Chapter One

Introduction

Marketing to consumers involves a combination of overt and covert messages. According to Packard (1980), there are hidden persuaders in advertising that appeal to the fundamental values of the consumer. Marketing is intended to influence and/or change the conscious behavior of the consumer, but marketing specialists also provide subtle appeals to the underlying dispositions of the consumer. Packard (1980) suggests that hidden persuaders are often the best way to influence consumer behaviors.

Colleges and universities use recruitment materials as a means of marketing their institutions to prospective students. One type of recruitment material, college and university viewbooks, is developed by admissions and recruitment offices to advertise the general characteristics of the institution through the use of pictures, student profiles, and general information (A. Widner, personal communication, October 5, 2001).

Like other marketing products, viewbooks attempt to affect prospective students' conscious behavior (to attend the institution). They also try to appeal to the underlying values of these customers regarding higher education, college life, and the campus environment. Recent research has suggested that these subtle, hidden appeals to underlying values may also operate in ways that college marketers do not intend. They may also be appealing to students' values and beliefs surrounding alcohol.

Goree and Szalay (1996) studied the underlying dispositions of college students regarding alcohol. They suggest that there are environmental factors that influence college student drinking behavior. Among other factors, they question the impression that recruitment materials leave on prospective students and, in turn, the influence of these materials on students'

future behaviors. Much of the groundwork in this area of research can be found in theories about the interaction between person and environment.

The College Student and the Campus Environment

According to Goree and Szalay (1996) elements of the campus environment can either support or inhibit students' drinking behaviors. Further, students who prefer not to drink will feel a better fit with some types of campus environments, and students who prefer to drink a lot will fit different types of campuses. Person-Environment theory helps to explain this interaction of the campus environment and students' behaviors.

The origin of Person-Environment theory is in Lewin's (1936) research on topological psychology. He created the formula B = f (P, E) (behavior is a function of the interaction between the person and the environment). According to Caplan and Harrison (1993) Lewin's (1936) work revolutionized the field of topological theory and impacted sociological and other psychological theories with regards to alcohol. This theory suggests that students' drinking behaviors, like other behaviors, result from the interaction of the campus environment (the environmental factor) and the person's own pre-existing disposition toward alcohol (the personal factor).

However, the relationship between the person and the surrounding environment is reciprocal. According to Lewin (1936) the surrounding environment influences the people within and, consequently, the people's behavior affects their surrounding environment. The campus environment helps to shape students' drinking behaviors. In turn their drinking becomes part of the perceived environment for other students.

Person-Environment theory also relates to the fit between the person and the environment. One study that was based on Lewin's research revealed that the congruence of the person and the environment affects a person's attitudes, mood, health (both emotional and physical), and behaviors (Caplan & Harrison, 1993). According to Strange and Banning (2001) it is important for students to feel comfortable and relate to their environment. Students who find congruence with their environment are more likely to succeed. Holland (1992) emphasizes the importance of matching a person's personality with the attributes found in the environment. Goree and Szalay (1996) suggest that the fit between a prospective college student and a campus environment will be based at least in part on the student's underlying disposition toward alcohol.

This study examines college and university recruitment materials as they relate to prospective students' underlying dispositions toward alcohol use. In this study the recruitment materials are part of the environment that is consciously intended to influence prospective students' behavior in matriculating at the institution. Goree and Szalay (1996) suggest that these materials may also have an unintended influence on behavior by disproportionately appealing to students of one disposition or the other (non-drinkers or frequent drinkers) and thereby conveying a better environmental fit for one group rather than another.

College Student Alcohol Use

Alcohol use by college students is a major issue on college campuses across the United States (Wechsler, Lee, Gledhill-Hoyt, & Nelson, 2001). The literature is clear and consistent. On average, college students consume about 4.5 drinks per week, and about two of every five college students engage in high-risk drinking (Wechsler, Davenport, Dowdall, Moeykens, &

Castillo, 1994; Presley, Meilman, & Cashin, 1996; Wechsler & Kuo, 2000; Wechsler, Lee, Kuo, & Lee, 2000; Wechsler, Lee, Gledhill-Hoyt, et al., 2001; Wechsler, Lee, Nelson, & Lee, 2001).

There is similarly consistent evidence of the negative effects of high-risk drinking for the student who drinks. One area of negative consequences is academic performance. The average number of drinks per week among students gradually increases as the average grade decreases. Frequent drinkers also perform poorly on tests and projects due to heavy alcohol use (Presley et al., 1996). These students have problems attending class, completing assignments, and maintaining good study habits (Presley et al., 1996; Wechsler, Lee, Gledhill-Hoyt, et al., 2001; Wechsler, Lee, Nelson, et al., 2001). Students who frequently use alcohol are more likely to get behind in schoolwork and miss classes than students who abstain from alcohol use (Wechsler & Kuo, 2000).

Intoxication also increases risk for serious legal and physical consequences. Students who drink are more likely to have trouble with police or other campus authorities than students who abstain (Presley et al., 1996; Wechsler, Lee, et al., 2000). Of these students who drink, those that reside on-campus are more likely to experience problems with police (both campus and non-campus police) than students living off-campus (Wechsler, Lee, Nelson, et al., 2001). College students who vandalize property are often intoxicated during the act (Epstein & Finn, 1997). Sexual assault is also more prevalent among frequent drinkers than among those who do not drink or who drink infrequently. More than half of the sexual assaults committed by students under the influence of alcohol are committed by students who frequently consume alcohol (Presley et al., 1996).

Not only drinkers but also other students experience negative consequences from alcohol abuse. These are called “second-hand effects” (Wechsler, Lee, Gledhill-Hoyt, et al., 2001). Some

of these effects include arguments, fights, unwanted sexual advances (including sexual assault), damaged property, interrupted studying or sleep, and having to assist an intoxicated individual who is sick.

The misbehavior of high-risk drinkers is expensive for colleges and universities. These students are more likely to be involved in the judicial process because of negative actions like vandalism, violence, and sexual assault, particularly in the residence halls. Frequent drinkers have more aggressive behaviors and are less mature than students who do not drink. In many cases, the high costs associated with high-risk drinking result from association with Greek organizations, because frequent drinkers are more likely to be involved in fraternity-sponsored activities. Other costs associated with high-risk drinking occur due to the rise of drinking games on campus, which result in more student sickness and more students transported to either the hospital, the police station, or both. These consequences prove costly for student health services, residence life offices, judicial affairs offices, campus police, and other offices on campus (E. F. D. Spencer, personal communication, October 30, 2001).

Therefore, colleges and universities have a vested interest in recruiting students who do not drink alcohol and those who drink infrequently. These students are more likely to succeed academically and less likely to injure others or cause damage to property or to behave in any of the ways that make high-risk drinkers so costly for colleges and universities.

The evidence is clear that college students drink a lot, and that their drinking has serious negative effects on themselves, other students, and their institutions. Less clear, however, are the factors that contribute to this level of alcohol consumption by college students. One body of research concerns environmental factors that may influence college students' drinking. Environmental factors include such aspects as institutional policies; local laws; the presence or

absence of nearby bars and other retail outlets for alcohol sales; the availability of substance-free housing options; the character and history of the institution (e.g., religious vs. secular); and the beliefs, attitudes, and behaviors of the student body. Most recent research on environmental factors surrounding alcohol abuse by college students has centered on this last category – the beliefs, attitudes, and behaviors of students (Goree & Szalay, 1996; Presley et al., 1996; Wechsler & Kuo, 2000; Wechsler, Lee, Gledhill-Hoyt, et al., 2001, Wechsler, Lee, Nelson, et al., 2001).

The present study is an extension of the work of Goree and Szalay (1996), which described the *dispositions* of frequent drinkers and of non drinkers. Dispositions include the attitudes, beliefs, values, and perceptions that underlie a person's personality and behavior. These authors describe the type of campus environment that would appeal to frequent drinkers (and to occasional drinkers who tend to share the frequent drinker disposition). They also describe the type of campus environment that would likely appeal to non drinkers (and to occasional drinkers who share the non drinker disposition). These dispositions are explained in detail in the literature review in Chapter Two.

Since it is in the interest of colleges and universities to recruit non drinkers rather than frequent drinkers, administrators can use the descriptions provided by Goree and Szalay (1996) to develop recruitment materials that will be appealing to non drinkers. In fact, Goree and Szalay suggest that institutions review their recruitment materials with exactly this question in mind. Although some institutions may have assessed their own recruitment materials in light of the research on frequent drinker and non drinker dispositions, no studies have been published which describe recruitment materials in these terms. The present study extends the research of Goree and Szalay (1996) by examining college recruitment materials, specifically institutional

viewbooks, to analyze their subtle appeals to the underlying disposition of non drinkers and to the underlying disposition of frequent drinkers.

Purpose

The purpose of this study was to analyze how college and university viewbooks appeal to the different underlying dispositions of college students (non drinker vs. frequent drinker dispositions). A secondary purpose of this study was to explore differences in the viewbooks' appeals by geographic region and institutional type.

Research Questions

I used the following research questions to guide the present study.

1. How do college and university viewbooks appeal to the dispositions of students who are non drinkers and frequent drinkers?
2. Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ by the institution's Carnegie Classification?
3. Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ by the region where the school is located?
4. Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ between historically Black institutions (HBI) and non-HBIs?

Definitions

The following definitions were used in this research. *Viewbooks* are booklets published by higher education institutions used as a marketing tool or a yield instrument that provides

prospective students with general information about the institution (A. Widner, personal communication, October 5, 2001). *Dispositions* were defined by Goree and Szalay (1996) as the personal thoughts, beliefs, perceptions, and value systems of students. *Frequent drinkers* are those students who consume alcohol daily or almost daily. *Non drinkers* are those students who do not consume alcohol. *Historically Black Institutions (HBI)* are those institutions that have a history of predominately enrolling Black students. *Religious institutions* are affiliated with a religion determined by their name or information in their viewbook. *Women's colleges* are those schools that historically enrolled women only. *Co-educational institutions* are those which enroll both women and men.

Significance of the Study

This study has significance for researchers. It extends the previous research of Goree and Szalay (1996) by examining the content of university viewbooks in relation to the dispositions of college students as they described. It can provide a basis for similar future research that examines other types of recruitment materials, for example Web-based materials. Since this study focuses on images and headings, a future study might analyze the textual content of viewbooks and other types of recruitment materials. This study might prompt researchers to use student dispositions to study the content of other forms of documentation, such as newsletters and brochures. It can also provide a methodology for examining elements of the actual campus environment, rather than the way it is portrayed in marketing and recruitment documents.

This study is also significant for professional practice. This research could assist college and university admissions offices to understand how their viewbooks relate to other viewbooks on this issue and help them understand how to make recruitment materials with a greater appeal

to students with the non drinker disposition. Offices of admission, enrollment, and/or recruiting can use the results of this study to sustain or modify their recruiting practices to reflect the types of marketing that draw students with non drinker dispositions.

Organization of the Study

This study is organized around five chapters. Chapter Two contains a review of the relevant scholarly literature. Chapter Three describes the methods used in the study, including the procedures for collecting and analyzing the data. Chapter Four describes the results of the study. The final chapter discusses the results and their implications for future practice and research.

Chapter Two

Review of Literature

This chapter reviews the scholarly literature related to environmental influences on college student drinking. Scholarship on college alcohol use is undergirded by two major, on-going studies: the Core Alcohol and Drug Survey and the College Alcohol Study. These studies focus on rates of drinking and negative consequences, but each also offers some evidence about environmental factors that surround college drinking. Related to these two studies are a body of literature on Social Norm theory and recent research on Environmental Assessment, which are the basis for the present study.

Core Alcohol and Drug Survey

The Core Alcohol and Drug Survey is a national survey of U.S. college students and their drinking habits. The Core Survey was developed in 1989 by a group of grantee institutions funded through the Fund for Improvement in Postsecondary Education (FIPSE). The Core Survey is administered by Cheryl Presley and her colleagues at the Core Institute at Southern Illinois University. The purpose of the instrument is to provide researchers information pertaining to the prevalence of alcohol and other drug use, the consequences of use, campus climate, and individual beliefs and perceptions associated with alcohol and drug use, among other things.

The Core Survey was originally a one-page, two-sided instrument containing 23 questions. In 1994, the survey was expanded to a two-page, two-sided instrument containing 39 questions, often called the Long Form. The Long Form added questions pertaining to participation in extracurricular activities, beliefs about alcohol, perceptions of friends' thoughts

about alcohol and other drugs, racial harassment and violence, perceptions of harm, to the original survey. The Core Survey is administered on individual campuses based on suggested data collection procedures including representative sampling techniques. The Core Institute maintains a national data set of responses from more than 70,000 students to the Core Survey from more than 100 campuses that used representative sampling (Presley et al., 1996).

Responses to the Core Survey over the past decade have indicated that 38% of college students participate in high-risk drinking. The Core Survey defines high-risk drinking as consuming five or more drinks in one sitting (Presley et al., 1996). According to these findings, over 83% of college students reported consuming alcohol at some point during the year prior to taking the survey. Students reported consuming an average of 4.5 drinks per week.

Students who completed the Core Survey have also reported that they experience negative consequences from alcohol and other drug use. Nearly 22% of students reported poor performances on tests and projects, while 28% reported missing class due to alcohol use. Almost 30% of college students surveyed reported participating in an argument or fight, while 13% suffered some sort of injury due to their alcohol or drug use. Around 10% of the men reported that they took advantage of someone sexually while intoxicated compared to 3% of the women. Despite all of these reported negative consequences, only 11% of students reported that they felt they had a drinking or other drug problem (Presley et al., 1996).

The original form of the Core Survey asks about two types of environmental factors. One is students' perceptions of institutional alcohol policies and alcohol abuse prevention programs. According to Presley et al., (1996) over 75% of students surveyed were aware of the campus policies regarding alcohol and drug use. However, only about half believed that these policies were enforced. Nearly 42% of students were aware of alcohol and other drug prevention

programming on their campus, but only 7% reported participating in these programming efforts (Presley et al., 1996).

Another environmental factor addressed in the original form of the Core Survey is the preference for alcohol in the social environment. Overall, 31% of students responded that they would prefer a social environment without alcohol, and yet 84% of students reported that they drink (Presley et al., 1996). This disconnect between students' expressed preferences and their reported behaviors is an indirect indicator of the power of the social environment to influence students' drinking behaviors.

