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**Academic dishonesty: The impact of student and institutional
characteristics on cheating behavior**

Hanson, Ann Craig, Ph.D.

University of California, Los Angeles, 1990

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Los Angeles

Academic Dishonesty:

**The Impact of Student and Institutional Characteristics
on Cheating Behavior**

**A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Education**

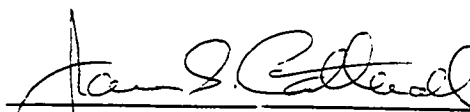
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Ann Craig Hanson

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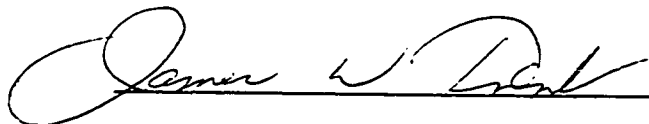
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1990

For John, Craig and Matthew

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ABSTRACT OF DISSERTATION

Academic Dishonesty:
The Impact of Student and Institutional Characteristics
on Cheating Behavior

by

Ann Craig Hanson

Doctor of Philosophy in Education

University of California, Los Angeles, 1996

Professor Alexander W. Astin, Chair

A recent national cohort of college students was used to test a new model for understanding what leads students to cheat and to determine which college environments are most and least effective in handling cheating problems.

The major hypotheses concerned the likely effects of three personal traits on cheating behavior: Drive and Ambition, Academic Self-Concept, and Effort. Longitudinal data from the Cooperative Institutional Research Program's freshman and follow-up surveys were used to compare information about student's personal qualities, students' demographic characteristics, precollege and college activities with three measures of cheating: cheating on examinations, copying homework, and a combined measure of cheating constructed from both measures. Relevant information about administrative practices employed to discourage cheating was

collected using an administrative climate survey sent to the 446 institutions attended by the students.

Following the "input / environment / output" model, "blocked," stepwise regression analysis was used to determine the predictors of cheating behavior by entering the independent variables into regressions according to their temporal order of occurrence.

Eighteen percent of the respondents admitted cheating on an examination and 29% admitted copying homework during their first two years of college.

Results of the multivariate analyses generally confirmed the major hypotheses: Cheating is negatively associated with both Academic Self-Concept and Effort and positively associated with Drive and Ambition. The findings suggest, however, that Drive and Ambition might be more appropriately labeled as "materialism." The data also suggest that: the positive effect of materialism on cheating is magnified if the student also has low academic self-esteem and displays a low level of effort.

Reasons for attending college are important predictors: students who attend college primarily to learn cheat less and those who attend college primarily to make money cheat more. Those students who are overly involved in "hedonistic" types of activities in college cheat more.

Institutions with honor systems, explicit academic honesty codes, special academic honesty handouts, adjudication boards composed of students or faculty, and harsh sanctions tend to have

less cheating. Institutions with the most cheating use proctor systems, handle cases through a separate administrative office, and remind students during a test not to cheat.

CHAPTER I
INTRODUCTION

Background

Recent social and political developments in the United States have generated what has been referred to by some as a national crisis of ethics. Shapiro (1987), in a recent feature article in Time, described America as a country that is "wallowing in a moral morass" (p. 15). National ethical scandals such as Contragate, insiders' trading on Wall Street, defense contractors selling hardware to the government at exorbitant markups, and other forms of official corruption are frequent themes of daily news. Personal morals are also under scrutiny, and the crisis of leadership in the television ministries and political campaign morality--adultery, cheating in law school and drug use--have all generated discussion of moral principles.

Nowhere is this crisis more noticeable than at the top levels of federal government, where legal or ethical charges were brought against 100 members of the Reagan administration (Stengal, 1987). Although these cases have received most of the media attention, in many instances the average citizen is equally guilty of a variety of unethical actions. We have become adept at stealing office supplies (justified as perks of the job), using company phones for personal long distance calls, overreporting hours worked for extra pay, using company time and equipment for personal business, income

tax evasion, falsification of resumes, welfare cheating and shoplifting (Stone, 1977; Why cheating is, 1984).

We are living during a period in American history in which power, prestige and money, rather than charitable works or moral values, are the measures of one's worth; "Mindless materialism . . . (has) left in its wake a values vacuum" (Shapiro, 1987, p. 14).

During this period of national concern about ethics and morality, an examination of higher education institutions has revealed a number of examples of immorality and dishonesty. These include cases of forged research data at the University of California, San Diego, misappropriations of institutional money for private use at University of California, Santa Barbara, and faculty and staff stealing equipment from a number of schools.

Among college students, theft from and vandalism to college libraries and facilities occur frequently (Carnegie Council on Policy Studies in Higher Education, 1980), and examples of misuse of college funds, financial aid abuse and academic dishonesty are common occurrences. Not only is the number of reported incidents high, but there is a growing body of evidence which suggests that cheating schemes are becoming increasingly sophisticated and complex.

Students have replaced traditional crib sheets with more clever methods of examination cheating, such as answers hidden in a variety of places--dummy pens and pencils, matchbook covers,

cigarette packages and lighters, glasses cases, sticks of gum, socks or shirt cuffs and scrolled in watch bands. Students have also written answers on their legs, thighs, hands and arms. In one reported instance a student went so far as to feign deafness and wear an ear phone plug to class during the term, in order to wear the plug attached to a cassette recorder during the final. It was also reported that students use hand calculators in which they have stored answers in the memory of the calculator (Cheating in college, 1979; Wellborn, 1980; Weldon, 1966).

Even more unfortunately, students have gone beyond enhancing their own advantage to deliberately sabotaging others by stealing, hiding or destroying library books and materials, cutting art prints out of valuable collections (Levine, 1980), sabotaging laboratory science experiments and stealing a peer's work and submitting it as one's own.

The advancement of computer technology has created new opportunities for sophisticated academic dishonesty. Software piracy, illegal entry into restricted files, and use of a peer's computer time, data and money are becoming more common.

These problems are an indication of the changing nature of college students, coupled with dramatic college environmental changes. Using information from a survey of student personnel officers, Levine (1980) described today's college students as more career-oriented, more concerned with both material matters and self, and better groomed than previous generations of students.

The college students of the 1980s have been referred to as the "me" generation and Levine contrasted them with the students of the sixties and seventies who were focused on what he termed "community ascendancy." Today's students are oriented to "individual ascendancy," in which the emphasis is on duty to self, concern with rights, acceptance of the propriety of taking, focus on individual differences, hedonism and orientation on the present. In contrast, the previous generation of college students was focused on duty to others, concern with responsibility, acceptance of the propriety of giving, commonalties of people, and orientation to the future (p. 25).

