder (50 students) called themselves drinkers. By quantity-frequency, however, 58 (96.7%) were classified as drinkers and two students (3.3%) as abstainers. Incidence of drinking for males was 100 percent and for females 92.3 percent. Most (86.2%) began drinking between the ages of 19 and 21, and none under the age of ten. The mean age for beginning to drink was 17.5 years.

#### Nigerian Sample

The 62 students in the Nigerian sample were almost all male (91.9%), with a mean age of 26.5 (see Table VI). The majority were single (60.7%) and they lived in their own home or apartment (43.6%), married student housing (27.4%) or university residence halls (22.6%). Most came from urban areas, although 32.8 percent had a rural or small town background; and over half (58.1%) listed an ownership or professional parental occupation. Fifty percent of this sample were sophomores or juniors, and 30 percent were graduate students. The largest single college representation was Business (30%) followed by Engineering (26.7%) and Arts and Science (20%). The mean grade point average for these students was 3.2, and 70 percent had been in the United States for more than two years.

Non-Christians made up the largest religious category (25%) and this included Jews, Muslims, African Traditionalists and those who listed "other" or "no religion." Non-denominational Protestants comprised 23.2 percent of the total, Catholics 19.6 percent, Episcopalians 16.1 percent

TABLE VI  
 DEMOGRAPHIC INFORMATION: NIGERIAN SAMPLE

Variable	Level	Drinkers n = 52 (%)	Abstainers n = 10 (%)	Total n = 62 (%)
Age	17	2.1	---	1.8
	18	---	10.0	1.8
	19	---	---	---
	20	4.3	10.0	5.3
	21	4.3	10.0	5.3
	21+	89.4	70.0	86.0
Sex	Male	92.3	90.0	91.9
	Female	7.7	10.0	8.1
Marital Status	Single	58.8	70.0	60.7
	Married	41.2	30.0	39.3
	Divorced	---	---	---
Residence	Residence Hall	23.1	20.0	22.6
	Greek Housing	---	---	---
	Married Student Housing	26.9	30.0	27.4
	Own Home or Apt.	42.3	50.0	43.6
	Commute	7.7	---	6.5
Greek Status	Non-Member	100.0	100.0	100.0
	Pledge	---	---	---
	Member	---	---	---
Parent Occupation	Low	44.2	30.0	41.9
	High	55.8	70.0	58.1
Home Community	Rural	17.3	11.1	16.4
	5,001-50,000	19.2	---	16.4
	50,001-250,000	13.5	66.7	21.3
	250,001-500,000	11.5	---	9.8
	500,001+	38.5	22.2	36.1
Class	Freshman	19.2	60.0	25.8
	Sophomore	7.7	10.0	8.1
	Junior	23.1	10.0	21.0
	Senior	7.7	---	6.5
	Special	---	10.0	1.6
	Graduate	42.3	10.0	37.2

TABLE VI (Continued)

Variable	Level	Drinkers n = 52 (%)	Abstainers n = 10 (%)	Total n = 62 (%)
College	Agriculture	14.0	10.0	13.3
	Arts and Science	20.0	20.0	20.0
	Business	32.0	20.0	30.0
	Education	8.0	---	6.7
	Engineering	22.0	50.0	26.7
	Home Economics	4.0	---	3.3
Grade Point Average	2.0	2.2	---	1.8
	2.0-2.49	4.4	20.0	7.1
	2.5-2.99	19.6	30.0	21.4
	3.0-3.49	45.7	20.0	41.1
	3.5-4.0	28.3	30.0	28.6
Drinking Age	-10	9.3	---	8.9
	10-14	7.0	---	6.7
	15-18	27.9	50.0	28.8
	19-21	37.2	50.0	37.8
	21+	18.6	---	17.8
Time in U.S.	2 mo	4.0	---	3.3
	3 mo	2.0	20.0	5.0
	3-6 mo	12.0	---	10.0
	7 mo-1 yr	4.0	20.0	6.7
	1-2 yr	6.0	---	5.0
	2-3 yr	16.0	20.0	16.7
	3-4 yr	20.0	20.0	20.0
	4+ yr	36.0	20.0	33.3
<u>Religious Denomination</u>				
Baptist		10.9	10.0	10.7
Methodist		2.2	---	1.8
Catholic		19.6	20.0	19.6
Fundamentalist		2.2	---	3.6
Non-Christian		28.3	20.0	25.0
Protestant (Non-Denominational)		21.7	30.0	23.2
Episcopalian		15.2	20.0	16.1
Proscriptive		18.9	22.2	19.6
Prescriptive		81.1	77.8	80.4



and Baptists 10.7 percent. The majority of Nigerian drinkers (80.4%) listed religious denominations which were prescriptive in nature.

In response to questions about drinking behavior, 12 (20%) indicated that they had never drunk alcohol, 24 (40%) said they did not drink but used to occasionally and two (3.3%) used to frequently. Twenty-two considered themselves to be drinkers. Using the quantity-frequency criterion, 52 were classified as drinkers (86.7%) and 10 as abstainers (16.7%). Among males 84.2 percent were drinkers and among females, 80 percent. These Nigerians began drinking at a fairly late age--37.8 percent between the ages of 19 to 21 and 17.8 percent after age 21. The mean age for beginning to drink was 18.

#### Chinese Sample

The Chinese sample of 47 included 31 males (66%) and 16 females (34%) with an age mean of 27.9 years. Most were married (57.5%), and they lived primarily in married student housing (46.8%) or their own home or apartment (31.9%). As a whole they were urban in origin with only 10.6 percent coming from rural or small town communities; and parental occupational level was high, as 81.8 percent listed an ownership or professional occupation. Almost all of the Chinese sampled were graduate students (80.9%), and a large proportion were Engineering students (42.2%). This group had a high level of achievement as indicated by a mean grade point average of 3.5. Over half (53.3%) had been in the United States for two years or longer.

Again non-Christians made up the largest single religious group and included Buddhists, Chinese Traditionalists and those who indicated "other" as a religious preference. These comprised 43.2 percent of the

total followed by non-denominational Protestants and Catholics with 11.4 percent each. These students were predominantly prescriptive in denominational choice (81.8%).

In drinking behavior, nine students (19.1%) indicated that they had never drunk alcohol, 25 (53.2%) used to drink occasionally, one (2.1%) used to drink frequently and 12 (25.5%) classified themselves as drinkers. By quantity-frequency, 38 (80.9%) were categorized as drinkers and nine (19.1%) as abstainers. Incidence of drinking was 93.6 percent for males and 56.3 percent for females. About one-fourth (26.5%) began drinking before age 14 and 64.7 percent after age 19. The mean age for beginning to drink was 18.2 years. See Table VII for a more detailed description of these variables.

#### Sample Comparisons

Some demographic differences were apparent in examining the five samples; and evident among these were the age differences, which probably accounted for some of the other variations as well. By nature of the sampling procedure, the classroom group was the youngest. Introductory classes generally contain a preponderance of freshmen, and this sample was no exception. International students, on the other hand, tend to cluster in graduate programs; and this probably accounts for their older age mean as well as higher grade point average. Grade point averages among non-international students tended to be quite similar, although the high representation of freshmen in the classroom sample may have made the figure for that group less representative of the university as a whole.

TABLE VII  
DEMOGRAPHIC INFORMATION: CHINESE SAMPLE

Variable	Level	Drinkers n = 38 (%)	Abstainers n = 9 (%)	Total n = 47 (%)
Age	18	---	---	---
	19	---	---	---
	20	2.6	---	2.1
	21	7.9	---	6.4
	21+	89.5	100.0	91.5
Sex	Male	76.3	22.2	66.0
	Female	23.7	77.8	34.0
Marital Status	Single	42.1	44.4	42.6
	Married	57.9	55.6	57.5
	Divorced	---	---	---
Residence	Residence Hall	7.9	11.1	8.5
	Greek Housing	---	---	---
	Married Student Housing	47.4	44.4	46.8
	Own Home or Apt. Commute	29.0	44.4	31.9
		15.8	---	12.8
Greek Status	Non-Member	90.9	100.0	92.7
	Pledge	3.0	---	2.4
	Member	6.1	---	4.9
Parent Occupation	Low	26.3	11.1	25.0
	High	73.7	88.9	81.8
Home Community	Rural	5.3	---	4.3
	5,001-50,000	2.6	22.2	6.4
	50,001-250,000	15.8	11.1	14.9
	250,001-500,000	15.8	22.2	17.0
	500,001+	60.6	44.4	57.5
Class	Freshman	5.3	---	4.3
	Sophomore	---	11.1	2.1
	Junior	2.6	---	2.1
	Senior	10.5	11.1	10.6
	Special	---	---	---
	Graduate	31.6	77.8	80.9

TABLE VII (Continued)

Variable	Level	Drinkers n = 38 (%)	Abstainers n = 9 (%)	Total n = 47 (%)
College	Agriculture	2.7	12.5	4.4
	Arts and Sciences	16.2	37.5	20.0
	Business	21.6	25.0	22.2
	Education	2.7	---	2.2
	Engineering	48.7	12.5	42.2
	Home Economics	5.4	12.5	6.7
	Vet Med	2.7	---	2.2
Grade	2.0	---	---	---
Point	2.0-2.49	---	---	---
Average	2.5-2.99	10.5	12.5	10.9
	3.0-3.49	34.2	37.5	34.8
	3.5-4.0	55.3	50.0	54.4
Drinking Age	-10	11.8	---	8.5
	10-14	14.7	---	10.6
	15-18	8.8	---	6.4
	19-21	32.4	---	23.4
	21+	32.4	---	23.4
Time in U.S.	1 mo	---	---	---
	2 mo	---	---	---
	3 mo	---	12.5	2.2
	3-6 mo	10.8	---	8.9
	7 mo-1 yr	21.6	---	17.8
	1-2 yr	18.9	12.5	17.8
	2-3 yr	18.9	25.0	20.0
	3-4 yr	16.2	37.5	20.0
	4+ yr	13.5	12.5	13.3
<u>Religious Denomination</u>				
Baptist		5.6	12.5	6.8
Methodist		8.3	---	6.8
Catholic		13.9	---	11.4
Fundamentalist		---	25.0	4.5
Non-Christian		55.6	75.0	59.1
Protestant (Non-Denominational)		11.1	11.5	11.4
Proscriptive		19.4	12.5	18.2
Prescriptive		80.5	87.5	81.8

Students in the classroom sample were more inclined to live in university residence halls, but again this could be due to the high incidence of freshmen in that sample; and parental occupational level was high for all but the Native Americans and Black Americans, possibly a reflection of minority status. Native Americans and those sampled in the classrooms were predominantly from rural backgrounds and the others were urban in origin. Only Native Americans indicated an appreciable incidence of divorce.

Some striking differences were obvious in drinking descriptions also. The average age at which students began drinking was quite different among the five groups with the classroom students beginning to drink just under age 15 and Nigerians not until after age 18. As a whole, the incidence of drinking was fairly high among all groups ranging from 96.7 percent among Native Americans to 76.3 percent among American Blacks. In all groups males had a higher incidence of drinking than did females, although this difference was significant only with the Chinese sample (Chi-square = 9.48, df = 1,  $p < 0.002$ ). When males and females were considered separately, both Native Americans and classroom females ranked above Black males; and Chinese males with a 93.6 percent drinking incidence were second only to Native American males.

#### Pretest

The questionnaire was pretested in three classes during the fall semester of 1980. Two of these classes were introductory sociology and the third was a class in American history for international students. The latter group was utilized to assess the impact of the instrument on students from other cultures. All classes were asked for input

concerning problems with understanding the questionnaire, clarity of meaning, etc., and were invited also to make comments in writing as they completed the instrument. One of the introductory sociology classes was small in size, and these students were asked to discuss the instrument as they read through it and to verbalize their interpretation of the meaning of various questions. This was particularly useful in evaluating the impact of the questionnaire on the students as they were able to ask questions relating to words or phrases in the test items, and the researcher could question their understanding of both these and the format of the instrument. As a result of this pretest, some minor changes were made in the final form of the questionnaire. In total, 72 students took part in this project, 17 of whom were international students. The pretest questionnaire can be found in Appendix C.

#### Statistical Measures

A number of statistical measures were utilized in the data analysis for this study. Factor analysis was used to establish scale validity and to determine if the various scale items measured the same dimension. This procedure was chosen because of its usefulness in summarizing data and in identifying the nature of underlying factors among a number of variables.

Assessment of the significance of differences in two sample means utilized the Student's t-test for equal variances, and the chi-square statistic was used to determine relationships in two-way crosstabulations. The 0.05 level of confidence was chosen as the basis for determining the statistical significance of differences in means and of correlations.

The relationship between drinking patterns and related variables was evaluated by Pearson's product-moment correlation coefficient which gives the change in one variable expressed as a proportion of concomitant change in another variable, and path analysis was utilized in the examination of the theoretical assumptions. This statistic was chosen because it allows for conjectures about the causal nature of the relationships among a number of variables by means of linear regression.

## CHAPTER V

### ANALYSIS OF DATA

#### Introduction

Research goals for this investigation included the establishment of baseline data from which to evaluate future studies, an examination of drinking patterns as they related to a number of associated variables, and the evaluation of a proposed theoretical orientation which attempted to tie several aspects of the student's life to problems resulting from alcohol consumption. This chapter will be concerned with baseline information and with the relationship of drinking patterns to other variables, and the theoretical orientation will be discussed in Chapter VI. All objectives will be examined in terms of the differing racial and cultural groups utilized in the study.

Establishment of baseline data involved the delineation of alcohol consumption patterns and a determination of how these patterns related to the following variables: (1) perceived parental attitudes toward drinking, (2) religious orientation, (3) ethos of college life, or the student's value perception regarding college, (4) personal and social characteristics of the individual, (5) reasons given for drinking, and (6) reported problems associated with alcohol consumption. Drinking patterns included (1) quantity and frequency of drinking, (2) pre-college drinking frequency, (3) type of beverage preferred, and (4) where and when alcohol consumption took place.



Religiosity was measured on a disagree-agree continuum, parental attitudes and ethos of college life were on scales of attractiveness and approval, respectively; and all drinking behavior variables were measured in terms of frequency. All items were arranged so that an increase in scale value meant either an increase in the frequency of the behavior being measured or movement from a negative to a positive position on agreement, approval, or attractiveness. An increase in the mean value of the proscriptive variable indicated an increase in denominational permissiveness toward drinking.

Since proscription is a bivariate, nominal measurement, this is not a true mean but is given as such for purposes of comparison among groups. A score of "one" is proscriptive and "two" is prescriptive in denominational orientation; therefore, the mean score only tells how the group as a whole relates to these two extremes and to the neutral position of 1.5 between them. The Likert-type responses ranged from "one" to "five" in scale value, and technically these are ordinal-level data. However, for purposes of comparison with other research that has been done in this manner and to be able to utilize the stronger statistical measures, the common practice of treating data of this nature as interval level was followed; and scale items were analyzed in terms of mean scores. Data were analyzed for drinkers only leaving sample sizes of 462 classroom students, 77 Blacks, 58 Native Americans, 52 Nigerians, and 38 Chinese. Mean scores for abstainers were given for purposes of comparison.

#### Description of Drinking Patterns

##### Classroom Sample

As can be seen from the mean frequencies in Table VIII, beer was the

TABLE VIII

CORRELATIONS AMONG DRINKING PATTERNS FOR CLASSROOM SAMPLE (n = 462)

Variable	Mean <sup>a</sup>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Frequency--Beer	2.63	1.00	-.02	<u>.38</u> <sup>1</sup>	<u>.68</u>	<u>.19</u>	<u>.44</u>	<u>.54</u>	<u>.29</u>	<u>.33</u>	<u>.45</u>	<u>.17</u>	<u>.60</u>	<u>.32</u>	<u>.53</u>	<u>.42</u>	<u>.41</u>	<u>.46</u>	<u>.34</u>	<u>.54</u>	<u>.56</u>	<u>.62</u>	<u>.58</u>
2 Frequency--Wine	1.97		1.00	<u>.23</u>	-.11	<u>.51</u>	-.01	<u>.09</u>	<u>.15</u>	<u>.13</u>	<u>.22</u>	.06	.04	<u>.30</u>	<u>.13</u>	.03	.01	.04	<u>.12</u>	<u>.11</u>	<u>.19</u>	<u>.09</u>	.03
3 Frequency--Liquor	2.30			1.00	<u>.24</u>	<u>.27</u>	<u>.56</u>	<u>.40</u>	<u>.33</u>	<u>.31</u>	<u>.37</u>	<u>.10</u>	<u>.43</u>	<u>.42</u>	<u>.42</u>	<u>.23</u>	<u>.29</u>	<u>.30</u>	<u>.28</u>	<u>.34</u>	<u>.41</u>	<u>.43</u>	<u>.49</u>
4 Quantity--Beer	3.05				1.00	<u>.25</u>	<u>.59</u>	<u>.46</u>	<u>.30</u>	<u>.37</u>	<u>.26</u>	<u>.23</u>	<u>.63</u>	<u>.28</u>	<u>.48</u>	<u>.40</u>	<u>.36</u>	<u>.52</u>	<u>.24</u>	<u>.42</u>	<u>.54</u>	<u>.62</u>	<u>.61</u>
5 Quantity--Wine	2.19					1.00	<u>.38</u>	<u>.27</u>	<u>.39</u>	<u>.27</u>	<u>.17</u>	<u>.17</u>	<u>.29</u>	<u>.35</u>	<u>.29</u>	<u>.23</u>	<u>.27</u>	<u>.30</u>	<u>.26</u>	<u>.29</u>	<u>.33</u>	<u>.28</u>	<u>.29</u>
6 Quantity--Liquor	2.65						1.00	<u>.41</u>	<u>.37</u>	<u>.34</u>	<u>.27</u>	<u>.27</u>	<u>.54</u>	<u>.34</u>	<u>.46</u>	<u>.31</u>	<u>.35</u>	<u>.40</u>	<u>.27</u>	<u>.40</u>	<u>.46</u>	<u>.55</u>	<u>.57</u>
7 Frequency Before OSU	2.99							1.00	<u>.41</u>	<u>.26</u>	<u>.45</u>	<u>.14</u>	<u>.46</u>	<u>.32</u>	<u>.50</u>	<u>.35</u>	<u>.39</u>	<u>.38</u>	<u>.31</u>	<u>.45</u>	<u>.50</u>	<u>.52</u>	<u>.50</u>
8 Frequency Take Drink Out	1.42								1.00	<u>.19</u>	<u>.35</u>	<u>.13</u>	<u>.34</u>	<u>.42</u>	<u>.33</u>	<u>.31</u>	<u>.30</u>	<u>.25</u>	<u>.41</u>	<u>.41</u>	<u>.36</u>	<u>.29</u>	<u>.31</u>
9 Frequency Residence Hall	1.87									1.00	<u>.16</u>	-.04	<u>.38</u>	<u>.24</u>	<u>.37</u>	<u>.27</u>	<u>.22</u>	<u>.37</u>	<u>.07</u>	<u>.30</u>	<u>.36</u>	<u>.38</u>	<u>.39</u>
10 Frequency Own Home	2.34										1.00	<u>.13</u>	<u>.31</u>	<u>.41</u>	<u>.46</u>	<u>.28</u>	<u>.24</u>	<u>.18</u>	<u>.28</u>	<u>.39</u>	<u>.42</u>	<u>.41</u>	<u>.32</u>
11 Frequency Greek Housing	1.36											1.00	<u>.22</u>	<u>.20</u>	<u>.13</u>	<u>.14</u>	<u>.22</u>	<u>.19</u>	<u>.13</u>	<u>.21</u>	<u>.19</u>	<u>.23</u>	<u>.20</u>
12 Frequency Bars, etc.	3.32												1.00	<u>.51</u>	<u>.59</u>	<u>.31</u>	<u>.31</u>	<u>.43</u>	<u>.20</u>	<u>.44</u>	<u>.54</u>	<u>.66</u>	<u>.75</u>
13 Frequency Restaurants	2.19													1.00	<u>.42</u>	<u>.25</u>	<u>.17</u>	<u>.21</u>	<u>.27</u>	<u>.34</u>	<u>.41</u>	<u>.40</u>	<u>.46</u>
14 Frequency Friend's Home	2.91														1.00	<u>.40</u>	<u>.36</u>	<u>.38</u>	<u>.27</u>	<u>.40</u>	<u>.48</u>	<u>.63</u>	<u>.63</u>
15 Frequency City Parks	1.60															1.00	<u>.51</u>	<u>.57</u>	<u>.36</u>	<u>.41</u>	<u>.36</u>	<u>.33</u>	<u>.34</u>
16 Frequency City Streets	1.44																1.00	<u>.57</u>	<u>.25</u>	<u>.30</u>	<u>.32</u>	<u>.34</u>	<u>.36</u>
17 Frequency Parked Car	1.97																	1.00	<u>.26</u>	<u>.34</u>	<u>.37</u>	<u>.41</u>	<u>.43</u>
18 Frequency Morning	1.10																		1.00	<u>.55</u>	<u>.36</u>	<u>.24</u>	<u>.22</u>
19 Frequency Early Afternoon	1.49																			1.00	<u>.66</u>	<u>.49</u>	<u>.42</u>
20 Frequency Late Afternoon	2.06																				1.00	<u>.61</u>	<u>.50</u>
21 Frequency Evening	3.34																					1.00	<u>.75</u>
22 Frequency Late Evening	3.33																						1.00

<sup>a</sup> A possible range of scores of from 1 to 5.

<sup>1</sup> Correlations >.09 significant at the .05 level.

preferred drink in terms of both quantity and frequency; and wine was relatively unpopular with these students. The mean frequency for drinking before coming to college was higher than that of drinking beer, a fact that would seem to substantiate the early age for beginning to drink expressed by this group. Students in this sample reported drinking most often in bars, nightclubs, etc., which would relate to beer drinking since beer containing 3.2 percent alcohol content could be purchased by 18-year-olds in bars near the university. This group appeared to drink more often in their own homes than they did in restaurants, relatively infrequently in city parks or on city streets, and somewhat more often in parked cars. A city ordinance had made drinking on city streets illegal, which would also relate to the low incidence of taking a drink from a bar after closing time. Very little drinking was reported in Greek housing, while drinking in university residence halls seemed to have occurred somewhat more frequently; both were prohibited by university regulations. Students in this sample reported drinking most often in the evening between five and ten o'clock, and almost as often in the late evening after ten. Relatively little drinking was indicated in the afternoon and almost none in the morning.

As Table VIII indicates, there was a high degree of correlation among the drinking pattern variables; or as the frequencies of one behavior increased, so did those of the others. Since the number of students in the sample was fairly large, many correlations were statistically significant but with a low level of explained variation. Correlations, therefore, will be discussed, for the most part, in terms of degree of relationship rather than statistical significance. Beer drinking related substantially to nearly all the other items and particularly to drinking in bars and to

evening drinking. Beer apparently was the pre-college drink of choice as well; and liquor drinking correlated highly with many of the same variables, indicating that this beverage ran a close second to beer. Wine drinking, when practiced, was associated with drinking at home or in restaurants, an indication that on the average, wine may have been consumed with meals rather than as a social drink. As reports of liquor drinking increased, so did drinking in the late evening, in bars or restaurants and in the homes of friends. Pre-college drinkers appeared to be beer drinkers primarily, although both quantity and frequency of liquor were also related to this variable. Those who reported drinking before coming to college were also more apt to report taking a drink from a bar at closing time and drinking in city parks, on city streets, and in parked cars. The latter three variables were highly interrelated, indicating that the same people tended to practice all three types of drinking.

#### Black Sample

Black students in this survey apparently preferred both wine and liquor to beer and also consumed these beverages in larger quantities than they did beer (see Table IX). These students indicated that they drank most often in friends' homes, and then in bars or their own homes. Evening drinking was the most popular for them, although they also reported drinking beer in the afternoon. Pre-college drinking was more related to quantity than to frequency of drinking, particularly to quantity of liquor, although all relationships were substantial.