Since 1994 the Core Survey has also asked about students' perceptions of the amount of drinking going on around them. This is at the center of Social Norm theory, and Core Survey results related to these items are discussed in the Social Norm section below.

College Alcohol Study

The Harvard School of Public Health College Alcohol Study (CAS) is a survey of U.S. college students and their drinking habits. Henry Wechsler, along with his Harvard colleagues, administered the survey in 1993, 1997, 1999, and 2001. The CAS is a questionnaire intended to return data about alcohol use among students, the risk behaviors of these students, and institutional policies associated with student alcohol use. The original survey administered in 1993 studied 20 behaviors. The instrument was changed slightly with each administration. It was sent to a random sample of 14,000 students at up to 140 U.S. institutions during each survey year (Wechsler, Moeykens, Davenport, Castillo, & Hansen, 1995).

The CAS instrument differs from the Core Survey in two important ways. First, it includes a focus on the second-hand effects of high-risk drinking, and second, it defines high-risk

drinking differently than it is defined in the Core Survey. For the CAS, high-risk, or “binge” drinking, is defined as five drinks in one sitting for men and four drinks in one sitting for women. Results of the College Alcohol Study regarding the incidence of drinking and high-risk drinking among college students are similar to those of the Core Survey. Despite the difference in definitions between the Core Survey and the CAS, this study also found that roughly 40% of college students engage in high-risk drinking (Wechsler et al., 1995; Wechsler, Dowdall, Maenner, Gledhill-Hoyt, et al., 1998; Wechsler & Kuo, 2000; Wechsler, Lee, Gledhill-Hoyt, et al., 2001, Wechsler, Lee, Nelson, et al., 2001).

Like the Core Survey, the College Alcohol Study also documented serious negative consequences of alcohol use by college students (Wechsler et al., 1995; Wechsler, Lee, Nelson, et al., 2001; Wechsler, Lee, Gledhill-Hoyt, et al., 2001). Students who were categorized as binge-drinkers were likely to miss class (63%) or get behind in schoolwork (46%). Binge-drinkers were also likely to experience some form of anger or violence. Over 40% of students had arguments with friends, while 23% of students reported damaging property. Unplanned sexual activity was also a problem for binge-drinkers. Some students engaged in unplanned sexual intercourse (42%) while others neglected to use protection during sex (20%). From a health-related standpoint, 27% of students were injured while intoxicated and almost 1% required medical treatment from an alcohol overdose. Overall, 48% of binge-drinkers reported having five or more alcohol-related problems.

The College Alcohol Study was the first to focus scholarly attention on the negative consequences of high-risk drinking for other students besides the drinker (Wechsler et al., 1995). These consequences were labeled the *secondhand effects of binge-drinking*. One group of secondhand effects pertains to personal violence and acts of vandalism. Students on campuses

with high levels of binge-drinking were affected by being insulted or humiliated (36%), arguing with binge-drinkers (23%), and being hit or assaulted (11%). Some students reported having their property damaged (16%) by binge-drinkers, while 71% reported having their sleep and/or studying interrupted by intoxicated students. Unwanted sexual advances and assault were also identified as secondhand effects of binge-drinking. More than 22% of students reported having experienced unwanted sexual advances, while 1% of students reported being the victim of rape or sexual assault as a result of the binge-drinking of others. As a whole, 86% of students reported having been affected in some way by binge-drinking at institutions with high levels of binge-drinking, compared to 81% and 64% at institutions with medium and low levels of binge-drinking, respectively (Wechsler, Lee, Nelson, et al., 2001).

In addition to these findings regarding use and consequences, the College Alcohol Study examines some environmental factors and the interaction of environmental factors and personal factors associated with student drinking. CAS results indicate that 52 campuses of the original 140 surveyed offer some sort of alcohol- or substance-free housing option. These housing alternatives give students the option of choosing an environment that supports their substance-free lifestyle, even on a campus where most students are otherwise supportive of high-risk drinking.

CAS findings also comment on the effectiveness of campus alcohol policies in shaping students' drinking behaviors. In colleges that ban the use of alcohol for all students (including students who are 21 or older), students are more likely to abstain from alcohol use (Wechsler, Lee, Gledhill-Hoyt, et al., 2001). These students are also much less likely to participate in high-risk drinking activities. However, the students at these schools who do choose to drink exhibit

similar attitudes and behaviors to students attending schools that do not ban alcohol for all students (Wechsler, Lee, Gledhill-Hoyt, et al., 2001).

Further, the CAS results provide some insight into the interaction of environmental and personal factors. For example, the general level of drinking in a student body appears to affect students' perceptions of their collegiate environment. Students at schools with high levels of reported alcohol use recognize alcohol as a problem at their institution (Wechsler, Lee, Nelson, et al., 2001). On the other hand, a student's personal level of drinking also impacts his or her perception of the general level of drinking on campus. According to Wechsler and Kuo (2000) those students who are frequent drinkers are likely to overestimate the levels at which students at their institution consume alcohol. Students who abstain from alcohol use are often unaware of the level of alcohol use at their institutions.

The Core Survey and the College Alcohol Study focus principally on alcohol use and consequences, with some related environmental questions. There are two main bodies of research that build on these findings and are devoted specifically to the environmental factors that influence students' drinking behaviors. These are Social Norm theory, particularly as elaborated by Perkins and Berkowitz (1986), and the Environmental Assessment studies by Szalay that are based on shared dispositions (Goree & Szalay, 1996). Each of these is described below.

Social Norm Theory

Social norms are the shared attitudes and perceptions of a group with which an individual associates. The acceptance of social norms comes about when an individual loses confidence in his or her own beliefs or ideas and chooses to conform to what seems to be the generally accepted attitudes and ideas of society (Prentice & Miller, 1993).

There were a few early studies that began to shift the scientific focus on perceptions from studying behavior to studying attitudes and/or beliefs. One of the first instances of studying social norms was conducted at Bennington College in 1943 (Prentice & Miller, 1993). A newcomer was sent to Bennington College to observe the attitudes and social behaviors of the students. The majority of students at Bennington publicly expressed a “liberal” view of the world. They expressed these views in a way that suggested to the newcomer that they were the attitudes and beliefs shared among all students. This newcomer left with the perception that Bennington College was a “liberal” school. This study was the first to demonstrate that people form opinions of a group based on their understanding of some individuals in the group.

Another body of research focusing on the social norm, sometimes referred to as conforming, originated with Asch’s 1951 conformity studies (Prentice & Miller, 1993). This research pitted an individual’s ideas against the shared, and purposefully skewed, viewpoints of the group. Participants altered their own views based on what they inaccurately understood to be the views of the group.

There are two generally accepted properties of norms. The first property is that norms are generated by public appearance. The public display of certain ideas (e.g. the liberal views at Bennington College) causes individuals to make general assumptions about the environment. In essence, the public displays of the norm influence the individual’s private perspective of an environment. This leads to the second property of social norms. Social norms are accepted as the collective perception. A social norm implies that all members of a community or group hold the same understanding.

A phenomenon associated with social norming is pluralistic ignorance (Prentice & Miller, 1993). Pluralistic ignorance occurs when a person believes that his or her individual beliefs are

distinctly different from those of society, although the person's public presentation of these beliefs is the same. This is apparent in situations where the social norm is a distortion of individuals' viewpoints. An individual's perception becomes skewed when he or she sees others' actions and public behavior as a direct result of his or her belief systems (Prentice & Miller, 1993). This perception is evident in studies concerning the use of alcohol on college campuses.

For years, researchers and educators assumed that social norms about alcohol were established by observing the actual amount of drinking taking place in the environment. The influence of peer drinking and environmental persuasions toward drinking were thought to influence individuals increasingly as they mature from adolescence into adulthood (Prentice & Miller, 1993). However, Perkins and Berkowitz (1986) discovered that social norms are actually based on a *misperception* rather than an accurate view of surrounding behaviors. These researchers also found that students tend to conform their own drinking habits to the misperceived norm.

Perkins and Berkowitz (1986) concluded that interventions focused on changing students' perceptions of the actual amount of drinking going on around them are likely to cause a decrease in alcohol use. They originally envisioned their findings to have value in one-on-one conversations and counseling sessions with students (C. Turrentine, personal communication, September 14, 2001). However, others saw the value of this new information for broader educational programming for all students (Prentice & Miller, 1993).

During the late 1980s through the early 1990s, Michael Haines used Perkins and Berkowitz's concepts to develop campus-wide alcohol prevention programming for Northern Illinois University. Haines used traditional surveys to confirm that students on his own campus had an inflated view of the amount of drinking among the student body, as Perkins and

Berkowitz had predicted. He then developed creative programs to inform students of the actual amount of drinking among their classmates. This was a radical departure from traditional alcohol education programming, which is based on informing students of the negative consequences of drinking. Posttest surveys found that this educational approach changed the perceived norm in the direction of the actual norm, and that high-risk drinking decreased from 43% to 34.2% (Haines & Spear, 1996).

Johannessen, Collins, Mills-Novoa, and Glider (1999) reported similar results at the University of Arizona. These researchers used a variety of techniques to inform students of actual drinking norms over a 4-year period. They found that the percentage of students who used alcohol dropped from 43% in 1995 to 30% in 1998.

In 1998, Western Washington University developed a project that used three strategies to help students develop accurate perceptions of the norm related to alcohol use (Higher Education Center, 2000). These strategies included a mass campaign to inform students about the accurate levels of drinking, a program for students referred to the judicial process because of their high-risk drinking, and an intervention that focused on providing student leaders on campus with factual information about the drinking practices of students on campus. The results showed a 20% decrease in the total amount of alcohol consumed, 62% of alcohol offenders reported lowering their average intake by one to two drinks, and student leaders' perceptions of students changed from viewing them as a problem to viewing them as the solution to the problem.

In 1999, Pennsylvania University developed a comprehensive alcohol prevention program that combined the efforts of their 1990 alcohol prevention program and their 1995 intervention that included programming using social norms (Higher Education Center, 2000). The 1999 program focused on providing students with alternatives to drinking, while ensuring

that they are aware of the actual levels of alcohol use on campus. The students have both individual and group responsibility and the program has seen a decrease in reported campus alcohol use from the 1997 CAS (49%) to the 2000 school year (33%).

The social norming studies demonstrate that students' perceptions of the alcohol use in their environment has a strong impact on their own individual drinking behaviors. Other studies, called Environmental Assessment, have found that shared perceptions of *all* aspects of the environment may be related to the level of alcohol consumption in a group. These studies use a research method called Associative Group Analysis.

Associative Group Analysis

Associative Group Analysis (AGA) is a socio-linguistic research method that analyzes shared perceptions, values, and beliefs across a group using word association tasks. Conceptual development is a topic well studied in sociological research. Human beings recognize and remember specific data to associate one item with another. The theory behind the AGA method comes from research that concluded humans use a sequential method to remember things. People remember specific details or events or information with which they associate. These associations help people establish their perceptual-representational belief system. This system allows people to (a) give the data they receive an order, (b) counter ideas that alter their personal belief system, and (c) evaluate data based on importance or complexity (Kelly, 1985).

The AGA method was first created in the late 1960s by sociologist Lorand Szalay to expand the assessment tools previously used to measure the individual dimensions of a personal belief system into a tool for evaluating shared belief systems (Kelly, 1985). The AGA method is a computer analysis technique for summarizing large data sets of individual word association

responses. Using AGA, a researcher can identify similar word responses from groups of responses (i.e., the same word root or a response with a similar meaning). At least one percent of the members of a group must provide the same or similar responses for the data to be considered suitable for analysis using AGA. The shared responses are scored using a weighted scoring system. That is, the initial word association responses to any given stimulus word are given a higher score than the latter responses. The shared, weighted responses from all respondents are then grouped into themes, forming a list of responses based on their similarity. The similarities help researchers to recognize the patterns in the group's shared beliefs and shared perceptual-representational systems.

Environmental Assessment Instrument

In the 1990s, the AGA method was used to assess the shared thoughts, beliefs, perceptions, and value systems (together called dispositions) that underlie students' desire to consume alcohol or use other drugs (Goree & Szalay, 1996). More than 50 colleges and universities and 20,000 students participated in a study sponsored by FIPSE, using the Environmental Assessment Instrument (EAI) to study these shared dispositions.

Typical of other studies using AGA methodology, the EAI began with a series of word association tasks. Stimulus words included concepts such as *father, campus,* and *authority,* as well as some related more directly to alcohol and other drugs, such as *beer* and *party.* In addition to these word associations, the EAI included some behavioral questions related to the actual amount of drinking or other drug use, the amount of time spent in volunteer work, etc.

At least 400 students in representatively selected classes completed the EAI at each institution. The result was a huge data set of individual word association responses that were

analyzed using AGA methods, first seeking shared perceptions of a specific campus environment and then seeking common dispositions across larger groups based on the amount of alcohol consumed.

The original intention of this research was to assist alcohol educators to understand their own specific campus environments and to develop tailored interventions based on the EAI evidence. The research was not as useful in this way as the FIPSE staff had originally hoped, due to the cost and difficulty of administering the instrument and the time required to analyze and report the results. However, the broader picture which developed from this body of research, of the markedly different dispositions of frequent drinkers and non drinkers, did prove useful and provides the basis for the present study (C. Turrentine, personal communication, Sept. 7, 2001).

According to this research, frequent drinkers simply approach the world differently than non drinkers (Goree & Szalay, 1996). These differences relate not only to alcohol and other drugs. They also relate to perceptions of self and family, friends and entertainment, school and authority, society, and problems. Using the EAI data, Szalay was able to paint a compelling picture of the world as seen by frequent drinkers and a very different picture of the world as seen by students who do not drink. Each of these dispositions is described below.

Frequent drinker disposition. Each of the six domains used by the EAI is focused on a specific subtopic. In the S*elf and Family* domain, frequent drinkers are more likely to report extraverted and social behaviors than are non drinkers. They are also likely to focus on themselves and what is important to them personally, rather than how their actions affect others. Under this domain, frequent users might also refer to their self-perceptions as opposed to their family life (Goree & Szalay, 1996, p. 6).