These changes in students themselves are coupled with changes in the college environment. During the past twenty years, both the numbers of students attending college (a result of the increased population) and the percentages of high school graduates who continue to college have increased dramatically. From 1969 to 1979 there was a 42% increase in the number of college students (Levine, 1980). In addition to greater college attendance, there have also been increases in part-time attendees and traditionally under-represented minorities.

These increases in enrollment have brought with them more college students who need remedial programs and skill enhancement, and increased competition for grades (with more emphasis on grades and less on learning), and for admission to professional graduate programs and corporate positions.

In addition, administrative atmosphere on college campuses has changed dramatically during the past 25 years. The in loco parentis atmosphere of college in the first half of the century was replaced in the wake of student demands in the late sixties and seventies by an administrative policy in which the maturity and rights of students to make their own choices are recognized. Those administrative climates reflected student liberalism and greater freedom and responsibility for students. As we approach the nineties, there has been a desire among some to return to administrators both the authority to control and the responsibility for supervising student behavior (Morrill & Fass, 1986). This trend has been exemplified by Boston University's recent policy to restrict the presence of members of the opposite sex in residence halls after specific hours.

Schools themselves create a climate of dishonesty. At the Universities of Arizona, New Mexico, Oklahoma, Southern California, California at Los Angeles, and at Wichita State University, recruited student athlete's transcripts have been altered to allow these students to obtain college credit for nonexistent courses and therefore, become or remain eligible for competition (Hardy, 1981/1982). A plethora of other infractions includes illegal enticements to athletes, illegal drug and steroid use among student athletes, and inappropriate use of research and grant moneys, etc.

Institutional response to this wave of cheating is important. An effective educational process is based on the foundation of

cooperation among students, faculty and administration. Giving credit for work done by another encourages sharing of findings and establishes a basic cornerstone of trust which acts to further develop knowledge. When acknowledgment of one's work is not given, sharing will stop and limitations will be placed on progress. That an institution actively discourages cheating or ignores it does not lessen the importance of an atmosphere of honesty and trust in the academic community, for trust is basic to the pursuit of knowledge. Honest work is a measure of the level of knowledge a student has obtained.

Institutional responses to cheating have been varied. Some schools have active programs of detection and enforcement, while the preference of others is to down play incidents by instituting either light penalties or none at all, and hoping the problem will disappear. Clearly, with the societal fixation on litigation and the long hours of preparation necessary for a college hearing, (which can drag on for months and then be heard again in a court of law), instructors are frequently reluctant to become involved. Some faculty prefer to handle cases themselves, by reducing a grade, and thus open themselves up to charges of denying a student due process.

Cheating has a long history in higher education and is a problem which is unlikely ever to disappear completely from the academic setting, unless the very nature of grades and academic competition is replaced by an academic focus on student progress in

and of itself. Since cheating is unlikely to disappear, and because cheating is at least as much a problem on campuses today (if not more) as it was 20 years ago, it is important to focus on what we can learn about cheating and what institutions can do to prevent it.

Goals of the Study

A recent national cohort of college students was used to test a new model for understanding what leads students to cheat and to determine which college environments are most and least effective in handling cheating problems.

This study is different from previous studies because it is multi-institutional and longitudinal, involving a random sample of 1985 college freshmen who were followed-up in the summer of 1987 (two years after college matriculation) with a second survey. For purposes of this study, cheating refers to academic honesty cases only. A new predictive model for cheating was tested. Among the student traits which will be studied are Drive and Ambition, Academic Self-concept and Effort. (See Methodology, Chapter IV for a more complete description of these constructs).

A variety of college environmental characteristics were considered to assess how they might be related to cheating. Are certain schools, because of their selectivity, size, control, etc., more likely to have high levels of cheating than others? Are institutional characteristics more or less important than

Individual student characteristics? A major purpose of this study was to determine which college characteristics predict cheating and which characteristics interact with student characteristics to diminish or increase cheating levels. For purposes of this study, an administrative system is a formal academic honor system or proctor system. Going beyond the traditionally studied type of administrative system used for handling cheating (e.g., "honor code"), the investigator identified particular characteristics of the administrative system that effectively reduce cheating. While the effectiveness of administrative systems for handling cheating has been considered in several studies (Bowers 1964; Campbell 1935), no investigator has reported which particular practices and methods used in these systems are effective.

Specifically, the goals of the study were:

1. To propose and test a new predictive model of why students cheat. The investigator postulated for this model that cheating behavior is determined by the interactions of student's drive and ambition, academic self-concept, and effort.
2. To assess the effects of institutional characteristics as they relate to cheating.
3. To compare the administrative climates of different colleges to determine the relative strengths and weaknesses of various administrative systems used to deter and respond to infractions of academic honesty

regulations.

This study provides nationally relevant information about the current college generation and the environments in which these students are enrolled. Results from this study will be useful to faculty, administrators and students who wish to discourage cheating.

A review of the cheating literature is provided in Chapter 2, models and theories to be tested are described in Chapter 3, and an explanation of the methodology is given in Chapter 4. The results of the study and a discussion of the correlates of cheating policies and behaviors are presented in Chapter 5, and the results and discussion of the multivariate analysis is presented in Chapter 6. Finally, a summary of the study is provided along with the investigators conclusions in Chapter 7.

CHAPTER II

Review of the Literature

Although this review of the literature is focused on academic cheating in the United States, cheating is also a problem in other countries and it should be noted that neither the phenomenon nor the study is a recent development. Brickman (1961) reported that when civil service examinations were given in Ancient China, examinees were searched for hidden notes or other test aids and were subsequently locked in cubicles for three days during the examination. Both examinees and examiners were sentenced to death for dishonesty, and despite all of these precautions and threats of death, cheating occurred. The Gest Oriental Library at Princeton University has an example of a "cribbing garment" which potential cheaters could rent for these civil service examinations. Sewn into the coat's lining are 772 essays which are based on Confucian writings.

A more recent example of cheating occurred at the School of Commerce at Waseda University in Japan. Entrance examinations and their corresponding answers were stolen, copied and sold for approximately \$40,000 (U.S.) to parents, who desperately wanted to enroll their children in the institution (Chapman, 1980). At the University of Bombay, India, an incident involving an examination-fixing scandal led to the resignations not only of the

President of the University, but also of the state's chief minister and governor (Altbach, 1987).

Cheating Studies in the United States

Several major studies over the past 60 years have led to increased knowledge and understanding of cheating. In 1928, Hartshorne and May undertook a major effort in this field with their Studies in the Nature of Character; their work has become a classic reference. Their first volume, Studies in Deceit is particularly important as a pioneering effort whose focus is situational factors in cheating. Campbell (1935) also furthered understanding of factors in cheating with his study of the effectiveness of proctor systems and honor systems. His research design was flawed in that he studied the same group of students during two different times in history, and made direct comparisons without acknowledging different time periods. The second study was conducted after the honor system was dispensed with and the proctor system instituted at the college he was studying. His work, however, paved the way for further studies of administrative climate.