Drinking on city streets, in parks, or a parked car did not appear to be frequent occurrences; and these activities were more apt to be indicated by those who reported drinking beer and consuming it in larger

TABLE IX

## CORRELATIONS AMONG DRINKING PATTERNS FOR BLACK SAMPLE (n - 77)

Variable	Mean <sup>a</sup>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Frequency--Beer	2.03	1.00	.13	.14	<u>.70<sup>†</sup></u>	<u>.24</u>	.15	<u>.24</u>	.17	<u>.26</u>	<u>.33</u>	<u>.24</u>	.19	.22	<u>.36</u>	<u>.46</u>	<u>.47</u>	<u>.47</u>	-.01	<u>.23</u>	<u>.31</u>	.18	<u>.33</u>
2 Frequency--Wine	2.29		1.00	<u>.43</u>	.15	<u>.69</u>	.21	<u>.22</u>	.19	.05	<u>.23</u>	<u>.25</u>	<u>.27</u>	.11	<u>.26</u>	.13	.11	.07	.10	.15	.14	<u>.37</u>	<u>.22</u>
3 Frequency--Liquor	2.52			1.00	.11	<u>.40</u>	<u>.67</u>	<u>.25</u>	<u>.33</u>	.12	<u>.37</u>	<u>.46</u>	<u>.42</u>	.21	<u>.41</u>	.19	.22	<u>.29</u>	.16	.13	.22	<u>.37</u>	<u>.52</u>
4 Quantity--Beer	2.03				1.00	<u>.32</u>	.21	<u>.30</u>	<u>.31</u>	.15	.20	.11	.21	.05	<u>.26</u>	<u>.29</u>	<u>.27</u>	<u>.22</u>	.05	.20	<u>.26</u>	-.01	.16
5 Quantity--Wine	2.17					1.00	<u>.42</u>	<u>.26</u>	<u>.29</u>	.14	<u>.28</u>	<u>.31</u>	<u>.26</u>	.12	<u>.32</u>	<u>.27</u>	<u>.29</u>	.19	.02	.20	.20	<u>.27</u>	<u>.28</u>
6 Quantity--Liquor	2.26						1.00	<u>.40</u>	<u>.26</u>	<u>.23</u>	<u>.29</u>	.21	<u>.31</u>	.12	<u>.35</u>	.20	.20	<u>.24</u>	.06	.07	<u>.28</u>	<u>.30</u>	<u>.36</u>
7 Frequency Before OSU	2.29							1.00	.13	<u>.25</u>	<u>.45</u>	.13	<u>.37</u>	<u>.35</u>	<u>.44</u>	.20	.21	.13	<u>.24</u>	<u>.36</u>	<u>.45</u>	<u>.39</u>	<u>.28</u>
8 Frequency Take Drink Out	1.47								1.00	.12	.04	<u>.23</u>	.21	.05	<u>.29</u>	.01	.06	-.04	.01	-.002	.15	.09	.08
9 Frequency Residence Hall	1.51									1.00	<u>.22</u>	<u>.26</u>	.02	.03	<u>.26</u>	<u>.51</u>	<u>.52</u>	<u>.45</u>	<u>.33</u>	<u>.52</u>	<u>.50</u>	.21	<u>.34</u>
10 Frequency Own Home	2.65										1.00	<u>.25</u>	<u>.38</u>	<u>.28</u>	<u>.67</u>	<u>.34</u>	<u>.37</u>	<u>.50</u>	<u>.26</u>	<u>.39</u>	<u>.46</u>	<u>.45</u>	<u>.57</u>
11 Frequency Greek Housing	1.45											1.00	<u>.23</u>	.09	<u>.22</u>	<u>.43</u>	<u>.54</u>	<u>.35</u>	.11	<u>.40</u>	<u>.41</u>	.17	<u>.34</u>
12 Frequency Bars, etc.	2.74												1.00	<u>.52</u>	<u>.63</u>	.10	.09	.10	.18	<u>.24</u>	<u>.33</u>	<u>.52</u>	<u>.56</u>
13 Frequency Restaurants	1.88													1.00	<u>.40</u>	<u>.37</u>	.20	.17	.08	.02	.14	<u>.32</u>	<u>.33</u>
14 Frequency Friend's Home	2.99														1.00	<u>.34</u>	<u>.37</u>	<u>.44</u>	.14	<u>.31</u>	<u>.49</u>	<u>.62</u>	<u>.68</u>
15 Frequency City Parks	1.59															1.00	<u>.83</u>	<u>.71</u>	.13	<u>.28</u>	<u>.33</u>	.22	<u>.38</u>
16 Frequency City Streets	1.39																1.00	<u>.80</u>	.13	<u>.42</u>	<u>.35</u>	.15	<u>.42</u>
17 Frequency Park Car	1.58																	1.00	.09	<u>.36</u>	<u>.34</u>	.17	<u>.45</u>
18 Frequency Morning	1.05																		1.00	<u>.49</u>	<u>.28</u>	.11	<u>.14</u>
19 Frequency Early Afternoon	1.22																			1.00	<u>.66</u>	<u>.27</u>	<u>.27</u>
20 Frequency Late Afternoon	1.59																				1.00	<u>.42</u>	<u>.40</u>
21 Frequency Evening	2.84																					1.00	<u>.69</u>
22 Frequency Late Evening	3.11																						1.00

<sup>a</sup> A possible range of scores of from 1 to 5.

<sup>†</sup> Correlations  $\geq .22$  significant at the .05 level.

quantities. The interrelationships among these variables indicates that those who engaged in one type of behavior tended to practice the others as well. In addition, drinking of this nature apparently was done more often in the afternoon or late evening, and more often by those who also drank in Greek housing and in residence halls. Taking drinks from bars after closing time, where wine and beer drinking were concerned, related more to quantity than to frequency of drinking; but with liquor, frequency of drinking was more important.

#### Native American Sample

As can be seen in Table X, this group appears to have favored beer to wine or liquor drinking, consumed it in relatively large quantities, and tended to drink in homes of friends, their own homes, or in bars. Evening or late evening was reported as the preferred time to drink, although late afternoon was also popular.

These students indicated that they drank fairly often before coming to college, drank more often in city parks and in a parked car than on city streets, and sometimes took a drink from a bar at closing time. Drinking in city parks or in parked cars was related to quantity of beer consumed, to frequency of drinking in bars and restaurants, and to morning drinking.

#### Nigerian Sample

Wine was the preferred drink for this group, followed by beer and then liquor; however, when drinking, they reported consuming larger quantities of beer and liquor than wine (see Table XI). These Nigerians indicated that they drank most often at home or in homes of friends and then

TABLE X  
CORRELATIONS AMONG DRINKING PATTERNS FOR NATIVE AMERICANS (n = 58)

Variable	Mean*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Frequency--Beer	2.83	1.00	-.02	.11	<u>.35<sup>†</sup></u>	.18	-.02	.18	.02	.07	.25	.04	.18	.14	-.01	.09	.06	.15	.08	.09	.11	.18	.07
2 Frequency--Wine	1.53		1.00	<u>.50</u>	-.16	<u>.70</u>	<u>.48</u>	.24	.23	-.07	<u>.35</u>	.16	<u>.42</u>	<u>.47</u>	.09	.13	-.12	-.12	-.07	.08	<u>.40</u>	<u>.38</u>	<u>.35</u>
3 Frequency--Liquor	1.67			1.00	-.17	<u>.52</u>	<u>.81</u>	<u>.26</u>	-.20	-.02	.14	-.26	<u>.59</u>	<u>.37</u>	<u>.31</u>	.06	-.27	-.14	-.02	.05	<u>.48</u>	<u>.52</u>	<u>.56</u>
4 Quantity--Beer	3.48				1.00	-.01	-.13	-.14	<u>.34</u>	-.14	.23	-.10	<u>.29</u>	.05	<u>.37</u>	<u>.27</u>	.11	<u>.46</u>	.12	.02	.11	<u>.26</u>	.24
5 Quantity--Wine	1.53					1.00	<u>.60</u>	<u>.38</u>	.25	-.24	<u>.44</u>	-.08	<u>.51</u>	<u>.46</u>	.10	.17	-.09	-.08	.11	.21	<u>.42</u>	<u>.51</u>	<u>.50</u>
6 Quantity--Liquor	1.82						1.00	<u>.22</u>	<u>.30</u>	-.16	.24	-.30	<u>.51</u>	.25	.16	.07	-.22	-.18	.12	.22	<u>.45</u>	<u>.44</u>	<u>.52</u>
7 Frequency Before OSU	2.51							1.00	<u>.50</u>	-.22	.24	-.17	.15	.21	.14	-.02	-.21	.04	.04	.04	.21	.24	.21
8 Frequency Take Drink Out	1.39								1.00	-.16	<u>.39</u>	-.27	<u>.36</u>	<u>.28</u>	<u>.33</u>	.20	.05	-.03	.12	-.001	.25	<u>.33</u>	<u>.36</u>
9 Frequency Residence Hall	1.53									1.00	-.27	.24	.12	.08	.07	<u>.32</u>	<u>.39</u>	.21	.09	.08	.09	.10	-.23
10 Frequency Own Home	2.54										1.00	.02	<u>.35</u>	<u>.43</u>	.25	.08	.06	.11	.12	<u>.34</u>	<u>.36</u>	<u>.45</u>	<u>.51</u>
11 Frequency Greek Housing	1.28											1.00	-.09	<u>.31</u>	.01	<u>.32</u>	<u>.63</u>	.19	<u>.29</u>	.14	-.08	-.08	-.22
12 Frequency Bars, etc.	2.53												1.00	<u>.60</u>	<u>.50</u>	<u>.41</u>	.10	<u>.28</u>	.23	<u>.25</u>	<u>.54</u>	<u>.75</u>	<u>.73</u>
13 Frequency Restaurants	1.88													1.00	<u>.42</u>	<u>.31</u>	<u>.34</u>	.15	.22	<u>.33</u>	<u>.50</u>	<u>.58</u>	<u>.48</u>
14 Frequency Friend's Home	2.78														1.00	.24	.11	<u>.26</u>	.18	.10	<u>.32</u>	<u>.60</u>	<u>.61</u>
15 Frequency City Parks	1.47															1.00	<u>.60</u>	<u>.31</u>	<u>.46</u>	<u>.35</u>	<u>.40</u>	<u>.30</u>	.22
16 Frequency City Streets	1.22																1.00	<u>.35</u>	<u>.47</u>	<u>.32</u>	.13	.03	-.05
17 Frequency Parked Car	1.50																	1.00	<u>.41</u>	<u>.35</u>	.24	.15	.17
18 Frequency Morning	1.14																		1.00	<u>.73</u>	<u>.39</u>	.15	.23
19 Frequency Early Afternoon	1.22																			1.00	<u>.62</u>	<u>.29</u>	<u>.36</u>
20 Frequency Late Afternoon	1.74																				1.00	<u>.50</u>	<u>.57</u>
21 Frequency Evening	2.93																					1.00	<u>.79</u>
22 Frequency Late Evening	2.59																						1.00

\* A possible range of scores of from 1 to 5.

<sup>†</sup>Correlations >.25 significant at the .05 level.

TABLE XI  
CORRELATIONS AMONG DRINKING PATTERNS FOR NIGERIAN SAMPLE (n = 52)

Variable	Mean <sup>a</sup>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Frequency--Beer	2.44	1.00	<u>.31</u> <sup>†</sup>	<u>.68</u>	<u>.56</u>	<u>.07</u>	<u>.18</u>	<u>.59</u>	<u>.02</u>	<u>.19</u>	<u>.49</u>	<u>-.11</u>	<u>.33</u>	<u>.49</u>	<u>.54</u>	<u>.11</u>	<u>.04</u>	<u>.04</u>	<u>.41</u>	<u>.51</u>	<u>.61</u>	<u>.54</u>	<u>.39</u>
2 Frequency--Wine	2.46		1.00	<u>.40</u>	<u>-.14</u>	<u>.50</u>	<u>-.10</u>	<u>.20</u>	<u>.29</u>	<u>.32</u>	<u>.32</u>	<u>.27</u>	<u>-.03</u>	<u>.14</u>	<u>.20</u>	<u>-.01</u>	<u>.03</u>	<u>.13</u>	<u>.003</u>	<u>.15</u>	<u>.26</u>	<u>.38</u>	<u>.22</u>
3 Frequency--Liquor	2.20			1.00	<u>.41</u>	<u>.26</u>	<u>.44</u>	<u>.43</u>	<u>-.03</u>	<u>.16</u>	<u>.43</u>	<u>-.13</u>	<u>.48</u>	<u>.62</u>	<u>.58</u>	<u>.18</u>	<u>.12</u>	<u>.17</u>	<u>.33</u>	<u>.40</u>	<u>.50</u>	<u>.50</u>	<u>.48</u>
4 Quantity--Beer	2.17				1.00	<u>.06</u>	<u>.53</u>	<u>.54</u>	<u>-.04</u>	<u>.03</u>	<u>.37</u>	<u>-.16</u>	<u>.46</u>	<u>.51</u>	<u>.54</u>	<u>-.03</u>	<u>-.02</u>	<u>.06</u>	<u>.44</u>	<u>.34</u>	<u>.39</u>	<u>.41</u>	<u>.45</u>
5 Quantity--Wine	1.92					1.00	<u>.15</u>	<u>-.11</u>	<u>.36</u>	<u>.03</u>	<u>.03</u>	<u>.25</u>	<u>-.04</u>	<u>.13</u>	<u>.07</u>	<u>-.09</u>	<u>-.02</u>	<u>.07</u>	<u>-.004</u>	<u>-.05</u>	<u>.14</u>	<u>.31</u>	<u>.15</u>
6 Quantity--Liquor	1.98						1.00	<u>.33</u>	<u>.01</u>	<u>.10</u>	<u>.20</u>	<u>-.04</u>	<u>.54</u>	<u>.51</u>	<u>.49</u>	<u>.16</u>	<u>.34</u>	<u>.34</u>	<u>.33</u>	<u>.20</u>	<u>.37</u>	<u>.30</u>	<u>.34</u>
7 Frequency Before OSU	2.56							1.00	<u>-.04</u>	<u>.16</u>	<u>.49</u>	<u>-.07</u>	<u>.35</u>	<u>.43</u>	<u>.60</u>	<u>.22</u>	<u>.14</u>	<u>.22</u>	<u>.47</u>	<u>.62</u>	<u>.55</u>	<u>.42</u>	<u>.28</u>
8 Frequency Take Drink Out	1.37								1.00	<u>.03</u>	<u>-.11</u>	<u>.57</u>	<u>-.19</u>	<u>-.12</u>	<u>-.28</u>	<u>-.04</u>	<u>-.01</u>	<u>-.03</u>	<u>-.16</u>	<u>-.18</u>	<u>-.02</u>	<u>.18</u>	<u>-.002</u>
9 Frequency Residence Hall	1.42									1.00	<u>.27</u>	<u>.16</u>	<u>.13</u>	<u>.27</u>	<u>.18</u>	<u>.30</u>	<u>.34</u>	<u>.39</u>	<u>.19</u>	<u>.29</u>	<u>.17</u>	<u>.30</u>	<u>.36</u>
10 Frequency Own Home	2.81										1.00	<u>.02</u>	<u>.36</u>	<u>.32</u>	<u>.54</u>	<u>.23</u>	<u>.26</u>	<u>.34</u>	<u>.36</u>	<u>.26</u>	<u>.41</u>	<u>.53</u>	<u>.59</u>
11 Frequency Greek Housing	1.14											1.00	<u>-.15</u>	<u>-.12</u>	<u>-.10</u>	<u>-.01</u>	<u>.05</u>	<u>.003</u>	<u>-.11</u>	<u>-.19</u>	<u>-.12</u>	<u>.16</u>	<u>.12</u>
12 Frequency Bars, etc.	2.65												1.00	<u>.59</u>	<u>.62</u>	<u>.33</u>	<u>.28</u>	<u>.33</u>	<u>.27</u>	<u>.38</u>	<u>.53</u>	<u>.50</u>	<u>.48</u>
13 Frequency Restaurants	2.13													1.00	<u>.70</u>	<u>.24</u>	<u>.11</u>	<u>.24</u>	<u>.30</u>	<u>.42</u>	<u>.54</u>	<u>.49</u>	<u>.43</u>
14 Frequency Friend's Home	2.81														1.00	<u>.37</u>	<u>.34</u>	<u>.43</u>	<u>.36</u>	<u>.45</u>	<u>.65</u>	<u>.59</u>	<u>.57</u>
15 Frequency City Parks	1.31															1.00	<u>.60</u>	<u>.60</u>	<u>.01</u>	<u>-.03</u>	<u>.11</u>	<u>.17</u>	<u>.12</u>
16 Frequency City Streets	1.17																1.00	<u>.73</u>	<u>.06</u>	<u>.02</u>	<u>.09</u>	<u>.12</u>	<u>.25</u>
17 Frequency Parked Car	1.27																	1.00	<u>.00</u>	<u>.02</u>	<u>.22</u>	<u>.27</u>	<u>.38</u>
18 Frequency Morning	1.30																		1.00	<u>.65</u>	<u>.52</u>	<u>.39</u>	<u>.29</u>
19 Frequency Early Afternoon	1.82																			1.00	<u>.73</u>	<u>.49</u>	<u>.36</u>
20 Frequency Late Afternoon	2.46																				1.00	<u>.80</u>	<u>.51</u>
21 Frequency Evening	3.14																					1.00	<u>.73</u>
22 Frequency Late Evening	2.90																						1.00

\* A possible range of scores of from 1 to 5.

† Correlations >.27 significant at the .05 level.



in bars or restaurants; and they reported more frequent drinking in the early evening. Pre-college drinking related to drinking at home or in the homes of friends, to drinking in the early afternoon, and more to frequency and quantity of beer drinking than to wine or liquor consumption. Taking a drink out of a bar after closing time correlated only with quantity of wine consumed--that is, those who reported drinking larger amounts of wine were more inclined to indicate this type of behavior.

#### Chinese Sample

These students reported drinking beer, wine and liquor, with beer being a somewhat more popular drink and consumed in slightly larger quantities (see Table XII). Drinking apparently was done most often in the evening, primarily in the early evening; and these students indicated that they drank most often at home, then in homes of friends and in restaurants. The Chinese students reported drinking on city streets, in parks, or a parked car only rarely; but those who did indicate these behaviors tended to be wine or liquor drinkers, to take a drink out of a bar after closing time, and to drink in residence halls and bars. Pre-college drinking related to both quantity and frequency of all alcoholic beverage consumption, with a higher correlation being noted for quantity, and to drinking in both bars and homes.

#### Comparison of Drinking Patterns

All of the samples indicated a high degree of correlation among the pattern variables in that many of the drinking behaviors were interrelated. These relationships were not the same, however, among samples; and interesting differences as well as similarities can be noted. Overall

TABLE XII

## CORRELATIONS AMONG DRINKING PATTERNS FOR CHINESE SAMPLE (n = 38)

Variable	Mean <sup>a</sup>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1 Frequency--Beer	2.35	1.00	<u>.59</u> <sup>†</sup>	.18	.19	-.04	-.16	<u>.49</u>	.27	.14	<u>.52</u>	.05	.14	.28	.31	.22	.00	.15	-.16	<u>.33</u>	<u>.37</u>	<u>.47</u>	.28
2 Frequency--Wine	2.03		1.00	<u>.58</u>	.04	.10	-.004	<u>.47</u>	.30	.30	.18	<u>.39</u>	<u>.39</u>	<u>.48</u>	<u>.35</u>	<u>.37</u>	.30	<u>.42</u>	.15	.28	<u>.33</u>	<u>.32</u>	.22
3 Frequency--Liquor	2.03			1.00	-.07	.29	<u>.35</u>	<u>.39</u>	<u>.43</u>	.16	.004	<u>.54</u>	.26	.19	.17	<u>.34</u>	<u>.56</u>	<u>.46</u>	<u>.46</u>	.26	<u>.63</u>	.11	.07
4 Quantity--Beer	2.35				1.00	<u>.72</u>	<u>.67</u>	<u>.50</u>	.21	<u>.39</u>	.20	-.09	<u>.35</u>	<u>.53</u>	.20	-.03	-.06	-.09	-.10	.15	.19	<u>.47</u>	.31
5 Quantity--Wine	2.19					1.00	<u>.91</u>	<u>.61</u>	.24	<u>.48</u>	.10	.24	<u>.46</u>	<u>.39</u>	.24	.18	<u>.33</u>	.16	.18	.11	.24	<u>.35</u>	.27
6 Quantity--Liquor	2.08						1.00	<u>.57</u>	.20	.37	.01	.11	<u>.42</u>	<u>.40</u>	.15	-.02	.18	.04	.12	.04	.26	<u>.24</u>	.23
7 Frequency Before OSU	2.36							1.00	<u>.39</u>	<u>.49</u>	<u>.36</u>	.24	<u>.58</u>	<u>.56</u>	<u>.37</u>	.27	.30	.22	.27	<u>.47</u>	<u>.47</u>	<u>.62</u>	<u>.66</u>
8 Frequency Take Drink Out	1.30								1.00	.06	.09	<u>.46</u>	<u>.44</u>	<u>.07</u>	.30	.32	<u>.47</u>	<u>.35</u>	<u>.43</u>	<u>.48</u>	<u>.44</u>	.20	<u>.36</u>
9 Frequency Residence Hall	1.74									1.00	.26	<u>.35</u>	<u>.45</u>	<u>.62</u>	.26	<u>.42</u>	<u>.37</u>	.25	.16	.20	.11	<u>.50</u>	<u>.39</u>
10 Frequency Own Home	2.89										1.00	-.001	-.05	.28	<u>.47</u>	.11	.03	.04	.16	.21	.21	<u>.67</u>	<u>.55</u>
11 Frequency Greek Housing	1.14											1.00	<u>.37</u>	.13	.26	<u>.85</u>	<u>.90</u>	<u>.92</u>	<u>.46</u>	.10	.20	.06	<u>.34</u>
12 Frequency Bars, etc.	1.68												1.00	<u>.52</u>	.27	<u>.32</u>	<u>.42</u>	.28	.08	.16	.12	<u>.26</u>	<u>.46</u>
13 Frequency Restaurants	2.47													1.00	<u>.42</u>	.17	.10	.14	.01	.05	<u>.003</u>	<u>.62</u>	<u>.43</u>
14 Frequency Friend's Home	2.61														1.00	.30	.22	.30	.08	<u>.34</u>	.28	<u>.49</u>	<u>.51</u>
15 Frequency City Parks	1.11															1.00	<u>.81</u>	<u>.90</u>	<u>.38</u>	.27	.13	.18	<u>.44</u>
16 Frequency City Streets	1.08																1.00	<u>.83</u>	<u>.52</u>	.16	.28	.15	.29
17 Frequency Parked Car	1.14																	1.00	<u>.40</u>	.08	.17	.05	<u>.34</u>
18 Frequency Morning	1.21																		1.00	<u>.45</u>	<u>.41</u>	.30	.28
19 Frequency Early Afternoon	1.37																			1.00	<u>.65</u>	<u>.41</u>	<u>.40</u>
20 Frequency Late Afternoon	1.61																				1.00	<u>.31</u>	.17
21 Frequency Evening	3.03																					1.00	<u>.57</u>
22 Frequency Late Evening	2.68																						1.00

<sup>a</sup>A possible range of scores of from 1 to 5.

<sup>†</sup>Correlations  $> .32$  significant at the .05 level.

the reported drinking frequencies were quite similar among the five samples, although there were variations in types of alcohol consumed. All of the groups indicated an average of between two and three drinks at any one time, but those who said they drink beer more frequently, also reported drinking in greater quantities. Native Americans indicated the highest mean quantity of beer drinking--between three and four drinks per drinking session. However, when wine and beer were considered, this group showed the lowest mean consumption quantity. American Blacks and Nigerians reported drinking liquor or wine most frequently, and the remainder chose beer.

With the exception of the Chinese, who reported drinking most often in homes or in restaurants, all tended to drink in bars or nightclubs. The highest incidence of this type of drinking was with the classroom sample, possibly because a larger percentage of this group lived in residence halls, making it necessary for them to leave home to drink legally.

All of these students indicated that they drank in city parks, or city streets and in parked cars relatively infrequently; and of the three locations, drinking on city streets was reported even less often.

American Blacks appeared most likely to take a drink with them when leaving a bar at closing time, followed by classroom sample students and Native Americans. Among all groups this type of activity related more to quantity than to frequency of drinking. Mean frequency of drinking before coming to college was highest with the classroom sample and lowest with American Blacks. Reported frequency of morning drinking was quite low with all samples, although the highest means for this activity were exhibited by the international students. All groups tended to drink more often

in the evening and American Blacks were the only group who reported drinking more frequently in late evening.

### Drinking Patterns and Related Variables

#### Classroom Sample

Table XIII gives the correlations between the drinking patterns previously discussed and a number of variables that are associated with drinking. Some of these variables (perceived parental attitudes and religious and social orientations) involved pre-college attributes that were not directly alcohol-related. Ethos of college life delineated the student's feelings toward the college environment, and the remainder of the variables had to do directly with drinking.