In the *Friends and Entertainment* domain, frequent drinkers relate alcohol to friends, parties and fun. Frequent drinkers associate parties and excitement with friendship. They have an entertainment orientation and often think of themselves as fun people. Frequent drinkers associate having fun with going out and focus on cigarettes and smoking in relation to parties (Goree & Szalay, 1996, p. 6).

In the *School and Authority* domain, many frequent drinkers associate college with fun and parties, and are much less interested in education than are non drinkers. Frequent drinkers are likely to describe fraternity life when thinking about the campus. These individuals will more frequently characterize campus as fun and exciting, but the classroom as stressful and boring (Goree & Szalay, 1996, p. 7).

The *Society* domain concerns society, religion, government, and responsibility. In this domain, frequent drinkers are inclined to view social institutions as corrupt or hypocritical. They are not likely to express religious beliefs. Frequent drinkers tend to view the government as imposing and unfair (Goree & Szalay, 1996, p. 8).

The fifth domain is *Problems*. Frequent drinkers are likely to identify alcohol, drugs, and smoking as problems. They often associate marijuana with smoking rather than thinking of it as a drug. Although frequent drinkers express an awareness of the negative consequences of smoking, they are less likely to refer to these problems than are non drinkers (Goree & Szalay, 1996, p. 9).

Shared word associations in the *Alcohol and Other Drugs* domain include students' perceptions of alcohol and illicit drugs. Frequent drinkers tend to relate alcohol use to parties and sex, and generally consider alcohol-related activities as their idea of fun. Frequent drinkers tend to associate drug usage, particularly marijuana usage, with parties. They are also likely to make a connection between cigarettes, smoking, and parties (Goree & Szalay, 1996, p. 9).

Frequent drinkers have some interesting, but predictable responses and associations about their dispositions according to the EAI. Non drinkers take a very different approach to their world.

Non drinker disposition. Under the *Self and Family* domain, non drinkers are more likely to report introverted and family-oriented behaviors than frequent drinkers. Many times, they focus on others and what is important to maintaining a strong family life. Non drinkers might also refer to being nice, loving, and responsible. Also within this domain, non drinkers are likely to describe their families as being understanding and accepting (Goree & Szalay, 1996, p. 6).

Word associations within the *Friends and Entertainment* domain often include terms such as *family* and *best friend*. Non drinkers are likely to view parties as traditional and family-oriented. These students often refer to church and religious activities as a source of fun. Unlike frequent drinkers, non drinkers usually prefer to have a reason for celebration. Non drinkers are likely to call playing games, watching television and movies, and going shopping fun activities (Goree & Szalay, 1996, p. 6).

In the *School and Authority* domain, many non drinkers associate college with education and academic performance . Non drinkers are likely to describe rules and expectations in a positive way. These individuals are inclined to think about the campus's physical features, such as buildings and nature, and academically influenced activities, such as research (Goree & Szalay, 1996, p. 7).

Words in the *Society* domain are likely to elicit positive responses from non drinkers. Non drinkers are likely to describe themselves as religious or having religion. They often view social institutions in a much more global context than do frequent drinkers. Non drinkers are inclined to describe responsibility in a personal context. These students are much less likely to

view the government as imposing and unfair than are frequent drinkers (Goree & Szalay, 1996, p. 8).

In the *Problems* domain, non drinkers often list family, friends, and money as minor problems. Non drinkers also identify smoking as a cause of cancer and death. They often associate smoking with stupidity. Non drinkers are also more likely to refer to being "hooked" on food and caffeine as problems (Goree & Szalay, 1996, p. 9).

In the domain *Alcohol and Other Drugs*, non drinkers' perceptions tend to focus on dangers associated with alcohol and drugs. Non drinkers are likely to relate alcohol use to injury and fatality. Non drinkers tend to view marijuana as dangerous and deadly. Non drinkers make a connection between alcohol use and crime. These students might also think of drug usage in a medical sense, referring to hospitals and prescriptions (Goree & Szalay, 1996, p. 9).

Frequent drinkers and non drinkers tend to perceive the campus environment very differently. These differences include elements of the campus that have no overt relation to alcohol. Architectural design, geographical setting, university policies, the residence halls, and many other features help determine whether or not the campus environment is more comfortable for non drinkers or for frequent drinkers.

Extrapolating from the EAI findings, Goree and Szalay (1996) suggest that some specific types of campus environments are more comfortable for frequent drinkers of alcohol than for non drinkers. Because frequent drinkers tend to be more extraverted and social than non drinkers, they would prefer a campus with numerous areas to support socialization in large groups. Because they are likely to have an entertainment orientation, frequent drinkers would be most comfortable on a campus or in a community that offers many exciting events and entertainment. Since frequent drinkers tend to think of the academic enterprise as stressful and boring, they

would likely prefer environments where buildings and venues for social, athletic, entertainment, and other activities are more prominent than academic locations such as classrooms and laboratories.

Frequent drinkers also differ from non drinkers in their preference for the size and purpose of social gatherings. They tend to prefer large group activities and a focus on recreational sports programs and team activities (Goree & Szalay, 1996). They rarely need a purpose to socialize, merely a time and a place.

The environmental aspects just mentioned do not necessarily have any direct relationship to alcohol use per se. Instead they reflect the underlying worldview or disposition that is common to many frequent drinkers of alcohol. Of course the environmental elements that do concern alcohol are also of interest to these students. Frequent drinkers would be attracted to institutions known for partying rather than a challenging academic curriculum and they would prefer those with lax enforcement of alcohol and other drug policies (Goree & Szalay 1996).

Goree and Szalay (1996) also describe the type of campus environments that appeal more to non drinkers than to frequent drinkers. Since non drinkers tend to be more introverted, they would likely prefer a study-based campus environment with opportunities to participate in intimate, small-group activities. Non drinkers usually prefer quiet time and a slow pace to the hustle and bustle of a large campus or a big city. Students who abstain from alcohol use would be more comfortable in institutions that promote academic accomplishment over large social activities and team sports. Non drinkers are likely to feel more comfortable in small-town, family-oriented campus environments that highlight academic locations over social locations.

Non drinkers differ from frequent drinkers in their preference for the size and purpose of social gatherings. They tend to prefer activities that focus on more traditional, family-oriented

activities. Non drinkers are also more likely to be drawn to an environment with a focus on learning and education (Goree & Szalay, 1996).

Non drinkers are likely to feel more comfortable on campuses with specific and visible policies. According to Goree and Szalay (1996), non drinkers are concerned with the rules and expectations outlined in institutional policies. These students are likely to avoid breaking the rules and regulations to avoid the consequences involved. Non drinkers are also much more likely then frequent drinkers to appreciate a challenging academic environment.

These environmental preferences reflect the dispositions most frequently associated with both frequent drinkers and non drinkers. In essence, the dispositions of college students help to shape and are shaped by the campus environment of which they are a part.

Goree and Szalay (1996) suggest that institutions review their recruitment materials to determine whether or not they are more likely to appeal in subtle ways to frequent drinkers or to non drinkers. To date, no related study has been reported. The present study takes the next step.

Chapter Three

Methods

The purpose of this study was to analyze how college and university viewbooks appeal to the different underlying dispositions of college students (non drinker vs. frequent drinker dispositions). Dispositions were defined as the personal thoughts, beliefs, perceptions, and value systems of students (Goree & Szalay, 1996). A secondary purpose of this study was to explore differences in the viewbooks' appeals by geographic region and institutional type. Regions were defined as West, Northcentral, Northeast, and South (Presley et al., 1996). Institutional type was based on the 2000 Carnegie Classifications and institutions classified as historically Black institutions (Urban Education Web, 2001).

Research Questions

I used the following research questions to guide the present study.

1. How do college and university viewbooks appeal to the dispositions of students who are non drinkers and frequent drinkers?
2. Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ by the institution's Carnegie Classification?
3. Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ by the region where the school is located?
4. Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ between HBIs and non-HBIs?

Expected Findings

In general, I expected to find differences in viewbooks that reflected the actual drinking patterns of college students. If Goree and Szalay (1996) are correct that recruitment materials in the past have attracted students to campuses based on differential appeals to their underlying dispositions, then I would expect that my analysis of those differential appeals would parallel the actual drinking patterns already described in the literature.

To understand my specific expectations for each research question, the reader must first understand the ND:FD ratio, which is the basis for data analysis. It is described in detail in the data analysis section. In general, it represents the relative weight of the appeals to the non drinker (ND) and the frequent drinker (FD) dispositions in a particular viewbook or group of viewbooks. A 1:1 ratio would represent equal appeals to both dispositions. A 3:1 ratio would represent appeals to the ND disposition that are three times as prominent as those to the FD disposition. A 0.5:1 ratio would represent appeals to the ND disposition that are half as prominent as those to the FD disposition.

In answer to Research Question 1, I expected to find that the ND:FD ratio for most viewbooks would be less than 1:1 (i.e., that the number of points for the non-drinker disposition would be less than the number for the frequent drinker disposition). Based on the findings of Goree and Szalay (1996) I anticipated that most viewbooks would appeal more to the frequent drinker disposition than to the non drinker disposition, since both the College Alcohol Study and the CORE Survey reveal that more than 80% of college students drink and about two out of every five college students engage in high-risk drinking. If recruitment materials in the past have attracted students to campus based on their underlying dispositions as Goree and Szalay (1996)

suggest, then it would seem logical that existing viewbooks must appeal more to drinkers than to non drinkers.

Research Question 2 relates to the Carnegie Classifications of the institutions in this study. There is no existing literature to suggest what differences might exist according to these institutional types. However, there is previous research related to institutional size. The Core Institute reports that the average number of drinks per week falls as the size of the institution increases (Presley et al., 1996). On the other hand, the Harvard study found higher rates of binge drinking for large institutions as compared to the entire sample of institutions in the study. Goree and Szalay (1996) found that students with a ND disposition are more likely to seek out human-scale environments and students with the FD disposition are attracted to large crowds and a lot of activity. Based on the Carnegie Classifications, Doctoral Extensive (DRE) and Doctoral Intensive (DRI) institutions often have large student bodies (e.g. greater than 15,000 students), as compared to the master's colleges and universities (MAI & MAII) and baccalaureate institutions (BAL & BAG) whose student bodies are often medium or small in number (e.g. less than 15,000). I therefore expected DRE and DRI institutions to have greater appeals to the FD disposition than master's colleges and universities and baccalaureate institutions. That is, I expected the ND:FD ratio for DRE and DRI institutions to be lower than the ratio for other types of institutions.

Research Question 3 concerned geographic region. According to Presley et al., (1996), students in the Northeast are more likely to use alcohol than students from other regions, and students in the South are more likely to abstain from alcohol use than students from other regions. Based on these findings, I expected to find that viewbooks from institutions in the Northeast region would appeal more to the FD disposition than viewbooks from other regions. I

also expected that viewbooks from the South region would appeal more to the ND disposition than viewbooks from other regions. That is, I expected the ND:FD ratio for institutions in the Northeast to be lower than all other regions, and those from the South to be higher.

Research Question 4 asked "Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ between HBIs and non-HBIs?" Previous research has shown that Black students typically drink less than White students (Presley et al., 1996). According to Wechsler, Lee, Kuo et al. (2000) Black students had more abstainers and fewer binge drinkers than any other ethnicity. I anticipated therefore that viewbooks from HBIs would have fewer appeals to the FD disposition and more to the ND disposition as compared to viewbooks from predominately White institutions. That is, I expected HBI viewbooks to have higher ND:FD ratios than non-HBI viewbooks.

Sample

This study was a document analysis of college and university viewbooks. Viewbooks are booklets published by higher education institutions. Their purpose is to provide prospective or admitted students with general information about the institution, the institution's purpose, and profiles of current students. Viewbooks contain information about basic admissions policies and, for some institutions, are the only marketing tool used to draw students to the institution (A. Widner, personal communication, October 5, 2001).

I used purposive sampling to select the viewbooks to be analyzed. I selected viewbooks based on their geographic location and their Carnegie Classification. I included Carnegie Classification in my sampling to assure that many types of institutions would be represented and

also because institutional size, which is related to Carnegie Classification appears to be related to student drinking rates.

I considered using Web-based viewbooks. However, based on a preliminary investigation, I discovered that Web-based viewbooks were not suitable for the sampling conditions I set prior to the study. The number of Web-based viewbooks was not consistent across Carnegie Classifications. There were also few Web-based viewbooks for HBIs.

Geographic regions. To divide the institutions geographically, I used the same regional classifications described by Presley et al. (1996). Figure 1 illustrates these regions.

Carnegie Classifications. I identified institutional classifications based on the 2000 Carnegie Classifications of Higher Education (Carnegie Foundation for the Advancement of Teaching [Carnegie Foundation], 2001). I chose the following six Carnegie Classifications for this research: Doctoral/research universities-extensive (DRE), Doctoral/research universities-intensive (DRI), Master's colleges and universities I (MAI), Master's colleges and universities II (MAII), Baccalaureate colleges-liberal arts (BAL), and Baccalaureate colleges-general.

DRE institutions offer many baccalaureate programs along with providing graduate education through doctoral programs. DRI institutions offer many baccalaureate programs and graduate programs as well, however they do not grant as many doctoral degrees as do DRE institutions. MAI and MAII institutions also offer numerous baccalaureate programs and graduate programs up through the Master's degree. MAI institutions typically award more Master's degrees per year than MAII institutions. BAL institutions are mostly undergraduate colleges with baccalaureate degrees primarily awarded in the liberal arts. BAG institutions are also primarily undergraduate colleges awarding less than half of their degrees in the liberal arts (Carnegie Foundation, 2001).

Figure 1. The four regions used for purposes of this study: West, Northcentral, Northeast, and South.

From *Alcohol and drugs on American college campuses: Use, consequences, and perceptions of the campus environment*, by C. A. Presley, P. W. Meilman, and J. R. Cashin, 1996, Carbondale, IL: The Core Institute. Reprinted with permission (see Appendix A).

HBIs. I also over-sampled HBIs because of their uneven distribution among the different geographic regions and Carnegie Classifications. I attempted to include HBIs from as many regions and classifications as possible. However, I found most of these institutions in the South and Northcentral regions.