Bowers (1964) conducted a landmark study of colleges and universities in which he surveyed 500 student body presidents and 600 deans for their opinions about cheating. He later followed-up his original survey with more in-depth information from 5,000 students at 99 institutions. His multi-institutional data base has

been helpful in focusing on a broader scope of student characteristics and environmental impacts related to cheating. The major limitation of Bowers work was that it was cross-sectional in nature: his analysis was limited to descriptive statistics and cross tabulations.

Houston (1976a; 1976b; 1983a; 1983c; 1986) conducted a series of studies that have advanced understanding of the classroom environment as it relates to cheating, preventive measures for cheating, and how faculty members can effectively control their own classroom environments to maximize honesty.

A few recent studies have provided important information on rates of cheating. Honig (1986), the State Superintendent of Public Instruction in California, released the results of a state study (of over 1,000 elementary and 2,200 secondary students) which indicate that approximately 75% of high school students had cheated. Cole (1976; 1981) and Schab (1969a; 1969b; 1972; 1980a; 1980b) each added a longitudinal look at cheating behaviors. Cole studied the Stanford honor code at three times in its history, and Schab looked at cheating behaviors of Georgia high school students.

This investigator conducted a pilot study (Hanson, 1986) at UCLA in the Spring of 1985. Two hundred undergraduates were surveyed, and while 46% admitted cheating at UCLA, when asked about specific behaviors (behaviors that were considered cheating at some schools), 75% admitted committing at least one of these behaviors

while at UCLA. Apparently there was both a lack of understanding of, and/or agreement about, what is considered cheating.

Theories of Cheating

Although much research about cheating is atheoretical, traditionally two opposing theories of cheating have been considered. Proponents of one theory posit that cheating is the result of a character flaw--there is a "dishonesty trait" which transcends several situations; an individual who would cheat in one situation would act dishonestly in another. In other words, a person's cheating behavior is consistent in a number of different settings. According to the second theory, cheating is a situationally-specific action; whether someone cheats in one situation has little or nothing to do with how that person will act in another setting. The student acts in accordance with the manner in which that student has been taught to act under specific conditions and if a student repeats certain types of behaviors, it is because certain key factors are present in both situations.

Hartshorne and May (cited in Antion & Michael, 1983) were the first to report on the importance of situationally-specific characteristics. They believed that resisting the temptation to cheat was the result of a series of environmental cues which an individual considered and to which he or she responded.

Most studies of cheating in which these two theories have been examined have supported the situationally-specific doctrine.

Antion and Michael (1983), for example, found that, of all the personality traits they examined, only anxiety was slightly related to cheating. Other studies corroborating the situationally-specific theory include: Fischer (1970), Leming (1980), Hetherington and Feldman (1964) Rogosin (1951) and Zastrow (1970). Zastrow's sample was so small, however, as to limit the generalizability of his findings.

Burton reviewed the analysis of Hartshorne and May's tests. Using factor analysis, he extracted three factors, one of which accounted for 50% of the variance. From this large factor, Burton concluded that "there is an underlying trait of honesty which a person brings with him to a resistance to temptation situation" (Burton, 1963, p. 492). He concluded that there was a general factor underlying the inter-correlations, and that as tests for honesty are more varied, the probability of similar responses will decrease. The work of White, Zielonka and Galer (1967) supports Burton's finding.

In examining these two theories, researchers have tested the importance of a variety of student personality and character traits and environmental characteristics for their effects on cheating. In this literature review, student characteristics, environmental characteristics, cheating behaviors, and reasons for cheating will be examined. Sections on these issues will be followed by a discussion of the methodological problems of research on cheating.

Student Characteristics

Three broad categories of student characteristics will be considered: demographics, pre-college traits, and personality and psychological characteristics.

Demographics

In this section we will consider four demographic categories: gender, age, socioeconomic status, and religion.

Gender differences. In many studies, using samples from both school children and college students, the relationship between gender and cheating has been examined. The results are conflicting, contradictory and confusing. Some investigators have found that males cheat more (Astin, Panos & Creagar 1967; Baird, 1980; Bonjean & McGee, 1965; Bowers, 1964; Fakouri, 1972; Kelly & Worrell, 1978; Newhouse, 1982; Parr, 1936; and Schab, 1972). Schab, in a longitudinal study of Georgia high school students, found that boys cheated more than girls and that 10 years later, when he followed up his original sample, he found girls, rather than boys, were more likely to allow homework copying (corroborated by Cornehlisen, 1965). Astin, Panos and Creagar (1967), in the Cooperative Research Program's Freshman survey program, found that in all institutional settings men "cribbed" more on exams--a finding corroborated by Cole (1976).

Bowers (1964) also found men were more likely to cheat, and concluded this behavior was the result of greater pressures faced by men. (If this were the case, it would seem likely that today, with the roles of the sexes more equal, the pressures facing both male and female students would be similar and cheating differences would diminish.)

Baird (1980) sampled 200 college students and found that males cheated in more of their courses, used more cheating techniques and cheated on a greater variety of tests. Conversely, he found that females disapproved of cheating and, when they did cheat, they felt more guilty than boys.

The results of the work of Hartshorne and May (cited in Burton, 1963) supported the theory that girls cheat more. Uhlig and Howes (1967) found girls cheated more in stress situations, but less in non-stress situations. Leming (1980) found that women cheated in high proportions under low-risk conditions. Jacobsen, Berger and Millham (1970) found women cheated when "tempted;" males did not, and that female cheating was related positively to need for approval and self-satisfaction.

Researchers who found no differences in cheating behaviors between genders include Ackerman (1971), Fischer (1970), Houston (1983b), Knowlton and Hamerlynck (1967), Rogosin (1951), Shelton and Hill (1969) and Vitro and Schoer (1972).

Apparent discrepancies may be explained by age differences among those sampled, dates of studies (current versus dated), and

lack of adequate controls. The discrepancies may also be because of differences in measures of cheating or other confounding variables. Clearly this is one area in which the findings are inconclusive and merit greater study.

Age. Traditionally, age has been measured by class standing. In general, as age increases, so do the numbers of students who cheat; however, once a student reaches college age, cheating levels seem to vary and there is disagreement about which undergraduate class cheats more. These discrepancies may be explained by differing environmental factors or by adjustments students make in study habits in order to meet the requirements of college work. Researchers whose findings support the belief that cheating increases as age or class standing increase include Hartshorne and May, (cited in Bushway and Nash, 1977), Honig, (1986), Parr (1936), and Zastrow (1970).