Perceived parental attitudes toward the student's drinking were measured on a scale from "Strongly Disapprove" to "Strongly Approve" with a rank of "three" being neutral. As can be seen from the means in Table XIII, parental attitudes for this sample were judged to be close to the median point but on the disapproving side with mothers seen as somewhat less in favor of drinking than fathers. These variables were not highly related to drinking patterns; although as would be expected, a stronger correlation was evident between parental attitude and drinking in one's own home; or as parents were seen as more approving, reported frequencies of drinking at home increased.

A mean of 3.45 on the religiosity scale places these students slightly above the neutral position on the importance of religion, that is, as a whole they tended to give some but not a great deal of importance to religious thought, ritual, etc. Proscription was measured on a scale of two, "one" being of a proscriptive denomination and "two" prescriptive;

TABLE XIII

CORRELATIONS BETWEEN DRINKING PATTERNS AND RELATED VARIABLES FOR CLASSROOM SAMPLE (n = 462)

	Mean* Drinkers	Mean Abstainers	Freq.--Beer	Freq.--Wine	Freq.--Liquor	Quan.--Beer	Quan.--Wine	Quan.--Liquor	Before OSU	Take Drink Out	Residence Hall	Own Home	Greek Housing	Bars, etc.	Restaurants	Friend's Home	City Parks	City Streets	Parked Car	Morning	Early Afternoon	Late Afternoon	Evening	Late Evening
1 Father's Attitude	2.68	1.80 <sup>†</sup>	.07	.05	.16 <sup>†</sup>	.04	-.002	.07	.12	.09	.01	.29	.02	.12	.24	.14	.04	.04	.02	.02	.12	.13	.11	.58
2 Mother's Attitude	2.43	1.74 <sup>†</sup>	.07	.14	.13	.02	.05	.04	.10	.05	-.03	.29	.03	.09	.21	.09	.03	.02	.01	.01	.09	.12	.08	.03
3 Religiosity	3.43	4.29 <sup>†</sup>	-.26	.06	-.15	-.22	-.06	-.21	-.25	-.11	-.11	-.17	.01	-.17	-.07	-.18	-.12	-.10	-.13	-.07	-.19	-.15	-.26	-.17
4 Proscription	1.48	1.21 <sup>†</sup>	.06	.07	-.002	.04	.07	-.03	.10	.01	-.002	.15	-.06	.05	.10	.08	.06	.03	-.04	-.02	-.04	.01	.06	.01
5 Ethos of College	3.78	3.48 <sup>†</sup>	.24	-.09	.19	.27	.11	.24	.16	.14	.18	.19	.13	.31	.15	.23	.23	.18	.21	.08	.15	.20	.19	.29
6 Social Ethos	3.38	2.58 <sup>†</sup>	.35	-.12	.23	.37	.12	.30	.21	.19	.20	.21	.15	.41	.19	.29	.31	.26	.32	.16	.26	.26	.28	.38
7 Academic Ethos	4.18	4.38 <sup>†</sup>	-.06	.01	.01	-.04	.03	-.004	-.02	-.02	.04	.04	.02	-.04	.0003	.01	-.03	-.06	-.08	-.07	-.09	.002	-.05	-.02
8 Social Orientation	1.99	1.74 <sup>†</sup>	.26	.04	.21	.26	.28	.27	.30	.33	.23	.21	.08	.33	.17	.34	.30	.35	.32	.21	.28	.31	.28	.32
9 Social (Anxiety)	2.11	2.14	-.03	.02	.06	-.04	.10	.01	.03	.12	.01	.02	-.05	.02	-.04	.08	.04	.12	.03	.05	.04	.01	.01	.04
10 Social (Hedonism)	2.07	1.55 <sup>†</sup>	.40	.03	.24	.42	.29	.39	.40	.35	.34	.28	.17	.46	.27	.40	.40	.41	.45	.24	.36	.45	.39	.43
11 Reasons for Drinking	2.17		.60	.11	.49	.59	.35	.55	.48	.39	.39	.38	.19	.66	.41	.59	.48	.40	.50	.32	.48	.53	.64	.67
12 Social Reasons	1.96		.43	.07	.33	.45	.20	.35	.27	.24	.27	.20	.15	.48	.28	.39	.35	.30	.39	.16	.29	.37	.44	.46
13 Escape Reasons	1.60		.40	.13	.34	.32	.32	.34	.33	.28	.21	.31	.10	.39	.31	.34	.34	.28	.29	.34	.40	.42	.38	.37
14 Hedonistic Reasons	2.87		.60	.11	.49	.61	.34	.59	.52	.38	.40	.40	.20	.69	.44	.63	.41	.36	.47	.28	.48	.52	.69	.73
15 Problem Drinking	1.60		.54	-.03	.27	.59	.30	.47	.49	.37	.34	.27	.19	.52	.36	.41	.42	.48	.49	.33	.41	.42	.48	.48
16 Problem (Acting Out)	1.30		.37	-.05	.16	.42	.23	.34	.38	.31	.25	.16	.21	.32	.21	.19	.25	.40	.37	.24	.27	.29	.33	.30
17 Problem (Physical)	2.02		.42	.02	.21	.50	.26	.34	.38	.31	.28	.21	.11	.43	.31	.36	.27	.33	.36	.16	.29	.33	.41	.42
18 Problem (Social)	1.40		.36	-.01	.17	.38	.20	.31	.30	.19	.20	.21	.13	.32	.23	.34	.35	.31	.33	.30	.32	.27	.31	.29
19 Blacking Out	1.44		.31	-.01	.16	.32	.16	.28	.23	.24	.23	.13	.05	.32	.21	.28	.29	.26	.32	.28	.29	.27	.28	.29
20 Drinking While Driving	2.02		.50	-.04	.30	.54	.28	.47	.52	.31	.30	.27	.23	.50	.30	.36	.41	.51	.52	.30	.38	.40	.47	.47
21 Regretting Behavior	2.08		.37	-.07	.17	.43	.15	.31	.33	.28	.26	.16	.08	.44	.29	.30	.26	.29	.28	.18	.27	.29	.36	.40
22 Interfering With School	1.49		.39	.001	.19	.39	.20	.31	.31	.23	.26	.25	.11	.33	.30	.27	.33	.29	.35	.26	.26	.31	.29	.27

\* A possible range of scores of from 1 to 5.

† Correlations >.09 significant (p < .05).

‡ Value of t significant (p < .05).

and with a mean of 1.48, the sample was about evenly divided on this variable. The fact that religiosity correlated negatively, although not highly so, with most pattern variables would seem to point out the importance of religion as a deterrent to drinking; for as degree of reported religiosity increased, frequency of drinking appeared to decrease. Proscription, however, appeared to have little impact on alcohol behavior patterns since all correlations were low; although there appeared to be a slight tendency for those from proscriptive denominations to be pre-college drinkers, to drink at home, and to drink in restaurants. A significant difference was noted between proscriptive and prescriptive denominations in degree of religiosity with those from proscriptive denominations tending to score higher on the religiosity scale (chi-square = 4.7, df = 1.0, p = 0.03).

Social orientation was divided into those aspects of social living that produced pleasure or relaxation (attending a party, driving a car over 80 miles per hour, etc.) and those that were anxiety inducing (having a headache, feeling nervous or tense, etc.). As far as mean frequencies were concerned, the two scales were quite similar. With the exception of frequency of wine drinking, mean frequencies on the hedonistic social scale correlated well with all drinking pattern variables. As the pleasure scale values of social orientation increased, so did most of the variables associated with drinking. The anxiety scale, however, related only to quantity of wine consumed, taking a drink from a bar at closing time, and drinking on city streets. This would seem to indicate that these students as a whole reported drinking primarily for social reasons and not to help curb emotional problems. Those who did drink to alleviate tensions, however, appeared to fit some of the patterns normally associated with excessive drinking.

The high mean scores on the ethos of college life scales would seem to indicate that these university students had pleurably anticipated attending college, and it is also interesting to note that the academic environment seemed more attractive to them than the social one. The academic orientation toward college apparently was not related to drinking, as only early afternoon drinking increased significantly with this variable, and that only minimally. Social ethos, on the contrary, increased with all drinking pattern variables and most strongly with frequency and quantity of beer drinking, drinking in bars, and late evening drinking--evidently the alcohol-related activities engaged in by those who came to college for sports events, dating, and partying.

Reasons for drinking were divided into four scales: total reasons, social, escape, and hedonistic reasons. As can be seen in Table XIII, these students said that they drank primarily for reasons of hedonism, then to be sociable, and last of all, to escape. The single most important reason reported for drinking was to celebrate special occasions, listed by 96.3 percent of the drinkers in the sample. This was followed by drinking for enjoyment of taste (88.7%), drinking to be sociable (79.9%), and drinking for a sense of well-being or to feel good (75.5%). Response percentages for drinking reasons along with mean scores for each item can be found in Table XIV. As would be expected, all reasons for drinking were strongly associated with drinking pattern variables; that is, as these reasons increased in importance, drinking behaviors were reported more frequently. Social and hedonistic reasons were related more to quantity than to frequency of drinking.

Most students reported few if any serious problems associated with drinking; however, a number did indicate having suffered some adverse

TABLE XIV  
 REASONS FOR DRINKING AND PROBLEM DRINKING:  
 CLASSROOM SAMPLE  
 (n = 462)

Variable	Mean*	Yes <sup>†</sup>	Percent
How often do you drink for the following reasons?			
1. It helps me relax or to be less nervous	2.10	289	62.6
2. To get along better on dates or other social occasions	1.90	244	52.8
3. To relieve aches, pains, or fatigue	1.40	132	28.6
4. To improve appetite for food	1.27	88	19.0
5. To be sociable	2.56	369	79.9
6. To celebrate special occasions	3.59	445	96.3
7. Because friends drink	2.07	277	60.0
8. For enjoyment of taste	3.14	410	88.7
9. For a sense of well-being or to feel good	2.58	349	75.5
10. To get high	1.95	206	44.6
11. To get drunk	2.14	268	58.0
12. It is the adult thing to do	1.28	97	21.0
How often has your drinking led to the following situations?			
1. Given you a hangover	2.16	314	68.0
2. Caused nausea and/or vomiting	1.88	295	63.9
3. Caused you to "black out" or not to remember what has happened	1.44	139	30.1
4. Interfered with school or work	1.49	157	34.0
5. Caused problems in human relationships	1.57	173	37.4
6. Drinking while driving or driving after having several drinks	2.02	255	55.2
7. Being arrested for DWI (driving while impaired), DUI (driving under the influence), or PI (public intoxication)	1.06	18	3.9
8. Being criticized by someone you were dating because of your drinking	1.35	102	22.1
9. Getting into a fight after drinking	1.48	136	29.4
10. Damaging property after drinking	1.35	98	21.2
11. Doing something while or after drinking which you later regretted	2.08	289	62.6
12. Thinking you might have a problem with drinking	1.28	89	19.3

\*A possible range of scores of from 1 to 5.

<sup>†</sup>Number of positive respondents.



effects of alcohol consumption, and some (19.3%) were concerned over the consequences of their drinking. Percentages of those who responded positively to the problem questions and mean scores for each item can be found in Table XIV. Only 18 students (3.9%) reported having been arrested for alcohol-related offenses (but several of these more than once), 30.1 percent indicated having "blacked out" or not remembered what had happened as a result of drinking (29.5% of this group said they had experienced loss of memory more than once), 34 percent reported that alcohol consumption had interfered with school or work, 29.4 percent reported getting into a fight after drinking, and 21.2 percent said they had damaged property while or after drinking.

Drinking problem scales all showed substantial correlations with the pattern variables; and as can be seen in Table XIV, problems of a physical nature (hangover, etc.) were reported more often than the social or the "acting out" types of concerns. All, however, increased more with both quantity and frequency of beer drinking than with quantity of liquor consumed. Physical problems were associated more with drinking in bars and nightclubs than were the other types, and "acting out" behavior more with drinking on city streets. Loss of memory as a result of drinking was highly related to both quantity and frequency of beer consumption and showed a weaker but significant association with quantity and frequency of liquor drinking. With both beer and liquor, the relationship was stronger for quantity than for frequency. Those who reported memory loss were more inclined to drink in bars and in parked cars, and were not likely to drink in Greek housing. Drinking while driving or driving after drinking was reported by over half the drinkers in the sample (55.2), and these students

were more apt to drink beer, be pre-college drinkers and drink in bars, on city streets, and in parked cars.

### Black Sample

Table XV gives the mean scores and correlations between drinking patterns and related variables for the American Black students. Parental attitudes toward drinking for this group were judged to be on the "disapprove" side of the continuum with mother's attitude being closer to the "strongly disapprove" position. Parental orientation correlated well with many of the drinking pattern variables, indicating that students whose parents did not approve of drinking were less likely to engage in drinking behaviors.

These students ranked above the median in religiosity and were closer to the proscriptive end of that scale. Both of these variables correlated negatively with many of the drinking pattern variables; although in the case of proscription, only quantity of beer consumption was significant. This would indicate that for these students both proscription and religiosity tended to be deterrents to drinking. Religiosity particularly related to wine and liquor drinking (which these students reported using more frequently than beer) and to drinking at home. There was a significant difference in degree of religiosity between proscriptive and prescriptive denominations ( $\chi^2 = 5.2$ ,  $df = 1.0$ ,  $p = 0.02$ ).

Mean scores on the social orientation scales were relatively high, with the anxiety aspects being somewhat stronger. Those who ranked higher on this scale were inclined to drink liquor more often, drink in bars, and in the late evening. As hedonistic social orientation scores increased, so did those of almost all drinking pattern variables, especially residence

TABLE XV

## CORRELATIONS BETWEEN DRINKING PATTERNS AND RELATED VARIABLES FOR BLACK SAMPLE (n = 77)

	Mean <sup>a</sup> Drinkers	Mean Abstainers	Freq. -- Beer	Freq. -- Wine	Freq. -- Liquor	Quan. -- Beer	Quan. -- Wine	Quan. -- Liquor	Before OSU	Take Drink Out	Residence Hall	Own Home	Greek Housing	Bars, etc.	Restaurants	Friend's Home	City Parks	City Streets	Parked Car	Morning	Early Afternoon	Late Afternoon	Evening	Late Evening
1 Father's Attitude	2.28	1.68 <sup>†</sup>	.25	.30	.29	.15	.22	.22	.38	.20	.40	.25	.30	.23	.37	.37	.41	.40	.36	.12	.33	.28	.31	.26
2 Mother's Attitude	1.92	1.47	.22	.18	.26	.16	.26	.23	.42	.16	.36	.23	.24	.33	.29	.36	.32	.35	.34	.12	.43	.37	.32	.34
3 Religiosity	3.63	4.25 <sup>†</sup>	-.12	-.35	-.37	-.18	-.23	-.27	-.10	-.21	-.05	-.29	-.13	-.14	.04	-.31	-.09	-.08	-.16	-.06	-.07	-.15	-.38	-.34
4 Proscription	1.26	1.21	-.15	.03	.03	-.23	-.19	-.05	-.08	.24	.12	-.08	-.18	-.07	-.11	-.04	-.05	-.09	-.09	.22	-.06	-.11	.16	.02
5 Ethos of College	3.80	3.72	.35	.06	-.02	.26	.12	.05	.09	.13	.03	.03	.28	.11	.03	.07	.17	.14	.07	.04	.14	.16	-.04	-.07
6 Social Ethos	3.29	2.75 <sup>†</sup>	.40	.04	-.06	.32	.13	.01	.10	.11	.07	.07	.19	.21	.13	.11	.19	.13	.08	.13	.21	.22	.004	.02
7 Academic Ethos	4.31	4.67 <sup>†</sup>	.05	.07	.06	.02	.02	.09	.02	.08	-.06	-.06	.26	-.11	-.17	-.03	.03	.08	.003	-.14	-.06	-.03	-.09	-.18
8 Social Orientation	2.21	1.62 <sup>†</sup>	.27	.21	.36	.21	.24	.24	.27	.29	.44	.28	.41	.38	.28	.28	.38	.49	.42	.25	.35	.25	.10	.33
9 Social (Anxiety)	2.37	1.84 <sup>†</sup>	.02	.18	.24	.07	.20	.10	.05	.20	.08	.16	.08	.36	.13	.13	.03	.19	.17	.10	.09	.04	.01	.22
10 Social (Hedonism)	2.27	1.53 <sup>†</sup>	.39	.12	.33	.24	.16	.27	.33	.23	.60	.31	.56	.24	.23	.32	.55	.57	.51	.27	.46	.36	.16	.31
11 Reasons for Drinking	2.22		.50	.26	.37	.31	.37	.37	.41	.17	.36	.56	.35	.55	.37	.70	.48	.48	.43	.08	.34	.54	.65	.78
12 Social Reasons	1.95		.40	.16	.33	.20	.29	.38	.36	.20	.35	.36	.42	.50	.30	.58	.44	.49	.30	.08	.29	.52	.57	.59
13 Escape Reasons	1.57		.26	.12	-.07	.20	.12	-.10	.22	.01	.26	.34	.09	.12	.18	.31	.26	.27	.23	.11	.37	.47	.22	.29
14 Hedonistic Reasons	2.70		.49	.31	.41	.31	.41	.43	.38	.20	.22	.53	.27	.56	.38	.67	.41	.28	.41	.05	.22	.38	.67	.72
15 Problem Drinking	1.38		.43	.25	.46	.34	.37	.44	.30	.40	.49	.41	.47	.30	.21	.56	.54	.57	.47	.16	.45	.59	.45	.58
16 Problem (Acting Out)	1.14		.26	.12	.23	.29	.26	.12	.11	.35	.46	.17	.51	.15	-.002	.34	.32	.50	.27	.29	.61	.51	.20	.30
17 Problem (Physical)	1.70		.48	.11	.30	.28	.24	.32	.27	.14	.27	.36	.29	.21	.34	.38	.51	.44	.44	-.02	.22	.37	.31	.55
18 Problem (Social)	1.30		.37	.24	.42	.34	.37	.46	.22	.47	.50	.33	.43	.27	.12	.46	.50	.57	.50	.18	.37	.53	.35	.49
19 Blacking Out	1.18		.15	.20	.22	.13	.15	.14	.19	.25	.17	.30	.23	.16	.22	.31	.28	.23	.14	.31	.17	.48	.20	.26
20 Drinking While Driving	1.48		.32	.18	.45	.15	.27	.30	.16	.28	.28	.35	.46	.24	.31	.42	.38	.40	.40	.003	.37	.33	.33	.34
21 Regretting Behavior	1.88		.31	.25	.46	.22	.35	.50	.33	.30	.44	.38	.21	.30	.05	.60	.32	.37	.40	.10	.38	.48	.59	.61
22 Interfering With School	1.27		.15	.33	.26	.26	.22	.36	.33	.31	.27	.23	.21	.16	.09	.34	.26	.26	.19	.07	.16	.37	.29	.18

<sup>a</sup> A possible range of scores of from 1 to 5.

<sup>†</sup> Correlations >.22 significant (p < .05).

<sup>‡</sup> Value of t significant (p < .05).

hall and Greek housing drinking, drinking on streets, in parks and parked cars, afternoon drinking, and beer and liquor drinking.

Ethos of college life, again, appeared to be an important concept for these students with academic ethos being relatively unrelated to drinking and social ethos only to quantity and frequency of beer consumption and to late afternoon drinking. Apparently this group as a whole did not attend college to drink.

All American Black drinkers in this survey reported drinking to celebrate special occasions, and they did so at a fairly frequent rate. Mean scores for drinking reasons, number of positive responders, and the percentage of total drinkers can be found in Table XVI. These students also reported drinking frequently to be sociable (85.7%) and for enjoyment of taste (81.8%). Hedonistic reasons for drinking were employed most often and escape reasons relatively infrequently (see Table XV). Hedonistic reasons were related to almost all variables and particularly to drinking in bars, in the homes of friends, and drinking in the evening. Social reasons were associated with most of the same variables but the relationships were less strong. As reports of escape drinking increased, so did reported frequencies of beer drinking, pre-college drinking, drinking at home or in the homes of friends, drinking on city streets, in parks, parked cars, and in the afternoon.

Serious problems associated with drinking, again, appeared to be few (see Table XVI). Only two students said they had been arrested for alcohol-related offenses, but 14.3 percent were concerned that they might have a problem with drinking. Twelve students (15.6%) reported having loss of memory as a result of drinking, 22.1 percent indicated that it had interfered with school or work, 15.6 percent said they had gotten into a fight

TABLE XVI  
 REASONS FOR DRINKING AND PROBLEM DRINKING:  
 BLACK SAMPLE  
 (n = 77)

Variable	Mean*	Yes†	Percent
How often do you drink for the following reasons?			
1. It helps me relax or to be less nervous	1.96	41	53.2
2. To get along better on dates or other social occasions	1.54	24	31.2
3. To relieve aches, pains, or fatigue	1.46	22	28.6
4. To improve appetite for food	1.28	13	16.9
5. To be sociable	2.95	66	85.7
6. To celebrate special occasions	3.68	77	100.0
7. Because friends drink	2.03	46	59.7
8. For enjoyment of taste	2.91	63	81.8
9. For a sense of well-being or to feel good	2.56	56	72.7
10. To get high	2.47	55	71.4
11. To get drunk	1.63	29	37.7
12. It is the adult thing to do	1.30	20	26.0
How often has your drinking led to the following situations?			
1. Given you a hangover	1.86	40	51.9
2. Caused nausea and/or vomiting	1.56	33	42.9
3. Caused you to "black out" or not to remember what has happened	1.18	12	15.6
4. Interfered with school or work	1.27	17	22.1
5. Caused problems in human relationships	1.21	12	15.6
6. Drinking while driving or driving after having several drinks	1.48	24	31.2
7. Being arrested for DWI (driving while impaired), DUI (driving under the influence), or PI (public intoxication)	1.04	2	2.6
8. Being criticized by someone you were dating because of your drinking	1.40	21	27.3
9. Getting into a fight after drinking	1.19	12	15.6
10. Damaging property after drinking	1.18	8	10.4
11. Doing something while or after drinking which you later regretted	1.88	40	51.9
12. Thinking you might have a problem with drinking	1.30	11	14.3

\*A possible range of scores of from 1 to 5.

†Number of positive respondents.

after drinking, 10.4 percent admitted to having damaged property, and 31.2 percent said they had combined drinking and driving. All problem scales were highly related to the drinking pattern variables. Frequency of beer drinking was associated more with physical problems and quantity and frequency of liquor consumption with social problems. All problems related to drinking in city parks, on city streets and parked cars, and to late afternoon or evening drinking. Those who reported memory loss were inclined to drink liquor, take a drink from a bar at closing time, drink at home or at the home of a friend, and drink in the late afternoon.

#### Native American Sample

The parental attitude variable for Native American students fell below the neutral position on drinking approval with mothers' attitudes being seen as slightly more negative toward drinking; however, only drinking in a parked car or drinking at the home of a friend showed a significant relationship to these variables (see Table XVII). As a whole, the group did not appear highly religious, but some surprising correlations were noted between degree of religiosity and some of the drinking pattern variables in that in some instances as reported religiosity increased, so did drinking. In addition, there was no difference in religiosity between prescriptive and prescriptive denominations.