To keep the size and complexity of the sample manageable, I did not include categories for other types of institutions, such as those with religious affiliation or a history of single-sex enrollment. However, I did not exclude such institutions from my sample. My other methods allowed me to account for these institutional type factors where they appeared to influence the data I analyzed.

Overall my sample included 51 viewbooks. There were at least ten viewbooks in each of the four geographic regions and at least seven under each Carnegie Classification. Nine viewbooks were from HBIs.

Instrument

For purposes of this study, I developed an electronic spreadsheet called the Viewbook Analysis Instrument (VAI, see Appendix B). I used the VAI to create a weighted score for the frequency and prominence of the images and headings found within the institutional viewbooks.

The VAI is comprised of three sections. At the top is the Institutional Description element, which includes space for the institution name, region, Carnegie Classification, and date of analysis. There is also a check-box to record if the institution is an HBI. Down the left side of the VAI is the Scoring Key, which summarizes the predetermined scores for different types of images and headings. The remaining body of the VAI is the Score Sheet element, where scores

for each image and heading are recorded, along with their description, page number, and the domains under which they fall.

The units of analysis were images and headings. Images included photographs, pictures, and graphics. Headings included section titles, headings, and captions. I assigned points based on size and prominence as shown in Tables 1, 2, 3, and 4. I developed these categories and point values based on a preliminary review of several viewbooks that revealed the kinds of images and headings that are typically used. I categorized images and headings according to the domains identified by Goree and Szalay (1996). Table 5 shows the concepts associated with each domain.

To test the reliability of this instrument, I enlisted three confederates who each scored five viewbooks using the VAI and my scoring template. For each viewbook, I compared their total point scores for the frequent drinker disposition and the non drinker disposition with my own scores for the same viewbook. I also compared the number of domains they identified in each disposition with the number of domains I found. Using my scoring as a baseline of 100%, I found that the confederates' scores averaged 87% on all viewbooks combined.

Data Collection

I began the study by identifying institutions that fit into the six selected Carnegie Classifications and four geographic regions chosen for this study. I also included institutions designated as HBIs. I contacted the institutions via online information request, e-mail, and/or telephone. The online information requests were on the various institutions' web sites. I looked at the web sites, specifically at the offices of admissions web pages, to find any online requests. For those institutions that had an online information request form, I completed the request and submitted it online.

Table 1

Point Values for Size of Images

Size	Description	Points assigned
Small	<1/3 page	1
Medium	>=1/3 page and < 1/2 page	2
Large	>=1/2 page	3

Table 2

Point Values for Prominence of Images

Prominence	Description	Points assigned
Color	Images with color (not black and white)	1
Bkgrd/Md	Images behind text that are <1/2 page	1
Top left	Images found at the top left of the page	1
Bkgd/Lg	Images behind text that are >=1/2 page	2
Ctr top/bot	Images found at the top or bottom and centered	2
Ctr mid	Images centered in the middle of the page	3
1 full page +	Images that cross the binding of the viewbook onto another page	4

Table 3

Point Values for Size of Headings

Size	Description	Points assigned
Small	<=1/4” in height	1
Medium	>1/4” in height and <1/2” in height	2
Large	>=1/2” in height	3

Table 4

Point Values for Prominence of Headings

Prominence	Description	Points assigned
Picture Caption	Captions that were descriptive of pictures	2
Top Left/Right	Headings at the top of the page on the left or the right	2
Top Center	Headings found at the top of the page and centered	3
Section Title	Headings that were titles of viewbook sections	4

Table 5

Concepts Associated with Frequent Drinker and Non-drinker Dispositions, by Domain

Domain	Abbv.	Non Drinker	Frequent Drinker
Self and Family	SF	Responsibility, character, leadership, intelligence, quiet; intimate, small group relationships; introverted, religious, positive thoughts of family; love, care, happiness	Negative feelings; stress, boredom, ambivalence, divorce/death in family; money, success, extraverted, social, exciting, appearance, large group activities
Friends and Entertainment	FE	Family = friends; games, movies, talking, family-oriented gatherings; reason for celebration; parties = negative feelings; church, individual athletics	Fun, friends, and party = alcohol; fraternities, athletics, excitement, parties = wild/cool; problems in friendship; sex, going out = fun; drugs (marijuana); smoking and cigarettes
School and Authority	SA	Homework, academics, intelligence, learning, professors, teachers, campus physical beauty, research, discipline, rules and regulations, God = authority, self-imposed rules	Hard, stressful, boring; rules = negative; fun, friends, parties, drinking; social aspects of school; classmates and excitement; Greek life = campus life; negative views of authority, including abuse of power and unfair rules

Domain	Abbv.	Non Drinker	Frequent Drinker
Society	SO	Positive view of society; church and religion; attending church services; personal responsibility, leadership, global view of society; view themselves as people in control of their own lives	Negative views of society; religion = confusion, false, stupid; negative views of government; responsibility for work, school, family NOT for discipline and duty; view themselves as a number not a person
Problems	PR	Fears (dark, heights, unknown); smoking = cancer, death, stupid; addiction to caffeine, food	Friends, family, money; relationships, drugs, alcohol, smoking; fear of failure, death; marijuana = smoking; smoking = positive, parties, bars
Alcohol and Other Drugs	AD	Disapproval, bad, stupid, driving accidents, dangerous, fatal; loss of control, illegal, crime; drugs = medicine, hospital	Social, fun, parties, friends, sex = drunk, specific types of alcohol, consequences of drinking, hangovers, passing out

For the institutions that did not have an online information request form on the web site, or did not send me a viewbook per my request, I wrote an e-mail message. I sent this message to the admissions, recruitment, and/or enrollment office e-mail address provided on the web site. This e-mail message included a brief description of the present study and my personal contact information (see Appendix C). I waited up to 10 business days for a response to my e-mail message or delivery of a viewbook.

If after 10 business days I did not receive a response to my e-mail or a delivered viewbook, I contacted the institutions by telephone. I asked to speak with someone involved in developing or sending out recruitment materials. I explained the purpose of my study and the reason I wanted to use one of their viewbooks for the study. If I was not able to get a viewbook from the institution, I selected another institution in the same region and with the same Carnegie classification and re-started the data collection procedure.

Data Analysis

Viewbook scoring. I used college and university viewbooks as the data for this study. The units of analysis were the photographs, graphics, captions, and headings found in the viewbooks. I categorized any photographs and graphics as images, and any captions and headings as headings.

First, I counted the number of viewbooks and created enough new VAI sheets on my electronic spreadsheet for each. I divided the viewbooks by region and then began to analyze the images and headings.

I started with the West region. I filled in the appropriate information at the top of the VAI (including institution, date, region, and Carnegie Classification). I began the analysis with the

front cover of the viewbook. To analyze the front cover, I considered any graphics, photographs, or captions. I considered all headings that were not the name of the institution.

For the front cover and each additional page, I recorded the images and headings found. I first decided whether or not the image or heading fit into the non drinker or frequent drinker category based on the concepts in Table 5. For each unit of analysis, I recorded a description of the item, the page on which it was found, the domain(s) under which it best fit, and then assigned the appropriate number of points.

This was a mixed-methods study, with quantitative analysis of qualitative judgments. The following are descriptions that illustrate how I made some of these judgments. For example, consider a picture of a woman playing a piano with another woman standing beside her. The photograph was found on page 6 of a viewbook. This photograph was a full-page in size. Figure 2 shows the image and Figure 3 shows the VAI score for this image.

The scoring for Figure 2 was as follows: Every image or heading starts with a score of zero. I added 3 points for the size of the picture being greater than a half of a page (a total of 3 points) and 5 points for the prominence of the picture being a full page or greater and in color (a total of 8 points). Since the image appealed to two domains, the weighted score was sixteen.

I assigned Friends and Entertainment (FE) and School and Authority (SA) as the domains. The photograph represented the FE domain because of the individual nature of the activity in which the student was participating. The photograph also represented the SA domain because of the faculty-student interaction portrayed.

I performed a similar procedure for each heading I discovered. For example, consider a heading that says “Leadership – Character – Intellect.” This heading was at the top and in the

Figure 2. Image of a woman playing a piano with another woman standing beside her.

NON DRINKERS											
Images											
Description	Pg.	SF	FE	SA	SO	PR	AD	S	P	T.Pts	W.Pts.
student & teacher @ piano	4		1	1				3	5	8	16

Figure 3. Example of VAI scoring for an image.

center of page 3. It was also a section title. It was almost 1/2" in height. Figure 4 shows this heading and Figure 5 shows the VAI score for this heading.

The scoring for Figure 4 was as follows: I added 2 points for a heading as a section title (a total of 2 points), 2 points for a heading that was under ½” but greater than ¼” (a total of 4 points). Since the heading appealed to the first, third, and fourth domains, the weighted score was fifteen. I assigned the domain SF because of the word “Character,” SA because of the word “Intellect,” and Society (SO) because of the word “Leadership.”

Both of the preceding examples fit into the non drinker category due to the nature of the photograph and heading. I used the same procedure for items that fit into the frequent drinker category.

There were some images and headings that did not clearly fit into either the non drinker or frequent drinker disposition. I discarded these images from the analysis. For example, consider a photograph of a person. This person is dressed casually and standing with her arms crossed. This photograph is 1-1.5” in height and has a blue background (see Figure 6).

The scoring for this image began as zero. I was unable to distinguish any characteristics of the person in the photograph or in the background that suggested either a disposition or domain category. Therefore, I discarded this image from analysis.

Once I finished scoring all of the images and headings in a viewbook, the electronic spreadsheet totaled the number of points assigned at the bottom of the VAI, including the total score by disposition and totals by domain within each disposition. I did this for each viewbook until all viewbooks were scored.

Figure 4. Heading “Leadership – Character – Intellect.”

NON DRINKERS											
Headings											
Description	Pg.	SF	FE	SA	SO	PR	AD	S	P	T.Pts	W.Pts.
leadership…	4	1		1	1			2	2	5	10

Figure 5. Example of VAI scoring for a heading.

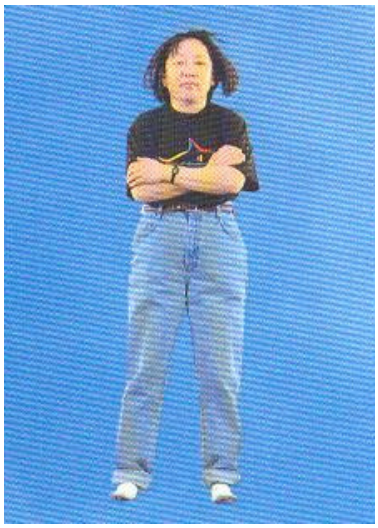

Figure 6. Example of a non-scorable image.

I created a compilation spreadsheet to include all of the scores from the viewbooks (see Appendix D). This sheet included multiple rows. The first three rows were for information regarding the institution's name, a pseudonym (for purposes of institutional anonymity), and the date each viewbook was scored. The next few rows were reserved for descriptive characteristics. These included the characteristics identified in Research Questions 2, 3, and 4 (region, Carnegie Classification, and HBI status respectively) and any other characteristics I chose to include (such as religious affiliation).

The next six rows included the total and weighted scores for ND images and headings. The following six were used to record the percentage of images and headings scored that appealed to each domain for each viewbook. The next twelve rows were identical to the previous twelve, except for the FD disposition. The final row included the ND:FD ratio.

To determine the prominence of viewbook appeals to the non drinker (ND) and frequent drinker (FD) dispositions, I had to determine both (a) what domains were most appealing to the ND disposition and the FD disposition and (b) the average weighted scores for institutional characteristics.

Percentage distribution of domains. The compilation sheet found in Appendix C includes a section under the ND disposition and the FD disposition for the percentage distribution of each domain within each disposition. The percentages were calculated by taking the total number of domains found for each institution and dividing each individual domain total by the overall total. For example, if there were 5 images that appealed to each of the six domains under the ND disposition (a total of 30 domains) and 5 headings that appealed to each of the six domains under the ND disposition (a total of 60 domains), then the percentage distribution for each domain under the ND disposition would be 10 divided by 60, or 16.7%.

Average weighted scores. I calculated the average weighted scores by totaling the weighted scores for each disposition and dividing by the total number of institutions. For example, the total weighted score for the ND disposition under one institutional type might be 1000. If there were 10 institutions of that type, the average weighted score would be 1000 divided by 10, or 100.

The ND:FD ratio. I calculated the ND:FD ratio by determining the distribution of the ND disposition in relation to the FD disposition. Each ND:FD ratio was X:1, where X is the number of times (rounded to one decimal point) more prominent the ND disposition was than the FD disposition for an individual institution or a group of institutions. For example, if the average weighted score for the ND disposition in one region was 100 and the average weighted score for the FD disposition in the same region was 20, the ND:FD ratio was 100:20, or 5:1. In other words, I divided both the ND average weighted score (100) and the FD average weighted score (20) by the FD average weighted score (100 / 20 = 5 and 20 / 20 = 1) and got an ND:FD ratio of 5:1.

Chi-Square analysis. I used Chi-square analysis to discover any statistically significant differences between institutions and institutional groups. I conducted chi-square analyses on the distribution f ND and FD points between each institution and the overall average among all institutions. I also conducted chi-square analyses between the average score across groups of institutions (based on descriptive characteristics) and the overall average among all institutions.

Chapter Four

Results

This chapter summarizes the results of the data analysis. It begins with an explanation of the changes made to the original data collection procedures found in Chapter Three. Next, there is a description of the final analyzed sample. Third, the results are displayed for each research question. This is followed by relevant findings from the data analysis other than those anticipated in the research questions. The chapter then moves to the results of selected individual institutions compared to all institutions in the sample. The final section discusses and displays atypical images found during the data analysis.

Changes to Intended Data Collection Procedures

I made three changes to the data collection procedures outlined in Chapter Three. First, I had originally set no minimum image size for analysis. However, as the analysis began, I found that there were many images too small to find any discernable attributes that could be used for scoring purposes (see Figure 7). Therefore, I decided not to score images smaller than 1.5 inches squared. Next, I made a second change to ease the scoring of headings. Viewbooks include many levels of headings (see Figures 8, 9, & 10). I found major headings (similar to APA level 5 headings) to be the most dominant and easily scored of all headings. I found that lower level headings made a much less important impression on the reader. Therefore I scored only major headings and consequently removed the 4-point weighting for section titles from the VAI.