Bowers (1964) looked at a variety of cheating behaviors by class levels and found that as students progressed through four years of college, the proportion of cheaters increased; however, the data reflect only small increases in the numbers of new cheaters. Other researchers have reported, on the one hand, that cheaters tend to be either freshmen or sophomores (Campbell, 1935; Knowlton & Hamerlynck, 1967), while Harp and Taletz (1966), on the other hand, found cheating levels to be at their height during a student's junior and senior year. Student cheating levels may

fluctuate because of the development of better study skills or better understanding of what is expected. Experience in the college setting and greater confidence about one's academic ability could also account for this finding.

Socioeconomic status. Several studies have focused on a number of socioeconomic status factors, although very few investigators have looked at race or ethnic origin as they relate to cheating. Parr (1936) found students of Scandinavian descent were more honest than those of other ethnic groups; Cole (1976) found no significant differences among the races, but found that non-citizens believe it is a more serious offense to turn someone in for cheating than to cheat oneself, and that non-citizens have less commitment to the honor code. International students do not necessarily consider sharing answers a wrongful act, but rather may see such sharing to be a means by which to cooperate with other students (Christian, 1980; Stanwyck & Abdelal, 1984). Clearly, honesty standards reflect cultural biases.

Bowers (1964) found cheating increased as occupational status of the student's father decreased. Parr (1936) compared labor and professional families, and discovered twice as many students from labor families cheated as those from professional families. Burton (1963) looked at school setting and found that children from higher social classes were more honest than those from the lower-classes. These findings may be explained by a variety of confounding factors

including educational levels, income levels, and belief in the value of education.

There is a weak relationship between cheating and parental education. Students whose fathers are college graduates, when compared with those whose fathers did not attend college, are less likely to cheat. Likewise, students whose mothers at least attended college are less likely to cheat than students whose mothers were not educated beyond high school (Bowers, 1964). Centra (1970) found that those students who were less bothered by cheating and less likely to report cheating tended to be those parents who were not highly educated, not wealthy, and who had low-level positions of employment; however, Bowers (1964) and Parr (1936) found no relationship between parental income and college cheating.

Religion. A few researchers have looked at the effects of religion and religious practice on cheating. Bonjean and McGee (1965) sampled college students on two campuses and found that students who were very active in a religion were much less likely to cheat than either inactive or moderately active students. Bowers (1964) found Jews and Catholics to have higher levels of cheating than Protestants. Smith, Ryan and Diggins (1972) found that for males there were no significant differences among student cheaters by religion; however, among women, Jews had the highest level of cheating. Religion and its relation to cheating is

probably confounded by a variety of institutional qualities, including any religious affiliation of the college.

Pre-College Activity Traits

Achievement and intelligence, often measured by grades and I.Q., are among the most frequently studied determinants of cheating. The findings strongly suggest that cheating is associated with lower, rather than higher levels of achievement and intelligence. Hartshorne and May (cited in Burton, 1963) found honesty to be positively correlated with I.Q. Johnson and Gormley (1972) studied fifth graders and also found that non-cheaters had higher I.Q. scores than cheaters. Fischer (1970), however, found no differences between cheaters and non-cheaters on measures of I.Q.

With respect to general measures of intelligence, research indicates that cheaters have lower levels of measured intelligence than non-cheaters. Using the Ohio State Literacy Test, Campbell found cheaters to be "slightly less intelligent" (Campbell, 1935, p.74). Howells (1938), in a study of high school students, measured achievement by scores on a European history test and found cheating negatively correlated with grades. White, Zielonka and Galer (1967) found female cheaters had significantly lower general intelligence.

Cheating has also been studied in relation to achievement. Many investigators have documented an inverse relationship between

grades and cheating (i.e., as grades decrease, cheating increases) (Antion & Michael, 1983; Baird, 1980; Bonjean & McGee, 1965; Bowers, 1964; 1966b; Bronzaft, Stuart & Blum, 1973; Creagar & Astin, 1968; Drake, 1941; Fakouri, 1972; Goldsen, Rosenberg, Williams & Suchman, 1960; Hetherington & Feldman, 1964; Honig, 1986; Parr, 1936; Vitro, 1971).

A few authors report that according to their studies, cheating is unrelated to achievement (Ellenberg, 1973; Oaks, 1975; Singhal, 1982). In general, it is problematic to consider grades as a cause of cheating, as one can not determine with certainty if good grades are in part the result of successful cheating.

Reasons for attending college have also been related to cheating. Bowers (1964) found that students who went to college for reasons pertaining to the intrinsic values of education cheated in smaller percentages than those students who went to college for other reasons. Bowers' study, however, may reflect a student mood of the past. This idea has not been explored in any recent studies.

Personality and Psychological Characteristics

Many researchers have tried to assess the importance of a variety of student personality and psychological characteristics that relate to cheating behavior. It is in this area of research that we find the most theory, although the theories are often implicit (i.e., not clearly stated but implied by the selection of

personality traits to be studied). The first implicit theory is suggested by the negative association between self-confidence and cheating: Students with low self-confidence are more inclined to cheat because they fear they do not have the ability to succeed.

Honig (1986), quoting from a symposium on cheating, acknowledged that a lack of self-confidence often is a common characteristic among those students who cheat. This is true even among those students who are highly motivated and successful: they cheat to attain even higher levels of success. White, Zielonka and Gaier (1967) conducted a study of 179 female students at a private women's college and at a state university to identify personality and situational determinants of cheating. While their focus was on testing whether cheating was situationally specific or a characterological trait based on basic dishonesty, one of the interesting findings of their work was that cheaters had poorer self-concepts than non-cheaters.

In a related study, Aronson and Metee (1968) provided false feedback to students after having them complete a personality inventory. The information indicated they had either high, medium or low self-esteem. Students then participated in a card game and were given opportunities to cheat in a manner that seemed impossible to detect. Significantly more students from the low self-confidence group cheated than from the high self-confidence group. While the propriety of applying this finding from a card game to an academic cheating situation is questionable, findings

nevertheless point out the importance of self-concept as it relates to cheating.

Using a more academically oriented setting, Millham (1974) gave 100 students from the University of Miami and Miami-Dade Junior College feedback that they either met or failed to meet "college norms." Students who were given negative feedback about their academic abilities were significantly higher in cheating levels than those given success feedback.

Vitro and Schoer (1972) sampled 611 fifth and sixth grade students. One of the key variables the authors considered was "probability of success," which they operationalized as self-confidence. Students were given a pretest followed by randomly given feedback that they had either done very well or very poorly. Based on this information, in combination with both risk of detection and test importance, the authors found that probability of success had significant effects on cheating when combined either with (a) high test importance and low risk of detection, or (b) low test importance and high risk of detection. They believed this to be an important finding as probability of success--confidence in one's ability--was determined in this study to be the most important variable studied. Vitro and Schoer suggested that, in order to reduce cheating, more time should be spent increasing students' confidence and less time monitoring tests.