The Native Americans did not appear to be socially inclined, as mean scores on social orientation scales were relatively low. Hedonistic social orientation related to taking a drink from a bar at closing time, drinking in bars, restaurants, and homes of friends, in city parks and on streets, and with all drinking times except early afternoon. Those scoring higher on the social-anxiety scale tended to report drinking liquor, consuming

TABLE XVII  
CORRELATIONS BETWEEN DRINKING PATTERNS AND RELATED VARIABLES  
FOR NATIVE AMERICAN SAMPLE (n = 58)

	Mean <sup>a</sup> Drinkers	Freq. --Beer	Freq. --Wine	Freq. --Liquor	Quan. --Beer	Quan. --Wine	Quan. --Liquor	Before OSU	Take Drink Out	Residence Hall	Own Home	Greek Housing	Bars, etc.	Restaurants	Friend's Home	City Parks	City Streets	Parked Car	Morning	Early Afternoon	Late Afternoon	Evening	Late Evening	
1 Father's Attitude	2.16	-.12	.25	-.09	.08	.04	-.10	.05	-.03	.20	.16	-.03	.13	.23	.25	-.003	-.04	<u>.32<sup>†</sup></u>	-.02	.16	.21	.17	.11	
2 Mother's Attitude	2.02	-.22	.21	-.13	-.10	-.01	-.23	-.21	-.02	.22	.03	.05	.10	.17	<u>.28</u>	-.04	.08	.21	-.06	-.05	-.02	.06	.06	
3 Religiosity	2.68	.22	.12	<u>.40</u>	.04	<u>.28</u>	<u>.28</u>	<u>.27</u>	.04	-.07	.21	.10	<u>.30</u>	.19	.19	.07	-.19	-.001	-.07	.01	.08	<u>.42</u>	<u>.42</u>	
4 Proscription	1.45	.04	<u>.35</u>	<u>.31</u>	-.23	<u>.35</u>	<u>.35</u>	.22	.05	-.15	.08	-.24	.04	.06	-.14	-.08	-.17	-.17	-.01	.11	.20	.16	.10	
5 Ethos of College	3.14	-.13	<u>.36</u>	<u>.64</u>	.01	<u>.37</u>	<u>.62</u>	<u>.30</u>	<u>.31</u>	-.21	.23	-.29	<u>.49</u>	<u>.32</u>	<u>.26</u>	-.02	<u>.30</u>	-.06	-.24	-.03	<u>.38</u>	<u>.48</u>	<u>.57</u>	
6 Social Ethos	2.90	-.05	<u>.38</u>	<u>.55</u>	.18	<u>.39</u>	<u>.62</u>	<u>.33</u>	<u>.37</u>	-.13	.25	-.33	<u>.43</u>	<u>.32</u>	<u>.29</u>	.10	-.19	.07	-.06	.11	<u>.49</u>	<u>.46</u>	<u>.52</u>	
7 Academic Ethos	3.37	-.16	<u>.27</u>	<u>.59</u>	-.13	<u>.27</u>	<u>.49</u>	.22	.19	-.24	.16	-.19	<u>.43</u>	<u>.26</u>	.18	-.11	-.33	-.15	<u>.34</u>	-.14	.21	<u>.41</u>	<u>.49</u>	
8 Social Orientation	1.75	-.10	.06	<u>.28</u>	.01	<u>.27</u>	<u>.30</u>	.05	.19	.25	-.03	.18	<u>.45</u>	<u>.28</u>	<u>.32</u>	<u>.40</u>	.24	.13	<u>.36</u>	.31	<u>.35</u>	<u>.33</u>	<u>.27</u>	
9 Social (Anxiety)	1.86	-.17	.14	<u>.37</u>	-.15	<u>.28</u>	<u>.36</u>	.01	.08	<u>.27</u>	.14	.03	.23	<u>.43</u>	.16	.17	<u>.31</u>	.09	.10	.18	<u>.28</u>	<u>.37</u>	<u>.29</u>	.25
10 Social (Hedonism)	1.75	-.03	.01	.25	.14	.25	.23	.11	<u>.27</u>	.14	.03	.23	<u>.43</u>	<u>.32</u>	<u>.44</u>	<u>.35</u>	.25	.12	<u>.36</u>	.19	.26	<u>.32</u>	<u>.27</u>	
11 Reasons for Drinking	1.98	-.12	<u>.38</u>	<u>.36</u>	.21	<u>.51</u>	<u>.41</u>	.14	.25	.12	<u>.53</u>	-.08	<u>.58</u>	<u>.40</u>	<u>.52</u>	<u>.34</u>	.14	.24	<u>.26</u>	<u>.46</u>	<u>.55</u>	<u>.62</u>	<u>.69</u>	
12 Social Reasons	1.89	.01	<u>.28</u>	<u>.37</u>	.22	<u>.30</u>	<u>.33</u>	.16	.19	.18	<u>.33</u>	-.12	<u>.52</u>	<u>.26</u>	<u>.39</u>	<u>.37</u>	.06	.20	.10	.22	<u>.40</u>	<u>.50</u>	<u>.56</u>	
13 Escape Reasons	1.56	.04	<u>.35</u>	.02	-.14	.23	.08	-.16	-.03	<u>.30</u>	<u>.32</u>	.17	.18	.24	.14	.22	<u>.28</u>	.03	.21	<u>.34</u>	<u>.26</u>	<u>.28</u>	<u>.27</u>	
14 Hedonistic Reasons	2.32	.13	<u>.42</u>	<u>.49</u>	<u>.28</u>	<u>.63</u>	<u>.51</u>	.24	<u>.37</u>	-.10	<u>.58</u>	-.13	<u>.69</u>	<u>.53</u>	<u>.60</u>	.24	.03	.23	.22	<u>.42</u>	<u>.64</u>	<u>.68</u>	<u>.78</u>	
15 Problem Drinking	1.54	-.02	.20	<u>.29</u>	.16	<u>.27</u>	<u>.32</u>	<u>.35</u>	.25	.16	.18	-.07	<u>.40</u>	.24	<u>.33</u>	<u>.41</u>	.10	<u>.37</u>	<u>.51</u>	<u>.56</u>	<u>.52</u>	<u>.40</u>	<u>.47</u>	
16 Problem (Acting Out)	1.25	.09	.06	.05	.03	.08	.04	.18	.14	.24	.15	.12	.16	.12	.21	<u>.38</u>	.24	.19	<u>.54</u>	<u>.50</u>	<u>.32</u>	.22	.22	
17 Problem (Physical)	1.93	-.18	.23	<u>.49</u>	.02	.19	<u>.47</u>	.23	.14	.12	.10	-.26	<u>.42</u>	.14	<u>.33</u>	.16	-.13	<u>.29</u>	.24	<u>.32</u>	<u>.50</u>	<u>.36</u>	<u>.49</u>	
18 Problem (Social)	1.49	-.002	.18	.20	.21	.20	.20	<u>.34</u>	<u>.39</u>	.17	.21	.03	<u>.36</u>	<u>.29</u>	<u>.29</u>	<u>.53</u>	.22	.16	<u>.36</u>	<u>.40</u>	<u>.44</u>	<u>.39</u>	<u>.40</u>	
19 Blacking Out	1.52	-.05	.05	.05	.18	.09	.12	.23	.07	.15	-.09	-.05	.21	.05	.17	.21	-.03	<u>.47</u>	<u>.31</u>	<u>.27</u>	<u>.29</u>	.14	.12	
20 Drinking While Driving	1.66	.14	.06	.14	<u>.39</u>	<u>.30</u>	.20	<u>.38</u>	.23	-.12	<u>.32</u>	-.17	<u>.27</u>	.11	.25	.06	-.02	<u>.60</u>	<u>.42</u>	<u>.49</u>	<u>.38</u>	<u>.32</u>	<u>.45</u>	
21 Regretting Behavior	1.79	-.07	.22	.20	.03	<u>.26</u>	.22	.19	.08	.11	.02	.07	<u>.27</u>	<u>.27</u>	.13	<u>.38</u>	.19	.09	<u>.40</u>	<u>.48</u>	<u>.33</u>	.22	<u>.30</u>	
22 Interfering With School	1.45	.11	.12	.24	.13	<u>.28</u>	<u>.36</u>	.20	.08	.09	.16	-.08	<u>.28</u>	.15	.20	<u>.27</u>	.01	<u>.35</u>	<u>.51</u>	<u>.56</u>	<u>.30</u>	<u>.29</u>	<u>.32</u>	

<sup>a</sup> A possible range of scores of from 1 to 5.

<sup>†</sup> Correlations  $>.25$  significant ( $p < .05$ ).

more of both wine and liquor, drinking in residence halls, in bars and city parks, and in the afternoon and early evening.

All ethos scales were related to frequency and quantity of wine and liquor consumption, to drinking in bars, and to evening drinking; however, with these variables the social ethos relationships were stronger, as would be expected.

Table XVIII shows that these students reported drinking most often to celebrate special occasions (82.8%), to be sociable and for enjoyment of taste (81.0%), and to get high (70.7%). Hedonistic reasons for drinking appeared more important than escape or social reasons (see Table XVII). Almost all variables correlated with hedonistic reasons in that as social hedonism increased, so did the reported frequencies; but relationships were strongest with quantity of wine and liquor consumption, drinking at home or in the homes of friends, in bars or restaurants, and late afternoon or evening drinking. Most of these same variables related well to social reasons also, but drinking in city parks was associated only with social reasons. Those who drank for escape reasons reported drinking more wine, doing so at home or in residence halls, drinking on city streets and at any time except morning.

Table XVIII shows the mean scores, numbers, and percentages for problem drinking for these drinkers. Quite a few (34.5%) expressed concern that they might have a problem with drinking, and 12.1 percent indicated that they had previously been arrested as a result of drinking. Twenty-one students (36.2%) reported loss of memory from drinking, the same number said they had gotten into a fight after drinking, and 15.5 percent confessed to having damaged property. As indicated in Table XVII, problems of a physical nature were reported most often, followed by social and



TABLE XVIII  
 REASONS FOR DRINKING AND PROBLEM DRINKING:  
 NATIVE AMERICAN SAMPLE  
 (n = 58)

Variable	Mean*	Yes†	Percent
How often do you drink for the following reasons?			
1. It helps me relax or to be less nervous	1.78	30	51.7
2. To get along better on dates or other social occasions	1.72	32	55.2
3. To relieve aches, pains, or fatigue	1.50	21	36.2
4. To improve appetite for food	1.40	20	34.5
5. To be sociable	2.38	47	81.0
6. To celebrate special occasions	2.81	48	82.8
7. Because friends drink	2.09	39	67.2
8. For enjoyment of taste	2.59	47	81.0
9. For a sense of well-being or to feel good	2.09	38	65.5
10. To get high	2.28	41	70.7
11. To get drunk	1.79	29	50.0
12. It is the adult thing to do	1.35	17	29.3
How often has your drinking led to the following situations?			
1. Given you a hangover	2.16	38	65.5
2. Caused nausea and/or vomiting	1.71	29	50.0
3. Caused you to "black out" or not to remember what has happened	1.52	21	36.2
4. Interfered with school or work	1.45	21	36.2
5. Caused problems in human relationships	1.66	25	43.1
6. Drinking while driving or driving after having several drinks	1.66	24	41.4
7. Being arrested for DWI (driving while impaired), DUI (driving under the influence), or PI (public intoxication)	1.14	7	12.1
8. Being criticized by someone you were dating because of your drinking	1.41	19	32.8
9. Getting into a fight after drinking	1.45	21	36.2
10. Damaging property after drinking	1.17	9	15.5
11. Doing something while or after drinking which you later regretted	1.79	29	50.0
12. Thinking you might have a problem with drinking	1.41	20	34.5

\*A possible range of scores of from 1 to 5.

†Number of positive respondents.

then "acting out" types of behaviors. Physical problems appeared to be more prevalent among those who drank more liquor and did so more often and among those who drank in bars, in homes of friends, parked cars, and in the afternoon or evening. "Acting out" and social types of problems related also to drinking in city parks and to morning drinking. Almost half the students (41.4%) reported drinking while driving or driving after having had several drinks. Those who were involved in this activity were inclined to report pre-college drinking, beer or wine drinking, drinking at home, in bars or in a parked car, and at any time of the day. It was of interest to note that although these students primarily drank beer and did so in fairly large amounts, beer drinking was not associated significantly with most of the related variables, whereas wine and liquor drinking were. In addition, beer drinking related to none of the problem areas with the exception of drinking and driving.

#### Nigerian Sample

Parental attitudes toward drinking, as seen by these students, were slightly on the disapproving side of the median; and again, with mothers giving somewhat less approval (see Table XIX). Only one significant relationship was apparent with these variables--quantity of liquor consumed, although some others were fairly high; and fathers' approval seemed to have more of an impact on drinking behavior than did that of mothers. In other words, as paternal approval of drinking increased, so did frequencies of drinking behavior patterns. These students exhibited a fairly high degree of religiosity; and as this variable increased, drinking behavior decreased, indicating that religion may have had some impact on drinking behavior. Religious proscription related only to drinking on

TABLE XIX

CORRELATIONS BETWEEN DRINKING PATTERNS AND RELATED VARIABLES FOR NIGERIAN SAMPLE (n = 52)

	Mean <sup>a</sup> Drinkers	Mean Abstainers	Freq. -- Beer	Freq. -- Wine	Freq. -- Liquor	Quan. -- Beer	Quan. -- Wine	Quan. -- Liquor	Before OSU	Take Drink Out	Residence Hall	Own Home	Greek Housing	Bars, etc.	Restaurants	Friend's Home	City Parks	City Streets	Parked Car	Morning	Early Afternoon	Late Afternoon	Evening	Late Evening
1 Father's Attitude	2.55	1.44 <sup>†</sup>	.21	.12	.12	.24	-.14	<u>.31</u> <sup>†</sup>	.25	.08	.27	.09	-.08	.26	-.05	.11	.16	.26	.17	.18	.11	.13	.07	.05
2 Mother's Attitude	2.41	1.44 <sup>†</sup>	.18	-.03	-.02	.24	-.06	.00	.13	.08	.18	-.06	-.15	.07	-.14	-.15	-.10	-.08	-.09	.13	.19	.00 <sup>4</sup>	-.02	-.06
3 Religiosity	3.69	4.32 <sup>†</sup>	-.16	-.11	-.19	-.06	-.001	-.08	-.10	.07	<u>-.31</u>	-.16	.01	-.04	-.03	-.02	.06	-.03	-.001	.09	-.09	-.01	-.06	-.11
4 Proscription	1.74	1.78	.11	.17	.04	-.09	.12	.04	.10	.25	.04	-.17	.20	-.17	.05	-.02	-.10	<u>-.30</u>	-.17	.11	.12	.10	.02	-.05
5 Ethos of College	3.89	3.72	<u>.32</u>	-.12	<u>.27</u>	<u>.42</u>	-.07	<u>.43</u>	<u>.33</u>	.06	-.01	.25	-.01	<u>.42</u>	<u>.33</u>	<u>.38</u>	.21	<u>.33</u>	<u>.35</u>	<u>.35</u>	.12	.26	.27	<u>.35</u>
6 Social Ethos	3.05	2.63	<u>.43</u>	.02	<u>.41</u>	<u>.48</u>	.07	<u>.51</u>	<u>.40</u>	.12	.08	<u>.35</u>	.02	<u>.47</u>	<u>.44</u>	<u>.49</u>	.18	<u>.42</u>	<u>.39</u>	<u>.40</u>	.27	<u>.40</u>	<u>.42</u>	<u>.49</u>
7 Academic Ethos	4.69	4.81	-.18	<u>-.38</u>	-.26	-.03	<u>-.33</u>	-.08	-.09	-.10	-.21	-.18	-.09	.01	-.17	-.15	.13	-.12	.004	-.03	<u>-.31</u>	<u>-.28</u>	<u>-.28</u>	-.23
8 Social Orientation	2.05	1.79	.18	.24	.23	.18	.14	.23	<u>.53</u>	.01	.16	<u>.28</u>	.11	<u>.32</u>	.25	<u>.47</u>	-.02	.21	.23	<u>.31</u>	<u>.43</u>	<u>.35</u>	<u>.40</u>	<u>.37</u>
9 Social (Anxiety)	2.32	1.92	.05	<u>.29</u>	.05	-.10	.14	-.12	.25	.09	.08	.03	.16	-.004	.01	.14	<u>-.27</u>	-.03	-.05	.10	.21	.11	.16	.09
10 Social (Hedonism)	2.00	1.82	.26	.06	<u>.36</u>	<u>.47</u>	.07	<u>.58</u>	<u>.56</u>	-.11	.16	<u>.42</u>	-.06	<u>.58</u>	<u>.42</u>	<u>.63</u>	.25	<u>.40</u>	<u>.46</u>	<u>.42</u>	<u>.45</u>	<u>.48</u>	<u>.46</u>	<u>.48</u>
11 Reasons for Drinking	2.12		<u>.53</u>	.17	<u>.44</u>	<u>.54</u>	.17	<u>.39</u>	<u>.56</u>	.14	.19	<u>.37</u>	.05	<u>.35</u>	<u>.37</u>	<u>.48</u>	-.01	.07	.16	<u>.55</u>	<u>.56</u>	<u>.61</u>	<u>.68</u>	<u>.50</u>
12 Social Reasons	2.02		<u>.43</u>	.11	<u>.28</u>	<u>.43</u>	.14	<u>.27</u>	<u>.39</u>	.06	.26	<u>.39</u>	-.01	<u>.33</u>	.26	<u>.43</u>	.02	.16	.16	<u>.39</u>	<u>.38</u>	<u>.44</u>	<u>.52</u>	<u>.42</u>
13 Escape Reasons	1.82		<u>.37</u>	.11	<u>.36</u>	<u>.30</u>	.12	.25	<u>.42</u>	.18	.06	.19	.06	.12	<u>.31</u>	<u>.31</u>	.03	-.002	.14	<u>.43</u>	<u>.43</u>	<u>.42</u>	<u>.44</u>	<u>.31</u>
14 Hedonistic Reasons	2.52		<u>.53</u>	.25	<u>.49</u>	<u>.56</u>	.18	<u>.47</u>	<u>.59</u>	.08	.23	<u>.41</u>	.06	<u>.38</u>	<u>.40</u>	<u>.52</u>	-.01	.06	.22	<u>.53</u>	<u>.57</u>	<u>.68</u>	<u>.79</u>	<u>.61</u>
15 Problem Drinking	1.31		.08	.06	.09	.23	.14	.02	.26	-.003	-.02	.07	.04	-.04	.04	.24	-.09	-.01	.08	.10	.07	.09	.14	.02
16 Problem (Acting Out)	1.02		-.05	.06	.03	.24	.16	.08	-.06	-.02	.07	.12	.11	.004	.11	.12	-.12	-.07	<u>.27</u>	-.09	-.07	.11	.14	.24
17 Problem (Physical)	1.64		.21	.02	.22	<u>.32</u>	.09	.14	<u>.42</u>	-.11	-.05	.14	.02	.09	.18	<u>.36</u>	-.11	-.08	-.01	.27	<u>.28</u>	.22	.21	.11
18 Problem (Social)	1.33		-.03	.09	.03	.12	.09	-.05	.12	-.04	-.02	.06	.01	-.08	.06	.16	-.06	-.06	.10	.02	-.03	.05	.10	.01
19 Blacking Out	1.37		.13	.11	-.02	.17	.12	-.14	.22	.23	-.13	-.04	.20	-.20	-.11	.09	-.10	-.12	-.04	.06	-.02	.03	.12	-.04
20 Drinking While Driving	1.27		-.07	.02	.12	.13	.10	<u>.31</u>	.15	-.22	.08	<u>.29</u>	-.08	<u>.39</u>	.06	<u>.37</u>	.20	<u>.37</u>	<u>.32</u>	-.05	.01	.14	.15	.12
21 Regretting Behavior	1.39		.02	-.04	-.07	.14	.17	-.03	.11	.06	.09	-.03	.07	-.06	-.07	.05	-.12	.09	.05	.02	.03	-.01	.01	-.05
22 Interfering With School	1.27		.07	.12	.08	.12	.14	-.07	.16	.04	.003	.02	-.04	-.20	-.05	.15	-.10	.03	.05	.09	-.02	-.03	.03	-.08

<sup>a</sup> A possible range of scores of from 1 to 5.

<sup>†</sup> Correlations >.27 significant (p < .05).

<sup>4</sup> Value of t significant (p < .05).

city streets in that those from proscriptive denominations were less likely to engage in this type of activity.

In social orientation, the group appeared somewhat more inclined toward anxiety than pleasure. The anxiety scale significantly related to frequency of wine consumption (the most popular drink with these people) and showed a negative relationship to drinking in city parks--apparently wine drinking was used to relieve tension and anxiety but this was not done in city parks. The pleasure orientation was associated with beer and liquor, but not with wine drinking, and with most of the other drinking variables except for drinking in residence halls and taking a drink from a bar at closing time.

Academic ethos rated very high with the Nigerian sample and showed either no relationship or a negative one with all drinking pattern variables. The strongest associations were with quantity and frequency of wine drinking, indicating that as academic ethos increased, wine consumption decreased in both amount and occurrence. Social ethos related to beer and liquor drinking, to drinking everywhere but in city parks, Greek housing and residence halls, and to drinking at any time of the day or night.

As can be seen in Table XX, drinking to celebrate special occasions was the most popular reason given and was listed by almost all drinkers (94.2%). This group also reported drinking often for a sense of well-being or to feel good (80.8%) and for enjoyment of taste (69.2%). Hedonistic reasons for drinking were claimed most frequently (see Table XIX), and this scale related to beer and liquor drinking (more highly to beer drinking), to pre-college drinking, drinking at home, in the homes of friends, in bars, and at any time of the day or night. Escape reasons

TABLE XX  
 REASONS FOR DRINKING AND PROBLEM DRINKING:  
 NIGERIAN SAMPLE  
 (n = 52)

Variable	Mean*	Yes†	Percent
How often do you drink for the following reasons?			
1. It helps me relax or to be less nervous	2.19	29	55.8
2. To get along better on dates or other social occasions	2.29	34	65.4
3. To relieve aches, pains, or fatigue	1.60	17	32.7
4. To improve appetite for food	1.69	21	40.4
5. To be sociable	2.27	34	65.4
6. To celebrate special occasions	3.40	49	94.2
7. Because friends drink	1.96	28	53.8
8. For enjoyment of taste	2.59	36	69.2
9. For a sense of well-being or to feel good	2.75	42	80.8
10. To get high	1.85	20	38.5
11. To get drunk	1.35	11	21.2
12. It is the adult thing to do	1.52	19	36.5
How often has your drinking led to the following situations?			
1. Given you a hangover	1.83	26	50.0
2. Caused nausea and/or vomiting	1.46	17	32.7
3. Caused you to "black out" or not to remember what has happened	1.37	9	17.3
4. Interfered with school or work	1.27	10	19.2
5. Caused problems in human relationships	1.31	12	23.1
6. Drinking while driving or driving after having several drinks	1.27	11	21.2
7. Being arrested for DWI (driving while impaired), DUI (driving under the influence), or PI (public intoxication)	1.00	0	0.0
8. Being criticized by someone you were dating because of your drinking	1.29	12	23.1
9. Getting into a fight after drinking	1.06	3	5.8
10. Damaging property after drinking	1.00	0	0.0
11. Doing something while or after drinking which you later regretted	1.39	12	23.1
12. Thinking you might have a problem with drinking	1.28	89	19.3

\*A possible range of scores of from 1 to 5.

†Number of positive respondents.

showed almost the same pattern except that those who reported drinking for this reason tended not to do so in bars.

The Nigerian students appeared to have a fairly low incidence of problem drinking (see Table XX). None reported having been arrested for alcohol-related offenses, and only 17.3 percent indicated having loss of memory as a result of drinking. Drinking and driving was admitted to by 21.2 percent, 19.2 percent indicated that alcohol had interfered with school or work, only 5.8 percent said they had gotten into a fight after drinking, and none had damaged property. Eleven students (21.2%) were concerned that they might have a problem with drinking. As Table XVI indicates, there were few significant relationships between problem drinking and drinking pattern variables. Physical problems were associated more highly with these variables; and those who tended to consume more beer were inclined toward pre-college drinking, drinking in homes of friends, and early afternoon drinking. Those who mixed drinking and driving tended to consume larger quantities of liquor, drink at home, in the homes of friends, in bars, in parked cars, and on city streets.

#### Chinese Sample

Parental attitudes, as seen by these students, were on the positive or approving side of the scale; and these variables were related more to quantity than to frequency of drinking, to pre-college drinking, drinking in residence halls, restaurants or homes of friends, and to morning drinking (see Table XXI). The group as a whole did not appear particularly religious, and this variable was not associated with any of the drinking patterns; however, those from the more prescriptive religions were more inclined toward pre-college drinking and drinking in bars.