Figure 7. An image not scored due to small size.

ACADEMIC OFFERINGS

Figure 8. A small heading.

undergraduate research

Figure 9. A medium-sized heading.

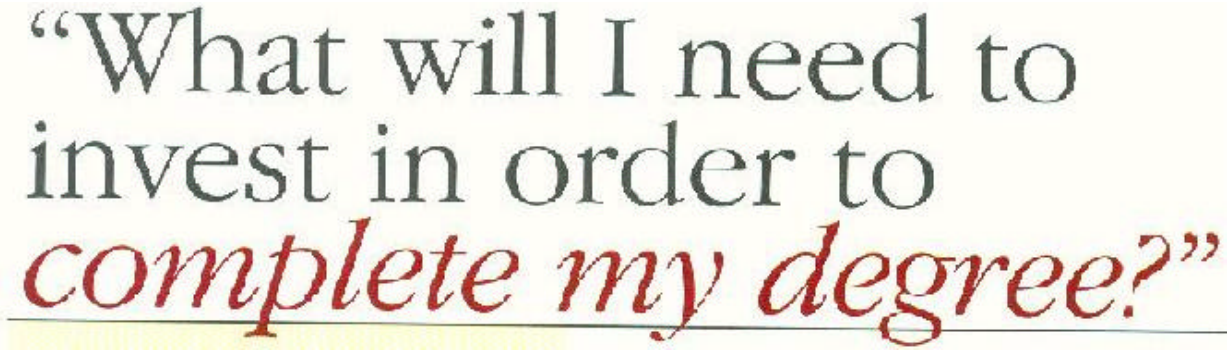

Figure 10. A large heading.

The Analyzed Sample

The analyzed sample included 51 college and university viewbooks. These 51 represented 68% of the 75 admissions offices I contacted to request a viewbook. The number of viewbooks for each Carnegie classification (including HBIs) is listed in Table 6. The number of viewbooks for each region is listed in Table 7.

Results for Each Research Question

After I scored the viewbooks, I analyzed the data as outlined in Chapter Three. The data were compiled into an electronic compilation sheet using Microsoft Excel. I then analyzed by overall results, Carnegie Classification, region, and HBI status. I found that several institutions in the sample were either religious institutions or Women's colleges even though I didn't sample according to these characteristics. Therefore, I also analyzed the data by religious affiliation and women's college status.

Results for Research Question 1. Research Question 1 asked "How do college and university viewbooks appeal to the dispositions of students who are non drinkers and frequent drinkers?" To answer this question, I summarized the average weighted score for all institutions as shown in Table 8. As these scores show, most viewbooks appeal more to the underlying dispositions of non drinkers (ND) than frequent drinkers (FD). The average weighted score for the ND disposition was 149.95, while the average weighted score for the FD disposition was 51.43.

Within this average, the most common domain for ND points was the School and Authority (SA) domain with 67.64%. The most common domain for the FD points was Friends and Entertainment (FE) with 65.38%. No institutions scored points under the ND disposition

Table 6

Number of Viewbooks by Carnegie Classification and HBI Status

Carnegie Classification	No. of Viewbooks per Classification	HBIs
DRE	7	0
DRI	9	2
MAI	11	4
MAII	6	1
BAG	9	1
BAL	8	0
Teacher's College	1	1

Note. DRE = Doctoral/research-extensive; DRI = Doctoral/research-intensive; MAI = Master's colleges and universities I; MAII = Master's colleges and universities II; BAG = Baccalaureate General; BAL = Baccalaureate Liberal Arts.

Table 7

Number of Viewbooks From Each Region

Region	No. of Viewbooks per Region
Northeast	12
Northcentral	12
South	17
West	10

Table 8

Average Weighted Scores for ND and FD Dispositions Across All Institutions

Category	Score
Average Weighted ND Score	149.18
Average Weighted FD Score	51.43
ND:FD Ratio	2.9:1

Note. ND:FD Ratio = ratio of weighted score for Non Drinker disposition to weighted score for Frequent Drinker disposition.

within the Alcohol and Drugs (AD) domain, while no institutions scored points under the FD disposition within the Problems (PR) domain. Table 9 shows the percentage distribution of points by domain for each disposition.

The average ND:FD ratio for all 51 viewbooks was 2.9:1 (see Table 8). This ratio indicates that images and headings that appealed to the ND disposition were THREE times more prominent than those that appealed to the FD disposition. Figures 11, 12, and 13 show typical images and headings that appeal to the ND disposition. Figures 14, 15, and 16 show typical images and headings that appeal to the FD disposition.

Results for Research Question 2. Research Question 2 asked "Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ by the institution's Carnegie Classification?" To answer this question, I summarized the average weighted score for each Carnegie classification as shown in Table 10. As these scores show, the viewbooks from institutions from all classifications appeal more to the underlying dispositions of non drinkers (ND) than frequent drinkers (FD).

The results by Carnegie Classification were reported using the average combined weighted score for headings and images for 7 Doctoral/research-extensive (DRE), 9 Doctoral/research-intensive (DRI), 11 Master's colleges and universities I (MAI), 6 Master's colleges and universities II (MAII), 9 Baccalaureate General (BAG), and 8 Baccalaureate Liberal Arts (BAL) colleges and universities. One college (selected for this study because of its HBI status) was classified as a teacher's college and was not included in the analysis by Carnegie Classification. Results by Carnegie Classification included the ND to FD overall ratio for each classification and the average distribution of each domain between ND and FD dispositions (indicated using percentages) for each classification.

Table 9

Average Percentage Distribution of Domains for Points Scored Across All Institutions

Category	%SF	%FE	%SA	%SO	%PR	%AD
Average ND Domains	20.17	7.76	67.67	3.83	0.59	0.00
Average FD Domains	20.90	65.38	5.02	7.77	0.00	0.94

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs.

Figure 11. A typical image that appealed to the ND disposition.

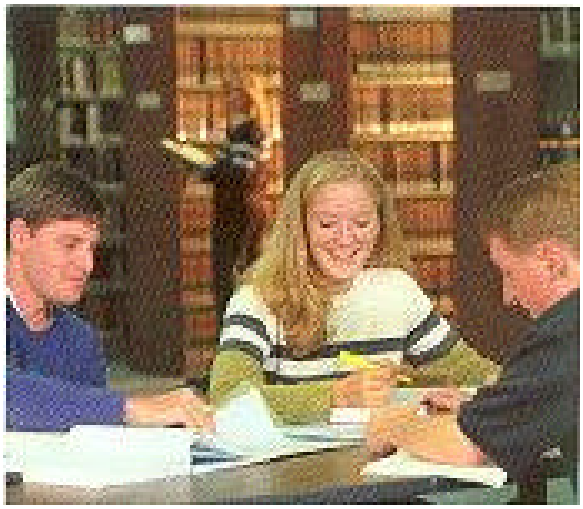

Figure 12. A typical image that appealed to the ND disposition.

Figure 13. A Typical image that appealed to the ND disposition.

Figure 14. A typical image that appealed to the FD disposition.

Figure 15. A typical image that appealed to the FD disposition.

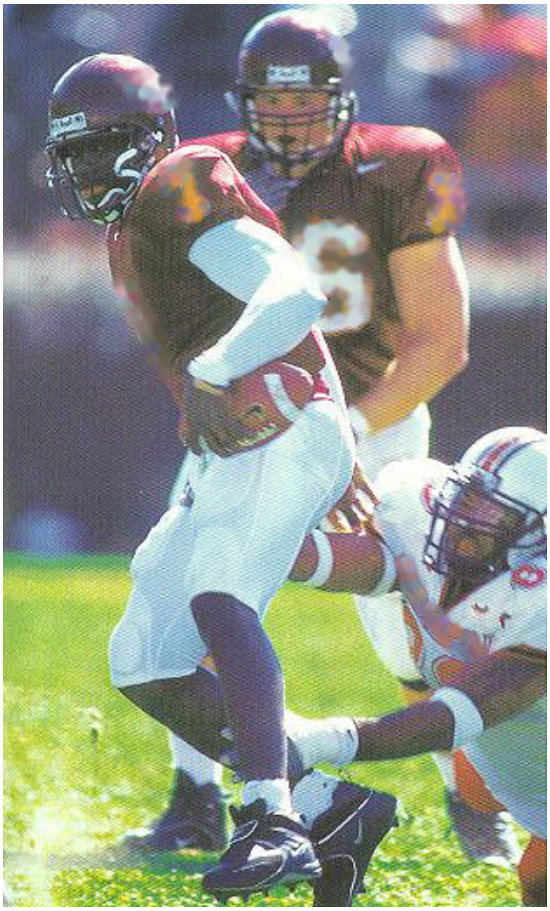

Figure 16. A typical image that appealed to the FD disposition.

Table 10

Average Weighted ND and FD Scores and ND:FD Ratio for Each Carnegie Classification

Carnegie Classification	Avg. Wt. ND	Avg. Wt. FD	ND:FD Ratio
DRE (n=7)	220.43	63.86	3.5 : 1
DRI (n=9)	153.67	51.89	3.0 : 1
MAI (n=11)	129.27	54.36	2.4 : 1
MAII (n=6)	130.50	25.83	5.1 : 1
BAG (n=9)	143.44	52.33	2.7 : 1
BAL (n=8)	140.50	55.88	2.5 : 1

Note. ND:FD Ratio = ratio of weighted score for Non Drinker disposition to weighted score for Frequent Drinker disposition; DRE = Doctoral Extensive; DRI = Doctoral Intensive; MAI = Master's colleges and universities I; MAII = Master's colleges and universities II; BAG = Baccalaureate General; BAL = Baccalaureate Liberal Arts.

Among the scores in Table 10, the highest average weighted score for both the ND and FD disposition was the DRE Carnegie classification with scores of 220.43 and 63.86 respectively. The lowest average weight score for the ND disposition was the MAI classification with 129.27, while the lowest average weighted score for the FD disposition was the MAII classification with 25.83.

Within the scores for Carnegie classification, the most common domain for ND points among all Carnegie classifications was the SA domain. The most common domain for the FD points among all Carnegie classifications was the FE domain. Tables 11 and 12 show the percentage distribution of points by domain for the ND and FD dispositions.

The highest average ND:FD ratio among Carnegie classifications was the MAII with 5.1:1. This ratio indicates that images and headings that appealed to the ND disposition were FIVE times as prominent. The lowest average ND:FD ratio among Carnegie classifications was the MAI with 2.4:1. This ratio indicates that images and headings that appealed to the ND disposition were TWO to THREE times more prominent than those that appealed to the FD disposition.

I calculated a chi-square test of independence to compare the frequency of ND and FD points by Carnegie classification. There was no statistically significant difference in point distribution by classification across all six classifications (chi square = 13.10, df = 1, p = 0.06).

Results for Research Question 3. Research Question 3 asked “Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ by the region where the school is located?” To answer this question, I summarized the average weighted score for each region as shown in Table 13. As these scores show, the viewbooks from

Table 11

Percentage Distribution of Domains for the ND Disposition Across Carnegie Classifications

Carnegie	%SF	%FE	%SA	%SO	%PR	%AD
DRE (n=7)	14.74	8.05	73.39	3.64	0.18	0.00
DRI (n=9)	21.70	6.88	68.63	2.24	0.55	0.00
MAI (n=11)	18.35	6.41	70.46	4.22	0.56	0.00
MAII (n=6)	17.03	5.27	74.89	1.45	1.36	0.00
BAG (n=9)	24.64	9.90	56.66	7.73	1.06	0.00
BAL (n=8)	22.24	10.80	63.84	3.12	0.00	0.00

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs; DRE = Doctoral/research-extensive; DRI = Doctoral/research-intensive; MAI = Master's colleges and universities I; MAII = Master's colleges and universities II; BAG = Baccalaureate General; BAL = Baccalaureate Liberal Arts.

Table 12

Percentage Distribution of Domains for the FD Disposition Across Carnegie Classifications

Carnegie	%SF	%FE	%SA	%SO	%PR	%AD
DRE (n=7)	30.49	53.08	3.70	12.73	0.00	0.00
DRI (n=9)	23.24	67.78	2.13	5.46	0.00	1.39
MAI (n=11)	18.86	70.91	4.24	5.57	0.00	0.41
MAII (n=6)	10.76	54.31	23.26	11.67	0.00	0.00
BAG (n=9)	23.03	70.41	0.65	5.90	0.00	0.00
BAL (n=8)	20.48	66.25	2.34	7.09	0.00	3.84

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs; DRE = Doctoral/research-extensive; DRI = Doctoral/research-intensive; MAI = Master's colleges and universities I; MAII = Master's colleges and universities II; BAG = Baccalaureate General; BAL = Baccalaureate Liberal Arts.

Table 13

Average Weighted ND and FD Scores and ND:FD Ratio for Each Region

Region	Avg. Wt. ND	Avg. Wt. FD	ND:FD Ratios
Northcentral (n=12)	150.25	56.17	2.7 : 1
Northeast (n=12)	185.75	54.00	3.4 : 1
South (n=17)	136.12	55.12	2.5 : 1
West (n=10)	126.20	36.40	3.5 : 1

Note. ND:FD Ratio = ratio of weighted score for Non Drinker disposition to weighted score for Frequent Drinker disposition.

institutions from all regions appeal more to the underlying dispositions of non drinkers (ND) than frequent drinkers (FD).

The results by region were reported using the average combined weighted score for headings and images from the viewbooks of institutions within the Northcentral (12), Northeast (12), South (10), and West (17) regions. Results by region included the ND to FD overall ratio for each region and the average distribution of each domain among ND and FD (indicated using percentages) for each region.

Among the scores in Table 13, the highest average weighted score for the ND disposition was the Northeast region with a score of 185.75, while the highest average weighted score for the FD disposition was the Northcentral region with a score of 56.17. The lowest average weighted score for both the ND and FD dispositions was the West region with 126.20 and 36.40 respectively. Within these scores, the most common domain for ND points among all regions was the SA domain. The most common domain for the FD points among all regions was the FE domain. Tables 14 and 15 show the percentage distribution of points by domain for the ND and FD dispositions.