Houston and Ziff (1976) found that more cheating followed a success than a failure experience. Students were tested in a laboratory setting, given feedback unrelated to their actual performance and, for incentive to cheat, offered bonus experimental credit points towards class requirements. Houston (1977a) also looked at confidence (as it related to anticipated success-failure) and test importance. Using a targeted seating method in which he randomly targeted seats in certain rows, he tabulated the number of incorrect answers each targeted student had in common with those students in adjacent seats. He then compared numbers of incorrect responses with randomly seated students in other parts of the room. The number of incorrect answers that the farther-removed students had in common with the students in the targeted seat was compared with the number of incorrect answers by students in the adjacent seat. The degree of answer copying was determined by the difference in overlap between the adjacent student and students removed from the target. Houston's results indicate that anticipated success correlates positively with answer copying, and that cheating difference scores also correlate positively with confidence ($r = .49, p < .01$). The higher the students' confidence, the more answer copying occurred. Houston found that anticipated success and confidence serve as stronger predictors of cheating in combination than they do when considered independently of each other.

Jacobsen, Berger and Millham (1970) reported a study along similar lines; they investigated the relationship between failure in a social setting and testing situation to one aspect of self-esteem: self-satisfaction (which is defined as the congruence between anticipated success and aspirations: i.e., desired level of performance). Jacobsen et al. hypothesized that students with high esteem would be sensitive to failure and would cheat more because failing would be inconsistent with their self-images; the findings in the study confirmed their hypothesis.

In a related study, Houston (1978) tested the hypotheses that cheating might be related, in a curvilinear fashion, to anticipated success. He speculated that students anticipating sure success or sure failure might find cheating less functional and not cheat, while students in the medium range might cheat more because of its perceived usefulness. Using an experimental laboratory setting in which money rather than grades served as the motivation to cheat, Houston found that students with moderate self-esteem cheated more than those with either the high or low esteem.

One might ponder why there are discrepancies in whether high or low self-esteem leads to more cheating. It is possible that perceived usefulness of cheating could account for them, or that different definitions of self-concept, different incentives to cheat, etc., are responsible for the differences. Or, the differences might be accounted for by uncontrolled-for interactions.

Another characteristic that has been examined in relation to cheating is drive or motivation. McClelland, Atkinson, Clark and Lowell (1953; cited in Johnson, 1981), found that individuals with high need for achievement were, by definition, more concerned about attaining success than were those defined as low-need achievers. Johnson hypothesized that students with high need for achievement were more likely to cheat. He sampled 51 males enrolled in a Midwestern community college introductory psychology class. He found that almost half (8) of the 17 members of the high-need group cheated (by raising their scores) while only one of the 17 low-need achievers cheated.

Smith, Ryan and Diggins, using a sample of approximately 100 undergraduates at two large urban institutions, looked at "motive to achieve" (which they defined as a disposition to attain success in order to realize pride in accomplishment) and "motive to avoid failure" (which they defined as an effort to "avoid negative feelings that accompany failure") (Smith, Ryan and Diggins, 1972, p. 641). The authors hypothesized that those who had a strong drive to achieve would not cheat because cheating would obliterate any sense of pride in doing well; however, Smith, et al. found no significant relationship between the two variables. The lack of support for the hypothesized relationship leads the investigator to speculate that under certain circumstances, high need for achievement (or high drive) might in fact lead to cheating behavior.

Another characteristic--degree of effort--has been studied to determine its relationship with cheating. Astin (1985) found student time to be a key educational resource. Time is a finite quality, and degree of effort is an important measure of priorities and behavior. In relatively few studies have investigators looked at actual study effort of students, while a great many researchers have focused on the fruits of those efforts--grades. Bowers (1964) found that students who cheat tend to be those students "who study neither long nor efficiently." (Bowers, 1964, page 83). No matter how many the number of hours spent, a student who keeps up with his or her academic work is less likely to cheat than the student who is unable to keep up. Furthermore, even those students who have not mastered the work are less likely to cheat if they spend a great deal of time studying. Bowers found an inverse relationship between time spent studying and percentages of self-reported cheating.

With regard to effort, Houston (1976c) looked at the effects of study time distractions. Using a 90-item recall test, he found that distracted students did not learn as well initially; when students were distracted, they copied answers. Additionally, he found that students in some instances performed better if they expected that they would be able to cheat (1977b).

Hetherington and Feldman (1964) confirmed that cheaters exerted little effort. Goldsen, Rosenberg, Williams and Suchman (1960) found that those who did not attend class cheated more than

those who did attend class. Ackerman (1971), however, found no difference in cheating levels between students who did and did not attend class.

While all three of these traits--self-confidence, drive, and degree of effort--have been studied independently, they have not been examined in combination. Having a better sense of how these variables interact might provide a more thorough understanding of cheating.

Kelly and Worrell (1978) studied the psychological qualities of male and female cheaters and found that male cheaters are "aggressive, antagonistic, vindictive and interpersonally domineering" (page 186). Male cheaters, they suggest, tend to depend on external sources for personal approval, are loud, demand attention, and are vindictive as opposed to cooperative. Among females, the cheater tends to be more socially alienated, thrill-seeking and is unconcerned about bodily harm. The female cheater is "less impulse controlling. . .and more likely to seek attention through conspicuous, demonstrative behavior than the non-cheater" (p. 186). She is more rebellious and non-conformist than the noncheating female. White, Zielonka and Gaier (1967) found female cheaters to lack emotional maturity, but to be friendly and outgoing.

Cheaters have also been found to be more anxious than non-cheaters (Antion & Michael, 1983; White, Zielonka, & Gaier, 1967). Shelton and Hill (1969) found a relationship between

cheating and anxiety in the instance when information about another's performance was provided to students. In this case, students with high anxiety cheated more. Conversely, Bronzaft, Stuart, and Blum (1973) found cheating behaviors did not differ on the basis of anxiety.

Need for approval has also been studied in relation to cheating. Results of several studies have indicated that cheaters have more need for approval than non-cheaters (Kelly & Worrell, 1978; Jacobsen, Berger & Millham, 1970; Millham, 1974). Millham (1974) looked at attribution (the need to attribute to one's self socially valued characteristics and to deny socially undesirable characteristics) in relation to need for approval. He found that women cheaters have higher attribution scores than do women non-cheaters; men, in measures of attribution, showed no significant differences between cheaters and non-cheaters. Finally, women cheaters had higher attribution scores than men cheaters.