TABLE XXI

## CORRELATIONS BETWEEN DRINKING PATTERNS AND RELATED VARIABLES FOR CHINESE SAMPLE (n = 38)

	Mean <sup>a</sup> Drinkers	Mean Abstainers	Freq. -- Beer	Freq. -- Wine	Freq. -- Liquor	Quan. -- Beer	Quan. -- Wine	Quan. -- Liquor	Before OSU	Take Drink Out	Residence Hall	Own Home	Greek Housing	Bars, etc.	Restaurants	Friend's Home	City Parks	City Streets	Parked Car	Morning	Early Afternoon	Late Afternoon	Evening	Late Evening
1 Father's Attitude	3.26	2.56 <sup>+</sup>	-.01	.24	.28	.30	<u>.35</u> <sup>†</sup>	<u>.32</u>	.30	.24	<u>.34</u>	.19	.30	.15	<u>.37</u>	<u>.44</u>	.31	.19	<u>.39</u>	<u>.36</u>	.24	.21	.25	<u>.46</u>
2 Mother's Attitude	3.24	2.56 <sup>+</sup>	-.04	.19	.30	<u>.34</u>	<u>.42</u>	<u>.39</u>	<u>.34</u>	.27	<u>.39</u>	.20	.25	.19	<u>.37</u>	<u>.43</u>	.24	.21	.29	<u>.40</u>	.28	.26	.30	<u>.45</u>
3 Religiosity	2.65	2.22	-.04	-.14	.18	-.04	.17	.15	-.01	.08	.06	-.03	.07	-.01	-.09	-.01	.12	.21	.03	-.06	-.01	.05	.02	-.25
4 Proscription	1.81	1.88	.08	.19	-.09	.29	.18	.12	<u>.36</u>	.21	.26	.22	.11	<u>.36</u>	.11	.19	.14	.09	.12	.16	.28	.18	.08	<u>.47</u>
5 Ethos of College	3.41	2.78 <sup>+</sup>	-.21	-.03	-.01	<u>-.32</u>	-.19	-.30	-.31	-.001	-.24	-.20	<u>.38</u>	.004	-.17	-.03	.28	<u>.36</u>	<u>.36</u>	-.01	-.28	-.25	-.21	-.23
6 Social Ethos	2.53	1.81 <sup>+</sup>	-.10	.16	.24	-.23	.05	-.06	-.02	.21	-.23	-.10	<u>.38</u>	.11	-.12	.12	.29	<u>.38</u>	<u>.38</u>	.19	-.002	-.03	-.13	-.02
7 Academic Ethos	4.30	3.74	-.17	-.26	<u>-.35</u>	-.18	<u>-.38</u>	<u>-.39</u>	<u>-.46</u>	-.30	-.05	-.16	.01	-.14	-.09	-.22	.03	.02	.02	-.28	<u>-.45</u>	<u>-.34</u>	-.16	<u>-.32</u>
8 Social Orientation	1.94	1.77	.10	<u>.39</u>	<u>.37</u>	-.06	.13	-.001	.16	.48	.16	.02	<u>.70</u>	<u>.38</u>	.19	.29	<u>.60</u>	<u>.65</u>	<u>.63</u>	<u>.34</u>	.28	.15	.17	.28
9 Social (Anxiety)	2.31	1.71	.17	.19	-.07	-.05	-.03	-.20	-.05	.23	.09	.06	<u>.49</u>	.20	.12	.07	<u>.45</u>	<u>.38</u>	<u>.43</u>	.06	.03	-.22	.13	.18
10 Social (Hedonism)	1.78	2.03	-.06	<u>.39</u>	<u>.61</u>	-.04	.23	.19	.23	<u>.49</u>	.18	-.02	<u>.60</u>	<u>.37</u>	.19	<u>.37</u>	<u>-.48</u>	<u>.62</u>	<u>.53</u>	<u>.42</u>	<u>.32</u>	<u>.36</u>	.14	.24
11 Reasons for Drinking	2.28		<u>.33</u>	<u>.50</u>	<u>.47</u>	.04	.16	.08	<u>.44</u>	<u>.37</u>	.26	.20	.30	<u>.44</u>	.26	<u>.34</u>	.27	<u>.40</u>	.24	<u>.34</u>	<u>.38</u>	<u>.41</u>	<u>.47</u>	<u>.32</u>
12 Social Reasons	2.36		.17	<u>.41</u>	<u>.40</u>	.05	.24	.16	<u>.42</u>	.24	.13	-.01	.23	<u>.40</u>	.25	.26	.26	<u>.33</u>	.21	<u>.32</u>	.30	.28	<u>.39</u>	.23
13 Escape Reasons	1.98		.25	.30	.28	-.14	-.05	-.09	.27	<u>.35</u>	-.01	.05	.30	.29	-.03	.27	.25	.30	.25	.13	.29	.28	.20	.23
14 Hedonistic Reasons	2.56		<u>.41</u>	<u>.48</u>	<u>.42</u>	.17	.18	.09	<u>.42</u>	.30	<u>.46</u>	<u>.43</u>	.22	<u>.37</u>	<u>.40</u>	.29	.18	<u>.33</u>	.15	.26	.31	<u>.41</u>	<u>.55</u>	.31
15 Problem Drinking	1.30		.11	.30	<u>.49</u>	-.05	.14	-.06	.30	<u>.65</u>	.16	.04	<u>.63</u>	<u>.38</u>	.08	<u>.39</u>	<u>.61</u>	<u>.67</u>	<u>.65</u>	<u>.64</u>	<u>.53</u>	<u>.47</u>	.20	<u>.37</u>
16 Problem (Acting Out)	1.14		-.21	.23	<u>.56</u>	-.10	.26	.14	.25	<u>.56</u>	.25	-.02	<u>.81</u>	<u>.32</u>	.01	.29	<u>.74</u>	<u>.87</u>	<u>.77</u>	<u>.73</u>	<u>.39</u>	<u>.42</u>	.13	.30
17 Problem (Physical)	1.38		.20	.23	<u>.41</u>	.05	.41	.09	<u>.38</u>	<u>.71</u>	.09	.19	<u>.36</u>	<u>.34</u>	.01	<u>.36</u>	<u>.36</u>	<u>.47</u>	<u>.33</u>	<u>.53</u>	<u>.64</u>	<u>.58</u>	.27	<u>.38</u>
18 Problem (Social)	1.32		.07	.26	<u>.44</u>	-.11	.04	.002	.14	<u>.52</u>	.11	-.02	<u>.51</u>	<u>.35</u>	.10	<u>.32</u>	<u>.45</u>	<u>.54</u>	<u>.52</u>	<u>.55</u>	<u>.40</u>	<u>.36</u>	.17	.22
19 Blacking Out	1.37		.13	.31	<u>.34</u>	-.04	.13	-.01	<u>.36</u>	<u>.58</u>	.20	.05	<u>.55</u>	<u>.33</u>	.01	<u>.38</u>	<u>.70</u>	<u>.58</u>	<u>.57</u>	<u>.57</u>	<u>.67</u>	<u>.37</u>	.23	<u>.44</u>
20 Drinking While Driving	1.39		.23	.30	<u>.40</u>	.11	.16	.11	<u>.38</u>	<u>.68</u>	.09	.08	<u>.61</u>	<u>.34</u>	.13	<u>.45</u>	<u>.59</u>	<u>.58</u>	<u>.68</u>	<u>.49</u>	<u>.48</u>	<u>.48</u>	.16	<u>.45</u>
21 Regretting Behavior	1.37		.08	.11	.10	-.17	-.19	-.17	-.13	.05	-.04	-.05	.22	-.02	.08	.11	.24	.15	<u>.34</u>	.07	-.01	-.07	-.10	.04
22 Interfering With School	1.29		.13	<u>.38</u>	<u>.43</u>	.06	.19	.15	<u>.39</u>	<u>.56</u>	.14	.01	<u>.48</u>	<u>.50</u>	.20	<u>.46</u>	<u>.44</u>	<u>.47</u>	<u>.50</u>	<u>.59</u>	<u>.55</u>	<u>.50</u>	.28	<u>.39</u>

<sup>a</sup> A possible range of scores of from 1 to 5.

<sup>†</sup> Correlations > .32 significant (p < .05).

<sup>+</sup> Value of t significant (p < .05).

In social orientation these students appeared to lean more toward anxiety than pleasure, and the pleasure position was associated more with frequency than quantity of drinking and with most of the drinking variables. Those scoring highly on the anxiety social orientation scale were more apt to report drinking in parked cars, on city streets, and in city parks.

In anticipating college, this group seemed to be much more academically than socially oriented, and those who scored more highly on the academic scale were less likely to report engaging in drinking behavior--particularly wine or liquor drinking--and to have been pre-college drinkers. Social ethos was associated with frequency of wine and liquor drinking, drinking in Greek housing, bars, city parks, parked cars, on city streets, and in the morning.

As Table XXII indicates, the Chinese students reported drinking most often to celebrate special occasions (92.1%), then to be sociable (89.5%), and for enjoyment of taste (84.2%). As can be seen in Table XXI, hedonistic reasons for drinking appeared to be the most important. These related more to frequency than to quantity of alcohol consumption; and students who reported drinking for these reasons appeared to drink before coming to college, in almost all drinking places, and more often in the afternoon or early evening. Social drinkers seemed to be quite similar except that they reported drinking mainly in bars. Escape drinking showed a significant positive relationship only with taking a drink from a bar at closing time.

Some problem drinking was evident, as can be seen in Table XXII. Five students (13.2%) said they had been arrested for alcohol-related offenses, 23.7 percent reported "blacking out" after drinking, 21.1 percent indicated



TABLE XXII  
 REASONS FOR DRINKING AND PROBLEM DRINKING:  
 CHINESE SAMPLE  
 (n = 38)

Variable	Mean*	Yes†	Percent
How often do you drink for the following reasons?			
1. It helps me relax or to be less nervous	2.39	26	68.4
2. To get along better on dates or other social occasions	2.34	26	68.4
3. To relieve aches, pains, or fatigue	1.42	11	28.9
4. To improve appetite for food	2.13	22	57.9
5. To be sociable	3.00	34	89.5
6. To celebrate special occasions	3.53	35	92.1
7. Because friends drink	2.42	28	73.7
8. For enjoyment of taste	2.79	32	84.2
9. For a sense of well-being or to feel good	2.61	30	78.9
10. To get high	1.74	19	50.0
11. To get drunk	1.32	7	18.4
12. It is the adult thing to do	1.66	16	42.1
How often has your drinking led to the following situations?			
1. Given you a hangover	1.47	14	36.8
2. Caused nausea and/or vomiting	1.29	10	26.3
3. Caused you to "black out" or not to remember what has happened	1.37	9	23.7
4. Interfered with school or work	1.30	8	21.1
5. Caused problems in human relationships	1.24	8	21.1
6. Drinking while driving or driving after having several drinks	1.39	10	26.3
7. Being arrested for DWI (driving while impaired), DUI (driving under the influence), or PI (public intoxication)	1.21	5	13.2
8. Being criticized by someone you were dating because of your drinking	1.34	9	23.7
9. Getting into a fight after drinking	1.13	3	7.9
10. Damaging property after drinking	1.08	2	5.3
11. Doing something while or after drinking which you later regretted	1.37	10	26.3
12. Thinking you might have a problem with drinking	1.37	11	28.9

\*A possible range of scores of from 1 to 5.

†Number of positive respondents.

that alcohol had interfered with school or work, 26.3 percent said they had mixed drinking and driving, 7.9 percent admitted to having gotten into a fight after drinking, and 5.3 percent indicated that they had damaged property. Thinking they might have a problem with drinking had concerned 28.9 percent of this sample.

#### Comparison of Drinking Patterns and Related Variables

In comparing the five samples a number of similarities as well as some differences can be noted. With the exception of the Chinese, all groups felt their parents to be somewhat disapproving of their use of alcoholic beverages. In every instance mothers were seen as less approving, although with international students this difference was minimal. In religiosity the Chinese indicated the highest mean score, but there was a low and non-significant correlation between this scale and the drinking pattern variables. Although the Nigerian students saw their parents as being slightly disapproving of alcoholic beverage consumption, their scores on this variable were near the median range; and they also exhibited low and insignificant correlations between religiosity and drinking patterns. Religiosity for the three American samples, and particularly for those sampled in classrooms and Black students, appeared to have some impact on drinking; and the fact that this was less noticeable with the Native Americans may possibly have been due to the influence of native religions.

The American samples were relatively homogeneous in the social orientation scales with the classroom sample indicating only a four point difference between social-anxiety and social-hedonism. American Blacks showed a ten point difference between these two scales, and Native Americans

varied by nine points. The international samples, however, evidenced large differences in the means of these two scales (53 points with the Chinese students and 32 points with the Nigerians), giving them a relatively high anxiety-low pleasure social posture. All scored higher on social anxiety scales than on social hedonism ones. Native Americans had the lowest social hedonism score and American Blacks the highest, the latter group indicating the highest anxiety score as well. Both Native Americans and Chinese exhibited some correlations between anxiety and drinking patterns, more significantly so with the Native American group; but in the other samples it would appear that anxiety was not particularly related to drinking. Hedonistic social orientation, however, related positively to drinking patterns in all samples.

All students tended to put a great deal of emphasis on the ethos of college life, as mean scores on these scales were quite high; and all samples ranked the academic aspect of college life as being more important than the social component. On the academic ethos scale, Nigerian students had the highest mean score, followed by American Blacks and Chinese. Academic ethos did not correlate with drinking patterns for either those who were sampled in classrooms or for the American Blacks; however, some positive relationships were noted for Native Americans, and the international groups exhibited a negative connection between these variables. Native Americans were lowest in academic ethos.

The classroom sample indicated the highest mean score on social ethos, making these students more inclined to come to college for sports events, dating and drinking, and partying. Chinese and Native Americans ranked lowest on this scale. The Chinese students and American Blacks did not associate social ethos with drinking to any extent, but with the other

samples social ethos was correlated with some of the drinking pattern variables. In total ethos Nigerians ranked first, followed by American Blacks, those sampled in classrooms, and the Chinese. Native Americans with a mean score considerably lower than that of the other groups would appear to look forward to college with the least amount of enthusiasm.

All students drank more often for hedonistic reasons (to celebrate special occasions, for enjoyment of taste, for a sense of well-being or to feel good, and to get drunk). The classroom sample students indicated the highest mean score on this scale and Native Americans the lowest. Chinese students drank most often for hedonistic reasons, but they also drank quite often for social reasons. Native Americans again ranked lowest on the social drinking scale. Both Native Americans and American Blacks drank frequently to get high, and those sampled in classrooms, to get drunk.

Escape reasons for drinking were mentioned least often, although the two international samples scored highest on this dimension by several points. Drinking to improve appetite for food was listed infrequently by classroom sample class students and American Blacks, but over half the Chinese and nearly that many Nigerians considered it important. Native Americans listed this reason quite frequently also.

Problem drinking was rare, but a number of students in all groups reported some difficulties with drinking. Problems of a physical nature (having a hangover and nausea and/or vomiting) were cited most often and were fairly common among all of those in the study. The mean frequency of this type of reaction was highest in the classroom sample and lowest with the Chinese. With the exception of social problems, the former indicated the highest frequency on all problem scales; however, Native Americans were higher in mean frequency of this variable. Since many of the

behaviors on these scales (having a hangover, fighting, damaging property, etc.) are considered to be typical of young college students, this could tend to influence the scale values.

Native Americans scored highest on the social problem scale (problems with human relationships, being criticized for drinking, and concern over drinking). When looking at the individual items that could presage alcoholism, Native Americans showed the highest reported incidence of loss of memory from drinking as well as the highest frequencies of admitting that alcohol usage had interfered with school or work; and although the Chinese indicated the highest arrest rate, Native Americans were only one percentage point behind--four times the rate indicated by classroom students.

Combining drinking and driving was a fairly common occurrence with all students but was done more frequently by the American groups and two times as often by the classroom sample. Well over one-half of these students indicated that they drank while or before driving. With the exception of the high arrest rate among the Chinese, the international group, as a whole, appeared much more law-abiding and less inclined to fight after drinking or do things which were later regretted.

A number of the drinking pattern variables tended to relate to problem drinking, although not in all instances. Quantity rather than frequency of consumption seemed to be more of an indicator of problem drinking as was pre-college drinking, drinking in illegal places, taking a drink from a bar after closing time, and morning drinking.

Although the majority reported drinking beer more often and in larger quantities, liquor consumption was more frequently implicated in problem drinking. Only with the classroom students was there a consistent positive relationship between an increase in beer consumption and drinking problems.

## CHAPTER VI

### RESEARCH MODEL

The literature relating to alcohol consumption as well as the findings presented in the previous chapter would seem to indicate that this phenomenon is not discrete but is interrelated with a number of facets of human life. Of particular interest in this research has been how these various social attributes are associated with the specific kinds of drinking patterns that lead to problem drinking, and this chapter will present an evaluation of a theoretical causal sequence based on background information presented in Chapter III.

It was suggested that students come to college with pre-set norms and value systems regarding alcohol consumption and that these value systems have been the result in part of the degree of religious orientation and perception of parental attitudes toward drinking. The student may then neutralize drinking behavior and begin to develop patterns of drinking before coming to college. These value systems and behavior patterns will, in turn, influence students' attitudes toward college and their perspective of what college life is like. This will have an effect on students' social orientation and lead to further development or accentuation of drinking patterns and behaviors. The degree of problem drinking, then, will depend upon the relationship of all of these antecedent variables, each having been influenced by the variables preceding it in the model.

The suggested relationship was evaluated using path analysis, which allows for a postulation of an ordering of relationships and testing of

the underlying assumptions. Path analysis assumes that (1) relationships among the variables in the model are linear, additive, and causal; (2) all relevant variables are included in the system; and (3) the causal flow is unidirectional (Kerlinger and Pedhazzer, 1973). The samples were divided into three groups: (1) those sampled in the introductory sociology classes, (2) the minority samples--Native Americans and American Blacks, and (3) international students--Nigerians and Chinese.

For this research goal it was assumed that reported religiosity and parental attitudes toward drinking as perceived by the respondents were exogenous variables, that is, they did not depend on any other variables in the model. Ethos of college life was divided into two scales, social ethos and academic ethos, and these were examined separately as to their relationships with the other variables. Six different measures of problem drinking, and therefore six path coefficients, were included: (1) the total problem scale, (2) "acting-out" types of problems, (3) physical problems, (4) social problems, (5) loss of memory as a result of drinking, and (6) drinking while driving or driving after having several drinks. A description of how these scales were formed and the items in each scale was given in Chapter IV. Loss of memory as a result of drinking was included because it has been implicated as an indicator of future alcoholism, and drinking with driving because it was a commonly-reported phenomenon not included in the subscales. The path coefficients designate the amount of expected change in the dependent variables (problem drinking) as a result of unit changes in the independent variables, and each coefficient indicates the change in that variable while controlling for all prior items on the path.

### Classroom Sample Analysis

The first path diagram, which included the hedonistic social orientation for classroom students, can be seen in Figure 1. The path structure explains a substantial amount of the variation in problem drinking--47 percent for total problem drinking, 30 percent for "acting out" types of problems, 28 percent for physical problems, 23 percent for problems of a social nature, 14 percent for "blacking out" as a result of drinking, and 42 percent for driving while or after drinking. The best direct predictor of memory loss in this model was quantity and frequency of consumption, and perceived parental attitude appeared to be a weak deterrent.

The best direct predictor of problem drinking was quantity and frequency of alcohol consumption with path coefficients of .37 for total problem drinking, .20 for "acting out" types of problems, .34 for physical problems, .25 for both problems of a social nature and loss of memory as a result of drinking, and .36 for driving while or after drinking.

It has been recommended that a path coefficient of less than .05 not be considered meaningful (Kerlinger and Pedhazzer, 1973); thus neutralization could not be considered a good direct predictor of problem drinking. Three of the six path coefficients, total problems (.07), social problems (.11), and loss of memory as a result of drinking (.08), showed some direct relationship to this variable; the remainder did not. Indirectly, however, neutralization did influence problem drinking, as its direct effects on pre-college drinking (.31), ethos of college life (.29), and quantity-frequency of drinking (.22) were relatively strong. The path coefficients from neutralization to pre-college drinking (.31) and to ethos of college life (.29) suggested that justification of drinking behavior had some influence on these activities, and the generated behavior



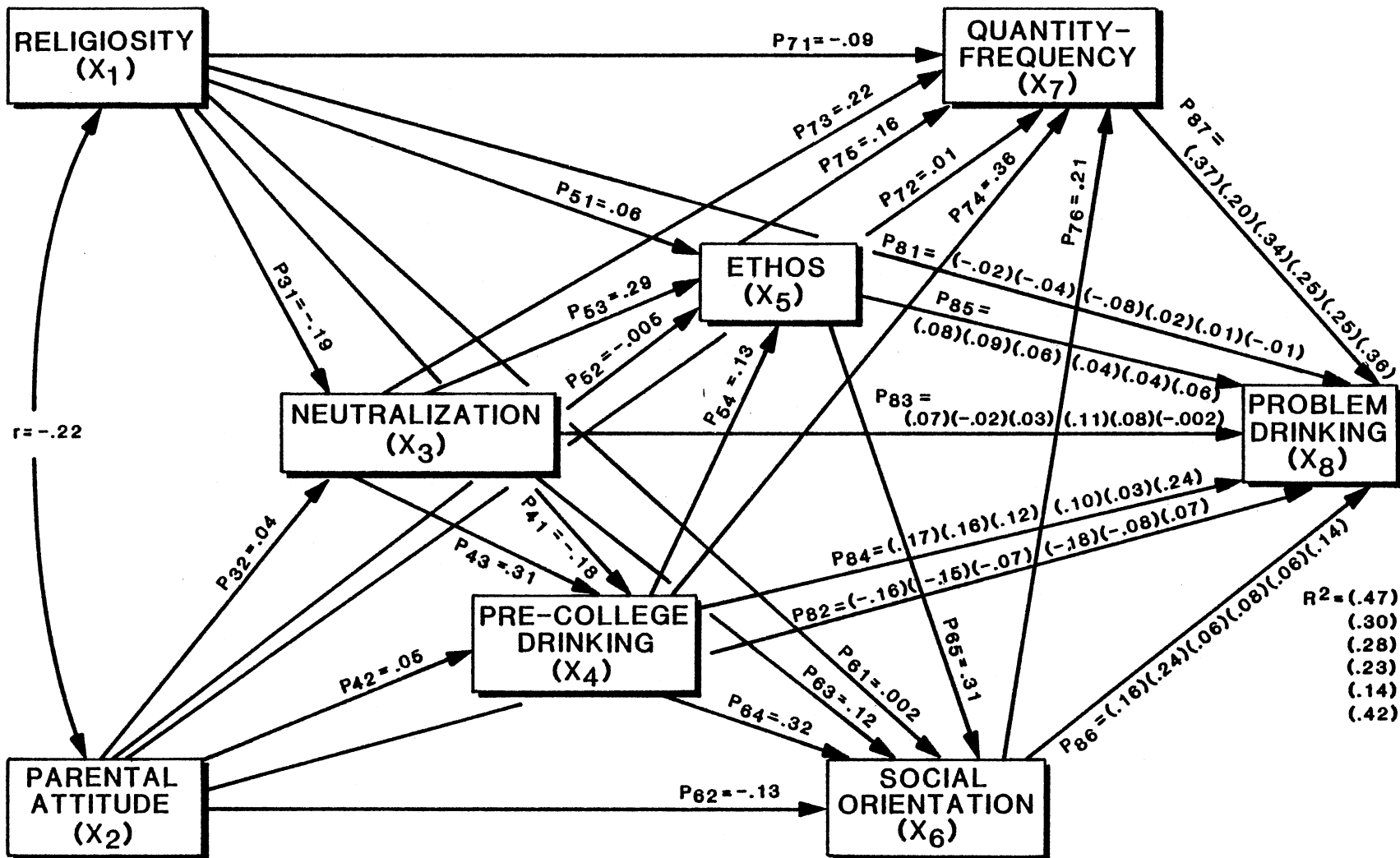


Figure 1. Path Diagram for Classroom Sample (Social Ethos)

patterns possibly influenced quantity and frequency of alcohol consumption and resultant problems with drinking.

The direct effect of perceived parental attitude on nearly all variables was negligible. The negative relationship of parental attitude with social orientation would seem to indicate that as parental attitude was seen to be more disapproving toward drinking, students were more likely to engage in such social activities as dating, partying and missing classes. It would also appear that as parental attitudes were seen as more approving, reports of drinking problems decreased. This would mean that those drinkers who saw their parents as not approving of drinking were more prone to report alcohol-related problems. Religiosity appears to have had little or no direct impact on drinking problems and only a minimal amount on quantity and frequency of drinking; however, both neutralization and pre-college drinking seemed to be mediated by the degree of religious commitment; for as reported religiosity increased, students appeared to neutralize drinking less and to indicate less pre-college drinking.

The amount of reported drinking before college appeared to have had some direct effects on problem drinking--particularly on the physical problems of hangover, etc. and on driving while or after drinking. However, the primary direct effects of pre-college drinking seemed to have been on quantity and frequency of alcohol consumed and on hedonistic social orientation.

Social ethos, while controlling for pre-college drinking, neutralization, religiosity and parental attitude appeared to have been a fairly good predictor of social hedonistic orientation (.31); and its direct effects on

quantity-frequency were quite strong (.16), indicating that this aspect of living could be viewed as influential in determining drinking patterns.

Figure 2 shows the same path diagram but with academic ethos, which measured the student's attitudes and behaviors as they related to perceptions of preparing for a career, academic environment, and making a better life. Although the general structure of the model did not change by this insertion, some differences can be noted. Most relationships appeared somewhat stronger; but with the exception of religiosity and parental attitude, those variables directly connected to ethos showed a decrease in the value of the path coefficient. The direct effect of academic ethos on reported problem drinking showed an overall change in direction, suggesting that the academic orientation to college life could be somewhat of a deterrent to problem drinking.