The highest average ND:FD ratio among regions was the West with 3.5:1. This ratio indicates that images and headings that appealed to the ND disposition were THREE to FOUR times more prominent than those that appealed to the FD disposition. The lowest average ND:FD ratio among regions was the South with 2.5:1. This ratio indicates that for every ONE image or heading that appealed to the FD disposition there were TWO to THREE that appealed to the ND disposition.

Table 14

Percentage Distribution of Domains for the ND Disposition Across Regions

Region	%SF	%FE	%SA	%SO	%PR	%AD
Northcentral (n=12)	19.79	9.06	67.62	2.20	1.32	0.00
Northeast (n=12)	15.07	7.81	72.17	4.70	0.25	0.00
South (n=17)	21.41	6.02	68.84	3.49	0.24	0.00
West (n=10)	24.64	9.11	60.21	5.31	0.72	0.00

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs.

Table 15

Percentage Distribution of Domains for the FD Disposition Across Regions

Region	%SF	%FE	%SA	%SO	%PR	%AD
Northcentral (n=12)	23.27	62.33	1.33	11.56	0.00	1.52
Northeast (n=12)	19.66	62.37	10.76	6.17	0.00	1.04
South (n=17)	16.56	71.44	3.08	7.92	0.00	1.00
West (n=10)	26.92	62.38	5.83	4.88	0.00	0.00

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs.

I calculated a chi-square test of independence to compare the frequency of ND and FD points by Carnegie classification. There was no statistically significant difference in point distribution by classification (chi square = 8.05, df = 1, p = 0.34).

Results for Research Question 4. Research Question 4 asked "Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ between historically Black institutions (HBIs) and non-HBIs?" To answer this question, I summarized the average weighted score for each HBI as shown in Table 16. As these scores show, the viewbooks from institutions from all HBIs (like those of other institutions) appeal more to the underlying dispositions of non drinkers (ND) than frequent drinkers (FD).

The results by HBI status were reported using the average combined weighted score for headings and images for colleges and universities that were considered HBIs (9) and those that were non-HBIs (42). Results by HBI status included the ND to FD overall ratio for HBIs and non-HBIs and the average distribution of each domain among ND and FD (indicated using percentages) for HBIs and non-HBIs.

As Table 16 shows, non-HBIs had a higher average weighted score for both the ND and FD dispositions than HBIs. As expected, the most common domain for ND points among both HBIs and non-HBIs was the SA domain. Also as expected, the most common domain among HBIs and non-HBIs for FD points was the FE domain. Tables 17 and 18 show the percentage distribution of points by domain for the ND and FD dispositions.

The ND:FD ratios for HBIs and non-HBIs were 2.8:1 and 2.9:1 respectively. These ratios indicate that images and headings that appealed to the ND disposition were about THREE times more prominent than those that appealed to the FD disposition, for both HBIs and non-HBIs.

Table 16

Average Weighted ND and FD Scores and ND:FD Ratios by HBI Status

HBI Status	Avg. Wt. ND	Avg. Wt. FD	ND:FD Ratio
HBI (n=9)	81.22	28.89	2.8 : 1
Non-HBI (n=42)	163.74	56.26	2.9 : 1

Note. ND:FD Ratio = ratio of weighted score for Non Drinker disposition to weighted score for Frequent Drinker disposition.

Table 17

Percentage Distribution of Domains for the ND Disposition by HBI Status

Region	%SF	%FE	%SA	%SO	%PR	%AD
HBIs (n=9)	15.88	3.97	76.47	3.23	0.44	0.00
Non-HBIs (n=42)	21.09	8.58	65.75	3.96	0.62	0.00

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs.

Table 18

Percentage Distribution of Domains for the FD Disposition by HBI Status

Region	%SF	%FE	%SA	%SO	%PR	%AD
HBIs (n=9)	12.72	80.74	0.00	6.54	0.00	0.00
Non-HBIs (n=42)	22.65	62.09	6.09	8.03	0.00	1.14

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs.

I calculated a chi-square test of independence to compare the frequency of ND and FD points by HBI status. There was no statistically significant difference in point distribution between these groups (chi square = 3.72, df = 1, p = 0.90).

Six of the nine HBIs were from the South region. The regional results suggest that viewbooks from the South are more likely to appeal to the FD disposition. To further explore Research Question 4, I compared the average ND:FD ratio of the 6 HBIs within the South region and the 11 non-HBIs in the South region (3.5:1 & 2.7:1, respectively). These ratios indicate that viewbooks from HBIs were more likely to appeal to the ND disposition than viewbooks from the non-HBIs within the South region. I also compared the average ND:FD ratio of the six HBIs in the South region to the three HBIs outside of the South region (3.5:1 & 2.1:1). This comparison indicates that viewbooks from HBIs in the South are less likely than viewbooks from HBIs in other regions to appeal to the FD disposition.

Other Results

There were two other categories by which the results were grouped: religious affiliation and women's college status. I chose these categories because they emerged as observable and important characteristics of institutions from some of the 51 viewbooks scored, and because both gender and religious affiliation have been shown in the literature to be associated with significant differences in alcohol consumption.

Results by religious affiliation. I summarized the average weighted score for each institution based on its religious affiliation as shown in Table 19. As these scores show, the viewbooks from both religious and non-religious institutions appeal more to the underlying dispositions of non drinkers (ND) than frequent drinkers (FD).

Table 19

Average Weighted ND and FD Scores and ND:FD Ratios by Religious Affiliation

Religious Affiliation	Avg. Wt. ND	Avg. Wt. FD	ND:FD Ratios
Religious (n=9)	120.67	42.00	2.9 : 1
Non-religious (n=42)	155.29	53.45	2.9 : 1

Note. ND:FD Ratio = ratio of weighted score for Non Drinker disposition to weighted score for Frequent Drinker disposition.

I summarized the results by religious institutions using the average combined weighted score for headings and images for colleges and universities that I considered religious (9) and those that were non-religious (42). Results by religious institution included the ND to FD overall ratio for religious and non-religious institutions and the average distribution of each domain among ND and FD (indicated using percentages) for religious and non-religious institutions.

As Table 19 shows, non-religious institutions had higher average weighted scores for both the ND and FD dispositions than religious institutions. As expected, the most common domain for ND points for both religious and non-religious institutions was the SA domain. Also as expected, the most common domain for both religious and non-religious institutions for FD points was the FE domain. Tables 20 and 21 shows the percentage distribution of points by domain for each disposition.

The ND:FD ratio for both religious and non-religious institutions was 2.9:1. ND images and headings were approximately THREE times more prominent than those that appealed to the FD disposition.

I calculated a chi-square test of independence to compare the distribution of ND and FD points by religious status. There was no statistically significant difference in point distribution by religious status (chi square = 3.78, df = 1, p = 0.96).

Results by women's college status. I summarized the average weighted score for each institution that was a women's college as shown in Table 22. As these scores show, the viewbooks from both co-educational and women's colleges appeal more to the underlying dispositions of non drinkers (ND) than frequent drinkers (FD).

I reported the results by women's colleges using the average combined weighted score for headings and images for colleges and universities that were considered co-educational (48)

Table 20

Percentage Distribution of Domains for the ND Disposition by Religious Affiliation

Rel. Affiliation	%SF	%FE	%SA	%SO	%PR	%AD
Religious (n=9)	31.75	8.69	51.66	6.84	1.06	0.00
Non-religious (n=42)	17.69	7.57	71.07	3.18	0.49	0.00

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs.

Table 21

Percentage Distribution of Domains for the FD Disposition by Religious Affiliation

Rel. Affiliation	%SF	%FE	%SA	%SO	%PR	%AD
Religious (n=9)	24.28	65.75	0.74	5.82	0.00	3.41
Non-religious (n=42)	20.17	65.31	5.93	8.18	0.00	0.41

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs.

Table 22

Average Weighted ND and FD Scores and ND:FD Ratios by Women's College Status

W. C. Status	Avg. Wt. ND	Avg. Wt. FD	ND:FD Ratios
Co-educational (n=48)	171.00	36.33	2.9 : 1
Women's college (n=3)	1147.81	52.38	2.9 : 1

Note. ND:FD Ratio = ratio of weighted score for Non Drinker disposition to weighted score for Frequent Drinker disposition.

and those that were women's colleges (3). Results by women's college status included the ND to FD overall ratio and the average distribution of each domain among ND and FD (indicated using percentages) for co-educational and women's colleges.

As Table 22 shows, the women's colleges had higher average weighted scores for the ND disposition with 171.00, while co-educational institutions had higher average weighted scores for the FD disposition with 52.38. As expected, the most common domain for ND points for both co-educational and women's colleges was the SA domain. Also expected, the most common domain for both co-educational and women's colleges for FD points was the FE domain. Tables 23 and 24 shows the percentage distribution of points by domain for each disposition.

The ND:FD ratio for co-educational institutions was 2.8:1. ND images and headings were approximately THREE times more prominent than those that appealed to the FD disposition. The ND:FD ratio for women's colleges was 4.7:1. ND images and headings were approximately FIVE times more prominent than those that appealed to the FD disposition..

I calculated a chi-square test of independence to compare the distribution of ND and FD points among women's colleges. There was a statistically significant difference in point distribution among women's colleges (chi square = 5.53, df = 1, p = 0.03). Of the five descriptive characteristics I examined, women's colleges were the only ones that returned a statistically significant difference from the overall average on the chi-square analysis. Table 25 summarizes the chi-square comparisons across all the groups in this study.

Table 23

Percentage Distribution of Domains for the ND Disposition by Women's College Status

Women's College Status	%SF	%FE	%SA	%SO	%PR	%AD
Co-educational (n=48)	17.63	13.95	66.66	1.75	0.00	0.00
Women's colleges (n=3)	20.33	7.38	67.70	3.96	0.63	0.00

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs.

Table 24

Percentage Distribution of Domains for the FD Disposition by Women's College Status

Women's College Status	%SF	%FE	%SA	%SO	%PR	%AD
Co-educational (n=48)	29.63	50.46	0.00	19.91	0.00	0.00
Women's colleges (n=3)	20.35	66.32	5.33	7.01	0.00	0.99

Note. SF = Self and Family; FE = Friends and Entertainment; SA = School and authority; SO = Society; PR = Problems; AD = Alcohol and Drugs.

Table 25

The Results of Chi-Square Comparisons Across all Groups in the Study

Groups of Institutions for χ^2 Analysis	χ^2	p
Carnegie Classifications	13.10	0.06
Regional	8.05	0.34
HBIs & non HBIs	3.72	0.90
Religious & non religious inst.	3.78	0.96
Women's college and coed inst.	5.53	0.03

Note. n=51, $\alpha = 0.05$, and df = 1 for all analyses.

Differences by Individual Institutions

Along with the chi-square analyses to determine difference by institutional groups, I also conducted chi-square analyses comparing each institution to all institutions in the data set. Table 26 shows the results of these tests, along with any descriptive characteristics, for each institution.

Atypical Images

During my analysis, I discovered certain images that were atypical when compared with most other viewbook images. Figure 17 shows an image from Well-Known Catholic University. (I used pseudonyms here and throughout to protect the identity of institutions used in this study.) This image was one of only four that actually pictured drinking or suggested alcohol service or use. The viewbook from Middle U.S. Inspirational College (MUSIC) included two images that indicated alcohol service and/or use (see Figures 18 and 19). Finally, Figure 20 shows an image from Elvis State University that pictures a smoky saloon. Surprisingly, three of these images were from viewbooks from two religiously affiliated institutions, where I least expected to find such direct appeals to the FD disposition.

Table 26

Chi-square Results for Each Institution as Compared to All Institutions in the Data Set

Institution	Carnegie	Region	HBI?	Religious?	Coed?	ND:FD	χ^2	p
Inst. 1	DRI	South	Y	N	N	2.9 : 1	3.812	0.988
Inst. 2	MAI	South	Y	N	Y	10.0 : 1	10.900	0.018
Inst. 3	MAI	West	N	N	Y	3.7 : 1	4.615	0.469
Inst. 4	BAL	Northeast	N	N	Y	1.8 : 1	2.732	0.027
Inst. 5	BAG	West	N	Y	Y	2.9 : 1	3.838	0.961
Inst. 6	BAG	Northcentral	Y	N	Y	1.9 : 1	3.932	0.839
Inst. 7	BAL	South	N	N	Y	2.4 : 1	2.407	0.002
Inst. 8	MAI	South	Y	N	Y	5.0 : 1	5.900	0.122
Inst. 9	DRI	Northeast	N	Y	Y	2.6 : 1	3.460	0.591
Inst. 10	MAI	Northcentral	N	N	Y	7.1 : 1	8.031	0.001
Inst. 11	MAII	West	N	N	Y	1.4 : 1	2.310	0.023
Inst. 12	MAI	South	N	N	Y	1.5 : 1	2.368	0.000
Inst. 13	MAII	Northcentral	N	N	Y	3.8 : 1	4.727	0.216
Inst. 14	DRE	South	N	N	Y	10.9 : 1	11.758	0.001
Inst. 15	BAG	South	N	N	Y	1.8 : 1	2.692	0.019
Inst. 16	BAG	Northcentral	N	Y	Y	3.9 : 1	4.772	0.231
Inst. 17	MAI	South	Y	N	Y	3.9 : 1	4.772	0.231
Inst. 18	Teacher C.	Northcentral	Y	N	Y	1.6 : 1	2.532	0.027
Inst. 19	BAL	Northeast	N	Y	Y	2.9 : 1	3.811	0.987