Other researchers have studied the relation of neurosis to cheating. Hetherington and Feldman (1964) found cheaters to be more neurotic than non-cheaters and Campbell (1933) confirmed this finding. Campbell also found cheaters to be less self-sufficient, more dominant and more introverted than non-cheaters.

Environmental Characteristics of Colleges

While students bring with them to college certain personal characteristics and traits that may affect their chances of cheating, college environments can also affect cheating behaviors. Astin (1968) found that the types of changes occurring in students during their college years may depend in part on the type of college the student attends. Research on the effects of college environments can be separated into four categories: college characteristics, college involvement, the administrative climate, and the classroom environment.

College Characteristics

A variety of college characteristics have been studied to determine the effects of the institutional environment on cheating. Selectivity is one institutional characteristic that has received a considerable amount of attention. Bowers (1964) found that the lower the institutional selectivity, the higher the proportion of cheaters. He explained this finding by suggesting that the more selective schools have more academically-oriented students who concentrate more on their studies and are better prepared for the rigors of academic life. Centra (1970) studied attitudes toward cheating and found a relationship between attitudes and selectivity. He believed that lenient student attitudes resulted in lenient behavior--that is, the more lenient the attitude, the

more cheating occurred. Results indicate that, the more selective the institution, the less lenient student's attitudes.

Levine (1980) compared 1969 and 1976 student responses to the statement "some forms of cheating are necessary to get the grades I want." At the less selective institutions (Doctorate Granting Universities II, Comprehensive Universities and Colleges I and II, and Research Universities II) higher percentages of students were found to agree with this opinion than in the Doctorate Granting Universities I, and Research Universities I. Given that the types of institutions where students agreed with the statement are all large institutions, there may be some confounding of selectivity and size. Centra (1970) found students at Catholic's men's colleges had by far the most lenient attitude toward cheating; he credited this result to the fact that these schools appear to be less selective.

Contradictory findings were reported by Honig (1986), who found that, in general, students in high schools with higher achievement (as measured by a standardized state test) cheated more. The second highest level of cheating, however, occurred at schools with the lowest achievement levels. The least cheating occurred in schools with moderate achievement. Because this study was conducted in California public high schools, it is difficult to generalize from the results. It does suggest, however, that selectivity has some kind of relationship--although a complex one--to cheating levels.

The relationship of college size to cheating has also been studied. Researchers have confirmed that colleges with greater rates of cheating tend to be ones that have the largest numbers of students (Bowers, 1964; Goldsen, Rosenberg, Williams & Suchman, 1960). Coeducational institutions tend to have greater levels of cheating than single-sex institutions (Bowers, 1964; Centra, 1970) and men's colleges have higher levels of cheating than women's colleges (Bowers, 1964; Centra, 1970). Contradicting his earlier finding, Bowers and Salem (1969) found that the highest rates of plagiarism and exam copying occurred at men's colleges.

Astin, Panos and Creagar (1967) found that the highest percentages of students who report cribbing on an exam come from Catholic, four-year colleges (25%), two-year public colleges (24%), and public four-year colleges (22%). Conversely, the lowest levels of cribbing occurred at Protestant four-year colleges (15%) and private nonsectarian four-year colleges (18%).

Very little attention has been given to either the region or racial composition of the college. Astin (1967) found the colleges in the Northeast had relatively severe policies against cheating, but those in the Southeast had the most severe policies. Colleges in the West and the Southwest were the most permissive toward cheating. With regard to race, he found that historically black colleges tended to be relatively permissive.

College Involvement

Within every campus setting there is a wide variety of activities and opportunities for involvement. Just as opportunities and activities vary between campuses, so too do the effects of different types of involvement.

Astin (1977, 1985) looked at involvements as a way to measure and understand student gains and growth during the college years. He defined involvement as "the amount of physical and psychological energy that the student devotes to the academic experience." This investigator believes that involvements can be viewed in general categories. The five kinds of involvement examined in this review are the major field, general, academic and social, extracurricular, and athletic.

Major field. The student's major field has been found to be a factor related to cheating. Students with low involvement and low interest in their major area, for instance, cheated more than those who either were not sure of their interest or who were very interested (Goldsen, Rosenberg, Williams & Suchman (1960). Bowers (1964) studied student cheaters by major and probable career and found the highest proportions of cheating occurred in business and commerce (66%), engineering (58%) and education (52%). The lowest percentages occurred in language (37%) humanities (39%) and history and area studies (43%). Baird (1980) also found that business students cheated more than education or liberal arts students, and

that liberal arts and education students were more disapproving of cheating. Harp and Taletz (1966) looked at the effects of major field and found higher levels of reported cheating for engineering students (50%) and agricultural students (42%). Cole (1981) found that engineering students consistently reported higher levels of cheating than did students majoring in sciences/math, social science and humanities. Oaks (1975), however, found that the highest level of cheating occurred with mathematics majors.

Anderson (1957) looked at the effects of attitude in combination with major field. Graduate education students had the strictest attitude against cheating, whereas sophomores in arts and science and in commerce had the most lenient attitude. Since attitudes affect behavior, this might account for higher cheating levels among some students. It is clear that major and its relation to cheating is an area that deserves further consideration.

General involvement. Newhouse (1982) reported on involvement and alienation as they relate to student expectations of faculty, student body, administration, student services and school. He found that the more alienated a student was, the more likely that student was to cheat.

Students who saw cheating but would take no action against cheaters were those who were less involved. These students studied less, received poorer grades in high school, and seemed less

interested in getting good college grades (Centra, 1970). Findings of Bowers (1964) and Harp and Taletz (1966) are consistent with those of Centra.

Goldsen, Rosenberg, Williams and Suchman (1960) found cheating was related to what they labeled a "general depreciation of the academic experience" (p.74). They found cheaters to be disenchanted with school work, unsuccessful, and uninterested. Conversely, the student who was enthusiastic about school and learning was less likely to cheat.

One indicator of involvement is the actual amount of time spent on-campus and at school (Astin, 1977). On-campus residence increases persistence and satisfaction. Bowers (1964) found that deans, student body presidents and students themselves estimated that at institutions in which there is a high proportion of students living in on-campus residences, cheating decreases. Students who spend a good deal of time on-campus tend to have relatively fewer distractions and other pressures on their time than students who live at home and commute, live off-campus, or only attend school part-time and are occupied with other roles or commitments that take the focus away from college and college-related activities.