#### Minority Analysis

The results of path analysis with the hedonistic social orientation for minority students can be found in Figure 3. This path model is somewhat less of a predictor of problem drinking than the previous diagrams; however, it explains 37 percent of the total variation in problem drinking for total problems, 19 percent for "acting out" types of problems, 26 percent for physical problems, 29 percent for social problems, 15 percent for "blacking out" as a result of drinking, and 25 percent for driving while or after drinking. The best direct predictor of problem drinking again was quantity and frequency of alcohol consumption with path coefficients of .31 for total problem drinking, .09 for "acting out" types of problems, .28 for social problems, .31 for physical problems, .06 for loss of memory as a result of drinking, and .26 for combining

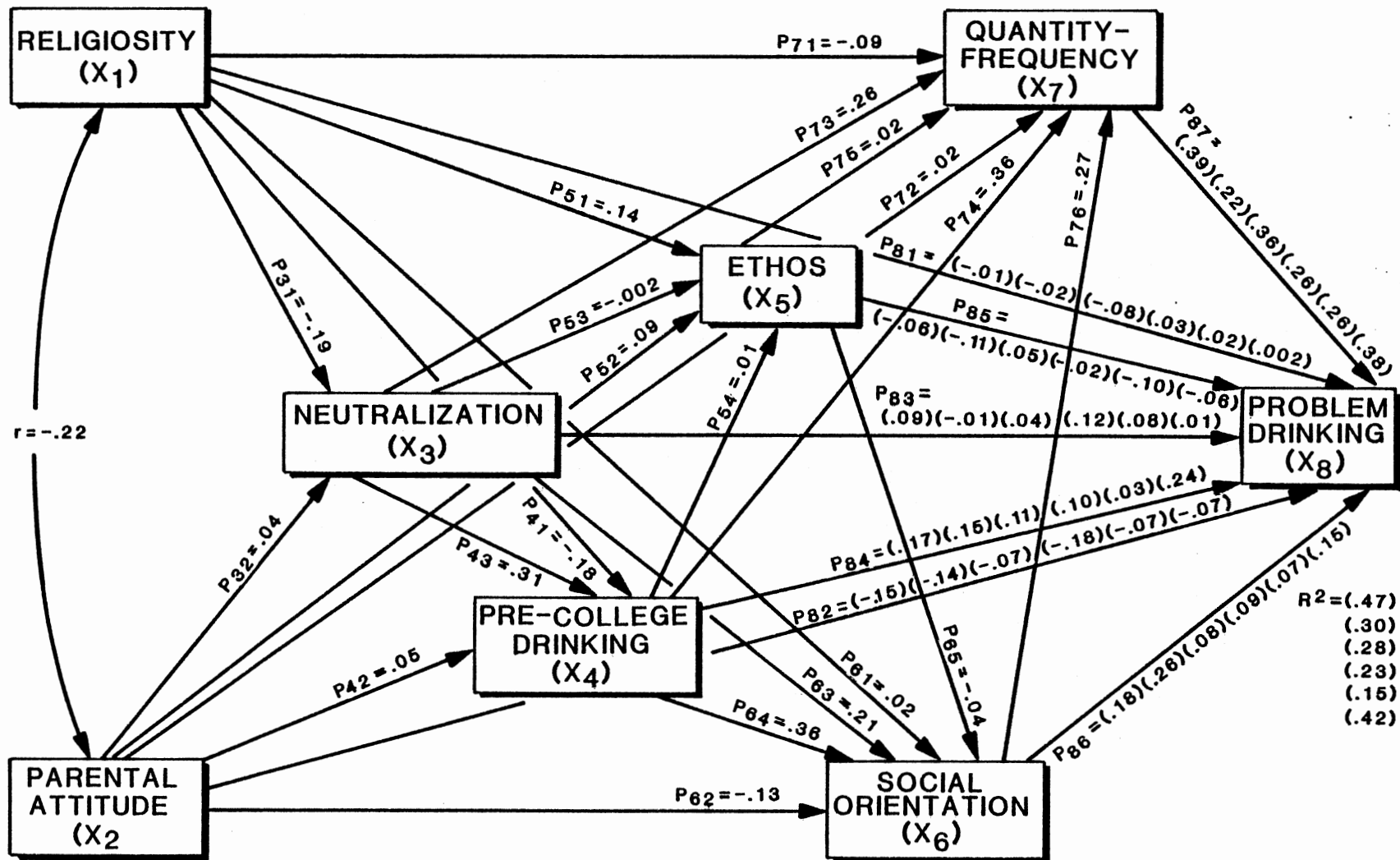


Figure 2. Path Diagram for Classroom Sample (Academic Ethos)

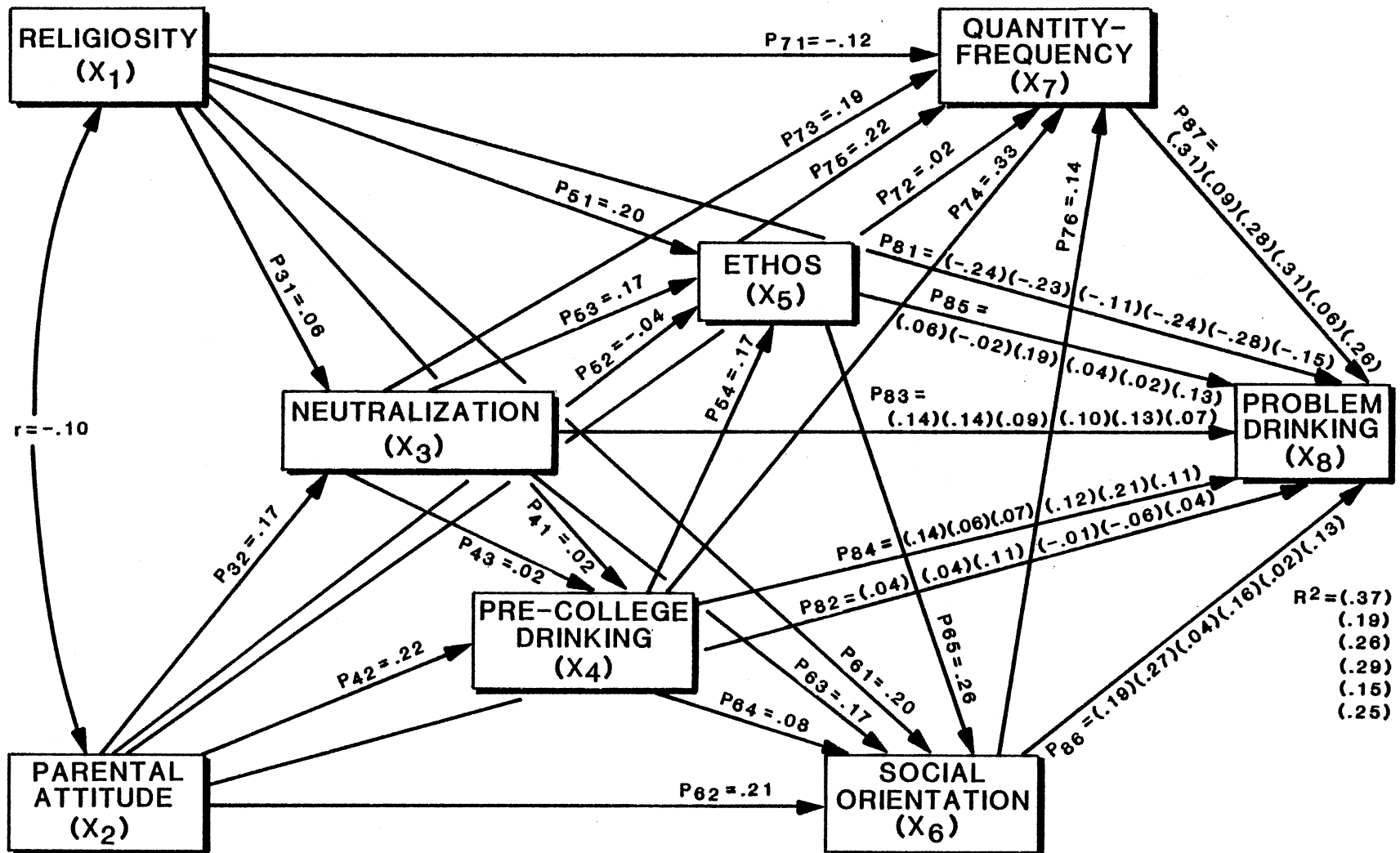


Figure 3. Path Diagram for Minority Samples (Social Ethos)

drinking and driving. The overall strength of this path, while controlling for all other independent variables, would tend to support the general utility of the model.

This model also indicates the relatively weak position of loss of memory as a result of drinking compared with drinking and driving. The best predictor of memory loss was pre-college drinking, followed by neutralization of drinking. Religiosity, on the other hand, appears to have been a strong deterrent to this problem as well as to drinking problems as a whole. The direct effect of religiosity on variables such as social orientation (.20) and ethos of college life (.20) was quite high; but it was strongest with problem drinking--total problems (-.24), "acting out" problems (-.23), physical problems (-.11), social problems (-.24), "blacking out" (-.28), and drinking while driving (-.15).

Neutralization was more of a direct predictor of problem drinking for these students with path coefficients of .14 for both total and "acting out" problems, .09 for physical problems, .10 for social problems, .13 for loss of memory, and .07 for drinking while driving. The low path coefficient for neutralization to pre-college drinking (.02) and the relatively high one to quantity and frequency of consumption (.19) might indicate that neutralization of drinking for this group occurred after rather than before coming to college.

The direct effects of religiosity on all other variables was quite substantial, an indication of the importance of religion for these students; and this variable appears to have been a fairly strong deterrent to problem drinking. Although perceived parental attitude was not particularly influential by itself in deterring problem drinking, these students

appeared to be influenced by their parents in the frequency of drinking before college (.22) as well as in social orientation (.21).

The path model which included academic ethos appears to have been an equally efficient model for predicting problem drinking (see Figure 4). Again, most of the path coefficients were somewhat stronger with this model, particularly those leading to problem drinking. With the exception of those paths leading directly to and from academic ethos, few changes can be noted. The path coefficients to academic ethos from neutralization (.11) and pre-college drinking (.05) decreased in value as did the coefficient from ethos to social orientation (.12). Religiosity appears to have been a stronger predictor of academic than social ethos (.51), and it was related less strongly to neutralization of drinking (.06), pre-college drinking (.02), and social orientation (.19), as would be expected.

#### International Analysis

Figure 5 shows the path model with social ethos for international students. The overall path was a predictor of problem drinking, but not a particularly strong one with 24 percent explained variation for total problem drinking, 23 percent for "acting out" types of problems, 29 percent for physical problems, 14 percent for social problems, 17 percent for loss of memory after drinking, and 31 percent for driving while or after drinking.

For this model the best direct predictor of problem drinking was social orientation with path coefficients of .36 for total problems, .44 for "acting out" problems, .31 for both physical and social problems, .15 for loss of memory, and .56 for drinking while driving. Again, loss of

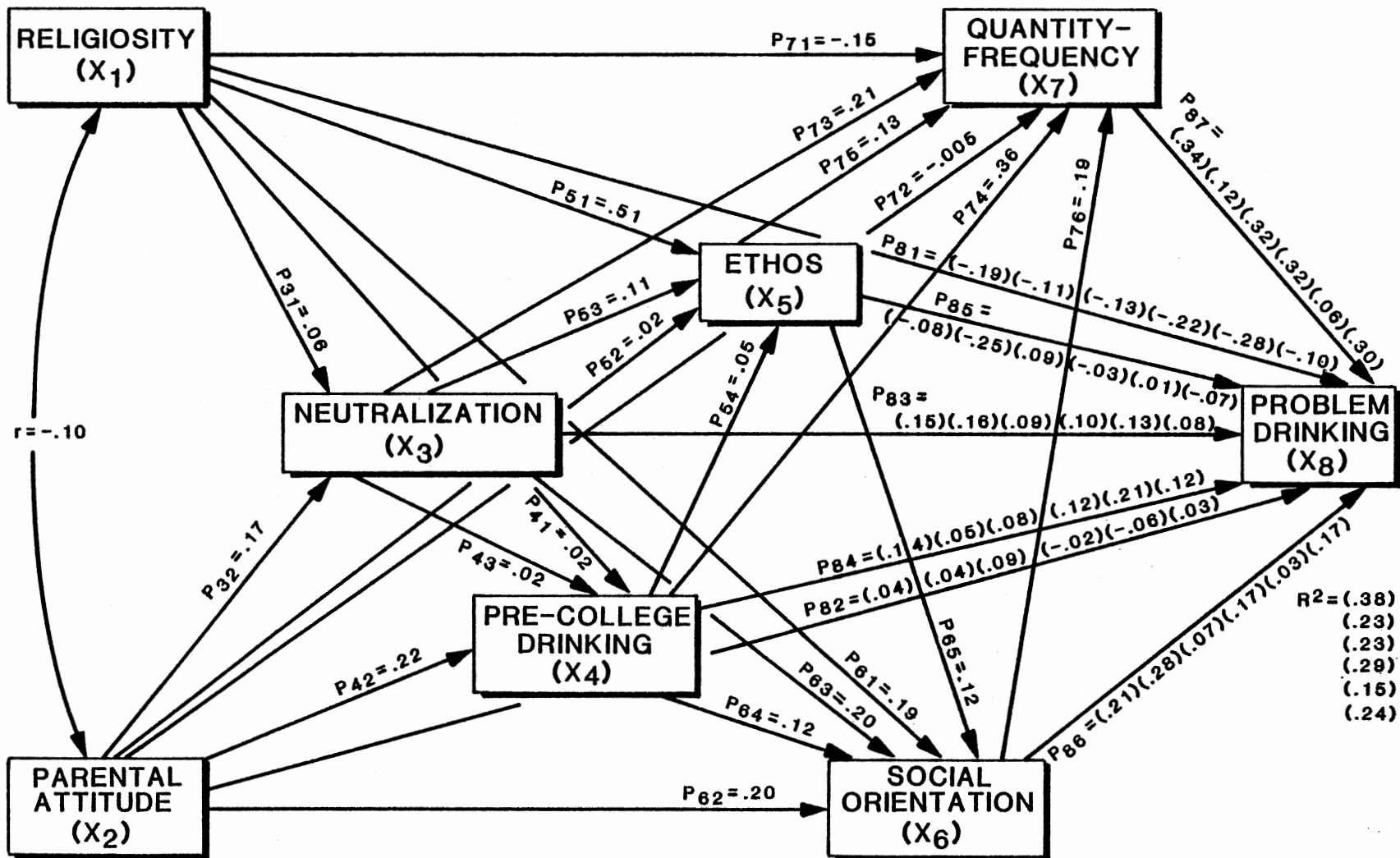


Figure 4. Path Diagram for Minority Samples (Academic Ethos)



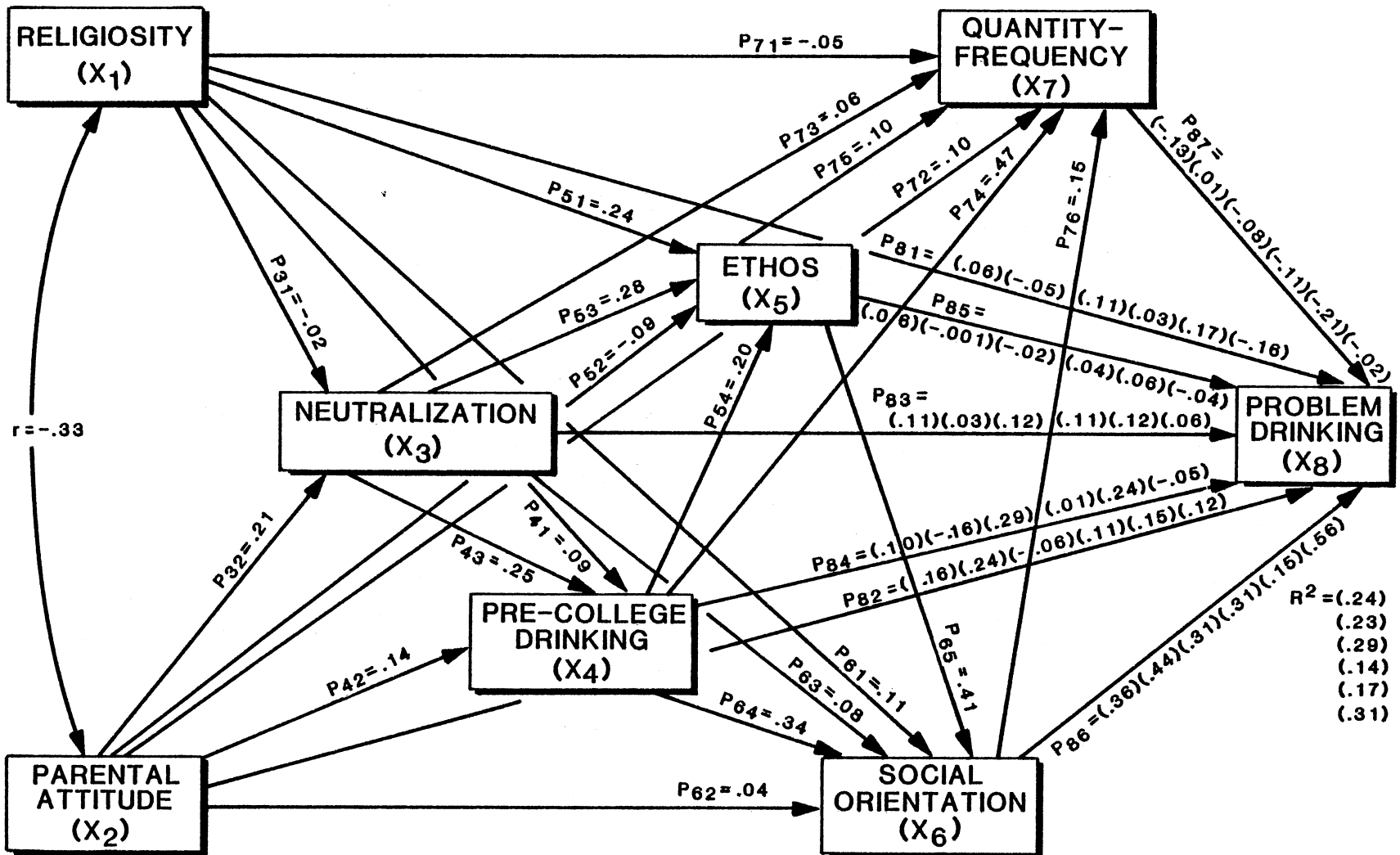


Figure 5. Path Diagram for International Samples (Social Ethos)

memory from drinking did not relate well to the other variables, but they were extremely good predictors of drinking and driving. The best predictor of memory loss with this sample was pre-college drinking.

Religiosity appears to have had some utility with this model, as three of the path coefficients to problem drinking were large enough to be considered important--physical problems (.11), "blacking out" after drinking (.17), and drinking with driving (-.16). Only with the latter did religiosity appear to be a deterrent, the others indicating an increase in religiosity along with an increase in reports of problem behavior. Religiosity also had a positive effect on ethos of college life (.24) and on social orientation (.11).

The direct effect of parental attitude on neutralization was relatively high (.21), and some of the other paths from perceived parental attitude were meaningful as well--pre-college drinking (.14), total problems (.16), "acting out" problems (.24), social problems (.11), "blacking out" after drinking (.15), and drinking while driving (.12). The path from neutralization to pre-college drinking (.25) would tend to indicate that neutralization of drinking behavior probably took place before coming to college. This variable also had an appreciable effect on ethos of college life (.28), and on some of the problem variables--total problems (.11), physical problems (.12), social problems (.11), and loss of memory from drinking (.12).

The path diagram using academic ethos (Figure 6) again appears to have been somewhat stronger than that with social ethos, and the greatest amount of variance was indicated by "acting out" types of problems ( $R^2 = .30$ ). Neutralization becomes more important in this model, indicating a negative relationship with academic ethos (-.16) and a stronger positive

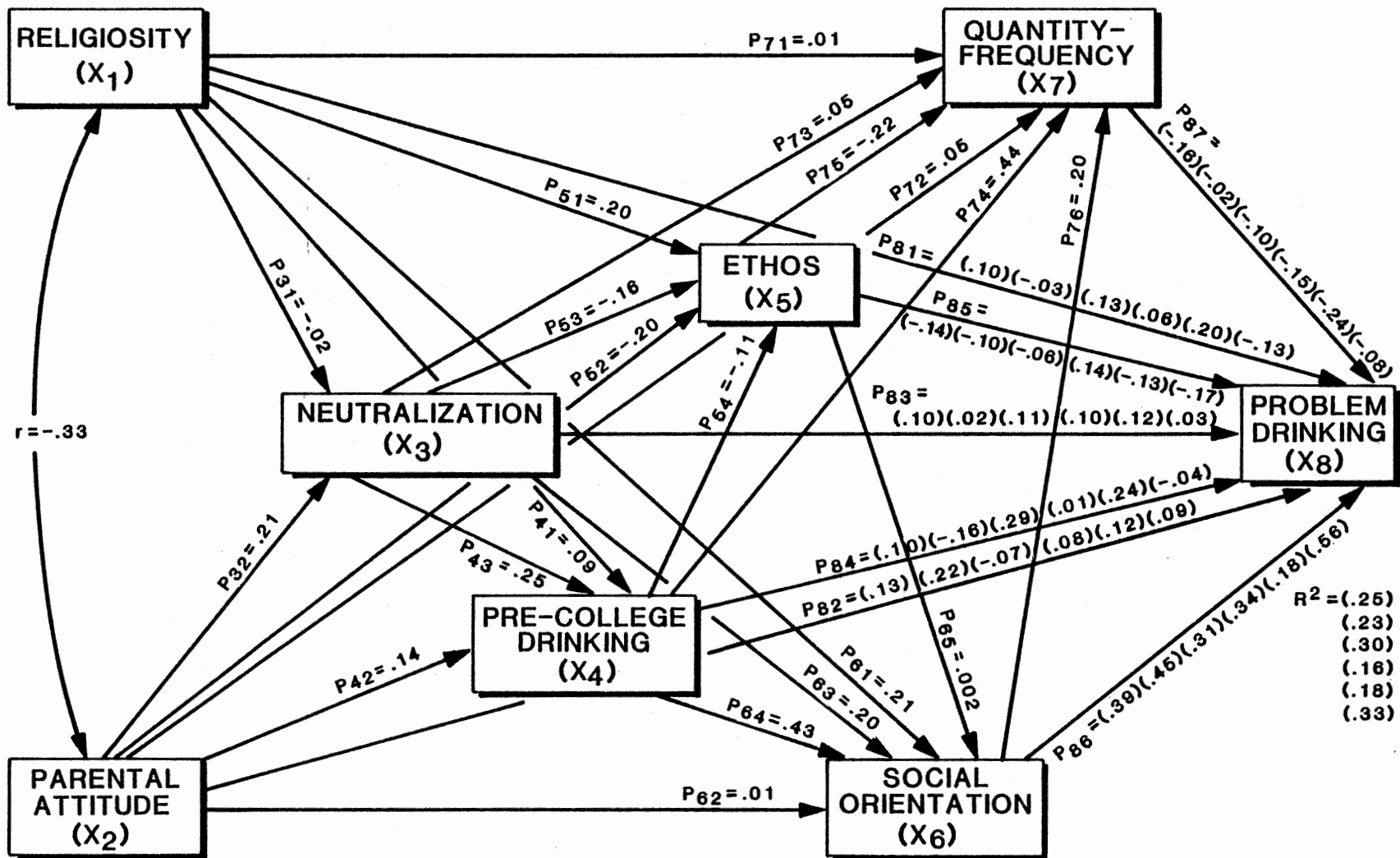


Figure 6. Path Diagram for International Samples (Academic Ethos)

one with social orientation (.20). Again social orientation, controlling for the antecedent variables, was the best predictor of problem drinking, with path coefficients of .39 for total problem drinking, .45 for "acting out" types of problems, .31 for physical problems, .34 for social problems, .18 for loss of memory after drinking, and .56 for drinking and driving. Parental approval of drinking related negatively to academic ethos (-.20), that is, as students saw parents as being less approving of drinking, they were more inclined toward the academic aspects of college life.

#### Summary

As a whole the path models were fairly good predictors of problem drinking, although that of the international group appeared to be somewhat less adequate. While several similarities and differences could be detected, no overall pattern appeared to emerge. With both the American samples, quantity and frequency of alcohol consumption was the best predictor of problem drinking; however, with the international group, social orientation indicated the highest path coefficients to these variables. Religiosity appeared to be a relatively strong deterrent to problem drinking for the minority students, but not the others; and perceived parental approval was related to a decrease in reported problems for the classroom sample, but indicated an increase in this variable with the other two.