Institution	Carnegie	Region	HBI?	Religious?	Coed?	ND:FD	χ^2	p
Inst. 20	MAI	Northcentral	N	N	Y	2.1 : 1	2.972	0.107
Inst. 21	MAI	South	N	N	Y	1.0 : 1	1.923	0.000
Inst. 22	BAL	West	N	N	Y	2.0 : 1	2.887	0.079
Inst. 23	MAI	Northeast	Y	N	Y	6.4 : 1	7.312	0.009
Inst. 24	DRE	Northeast	N	N	Y	1.6 : 1	2.523	0.011
Inst. 25	MAII	South	N	N	Y	5.7 : 1	6.553	0.003
Inst. 26	DRI	Northcentral	N	N	N	2.5 : 1	3.412	0.480
Inst. 27	DRI	South	N	N	Y	1.8 : 1	2.681	0.053
Inst. 28	DRI	West	N	N	Y	3.2 : 1	5.691	0.009
Inst. 29	DRI	West	N	N	Y	2.6 : 1	4.125	0.632
Inst. 30	BAL	Northcentral	N	Y	Y	1.0 : 1	3.519	0.651
Inst. 31	DRE	Northeast	N	N	Y	4.8 : 1	1.933	0.000
Inst. 32	BAG	Northcentral	N	Y	Y	2.0 : 1	5.489	0.140
Inst. 33	BAG	West	N	Y	Y	4.6 : 1	2.872	0.076
Inst. 34	DRE	Northcentral	N	N	Y	1.7 : 1	2.555	0.008
Inst. 35	DRE	West	N	N	Y	7.7 : 1	8.643	0.000
Inst. 36	BAG	Northeast	N	N	Y	2.4 : 1	3.273	0.408
Inst. 37	MAI	Northeast	N	N	Y	1.8 : 1	2.690	0.025
Inst. 38	DRE	Northcentral	N	N	Y	11.0 : 1	11.942	0.000
Inst. 39	MAII	West	N	Y	Y	7.1 : 1	8.025	0.003
Inst. 40	BAG	Northeast	N	N	Y	6.0 : 1	6.920	0.001

Institution	Carnegie	Region	HBI?	Religious?	Coed?	ND:FD	χ^2	p
Inst. 41	MAII	South	Y	N	Y	1.8 : 1	2.747	0.232
Inst. 42	DRI	Northeast	N	N	Y	4.0 : 1	4.900	0.152
Inst. 43	MAI	Northeast	N	N	Y	3.7 : 1	4.567	0.323
Inst. 44	BAL	Northcentral	N	N	Y	3.6 : 1	4.530	0.407
Inst. 45	MAII	Northeast	N	N	N	25.8 : 1	3.810	0.994
Inst. 46	DRI	South	Y	N	Y	2.9 : 1	26.734	0.000
Inst. 47	DRE	South	N	N	Y	1.5 : 1	2.351	0.000
Inst. 48	BAG	South	N	N	Y	3.0 : 1	4.810	0.160
Inst. 49	BAL	South	N	Y	Y	4.3 : 1	3.875	0.917
Inst. 50	BAL	West	N	N	N	3.5 : 1	5.206	0.107
Inst. 51	DRI	South	N	N	Y	3.9 : 1	4.377	0.447

Note. $\alpha = 0.05$ and df = 1 for all analyses. ND:FD Ratio = ratio of weighted score for Non Drinker disposition to weighted score for Frequent Drinker disposition; DRE = Doctoral/research-extensive; DRI = Doctoral/research-intensive; MAI = Master's colleges and universities I; MAII = Master's colleges and universities II; BAG = Baccalaureate General; BAL = Baccalaureate Liberal Arts.

Figure 17. A portion of an image found in Well-Known Catholic University's viewbook. This picture shows large crowds and some people carrying cups of beer.

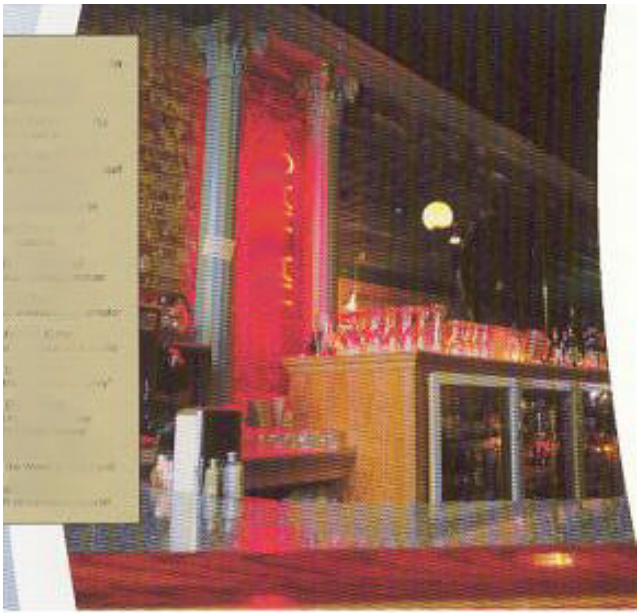

Figure 18. This is an image from the Middle U.S. Inspirational College viewbook. It clearly shows alcoholic beverages in and on top of a cooler, along with numerous glasses often used for alcohol consumption (i.e. shot glasses).

Figure 19. This image (also from Middle U.S. Inspirational College) shows students and a faculty member in a social setting. It is difficult to see what kind of bottles are on the shelves in the background, but they closely resemble liquor bottles.

Figure 20. This image, found in the Elvis State viewbook, shows a smoky saloon environment. The mere inclusion of the word “saloon” on the sign suggests alcohol use.

Chapter Five

Discussion

The purpose of this study was to analyze how college and university viewbooks appeal to the different underlying dispositions of college students (non drinker vs. frequent drinker dispositions). This study was an extension of Goree and Szalay's (1996) studies of the underlying dispositions of college students in relation to the campus environment. This study focused on how students' underlying dispositions affect their perceptions of an institution they might choose to attend. I chose to analyze viewbooks because they are intended to influence prospective students' decisions to attend an institution and because Goree and Szalay suggested this as a next logical step in that line of research.

I used purposive sampling methods and chose two major descriptive characteristics (Carnegie classification and region) to select the viewbooks I analyzed in the study. Of the 75 institutions I contacted to request a viewbook, 51 responded.

Four major research questions guided this study. The results described in Chapter Four are discussed below, first in terms of each research question, then in terms of additional findings.

Viewbook Appeals to Frequent Drinkers and Non Drinkers

Research Question 1 asked "How do college and university viewbooks appeal to the dispositions of students who are non drinkers and frequent drinkers?" Every viewbook I examined had a stronger appeal to the non drinker (ND) disposition than to the frequent drinker (FD) disposition. On average, the weighted scores for the ND disposition were three times higher than for the FD disposition. This means that the prominence of images and headings that

appealed to the ND disposition was about three times greater than the prominence of images and headings that appealed to the FD disposition.

This study was based on Goree and Szalay's (1996) recommendation that institutions review their recruitment materials. That recommendation anticipated that institutions might be appealing inadvertently to frequent drinkers. This study found instead that most viewbooks are at least somewhat more supportive of the non drinker disposition.

Of the six domains used to classify an image or heading under the ND disposition, the School and Authority (SA) domain occurred most frequently in every viewbook I examined. Most images in this domain included pictures of students studying, in class, or speaking with faculty; or the pictures showed professors in classes or labs. The headings that most often indicated the SA domain were "academics," "degrees," "programs of study," and "the faculty."

According to Goree and Szalay (1996), non drinkers value academics, authority figures, studying, homework, and knowledge, to name a few concepts in the SA domain. In general, college and university viewbooks do a good job of appealing to non drinkers by highlighting academics and study-based environments.

When viewbooks appealed to the FD disposition it was most often through the Friends and Entertainment (FE) domain. Most images that indicated this domain included pictures of athletic and social events, while others showed Greek organizational letters and events. Few headings appealed to the FD disposition. Some that did included "athletics" and "Greek life."

According to Goree and Szalay (1996), frequent drinkers feel athletics, social activities, Greek involvement, and partying are important in their college lives. College and university viewbooks often use athletics and Greek organizations as marketing tools to recruit students to

apply or yield tools to convince students to attend their institution. When viewbooks emphasize these social activities, they are likely to appeal to frequent drinkers more than to non drinkers.

Findings by Carnegie Classification

Research Question 2 asked "Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ by the institution's Carnegie Classification?" I found that Master's colleges and universities II (MAII) and Doctoral Extensive (DRE) institutions had the most positive ND:FD ratios (5.1:1 and 3.5:1 respectively).

The average weighted score for the MAII classification was considerably higher than the average weighted score for the FD disposition. The ratio of ND:FD for MAII institutions showed that the viewbooks for these institutions were about five times more appealing to the ND disposition than to the FD disposition.

Notably, viewbooks from Doctoral Extensive institutions (DRE) had a 3.5:1 ND:FD ratio, indicating that images and headings were more than three times more appealing to the ND disposition than the FD disposition. This is surprising because the average enrollment for the DRE institutions sampled was over 20,000 students per institution. According to the work of Goree and Szalay (1996), smaller, more family-oriented environments (found more often in the baccalaureate and master's Carnegie classifications) are more likely to appeal to the ND disposition.

Based on previous literature, I expected that doctoral institutions would be more likely to have a lower ND:FD ratio (i.e. to be only somewhat more appealing to the ND disposition than to the FD disposition) as compared to master's and baccalaureate institutions. However, according to my findings DRE institutions had higher than average ND:FD ratios.

Results by Region

Research Question 3 asked "Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ by the region where the school is located?" The analysis revealed that viewbooks from institutions in the West and Northeast had a stronger appeal to the ND disposition than viewbooks from the Northcentral and South. According to Presley et al. (1996), the results of the CORE Survey showed that students in the Northeast were more likely to use alcohol than students from other regions and students in the South were more likely to abstain from alcohol use than students from other regions.

Again, my findings were contrary to my expectations. Based on previous literature, I had expected ND:FD ratios to be lowest in the Northeast and highest in the South. Instead, I found the opposite. My findings show that a student who displays more characteristics indicative of the FD disposition would be more likely to exhibit interest in attending schools in the South rather than the Northeast. However, as shown in the results of the CORE survey, students in the Northeast are more likely to use or consume alcohol than those in the South. In essence, college and university viewbooks from the South are more likely to appeal to the FD disposition than viewbooks from other regions, but their eventual student bodies often drink less than students from institutions in other regions.

Historically Black Institutions (HBIs)

Research Question 4 asked "Do appeals to the underlying dispositions of students who are non drinkers and frequent drinkers differ between historically Black institutions (HBIs) and non-HBIs?" I found that there was no significant difference in the appeals of viewbooks from HBIs and non-HBIs. National studies have shown that Black students drink considerably less

than most other students (1.9 drinks per week as opposed to 5 drinks per week for White and Native American students; Presley et al., 1996). According to Wechsler, Lee, Kuo et al. (2000) Black students had more abstainers and fewer binge drinkers than any other ethnicity.

Based on this previous literature, I expected viewbooks from HBIs to appeal much more to the ND disposition than the FD disposition. They should therefore have a much higher ratio of ND:FD points than non-HBIs. However, this was not the case. The ND:FD ratios from non-HBIs were only slightly higher than for HBIs (2.9:1 and 2.8:1 respectively) and chi-square analysis reveled no significant difference in the space distribution between these groups.

There were interesting findings not anticipated in the original four research questions. Nine viewbooks came from institutions with a stated or apparent religious affiliation. There were also three viewbooks that came from women's colleges. The following section discusses findings by institutional religious affiliation and women's college status.

Religious Institutions

As I scored the viewbooks, it was apparent that certain institutions were religiously affiliated. The analysis of viewbooks from religiously affiliated institutions and non-religious institutions showed that the appeals to the ND and FD dispositions were virtually the same for both types of institutions.

According to Wechsler, Lee, Kuo, et al. (2000) there was no significant difference in the binge drinking habits of students from religious and non-religious institutions. However, Goree and Szalay's (1996) research found that students with the ND disposition are much more likely to participate in or value religious involvement. Other researchers have found connections between a student's religious affiliation and lower rates of drinking (Clarke, Beeghley, & Cochran,

1990). The results of my analysis are surprising because if students with the ND disposition are more likely to value religion in their lives, then it would be logical that viewbooks from religiously affiliated institutions would appeal more to the ND disposition than those from non-religious schools. However, the ND:FD ratio was 2.9:1 for viewbooks from both religious and non-religious institutions.

Women's Colleges

The women's college status of an institution is an indicator of the level of alcohol use at the institution. The results of the CORE Survey revealed that women drink less than men (Presley et al., 1996). According to Wechsler, Lee, Kuo et al., (2000) students who attend women's colleges drink about 30% less than students from non-women's colleges. I included an analysis of women's colleges and co-educational institutions in my results. I found that viewbooks from women's colleges appealed much more to the ND disposition than to the FD disposition (an ND:FD ratio of 4.7:1 v. 2.8:1).

The findings for women's colleges were limited by the fact that only three viewbooks were from women's colleges (6% of the viewbooks analyzed). Although this small number is a concern, I found that my analysis was similar to other major studies. For example, in the 1999 College Alcohol Study, only 6 out of 113 institutions (5% of institutions included in the study) were from women's colleges, and yet the College Alcohol Study researchers felt comfortable enough to report their analysis by women's college status.

Individual Institutions

The average ND:FD ratio across all institutions was 2.9 : 1. However, the range across institutions was 24.8 : 1 (the highest ND:FD ratio was the Inventor College viewbook with 25.8 : 1, while the lowest were the American Gator College and the Middle U. S. Inspirational College viewbooks with 1.0 : 1. There were 30 viewbooks with an ND:FD ratio greater than the average ratio and 21 viewbooks with an ND:FD ratio less than or equal to the average.

Viewbook Appeals

Based on the findings of Goree and Szalay (1996) I expected to find that many, if not all, college and university viewbooks appealed to the FD disposition more then to the ND disposition. However, my findings revealed that viewbooks are more likely to appeal to the ND disposition than to the FD disposition. Three good examples of viewbooks that appeal to the ND disposition are Boiler University, Inventor College, and Strong Women's College.

The best viewbooks. Boiler University, a DRE university in the Northcentral region, had an overwhelming appeal to the ND disposition. Boiler U is a prominent Midwestern school with a large number of students and outstanding sports teams. Boiler U's high appeal to the ND disposition through its viewbook was due to the pictures that focused heavily on academics and environmental comfort. The viewbook did not highlight the institution's large size and it used very few images that suggested athletic involvement (see Figures 21 & 22).

In reality, Boiler U is an institution with key features (size and athletic success) that would appeal to frequent drinkers, and other key features (academic prominence) that would appeal more to non drinkers. Boiler U's viewbook is exemplary because it emphasized the academic features almost to the exclusion of the institutional size and athletic features.