Academic and social involvement. Students who are involved in a variety of academic activities have an academic orientation which facilitates growth and learning. Bowers (1964; 1966a, 1966b)

classified students according to what he termed orientation. His measures of orientation were major field of study, goals of education, friends with whom students associated and social activities in which they participated. He found that the student attending college who had an academic orientation was less likely to cheat than the student who had a social orientation. Of the social orientation Bowers stated, "Students who place primary value on the social reasons for going to college are somewhat more likely to cheat than those who attend because of intellectual interests even after differences in academic performance are taken into account" (1966a, p. 22). Bowers found that the college student with a social orientation tends to place high priority on developing interpersonal relationship skills and matrimonial skills, and also tends to focus on occupational training. Not surprisingly, students concerned with social involvement tend to be highly represented in fraternities and sororities, spend more time drinking with friends, and date more.

Several studies have reported on the effects of fraternity and sorority memberships as they relate to cheating. The perception that fraternity and sorority membership is linked to cheating is furthered by some of the cheating "lore." Clinton Rossiter, an undergraduate fraternity member at Cornell, wrote a paper on the national presidency and dutifully made a copy for his fraternity to keep on file in their house "library" of papers. As a faculty member at Cornell several years later, he was surprised to receive

the same paper (his paper) submitted by a student, currently a member of his fraternity (Einsiedler, 1972; Howells, 1938).

Researchers who have looked at fraternity and sorority membership have found membership is positively related to cheating (Bonjean & McGee, 1965; Bowers, 1964; Centra, 1970; Drake, 1941; Harp & Taletz, 1966; Knowlton & Hamerlynck, 1967; Parr, 1936; Stannard & Bowers, 1970). Baird (1980) found that fraternity and sorority members cheated more frequently on more types of examinations, and that their cheating methods were more likely to include cooperative techniques--copying homework, using hand signals, taking tests for friends. Bowers (1964) found the stronger the affiliation with the house, the more likely the student is to cheat.

Extracurricular involvement. During the college years there are many opportunities to participate in a wide variety of activities. Given the time constraints that students face, those students who are highly involved in extracurricular activities have less time to devote to their academic work. While the value of extracurricular involvement is not questioned, this focus does point to an orientation away from academics. Parr (1936) found that the greater the number of activities in which students participated, the greater the proportion of cheaters. Astin (1968) and Zastrow (1970) found that having a job correlated with cheating, and Astin speculated that either the student worker had

less time to study or found it easier to admit and justify cheating behavior because he or she was working.

Johnson and Gormley (1972) found that student cheaters were more involved in clubs than non-cheaters, and that they held more leadership positions. Students who were involved in campus political activities demonstrated the highest percentage of cheating (Parr, 1936).

Athletic involvement. Students who were very athletically involved spent a lot of time in various aspects of their sports. Not only are these students expected to train long hours, but during competition seasons they are required to travel, to eat at the training table, and to engage in other activities which focus attention on the sport and detract from an academic orientation. Parr (1936) found that after campus political involvement, students who participated in athletics had the second highest rate of cheating. No recent work has been published on this area.

Administrative Climate

Policies and rules. The ways in which institutions respond to cheating clearly affects the environment for cheating. Policies, rules, and enforcement practices thus help to shape student's perceptions of what is expected and how much cheating will be tolerated. It is important that information about both stated

rules and enforcement of the rules is made available to the academic community. If a school has a severe policy, yet cases are not reported, then the policy is likely to be ineffective. Houston, (1976; cited in Barnett and Dalton, 1981) found that cheating increases when there is little danger of cheaters being apprehended.

Administrative models. There are two main administrative models for dealing with academic honesty: the proctor system and the honor system. There is no universally accepted definition of a proctoring system, but in general the professor or some other authority stays in the room during examinations and "proctors" or polices the room to prevent cheating. The role of the proctor is to assure that honesty prevails and to catch violators; students are not necessarily trusted to be honest on their own. The faculty member is supposed to report infractions which are observed.

Conversely, in a formal honor system, students are made responsible for honesty in their own work. The system's foundation is mutual trust. Students make a commitment to adhere to a standard of honesty in their academic work. At some schools, the concept of honor applies not only to academic work, but to all aspects of life. Bowers (1964) found that single-sex colleges were more likely to have honor systems, and that honor systems were particularly effective at men's schools.

In both types of system, faculty play a critical role. Results of studies suggest that rates of detection by faculty are

much higher than actual rates of reported instances (Singhal, 1982; Wright and Kelly, 1974). Some faculty, it appears, are not aware of the rules, and hence do not follow institutional policy. Additionally, with the greater societal emphasis on litigation and the hours of preparation time necessary for hearings, it is easier for faculty to look the other way, or to deal with the infraction personally. Wright and Kelly (1974) found that some faculty believe that infractions should be handled between the instructor and the student.

There is some debate about the effectiveness of both types of systems. Bowers (1964), Campbell (1935), Canning (1956), Cole (1981), Fischer (1970) and Williams and Barth (1967) all found that cheating was less likely to occur in an honor system setting. Conversely, Ackerman (1971), Hardy (1981/1982), and Leming (1980) found that students cheat more in unproctored situations. Williams' (1969) results suggest that students believe an honor system promotes cheating.

These discrepancies might be explained by looking beyond each type of system to the actual characteristics or components of the system in operation. One important factor with either kind of system is student attitude. Students often perceive academic honesty as an institutional concern rather than a student concern. Bowers (1966a) found that the greatest deterrent to cheating was peer disapproval, and that students who cheated in high school and stopped when they got to college were those who attended colleges

with a strong climate of peer disapproval. Likewise, students who cheated for the first time in college attended schools with weak peer disapproval.

Certainly, the student culture does not strongly condemn cheating (Barnett & Dalton, 1981, Henricks, 1958; Trabue, 1962). Seventy-five percent of the students surveyed by Baird (1980) felt cheating to be a normal part of student life. The ways to which cheating is referred indicate its acceptance: "the good neighbor policy," "the flying wedge," "the wandering eye," and "collaboration." Furthermore, attitude towards cheating is related to cheating behavior. Student cheaters have much more lenient or positive attitudes toward cheating (Fakouri, 1972; Homant & Rokeach, 1970; Sherrill, Horowitz, Friedman & Salisbury, 1970), tend to exaggerate the number of cheaters (Knowlton & Hamerlynck, 1967; Sherrill, Horowitz, Friedman & Salisbury, 1970) and express less concern that cheating is a problem (Sherrill, Horowitz, Friedman & Salisbury, 1970).

Size seems to have a relationship to the system of control for academic honesty. Small colleges tend to have honor systems while large colleges more often do not, and colleges with honor systems have lower rates of dishonesty (Bowers, 1964).

Communication. Some investigators have looked more directly at administrative policies. This work relates to how rules and

reminders are communicated to students and how information about sanctions is given to the community.

Most schools provide students with some information about their honor code during orientation or in written form (handbooks, catalogues or other materials). While none of the research reported in the literature describes the effectiveness of these various means, some attention has been given to familiarity with the rules. It was found that students more correctly perceive the rules when they are under an honor system (Williams & Barth, 1967). Cole (1976) found, however, that cheaters knew no more or less about regulations than non-cheaters.