With the classroom sample, religiosity, but not parental attitude, appeared to be a predictor of neutralization; however, the opposite was true for the other two samples. The paths from neutralization to pre-college drinking were strong for classroom and international students,

but not for minorities. All showed a fairly substantial path from neutralization to social ethos, with the classroom and international groups indicating a weak or negative coefficient from this variable to academic ethos. The minority sample, however, showed an increase from social to academic ethos in the path coefficient from neutralization. In all samples the direct effects of pre-college drinking upon quantity and frequency of consumption were substantial.

## CHAPTER VII

### SUMMARY AND CONCLUSIONS

The purpose of this research was (1) to establish descriptive baseline data that could serve as a reference point for future studies, and (2) to examine some of the social and cultural drinking patterns associated with divergent racial and ethnic groups in order to determine if differing drinking patterns could be related to abuse of alcohol.

Drinking patterns investigated were: (1) quantity and frequency of consumption; (2) frequency of drinking before coming to college; (3) beverage choice; and (4) where and when alcohol consumption took place. These drinking patterns were examined in relation to the associated variables of: (1) parental attitudes toward drinking as seen by the student; (2) reported religious orientation; (3) the student's perception of college, or ethos of college life; (4) personal and social characteristics; (5) reasons given for drinking; and (6) reported problems with drinking.

A somewhat loosely connected theoretical orientation utilizing path analysis was developed with reported religiosity and perceived parental attitudes postulated to have an effect on the student's degree of neutralization of drinking behavior, and this in turn influencing pre-college drinking, ethos of college life, social orientation in college, and quantity and frequency of alcohol consumption. It was anticipated that all of these variables together, each controlling for prior items on the path, would then relate to the degree of problem drinking.

Data were gathered at Oklahoma State University with a total sample size of 800. This included 534 students from introductory sociology classes, which were used for establishing baseline information, 97 American Black students, 60 Native Americans, 62 Nigerians, and 47 Chinese.

#### Baseline Data

A review of the literature found college students generally reporting a fairly high incidence of alcohol usage, and findings from this research would tend to indicate that these Oklahoma State University students were fairly typical of American collegians. Those classified as drinkers comprised 86.5 percent of the sample--a higher figure than many prior studies but somewhat lower than the research done in a neighboring state which indicated a drinking incidence of 89 percent (Hill and Biegen, 1979). The early research of Straus and Bacon (1953) using a nationwide cross section of educational institutions found incidence of drinking to have a wide range varying from a high of 98 percent among males at some institutions to a low of 20 percent for females in other, religiously supported schools. Following the conclusions of Rouse and Ewing (1978), which implicated the southern and central part of the United States in a low incidence of drinking, it had been anticipated that both the rural and the religious orientations of the area where the data for this study had been gathered would have influenced drinking to the extent that the incidence of drinkers would have been somewhat lower than average. This was not the case, however; and since the sample was largely from the freshman class, it could be an indication of the nationwide increase in teenage drinking having an impact on adult drinking patterns.

It must be emphasized again that since important methodological differences can be noted in data collection, any comparisons made among studies, and particularly where drinking incidence is concerned, should be done with caution. It has been found that many people drink occasionally but still consider themselves to be abstainers and categorize themselves as such on a research questionnaire. In order to avoid these subjective definitions which are based more on self-concept than on fact and to instill some uniformity into the data analysis, most researchers have developed a more objective system of separating drinkers from abstainers. Some studies (Straus and Bacon, 1953; Knupfer and Room, 1964; Cahalan, Cisin and Crossley, 1969; Engs, 1977; Globetti, Alsikafi and Morse, 1980) classified as drinkers those who reported having some occasion to use beverage alcohol within the preceding year; other research (Maddox and McCall, 1964; Moos, Moos and Kulik, 1976; Higgins, Albrecht and Albrecht, 1977) listed those respondents as drinkers who had answered positively to questions concerning average frequencies of drinking or amounts consumed. A few relied on subjective evaluations; but questions were not uniformly worded, making comparisons questionable (Brunswick and Tarcia, 1974; Gallup, 1980).

The relationship between GPA and drinking that had been reported in earlier studies (Engs, 1977; Wechsler and McFadden, 1979; Kaplan, 1979; Hill and Biegen, 1979) was confirmed by the significantly higher GPA found among abstainers in the present research; and the earlier findings relating socioeconomic status to drinking (Riley and Marden, 1947; Straus and Bacon, 1953; Wechsler and McFadden, 1979; Kaplan, 1979) were also replicated by the higher position of drinkers in the current study.

Prior research had found religious affiliation and commitment to be related to alcohol consumption patterns in that drinkers from abstinent



backgrounds were more inclined to report social problems as a result of drinking, but this was moderated by degree of religious involvement (Skolnick, 1958; Wechsler and McFadden, 1979; Burkett, 1980). The present study substantiated these findings to the extent that religiosity was related to the initial decision to drink and in that the degree of religiosity appeared to have an influence on some drinking patterns as well as on problem drinking. However, contrary to Skolnick's conclusions, the proscriptive position of affiliated denominations seemed to have little impact on either drinking patterns or related problems.

Drinkers in this sample saw their parents as being slightly disapproving of alcohol consumption, a fact which appeared to have had only a minimal influence on drinking behavior. The significant difference between drinkers and abstainers on parental approval, however, indicated that although parental orientation may not have modified drinking behavior, it was important in separating drinkers from non-drinkers.

Some additional differences between drinkers and abstainers were also observed. Those who did not drink gave more importance to the academic aspects of college life, while drinkers were more socially oriented and more inclined to attend college for sports events, dating, partying, and, as would be expected, drinking. On the social anxiety scale, however, drinkers and abstainers exhibited almost identical mean scores, a possible indication that for these students drinkers were not more anxious and drinking was not used to alleviate anxiety.

Drinkers in this survey appeared to have preferred beer, they reported drinking most often in bars and in the early evening hours, and most began drinking between the ages of 15 and 18. As a whole, the group exhibited few problems associated with drinking; and on the path analysis

the low percentage of explained variation for "blacking out" from drinking ( $R^2 = .14$ ) compared with the relatively high variation for driving while or after drinking ( $R^2 = .42$ ) would seem to indicate that the typical college orientation toward drinking led more toward the less serious kinds of problems than toward behavior that has been thought to preface alcoholism. Most past research (Cahalan, Cisin and Crossley, 1968; Jung, 1977; Russell and Bond, 1979) has indicated that Americans, both young people and adults, drink primarily for social reasons; and those sampled in this study were no exception, as indicated by the low mean scores of escape reasons for drinking.

Although the mean frequencies on most problem situations were fairly low, a surprisingly large number did indicate that they had encountered some of the more serious problems at least once. Around 30 percent reported fighting after drinking, that alcohol had interfered with school or work and loss of memory from drinking. If the latter phenomenon is indeed a precursor of alcoholism, this figure appears to be inordinately high! This is also a considerable increase over incidence of memory loss reported in earlier research--18 percent of males and 5 percent of females in the Straus and Bacon (1953) study, and 15.3 percent of males and 7.6 percent of females reported by Wechsler and McFadden (1979). In addition, those studies that cited fighting or damaging property after drinking indicated a lower incidence of these behaviors than found in the current research where 29.4 percent reported fighting and 21.2 percent damaging property. Straus and Bacon (1953) found 11 percent of males and less than 1 percent of females to have engaged in destructive activities; Engs (1977) cited 18.6 percent reporting fighting and 17.6 percent damaging property; and Wechsler and McFadden (1979) found 20.6 percent of males and 2.1

percent of females to indicate fighting after drinking. In the present study the percentage of those who expressed concern about drinking was relatively low--19.3 percent. Straus and Bacon (1953) had found a somewhat similar figure of 17 percent; however, a later study (Strange and Schmidt, 1979) indicated that over 25 percent felt that their drinking could be a problem. The relatively low level of concern expressed by those sampled in the current research combined with a higher incidence of problem drinking could be a possible indication that these students considered the problems associated with drinking to be a common part of college life.

The results of the path analysis indicated that the suggested relationships among the selected variables had some utility in predicting problem drinking. The sequence as reported by these drinkers of parental and religious orientations, neutralization of drinking behavior, pre-college drinking, ethos of college life, social attitude, and drinking patterns tended to be fairly adequate for prognostication of drinking problems. An academic approach to college life appeared to deter problem drinking, and that combined with the statistics on grade point average would seem to indicate that a studious orientation toward college paid off in more than one respect.

The results of path analysis helped to confirm the belief that drinking behavior is not an isolated phenomenon but is interrelated with a number of other factors in the daily life of the college student. The general utility of the path model for the classroom sample would seem to indicate that the social activities of evening beer drinking and partying generally involved these students in alcohol-related problems of a less serious nature and caused them little concern. Path coefficients to the more serious

types of problems were less strong than those to drinking and driving, an activity reported by a substantial number of drinkers; and this combined with the relatively low incidence of concern over drinking would indicate that combining alcohol with driving was a somewhat common part of college life. Pre-college drinking appeared to influence some of the more serious problem areas, although not directly; and this could forecast some of the social consequences of rising rates for teenage drinking.

#### Minority and International Samples

Past research has found differing drinking patterns among racial and ethnic groups, both in the United States and elsewhere. The majority of studies reported American Blacks, and particularly Black males, to have a high incidence of both drinkers and problem drinking (Straus and Bacon, 1953; Maddox, 1968; Maddox and Williams, 1968); although some investigations found Black adolescents to show a lower drinking incidence than did Whites in a comparable sample (Higgins, Albrecht and Albrecht, 1977; Klatsky et al., 1977; Globetti, Alsikafi and Morse, 1980). Data from the present study would appear to substantiate the latter research, as these Black students indicated an older age for beginning to drink than did students in the predominantly White classroom sample (17.1 years compared with 15.9 years). However, findings from the comparable collegiate studies were not confirmed as these Black college students indicated a lower incidence of drinking than did students in the classroom sample, the difference between males and females in drinking incidence was less, and a smaller percentage of this group reported problems relating to use of alcohol. Only half as many Black students indicated loss of memory from drinking, damaging property or getting into a fight after drinking, and

feeling that alcohol had interfered with school or work. However, the percentage of students indicating that they had been criticized by someone they were dating because of drinking was larger than that of the classroom sample, a possible indication of some cultural restraints being placed upon drinking behavior.

A great deal of research has centered around Native American drinking patterns, primarily because problem drinking has exacted such a high toll among people in this group and because it appears to be increasing at an alarming rate. No literature was available on Native American collegiate drinking patterns; but studies examining adult Indians indicated that this group drank to release inhibitions, hostilities, or aggression (McAndrew and Edgerton, 1969; Price, 1975), for social or "time out" reasons (Price, 1975), and as an escape mechanism (Stratton, Zeiner and Paredes, 1975).

In some respects this characterization of the drunken Indian would tend to be refuted by the data from the current research. With the exception of drinking to get high, these students reported drinking for about the same reasons as did those in the other samples. Although the reported quantity of beer consumption was high, the overall quantity-frequency was relatively low; and many problem items indicated a lower mean frequency than that of the predominantly White classroom sample. However, in the more serious problem areas, this group ranked fairly high. Of all the samples these students indicated the highest incidence of "blacking out" from drinking, getting into a fight after drinking, being criticized by a date, and finding that alcohol had interfered with school or work; they expressed the most concern that drinking could be a problem for them, and their arrest rate was only a few percentage points below the top figure. The incidence of memory loss after drinking was over 36 percent; and, again,

if this is a true indicator of future alcoholism, the figure could be cause for concern. Although the overall quantity-frequency consumption for Native Americans was lower than some samples in the study, the individual quantity of beer consumed was the highest; and this could account for some of the problem scores.

No studies were found in the literature describing Nigerian drinking patterns or related problems, and indications are from these data that alcohol-related difficulties with this group were minimal. In almost every problem area the Nigerians ranked lower than students in other samples. None had been arrested or had damaged property as a result of drinking; and they indicated the lowest mean incidence of fighting after drinking, combining drinking with driving and loss of memory from drinking. As a whole, these students appeared to be very law-abiding, quite studious, relatively moderate users of alcoholic beverages, and fairly free from problem drinking.

A number of authors have implicated the Chinese in low rates of alcohol-abuse problems, but little actual research was cited and none utilizing college students. Nevertheless, the results of this research would appear to refute many of the conclusions of earlier authors. The Chinese students sampled indicated the lowest mean frequency of physical problems --hangover, nausea, and vomiting; and this combined with the fairly high mean scores on quantity and frequency of consumption would appear to refute Wolff's (1972) conclusion that among those of Oriental extraction, physical discomforts associated with drinking encouraged a lower consumption rate and accounted for the low incidence of alcoholism.

Findings from this research, in addition, seemed partially to substantiate Singer's (1972) contention that Chinese drink primarily with meals

and consider alcohol to be a food substance in that these students indicated a higher incidence of drinking at home or in restaurants. However, it cannot be concluded that this group showed none or even few of the indications of problem drinking. Of all the samples in the study, the Chinese reported the highest arrest rate for alcohol-related offenses, almost one-fourth said they had "blacked out" after drinking, and nearly 29 percent were concerned that drinking might be a problem for them. The lower overall scores for this group in mean frequencies of problem behavior were primarily due to the fact that these activities were not reported as happening often; however, the incidence of occurrence was fairly high. From this it might be concluded that the Chinese were equally as problem prone as were those from other cultures, but tended to express these behaviors less habitually.

#### Sample Comparisons

Parents in almost all groups were seen as disapproving of the use of beverage alcohol; however, the Chinese students saw their parents as being somewhat approving of this activity. In addition, for the Chinese religiosity had no significant impact on drinking behavior; and this fact combined with the parental attitude findings would seem to indicate a prescriptive cultural as well as religious position for this group. With the Nigerians religiosity appeared to have only a minimal deterrent effect on drinking, and the Native American sample reported a positive relationship between drinking and religiosity. The other two samples found religiosity a deterrent to drinking. This could indicate a more prescriptive position for religion in other cultures, particularly with the Native American students, and it could also mean that the Native American religion takes a different

approach to alcohol consumption. As a whole, however, religiosity apparently had more of an impact on drinking patterns than did the official position of the affiliated denomination, since proscription rarely related to drinking patterns while religious involvement did.

In social orientation the American samples were relatively similar; however, the international students scored considerably higher on the anxiety aspect of this measure--a possible reflection of some of the social pressures associated with life in a foreign country. All samples placed relatively high emphasis on the ethos scales, and this research generally supported findings of Rouse and Ewing (1978) that alcohol consumption constituted an integral part of the American college scene. In the classroom sample social ethos correlated substantially with most of the drinking pattern variables tending to support the importance of drinking in the life of the American collegian. This group gave the most importance to social ethos and were second only to Native Americans in their low ranking on the academic scale. However, the fact that all samples ranked academic ethos above social would indicate a somewhat studious orientation overall.

The high mean scores of Nigerians, American Blacks, and Chinese on academic ethos could be a reflection of the fact that these individuals probably have been more upwardly mobile and stand to gain the most from a college education. Similarly, the low position of Native Americans on this variable could tend to reflect the lack of upward mobility that has generally been attributed to the American Indian.

All samples reported drinking mainly for hedonistic and social reasons, although American Indians and American Blacks indicated that they frequently drank to get high, and the classroom sample to get drunk. The fact that escape reasons were listed most often by the international groups



could reflect some of the problems of being foreign students in an alien culture as well as a greater pressure to do well academically.

If any racial comparisons could be made in this study, problem drinking profiles would seem to indicate that the American Blacks and the Nigerians resembled each other more than they did the other three groups. However, they were less similar in drinking patterns, which could tend to indicate that drinking patterns are not necessarily important in the development of problem drinking. Both international groups reported a low incidence of concern over problems of drinking, which could reflect a less rigid moral climate regarding this activity. These groups were also considerably less likely to regret behavior concomitant to drinking.

Most research seems to indicate that arrest rates do not necessarily reflect the actual commission of offenses; and some people or groups of people, because of high visibility or social labeling, may be more prone to arrest than others (Haskell and Yablonsky, 1978). In this study drinking and driving did not appear to be closely related to arrest rate, as the highest incidence of this activity (with the classroom sample) was associated with a fairly low rate of arrest. The relatively high arrest rate indicated by the Native American group could be a result of the popular drinking stereotype of the American Indian, and perhaps the typical American college student has learned to keep a low profile in this activity.

The path model indicated that drinking patterns were not the same for the various cultural groups in the study. For the international students quantity-frequency was not as useful a predictor of problem drinking as was the social orientation of the student.

In this research neutralization of alcohol consumption was found to be a functional part of the drinking scene. Neutralization involves taking behaviors that either society or the individual feels are wrong and, through a series of mental processes, making these activities acceptable to the actor. Path analysis of these data indicated that drinkers surveyed tended to use neutralization techniques in relation to alcohol consumption. The direct effects of neutralization on pre-college drinking and on quantity-frequency were particularly strong, a possible indication that drinking behavior was accepted and rationalized at an early age and that drinkers continued to use these techniques as drinking increased in amount and incidence. The five rationalizations, or techniques of neutralization, as described by Sykes and Matza (1957), apparently apply to a wider spectrum of behavior than that initially intended. Sykes and Matza felt that actions that were delinquent, or legally wrong, would need to be neutralized in order to be accepted by many young people. Although consumption of alcoholic beverages is legally wrong for non-adults, it is socially accepted and often legally ignored. Nevertheless, there may be some moral implications involved in the need to rationalize this behavior, and the same techniques appear to be applicable.

#### Limitations of the Study and Suggestions for Future Research

As with many research projects, a number of limitations have been apparent in this investigation, and some unanswered questions have also emerged. It was recognized from the onset that lack of randomness in the sampling procedure would make generalizations questionable; however, the nature of the populations involved made randomization of most samples

difficult if not impossible. The relatively small number of international students available made it necessary to poll as many of these as possible, and this was true also of the Native Americans who identified themselves as "cultural Indians." Although self-report studies have many advantages and are commonly considered to yield fairly accurate information, there is always the possibility that some items will be misunderstood by respondents; and the nature of the information being elicited in this research makes it more likely that students could have misrepresented their true behavior, either deliberately or through faulty memory of past events. Care was taken, however, to eliminate those questionnaires that were obviously invalid.

For purposes of comparison it would have been best to have sampled the Oklahoma State students in the same manner as the other groups; however, expenses would not permit gathering a large enough sample to use for baseline information. It was also desirable to obtain a replicable group of students, and sampling from introductory sociology classes can be done again at a later date for purposes of comparison.

The nature of the sampling procedure made it infeasible to control for age; therefore, some differences among samples could be due to age discrepancies rather than ethnic or cultural variations. In addition, sex ratios in the various samples were quite dissimilar; and in some samples the number of females was so small that reliable statistical analyses were not possible. For these reasons sex, and other possible comparative variables, were eliminated from the study, although some could be responsible for differences and could be an interesting addition to future research.

The size of many of the samples also made it difficult to compare drinkers and abstainers. This was particularly noticeable with the Native

Americans; and since these students were implicated in some of the more serious areas of problem drinking, it would be of particular interest to know how the sexual categories differed. This also could be an objective for later studies.

As has been previously discussed, the method of operationalizing drinkers and abstainers was, to a certain extent, subjective; and other ways of doing this could have led to different results. In addition, some researchers have categorized drinkers into such classifications as "infrequent," "moderate," or "heavy" users of alcohol and examined the characteristics of each group separately (e.g., Cahalan, Cisin and Crossley, 1969). The current study utilized correlations instead of categorizations; and this, again, could have produced dissimilar results (as well as rendering comparisons questionable).

The concept of this research was exploratory and without preconceived hypotheses, an approach which of itself tends to be somewhat limiting. Exploratory research takes an overall broad view of a variety of variables rather than an in-depth examination of a few ideas or hypotheses. This type of investigation necessitates the creation of new measurement techniques rather than the utilization of those already established and may make the data analysis more subject to question. In initiating exploratory research, some important variables may be omitted; and the data analysis of this investigation has posed some unanswered questions as well as suggested further avenues which could have been pursued. One variable that could have been important but was omitted was that of family structure. Differing family relationships among international students--perhaps an extended family situation--might possibly illuminate some of the differing degrees of problem drinking exhibited by these groups.

The fact that the Chinese appeared to be quite strongly implicated in problem drinking behavior was unexpected, and the drinking patterns involved did not suggest much that would help explain this enigma. Similarly, the low rates of problem drinking among the Nigerians and, to a lesser extent, the American Blacks were not anticipated and remain relatively unexplained. It is possible that social controls within these groups were responsible but this also needs further investigation. The Nigerian who polled these students indicated that he knew most of them well. He had been in the United States for a number of years and had helped newcomers to find housing, adjust to American life, etc. It is quite possible that he presented a father figure to these people and instigated somewhat of an extended family situation for them.

The question of why social orientation rather than quantity-frequency was the best predictor of problem drinking for international students has been raised. It is obvious that drinking patterns were not the same among cultural groups, but no clear relationships between drinking patterns and problem behavior were apparent; and this also needs further investigation.

It cannot be ascertained that the patterns of alcohol consumption expressed by college students have any real bearing on the life patterns of the general population or, for that matter, on that of the same individuals after graduation. More longitudinal research needs to be initiated in order to clarify this issue and shed some light on how these drinking periods are related.

Some aspects of religion also could be examined more closely. There would appear to be a relationship between increasing religiosity and problem drinking, but the reasons for this are not clear. It is possible that this phenomenon could be associated with the increased incidence of problem

drinking that occurred along with an increase in parental disapproval; however, this cannot be determined from the information gathered. There is a need also to explore further the nexus of religion to drinking among Native Americans. The positive relationship between religiosity and some of the drinking pattern variables observed with this sample was unexpected, and no adequate explanations were presented by the data.

It became obvious from this research that young people anticipate a number of aspects of college life with enthusiasm. Analysis of the data suggests that these anticipations of college lead to a type of social orientation which in turn has an influence on drinking behavior and on problem drinking. The nature of this relationship has been suggested, but not thoroughly explored. Future research could include a more in-depth examination of the interrelationships among pre-college drinking, anticipation of college life, and the actual social activities experienced.

Finally, the high proportion of those reporting loss of memory as a result of drinking needs further investigation. The relationship of this phenomenon to actual alcoholism should be examined more closely along with possible mechanisms for altering or actually halting the progression of this disability. It is important that continued efforts be made to understand the complex relationships accompanying mankind's use of beverage alcohol in order that problems resulting from this activity can be controlled.

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APPENDIX A

METHODS OF SEPARATING DRINKERS FROM ABSTAINERS

Researchers have found that a number of people, when asked if they are users of alcoholic beverages, will classify themselves as abstainers while still responding positively to items concerning quantity or frequency of consumption. The question arises as to whether the individual who may have a glass of wine once or twice a year to celebrate special occasions should be called a drinker or an abstainer. If this person is categorized as an abstainer, what then constitutes a drinker--someone who drinks three or four times a year? There are those, on the other hand, who feel that only someone who never drinks alcohol should be classified as an abstainer.

Since definitions of what constitutes a drinker or an abstainer differ and since these definitions may contain a large element of subjectivity on the part of both the respondents and the researchers, it has been deemed necessary for purposes of research to quantify these variables. Although many authors have not specified how these quantifications were made, a review of the available literature does uncover a few dominant patterns--methods of separating drinkers from abstainers--that have been used in a number of studies.

Probably the earliest of the comprehensive investigations on collegiate alcohol usage was that of Straus and Bacon (1953), and this set down guidelines for much subsequent research. These authors classified as drinkers those reported having had occasion to drink an alcoholic beverage at least once during the preceding year. Straus and Bacon also developed a quantity-frequency index which could be used for further categorization of respondents, and this was calculated by the average amount per drinking occasion multiplied by the frequency of consumption over a stated period. Infrequent drinkers were classified as those who

drank at least once a year but less than once a month, light drinkers were those who drank at least once a month and had not more than one to three drinks per drinking session, moderate drinkers drank at least once a month with no more than three to four drinks per session, moderate-heavy drinkers had three to four drinks at least once a week or five or more drinks once a month, and heavy drinkers consumed five or more drinks more than once a week. Later authors used this same type of classification, but most modified the frequency and amount questions to fit the particular needs of their research (Knupfer and Room, 1964; Maddox and Williams, 1968; Engs, 1977; Wechsler and McFadden, 1979; Globetti, Alsikafi and Alsifafi, 1980). Cahalan, Cisin and Crossley (1968) also used the quantity-frequency index but added a "variability" factor. The quantity-frequency concept has been useful; but it is not without problems--for example, there is no classification category for the individual who consumes only one or two drinks per drinking session but does this on a daily basis.