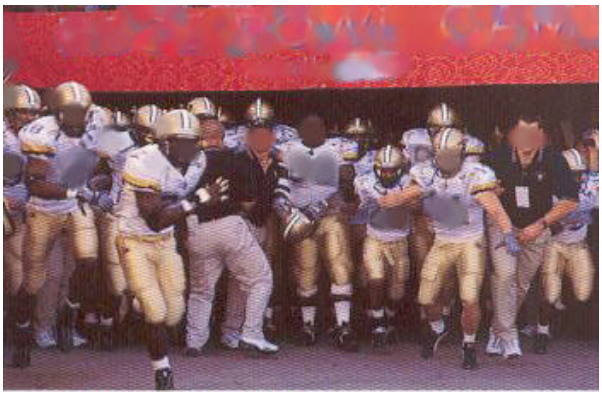

Figure 21. One of the few images used by Boiler University that appealed to the FD disposition.

Figure 22. One of the few images used by Boiler University that appealed to the FD disposition.

Inventor College had the highest ND:FD ratio of the 51 institutions in this study (25.8 : 1). This was largely due to the number of images and headings that focused on academics, the classroom, and faculty interaction (see Figures 23 & 24). There were only two images that appealed to the FD disposition in this viewbook. Inventor College, an MAII institution in the Northeast region, was clearly committed to marketing the scholastic attributes of the institution, giving this institution a strong appeal to the ND disposition. Unlike Boiler U, Inventor College has no apparent athletic programs or Greek organizations.

Strong Women's College (SWC), an MAII institution in the South region, had a 5.7 : 1 ND:FD ratio. The images and headings in SWC's viewbook included numerous section headings that highlighted "intellect" and "character" as attributes of the SWC student body (see Figure 25). It also had large images that pictured women in family environments on a beautiful campus and participating in academic activities (see Figure 26). The only appeals to the FD disposition showed athletics. The important thing that Boiler U., Inventor College, and SWC accomplished was including prominent images and headings that illustrated academics and a human-scale, comfortable environment.

Notable exceptions. Although all viewbooks in this study appealed to the ND disposition more than the FD disposition, there were a few viewbooks whose ND:FD ratios were close to 1 : 1, far lower than the average. There were also a few images that had surprisingly strong appeals to the FD disposition.

Middle U.S. Inspirational College (MUSIC), a small, BAL college in the Northcentral region, had an ND:FD ratio of 1.02 : 1. The viewbook included as much emphasis on being involved and having fun as it did on studying and interacting with faculty. The main reason the viewbook had high appeals to the FD disposition was that many of the images were very busy.

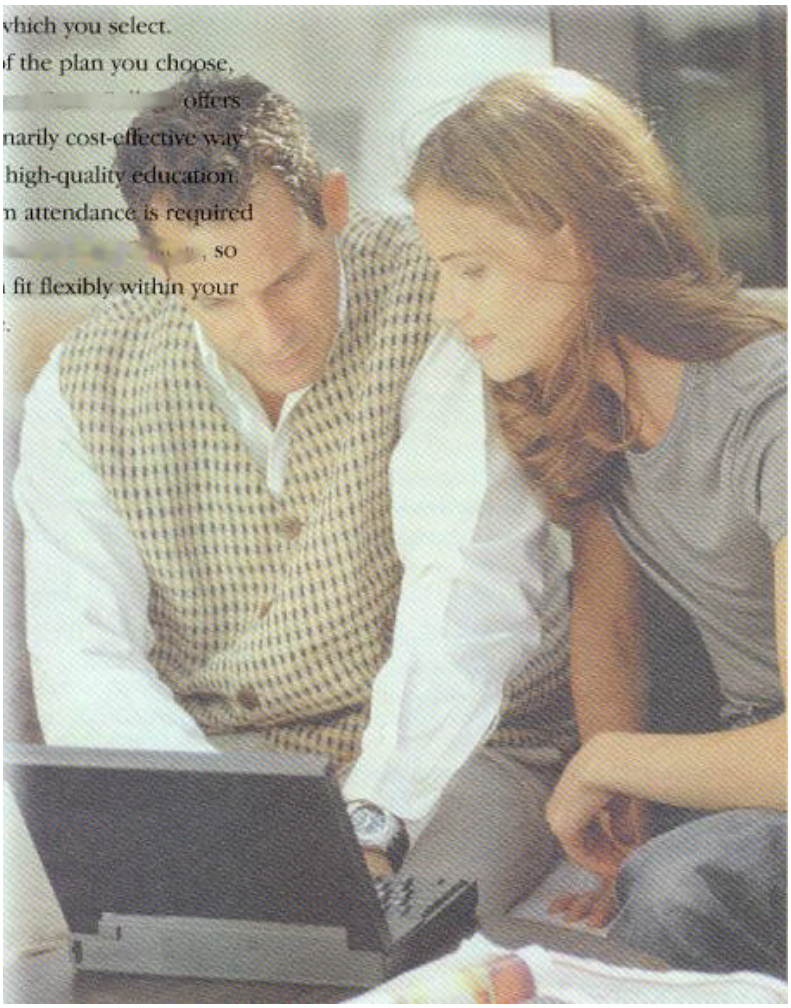

Figure 23. One of many images that Inventor College used to appeal to the ND disposition.

Figure 24. One of the many images Inventor College used to appeal to the ND disposition.

Figure 25. This heading is one of many Strong Women's College used to appeal to the ND disposition.

Figure 26. This image is one of many that Strong Women's College used to appeal to the ND disposition.

They had some pictures and small items that suggested a crowded and active environment (see Figures 27 and 28). The images that suggested academics, studying, and faculty interaction were effective, but there were fewer of them.

Turkey State University, a large, DRE institution from the South, had an ND:FD ratio of 1.5 : 1. Turkey State had many images that appealed to the FD disposition, particularly those that pictured athletic events and large group environments. The main reason for the low ratio, is that many of the images that appealed to the FD disposition were prominent (i.e., large and centered; see Figure 29).

There were four images that had very strong appeals to the FD disposition. An image found in Well-Known Catholic U. pictured a large group, outdoors, at a social event. There were at least four people holding cups of beer in this picture (see Figure 30). One image in the MUSIC viewbook showed a bar filled with bottles of liquor, beer, and shot glasses (see Figure 31). Another from the MUSIC viewbook showed some students and a faculty member in a room that had what appeared to be liquor bottles on the shelves beside them (see Figure 32). Elvis State University had an image that pictured a rock band playing in a dark, smoky environment, with a sign that had “saloon” on it (see Figure 33). (These images are repeated from Chapter Four for the convenience of the reader.)

In this study I scored approximately 1800 images in 51 viewbooks. Only these four images referred directly to alcohol and showed drinking as a part of the college environment. The purpose of this analysis was to identify and analyze the subtle appeals to the ND and FD dispositions. These images were not subtle.

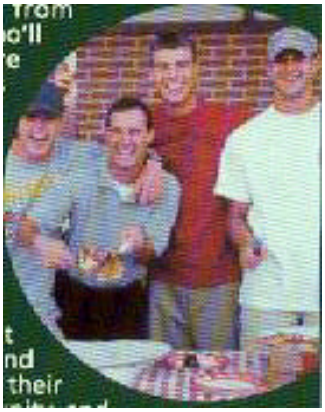

Figure 27. This picture represents the active nature of images from MUSIC that appealed to the FD disposition.

Figure 28. This image shows the big city where MUSIC is located. This kind of image appeals to the FD disposition.

Figure 29. Turkey University placed this image prominently centered and overlapping two pages in their viewbook.

Figure 30. Well-Known Catholic University used this image in its viewbook. Notice the clear cups of beer in the picture (circled).

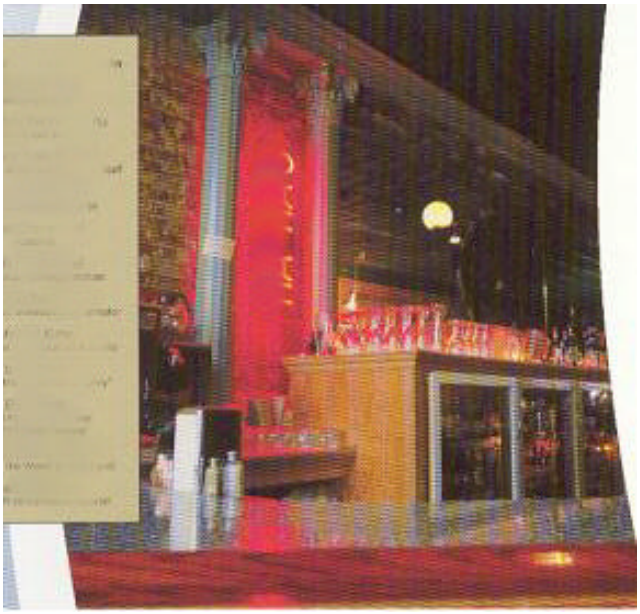

Figure 31. This is an image from the Middle U.S. Inspirational College viewbook. It clearly shows alcoholic beverages in and on top of a cooler, along with numerous glasses often used for alcohol consumption (i.e. shot glasses).

Figure 32. This image (also from Middle U.S. Inspirational College) shows students and a faculty member in a social setting. It is difficult to see what kind of bottles are on the shelves in the background, but they closely resemble liquor bottles.

Figure 33. This image, found in the Elvis State viewbook, shows a smoky saloon environment. The mere inclusion of the word “saloon” on the sign suggests alcohol use.

Viewbook Influence

Admissions offices should want to recruit, accept, and retain students with a non drinker disposition. The results of this study indicate that they already market their institutions to non drinkers, although some institutions appeal more strongly to non drinkers than do other institutions. In every viewbook I analyzed, the content that appealed to nondrinkers was more prominent than the content that appealed to frequent drinkers. Despite this college students still drink, and many of them drink heavily.

This phenomenon might be explained by social norming theory (Prentice & Miller, 1993). Even though the results of this study indicate that colleges and university viewbooks appeal more to non drinkers, the student who attend colleges might find themselves influenced by their peers. Even if institutions manage to attract more non drinkers to their institution, the frequent drinkers that attend the institution may have a stronger influence on their peers that do other aspects of the campus environment.

Elements of the campus environment inevitably have some influence on college students. As expressed in person-environment theory, there is always an interaction between the person and their surrounding environment. In this study the aspect of the environment was the viewbook. Although the results of this study suggest students may not be strongly influenced by viewbooks, they are influenced by some aspects of the campus environment. While person-environment theory indicates a reciprocal relationship between person and environment, my findings suggest that viewbooks do not produce a significant response from their audience.

The results of this study suggest that while viewbooks might appeal to non drinkers, they have little impact in shaping the campus environment to inhibit students' drinking. Students with FD dispositions still choose to attend these institutions, and even sometimes prefer those whose

viewbooks would have the strongest appeals for non drinkers, based on Goree and Szalay's (1996) research. Apparently, either these appeals are too subtle to influence college choices differently by disposition; or other factors (e.g., institutional reputation, family ties, geographic location, etc.) are stronger influence in the choice of which institution to attend. Alternately, the viewbooks may in fact be recruiting prospective students according to their underlying dispositions. However, other personal or environmental factors may have a stronger influence on the students' ultimate drinking behaviors than the distribution of personal dispositions toward alcohol in the student body.

Implications of the Study

The results of this study have implications for practice in college and university admissions offices. This study also has implications for future research.

Implications for practice. Even though the overall appeal of viewbooks to the ND disposition appears to be too subtle to affect the student body composition by disposition or student drinking behaviors, some images found in this study were blatantly supportive of drinking. Images that plainly show alcohol or places that serve alcohol should never be a part of any viewbook. It would serve admissions offices well to review their existing viewbooks and avoid including any images or headings that clearly suggest alcohol use. Such images are far outside the norm for college viewbooks and they suggest direct support for drinking behaviors that are dangerous for students and costly for universities.

The results of this study also have implications for college alcohol educators. They suggest that these educators need not concern themselves with the impact of recruitment

materials on the drinking behaviors of college students. Instead they should concentrate their efforts on other aspects of the environment that have been shown to affect drinking.

Implications for future research. There were two major limitations to this study. One concerned the number of viewbooks analyzed. There were only 51 viewbooks scored out of thousands of institutions in the U.S. While this sample is representative of many characteristics of college and universities, it does not fully account for the content of all viewbooks. Future researchers could examine a larger number of viewbooks.

The second limitation concerned the use of ND:FD ratios as the basis of analysis. I assumed that a 1 : 1 ratio represented a neutral appeal by disposition. I expected to find ratios lower than 1 : 1 but instead I found higher ratios at every institution in my study. It may be that a different analysis would show results closer to my original expectations. That is, institutions with ND:FD ratios significantly lower than other institutions could be attracting frequent drinkers at a higher rate than institutions with ratios that are significantly higher than the average. Future researchers could investigate this question.

This study calls into question whether other aspects of the campus environment described by Goree and Szalay (1996) can in fact shape students' drinking behaviors as they suggest. This is a serious question with wide-ranging implications for the whole body of scholarship on environmental influences on college students drinking. Future researchers should re-examine all the subtle aspects of the campus environment described by Goree and Szalay (1996) to determine whether they, in fact, support or inhibit drinking as those authors suggest. It may be that none of these elements is a significant determiner of student drinking, or it may be that some are strong factors and others are not, or it could be that clusters of environmental factors are required to

have a measurable influence on student drinking. Until that research is done, however, the results of this study cast some doubt on all their conclusions.

Conclusions

In marketing, the goal is to appeal to the consumer in as many ways as possible. In many cases, these appeals are subtle and intended to please the subconscious. Goree and Szalay (1996) suggest that studying recruitment materials might reveal that colleges and universities inadvertently draw frequent drinkers rather than non drinkers to their campuses. This study showed that admissions offices do an effective job of appealing more to the ND disposition than the FD disposition.

Person-Environment theory suggests that the person and environment counterbalance each other. In fact, the theory implies that shaping an environment can prove instrumental in achieving the desired behaviors of the people within. Colleges and universities should want to shape the behaviors of their students through any means, particularly through the environment. However, this study presents evidence that viewbooks are not an effective vessel from which to shape the campus environment in relation to alcohol.