Maddox and McCall (1964) divided their sample into three categories: (1) those whose exposure to alcoholic beverages had involved more than an isolated taste or drink and who called themselves drinkers, (2) those who called themselves abstainers but in some way indicated usage, and (3) those who called themselves abstainers and did not indicate usage. Respondents in categories one and two were classified as drinkers. This basic technique was followed by Higgins, Albrecht and Albrecht (1977) and Hill and Biegen (1979) who classified as abstainers those answering "never" on frequency questions. It was also used by Moos, Moos and Kulik (1976) who in addition counted as abstainers those who had drunk beverage alcohol only once or twice.



A few researchers (Brunswick and Tarcia, 1974; Gallup, 1980) depended upon respondents' classifications of themselves as drinkers or abstainers; however, questions were not worded the same. Brunswick and Tarcia asked those sampled if they ever drank beverage alcohol and Gallup asked if the respondents had occasion to use alcohol or if they were total abstainers.

APPENDIX B

QUESTIONNAIRE

## OKLAHOMA STATE UNIVERSITY

The following questionnaire is designed to examine student attitudes and habits concerning the consumption of alcoholic beverages. Your help in accurately completing it will be appreciated very much. The questionnaire is entirely anonymous, so please do not put your name on these forms.

1. Age at last birthday \_\_\_\_
2. Sex:
  - \_\_\_ 1 male
  - \_\_\_ 2 female
3. Marital status:
  - \_\_\_ 1 single (never married)
  - \_\_\_ 2 married
  - \_\_\_ 3 divorced
  - \_\_\_ 4 widowed
  - \_\_\_ 5 other (please specify) \_\_\_\_\_
4. School address:
  - \_\_\_ 1 residence hall
  - \_\_\_ 2 fraternity/sorority
  - \_\_\_ 3 married student housing
  - \_\_\_ 4 own home or apartment
  - \_\_\_ 5 commute or live with parents
5. Greek affiliation:
  - \_\_\_ 1 nonmember
  - \_\_\_ 2 pledge
  - \_\_\_ 3 member
6. Race or ethnicity:
  - \_\_\_ 1 American Indian
  - \_\_\_ 2 Spanish American
  - \_\_\_ 3 Black
  - \_\_\_ 4 White or Caucasian
  - \_\_\_ 5 Oriental or Asian (what country?) \_\_\_\_\_
  - \_\_\_ 6 Other (please specify) \_\_\_\_\_
7. Classification:
  - \_\_\_ 1 Freshman
  - \_\_\_ 2 Sophomore
  - \_\_\_ 3 Junior
  - \_\_\_ 4 Senior
  - \_\_\_ 5 Special
  - \_\_\_ 6 Graduate
8. What was the size of the community in which you spent the most time while growing up?
  - \_\_\_ 1 farming or rural (under 5,000 population)
  - \_\_\_ 2 town (5,001-50,000)
  - \_\_\_ 3 small city (50,001-250,000)
  - \_\_\_ 4 urban-suburban (250,001-500,000)
  - \_\_\_ 5 large urban area (500,000+)
9. Check the occupational category that best fits your father (or the person who supplied the support for your family). If deceased, retired or unemployed, indicate customary occupation.
  - \_\_\_ 1 unskilled worker, laborer, farm worker, household help
  - \_\_\_ 2 semiskilled worker (machine operator, etc.)
  - \_\_\_ 3 service worker (fireman, policeman, barber, etc.)
  - \_\_\_ 4 skilled worker or craftsman (carpenter, electrician, plumber, etc.)
  - \_\_\_ 5 salesperson, bookkeeper, secretary, office worker
  - \_\_\_ 6 owner, manager, partner of a small business, lower-level governmental official, military commissioned officer
  - \_\_\_ 7 professional requiring a bachelor's degree (engineer, elementary or secondary teacher, etc.)
  - \_\_\_ 8 owner, high-level executive in a large business or high-level government agency
  - \_\_\_ 9 professional with advanced college degree (doctor, lawyer, college professor)
  - \_\_\_ 10 other \_\_\_\_\_

- 10-11. College affiliation:
- 1 Agriculture
  - 2 Arts and Science
  - 3 Business
  - 4 Education
  - 5 Engineering
  - 6 Home Economics
  - 7 Veterinary Medicine
  - 8 Graduate (what major?)
- 

- 16-17. Religious preference:
- 1 Jewish
  - 2 Muslim
  - 3 Hindu
  - 4 Buddhist
  - 5 Catholic
  - 6 Protestant (what denomination?) \_\_\_\_\_
  - 7 other (please specify) \_\_\_\_\_
- 

12. Grade point average:
- 1 below 2.0
  - 2 2.0-2.49
  - 3 2.5-2.99
  - 4 3.0-3.49
  - 5 3.5-4.0

18. To which of the following categories do you belong?
- 1 I do not drink alcohol and never have
  - 2 I do not drink alcohol but used to occasionally
  - 3 I do not drink alcohol but used to frequently
  - 4 I do drink alcohol

13-14. If you are an international student, what is your native country?

---

19. If you have drunk alcohol, at what age did you start drinking?
- 1 under 10 yrs.
  - 2 10-14 yrs.
  - 3 15-18 yrs.
  - 4 19-21 yrs.
  - 5 over 21 yrs.

15. If you are an international student, how long have you been in the United States?

---

When you were anticipating going to college, how attractive did the following features appear to you as a part of college life? Please circle appropriate number.

	Not at all Attractive			Very Attractive	
	1	2	3	4	5
20. sports events					
21. academic environment					
22. drinking and partying					
23. dating					
24. freedom from parental supervision					
25. becoming an adult					
26. preparing for a career					
27. making a better life					
28. other (anything important to you not included above) _____					

Please circle the number that best describes your feeling or position.

	Strongly Disagree			Strongly Agree	
29. The voting age in the United States should be lowered to age 16.	1	2	3	4	5
30. You sometimes can't help wondering whether anything is worthwhile.	1	2	3	4	5
31. Religion is especially important to me because it answers many questions about the meaning of life.	1	2	3	4	5
32. These days a person doesn't really know whom he/she can count on.	1	2	3	4	5
33. Most people really don't care what happens to the next person.	1	2	3	4	5
34. It is important to me to spend periods of time in private religious thought and meditation.	1	2	3	4	5
35. Nowadays a person has to live pretty much for today and let tomorrow take care of itself.	1	2	3	4	5
36. To make money there are no right or wrong ways anymore, only easy and hard ways.	1	2	3	4	5
37. Quite often I have been keenly aware of the presence of God or a Supreme Being.	1	2	3	4	5
38. Most public officials (people in public offices) are not really interested in the problems of the average person.	1	2	3	4	5
39. In spite of what some people say, the daily life of the average person is getting worse, not better.	1	2	3	4	5
40. I can get my friends to do what I want them to do most of the time.	1	2	3	4	5
41. It is hardly fair to bring children into the world with the way things look for the future.	1	2	3	4	5

	Strongly Disagree			Strongly Agree	
42. Next to health, money is the most important thing in life.	1	2	3	4	5
43. This world is run by adults and there is not much young people can do about it.	1	2	3	4	5
44. Getting drunk is wrong.	1	2	3	4	5
45. Drinking is as much a part of college as attending classes.	1	2	3	4	5
46. It is no one's business how much I drink as long as I don't annoy others.	1	2	3	4	5
47. Having one beer or one drink is OK, but not more than that.	1	2	3	4	5
48. I have to drink to stay in good with my friends.	1	2	3	4	5
49. Drinking is always wrong.	1	2	3	4	5
50. Getting drunk is no worse than many other things people do today.	1	2	3	4	5
51. Drinking is part of becoming an adult.	1	2	3	4	5
52. Getting drunk is OK as long as I don't drive while drunk.	1	2	3	4	5
53. A little drinking is OK, but only on special occasions (weddings, etc.).	1	2	3	4	5

If you do not drink or do so only infrequently, please rate the following reasons as to their importance in your decision not to drink. Circle the correct number.

	Not at all Important			Very Important	
54. do not like the taste	1	2	3	4	5
55. in athletic or other training	1	2	3	4	5
56. detrimental to general health	1	2	3	4	5
57. parents disapprove	1	2	3	4	5

	Not at all Important			Very Important	
	1	2	3	4	5
58. friends disapprove	1	2	3	4	5
59. moral or religious reasons	1	2	3	4	5
60. cost is prohibitive	1	2	3	4	5
61. unable to handle alcohol	1	2	3	4	5
62. other _____	1	2	3	4	5

## Part II

Please circle the number that best describes your feeling or position.

	Strongly Disapprove			Strongly Approve	
	1	2	3	4	5
1. How does your father feel about your drinking?	1	2	3	4	5
2. How does your mother feel about your drinking?	1	2	3	4	5
	Never			Daily	
	1	2	3	4	5
3. How often, on the average, do you usually drink beer?	1	2	3	4	5
4. How often, on the average, do you usually drink wine?	1	2	3	4	5
5. How often, on the average, do you usually drink liquor?	1	2	3	4	5
	1-2 None Drinks		3-4 Drinks	5-6 Drinks	Over 6 Drinks
	1	2	3	4	5
6. When you drink beer, how many drinks, on the average, do you usually have at any one time?	1	2	3	4	5
7. When you drink wine, how many drinks, on the average, do you usually have at any one time?	1	2	3	4	5
8. When you drink liquor, how many drinks, on the average, do you usually have at any one time?	1	2	3	4	5

	Never				Very Often
9. Before coming to OSU, how often did you drink beer, wine, or liquor?	1	2	3	4	5
10. How often, on the average, do you take a drink with you when leaving a bar, restaurant, etc. after closing time?	1	2	3	4	5
11. Among your circle of friends, how often do others ask your advice on anything?	1	2	3	4	5
12. When your friends and you discuss new ideas, politics, etc., how often do you try to convince others that your ideas are correct?	1	2	3	4	5
13. When you were growing up, how often did you feel that your parents were placing restrictions on your activities or making rules about your behavior?	1	2	3	4	5
14. If not prevented by unavoidable circumstances, how often do you attend church or other places of worship?	1	2	3	4	5
15. How often do your parents attend church or religious worship services?	1	2	3	4	5
16. How often does your father (or the person who served as your father in raising you) drink beer, wine, or liquor?	1	2	3	4	5
17. How often does your mother (or the person who served as your mother in raising you) drink beer, wine, or liquor?	1	2	3	4	5
How often do you:					
18. attend a party?	1	2	3	4	5
19. pick up a date at a party?	1	2	3	4	5
20. have a headache?	1	2	3	4	5



	Never				Very Often
	1	2	3	4	5
21. feel nervous or tense?	1	2	3	4	5
22. have a rapid heart beat when not exercising?	1	2	3	4	5
23. take tranquilizers or sleeping pills?	1	2	3	4	5
24. feel depressed or unhappy?	1	2	3	4	5
25. oversleep and miss class?	1	2	3	4	5
26. drive a car over 80 miles per hour?	1	2	3	4	5
27. cheat on exams?	1	2	3	4	5
28. feel on top of the world?	1	2	3	4	5
29. feel that you are in agreement with the values and attitudes of those around you?	1	2	3	4	5
30. dominate those with whom you associate?	1	2	3	4	5
How often do you drink in the following places?					
31. residence hall	1	2	3	4	5
32. own home or apartment	1	2	3	4	5
33. Greek housing	1	2	3	4	5
34. night clubs, pubs, bars, etc.	1	2	3	4	5
35. restaurants	1	2	3	4	5
36. friend's house or apartment	1	2	3	4	5
37. city parks	1	2	3	4	5
38. city streets	1	2	3	4	5
39. parked car	1	2	3	4	5
40. other (anything important to you not included above) _____	1	2	3	4	5

How often do you drink at the following times?

	<u>Never</u>				<u>Very Often</u>
41. morning (before noon)	1	2	3	4	5
42. early afternoon (noon to 3)	1	2	3	4	5
43. late afternoon (3 to 5)	1	2	3	4	5
44. evening (5 to 10)	1	2	3	4	5
45. late evening (after 10)	1	2	3	4	5

How often do you drink for the following reasons?

46. it helps me to relax or to be less nervous	1	2	3	4	5
47. to get along better on dates or other social occasions	1	2	3	4	5
48. to relieve aches, pains, or fatigue	1	2	3	4	5
49. to improve appetite for food	1	2	3	4	5
50. to be sociable	1	2	3	4	5
51. to celebrate special occasions	1	2	3	4	5
52. because friends drink	1	2	3	4	5
53. for enjoyment of taste	1	2	3	4	5
54. for a sense of well-being or to feel good	1	2	3	4	5
55. to get high	1	2	3	4	5
56. to get drunk	1	2	3	4	5
57. it is the adult thing to do	1	2	3	4	5
58. other (anything important to you not included above) _____	1	2	3	4	5

How often has your drinking led to the following situations?

	Never				Very Often
59. given you a hangover	1	2	3	4	5
60. caused nausea and/or vomiting	1	2	3	4	5
61. caused you to "black out" or not to remember what has happened	1	2	3	4	5
62. interfered with school or work	1	2	3	4	5
63. caused problems in human relationships	1	2	3	4	5
64. drinking while driving or driving after having several drinks	1	2	3	4	5
65. being arrested for DWI (driving while impaired), DUI (driving under the influence), or PI (public intoxication)	1	2	3	4	5
66. being criticized by someone you were dating because of your drinking	1	2	3	4	5
67. getting into a fight after drinking	1	2	3	4	5
68. damaging property after drinking	1	2	3	4	5
69. doing something while or after drinking which you later regretted	1	2	3	4	5
70. thinking you might have a problem with drinking	1	2	3	4	5

APPENDIX C

PRETEST QUESTIONNAIRE

Oklahoma State University  
Student Alcohol Consumption Survey

The following questionnaire is designed to examine student attitudes and habits concerning the consumption of alcoholic beverages. Your help in accurately completing it will be greatly appreciated. The questionnaire is entirely anonymous, so please do not put your name on the answer form.

1. Age at last birthday \_\_\_\_\_
2. Sex:
 

<input type="checkbox"/> 1. male	<input type="checkbox"/> 2. female
----------------------------------	------------------------------------
3. Marital status:
 

<input type="checkbox"/> 1. single (never married)	<input type="checkbox"/> 3. divorced
<input type="checkbox"/> 2. married	<input type="checkbox"/> 4. widowed
4. Size of community in which you spent the most time while growing up:
 

<input type="checkbox"/> 1. farming or rural (under 5,000 population)
<input type="checkbox"/> 2. town (5,001-50,000)
<input type="checkbox"/> 3. small city (50,001-250,000)
<input type="checkbox"/> 4. urban-suburban area (250,001-500,000)
<input type="checkbox"/> 5. large urban area (500,000 plus)
5. Check the occupational category that best fits your father (or the person who supplied the support for your family)
 

<input type="checkbox"/> 1. unskilled worker, laborer, farm worker, household help
<input type="checkbox"/> 2. semiskilled worker (machine operator, etc.)
<input type="checkbox"/> 3. service worker (fireman, policeman, barber, etc.)
<input type="checkbox"/> 4. skilled worker or craftsman (carpenter, electrician, plumber, etc.)
<input type="checkbox"/> 5. salesperson, bookkeeper, secretary, office worker
<input type="checkbox"/> 6. owner, manager, partner of a small business; lower-level government official, military commissioned officer
<input type="checkbox"/> 7. professional requiring a bachelor's degree (engineer, elementary or secondary teacher, etc.)
<input type="checkbox"/> 8. owner, high-level executive in a large business or high-level government agency
<input type="checkbox"/> 9. professional requiring an advanced college degree (doctor, lawyer, college professor, etc.)
6. School address:
 

<input type="checkbox"/> 1. residence hall	<input type="checkbox"/> 4. own home or apartment
<input type="checkbox"/> 2. fraternity/sorority	<input type="checkbox"/> 5. commute or live with parents
<input type="checkbox"/> 3. married student housing	
7. Greek affiliation:
 

<input type="checkbox"/> 1. nonmember
<input type="checkbox"/> 2. pledge
<input type="checkbox"/> 3. member

8. Classification:
- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| <input type="checkbox"/> 1. Freshman  | <input type="checkbox"/> 4. Senior   |
| <input type="checkbox"/> 2. Sophomore | <input type="checkbox"/> 5. Special  |
| <input type="checkbox"/> 3. Junior    | <input type="checkbox"/> 6. Graduate |
9. Grade point average:
- |                                       |                                      |
|---------------------------------------|--------------------------------------|
| <input type="checkbox"/> 1. below 2.0 | <input type="checkbox"/> 4. 3.0-3.49 |
| <input type="checkbox"/> 2. 2.0-2.49  | <input type="checkbox"/> 5. 3.5-4.0  |
| <input type="checkbox"/> 3. 2.5-2.99  |                                      |
10. College affiliation:
- |  |   |
|--|---|
| <input type="checkbox"/> 1. Agriculture      | <input type="checkbox"/> 5. Engineering         |
| <input type="checkbox"/> 2. Arts and Science | <input type="checkbox"/> 6. Home Economics      |
| <input type="checkbox"/> 3. Business         | <input type="checkbox"/> 7. Veterinary Medicine |
| <input type="checkbox"/> 4. Education        | <input type="checkbox"/> 8. Graduate            |
11. If you are a graduate student, what is your major? \_\_\_\_\_
12. Race or ethnicity:
- |  |       |
|--|-------|
| <input type="checkbox"/> 1. American Indian                    |       |
| <input type="checkbox"/> 2. Spanish American                   |       |
| <input type="checkbox"/> 3. Black                              |       |
| <input type="checkbox"/> 4. Caucasian or White                 |       |
| <input type="checkbox"/> 5. Oriental or Asian (what country?)  | _____ |
| <input type="checkbox"/> 6. Other (please indicate what other) | _____ |
13. If you are an international student, what is your native country?  
\_\_\_\_\_
14. If you are an international student, how long have you been in the United States? \_\_\_\_\_
15. What is your religion? \_\_\_\_\_

Please answer the following questions by using the scales provided. In the blank beside each question or statement place the number from the scale that best describes your feeling or position.

Strongly				Strongly
Disagree				Agree
1	2	3	4	5

16. Religion is especially important to me because it answers many questions about the meaning of life.
17. Quite often I have been keenly aware of the presence of God or a Supreme Being.
18. It is important to me to spend periods of time in private religious thought and meditation.
-

Seldom or  
Never

1      2      3      4      5

Very  
Frequently

- \_\_\_ 19. If not prevented by unavoidable circumstances, I attend church or other places of worship.
- \_\_\_ 20. How often do your parents attend church or religious worship services?
- \_\_\_ 21. How often does your father (or the person who served as your father in raising you) drink beer, wine or liquor?
- \_\_\_ 22. How often does your mother (or the person who served as your mother in raising you) drink beer, wine or liquor?

23. To which of the following categories do you belong?

- \_\_\_ 1. I do not drink and never have
- \_\_\_ 2. I do not drink, but used to occasionally
- \_\_\_ 3. I do not drink, but used to frequently
- \_\_\_ 4. I do drink

24. If you drink alcohol, at what age did you start drinking?

- \_\_\_ 1. under 10 years                      \_\_\_ 4. 19-21 years
- \_\_\_ 2. 10-14 years                         \_\_\_ 5. over 21 years
- \_\_\_ 3. 15-18 years

If you do not drink now, or do so only infrequently, please rate the following reasons as to their importance in your decision not to drink. If you do drink, go on to question 35. Please answer by placing a number in each blank.

Not at all  
Important

1      2      3      4      5

Very  
Important

- \_\_\_ 25. do not like the taste
- \_\_\_ 26. in athletic or other training
- \_\_\_ 27. detrimental to general health
- \_\_\_ 28. parents disapprove
- \_\_\_ 29. friends disapprove
- \_\_\_ 30. moral or religious reasons
- \_\_\_ 31. cost is prohibitive
- \_\_\_ 32. unable to handle alcohol
- \_\_\_ 33. it makes me feel uncomfortable
- \_\_\_ 34. other (please list any reason that is important to you that was not included above) \_\_\_\_\_

When you were anticipating going to college, how attractive did the following features appear to you as a part of college life?

- |         | Not at all<br>Attractive           |   |   |   |   | Very<br>Attractive |
|---------|------------------------------------|---|---|---|---|--------------------|
|         | 1                                  | 2 | 3 | 4 | 5 |                    |
| ___ 35. | sports events                      |   |   |   |   |                    |
| ___ 36. | academic environment               |   |   |   |   |                    |
| ___ 37. | drinking and partying              |   |   |   |   |                    |
| ___ 38. | dating                             |   |   |   |   |                    |
| ___ 39. | freedom from parental supervision  |   |   |   |   |                    |
| ___ 40. | becoming an adult                  |   |   |   |   |                    |
| ___ 41. | preparing for a career             |   |   |   |   |                    |
| ___ 42. | making a better life               |   |   |   |   |                    |
| ___ 43. | other (please indicate what other) |   |   |   |   | _____              |

Please answer the following as to how much you agree or disagree with each of the statements.

- |         | Strongly<br>Disagree   |   |   |   |   | Strongly<br>Agree |
|---------|--|---|---|---|---|-------------------|
|         | 1  | 2 | 3 | 4 | 5 |                   |
| ___ 44. | Next to health, money is the most important thing in life.   |   |   |   |   |                   |
| ___ 45. | These days, a person doesn't really know whom he/she can count on.   |   |   |   |   |                   |
| ___ 46. | In spite of what people say, the welfare of the average person is getting better, not worse.                 |   |   |   |   |                   |
| ___ 47. | You sometimes can't help wondering whether anything is worthwhile anymore.                                   |   |   |   |   |                   |
| ___ 48. | To make money, there are no right or wrong ways anymore, only easy ways and hard ways.                       |   |   |   |   |                   |
| ___ 49. | This is a good time to bring children into the world with the way things look for the future.                |   |   |   |   |                   |
| ___ 50. | Most people don't really care what happens to the next fellow.   |   |   |   |   |                   |
| ___ 51. | It is useful to write to public officials because they are interested in the problems of the average person. |   |   |   |   |                   |
| ___ 52. | Nowadays a person can't just live for today, but must plan ahead for tomorrow.                               |   |   |   |   |                   |
| ___ 53. | Drinking is always wrong.  |   |   |   |   |                   |
| ___ 54. | A little drinking is OK, but only on special occasions (weddings, etc.).                                     |   |   |   |   |                   |
| ___ 55. | Having one beer or one drink is OK, but not more than that.  |   |   |   |   |                   |
| ___ 56. | Getting drunk is wrong.  |   |   |   |   |                   |
| ___ 57. | Getting drunk is OK as long as I don't drive while drunk.  |   |   |   |   |                   |
| ___ 58. | Getting drunk is no worse than many things people do today.  |   |   |   |   |                   |
| ___ 59. | It is no one's business how much I drink as long as I don't annoy others.                                    |   |   |   |   |                   |
| ___ 60. | Drinking is part of becoming an adult.   |   |   |   |   |                   |
| ___ 61. | Drinking is as much a part of college as is attending classes.   |   |   |   |   |                   |
| ___ 62. | I have to drink to stay in good with my friends.   |   |   |   |   |                   |







How often do you drink for the following reasons?

- 32. it helps me to relax or be less nervous
- 33. to get along better on dates or other social occasions
- 34. to relieve aches, pains or fatigue
- 35. to improve appetite for food
- 36. to be sociable
- 37. to celebrate special occasions
- 38. because friends drink
- 39. for enjoyment of taste
- 40. for a sense of well-being or to feel good
- 41. to get high
- 42. to get drunk
- 43. to feel like an adult
- 44. other (please indicate what other) \_\_\_\_\_

How often has your drinking led to the following situations?

- 45. given you a hangover
- 46. caused nausea and vomiting
- 47. caused you to "black out" or not remember what has happened
- 48. interfered with work or school
- 49. caused problems in human relationships
- 50. drinking while driving or driving after having several drinks
- 51. being arrested for DWI (driving while impaired), DUI (driving under the influence, or PI (public intoxication)
- 52. being criticized by someone you were dating because of your drinking
- 53. getting into a fight after drinking
- 54. damaging property after drinking
- 55. doing something while or after drinking which you later regretted
- 56. thinking you might have a problem with drinking

2  
VITA

Stella Platt Hughes

Candidate for the Degree of

Doctor of Philosophy

Thesis: CULTURAL AND ETHNIC PATTERNS OF ALCOHOL CONSUMPTION IN A UNIVERSITY ENVIRONMENT

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