There is no published research on the frequency of in-class reminders about academic honesty; several researchers, however, have looked at the effectiveness of reminders and threats as means of reducing cheating. Fischer (1970) looked at five classroom conditions for elementary school children related to appeals to honesty. She found significantly higher levels of cheating when either an informative appeal to honesty (i.e., "lets all be honest") or only directions to the test were given. Lower levels of cheating were found in situations where there was a threat of punishment (cheaters will have to write a sentence 50 times about cheating or write numbers repeatedly) and a public affirmation of the honesty value (students were asked to state why they would not cheat.)

Houser (1982) found in her work with fourth, fifth and sixth graders that coercion was the only type of strategy that was effective in controlling cheating.

Title and Rowe (1973) examined the effects of a general appeal to honesty and threat with college students. The threat given students was that their examinations would be randomly checked and student cheaters punished. Moral appeal was found to be ineffective. There were several possible factors which could have influenced this outcome, however, including the use of non-random groups, the elimination of the opportunity to cheat for students who received perfect scores, and the fact that students' examinations were kept overnight (secretly graded by the professor) and returned the next day for student self-grading. Because it is unusual to keep papers overnight and then allow students to grade them, students might have been suspicious.

Title and Rowe (1974) tried a second variation of their experiment by testing trust, punishment threat, and moral appeal. They found that the threat of being caught and punished was more effective than either trust or moral appeal.

Houston (1983b) extended this work by testing the effectiveness of threats in a large classroom setting with multiple-choice examinations. Using his target-adjacent seating overlap method (described earlier), he tested levels of threat deterrents. One group was given no caution, one group a caution similar to Title and Rowe's, and the third group was told that all

cheating would be detected and guilty students would receive scores of zero. Houston found threats were effective only among students who scored above the mean on a previous exam. Students scoring below the mean on an earlier exam did not change their cheating behavior as a result of threats. The results of this experiment suggested that achievement level can indeed affect the student's propensity to cheat.

Severity of sanction. Closely related to threat is severity of sanctions. It is important to determine the rules as well as their consistency and likelihood of enforcement. If a school has severe sanctions, but the cases are not reported, the sanctions are likely to be ineffective as a deterrent. Additionally, because of need for confidentiality, administrators are often reluctant to provide the academic community with feedback for fear of inadvertent disclosure of student identity.

Astin (1968) examined severity of administrative policy and found that cheating is negatively related to severe administrative policy against cheating. The more severe the penalty a student would pay for violating the norm, the less likely students are to cheat. He explained this by concluding that either severe policies are effective discouragements to cheating or severe policies discourage faculty from reporting infractions because the likely consequences of being found guilty are so serious. Honor system schools, of course, tend to have the most severe policies against cheating (Salem & Bowers, 1970).

Salem and Bowers (1970) also looked at types of sanctions that were imposed for academic honesty cases and found that only 18% or less of the academic honesty cases they examined resulted in dismissal or suspension. Most frequent courses of action included a failing grade on a paper or exam. This finding was confirmed by Sewall, Drake and Lee, (1980, May 26). Only a very few cases result in warnings, reprimands or censures.

Astin (1968) found that unless information about numbers of cases adjudicated and penalties imposed is provided, rules were often found unconvincing as a means of prevention. Bowers found that student attitudes were not affected by imposing formal sanctions, but that student behaviors were. Salem and Bowers (1970) found that formal sanctions in and of themselves, were not a deterrent to cheating, except in an academic honor system.

Hearing board constituency. The constituent make-up of hearing or adjudication boards appears also to be related to cheating. Bowers (1966b) found most cases were either adjudicated by faculty groups (31%), the next most by student groups (18%), and the least by administrators (14%). Bowers also found the cheating level to be lower at schools where the responsibility for dealing with cases was given to the students. Schools that have either faculty-centered control or faculty-student control had higher levels.

Clearly, current information is needed in this area to better understand the effects of administrative climate on student cheating behaviors.

Classroom Environment

While little attention has been focused on administrative climate, a great deal has been discovered about the classroom, and this will be reviewed briefly here.

Test importance has been determined to be a factor related to cheating. Houston (1976b) found copying to be minimal when a test was not being used in determination of the course grade. Vitro and Schoer (1972) found test importance to interact with high risk and low probability of success and low risk and low probability of success. Johnson and Gormley (1971) investigated cheating on tests among Naval ROTC students. Those students for whom the test had the most importance--career officer candidates--cheated more frequently.

Seating arrangement is another area which has been explored. Bowers (1964) found that more cheating occurred in classrooms where seating was staggered and students sat in assigned seats. Sherrill, Salisbury, Horowitz and Friedman (1971) looked at the effects of voluntary seating. They found that cheaters separated themselves from non-cheaters. Houston (1983a, 1976b) examined the effects of seating on answer copying. Using his targeted-adjacent seating method, he found that answer copying occurs from those in

the immediately adjacent seats--to either side of the targeted seat, but not from those in the seats in front of the targeted seat. Nor were any significant differences found for answer copying between the front of the room and the back. He also looked at the effect of assigning seats and free seating (1986). He found that free seating had significantly higher levels of answer copying. Finally, using alternate columns of seating (i.e., seats directly adjacent to targeted students are left empty) Houston (1976a) found that cheating levels decreased from side positions, and that copying from the front position did not increase.

Test forms and item order are also related to levels of cheating. Houston (1983a) found that use of alternate test forms for multiple choice examinations was not effective in deterring cheating primarily because students were able to unscramble question order. He did find, however, that if alternate test forms incorporated changes in the order of both test questions and the answers, cheating is decreased. Hardy (1981/1982) found more cheating to occur when a single form of an examination was used.

Shelton and Hill (1969) examined the effects of knowing about peer performance and achievement and found cheating occurred when feedback about successful peer performance was provided to students. Interestingly, the more specific the information, the greater the likelihood that students would cheat. Additionally, students are more likely to cheat if it is improbable that they will get caught (Leming, 1980; Vitro & Schoer, 1972). Houston

(1977a) found that expecting success combined with a low risk of detection leads to cheating.

Cheating Behaviors and Reasons for Cheating

The literature shows clearly that there are wide variations both in amounts of cheating reported and in types of cheating behaviors; many factors can affect the actual levels of cheating detected. Because investigators have addressed a wide variety of cheating behaviors, it is hard to discern trends (increases and decreases) over time. Some researchers examine cheating in a specific class, while others examine cheating during college, or cheating incidents in one's lifetime. Reports of increases or decreases in cheating are often misleading or invalid. Very few cheating studies are replicated, so unless there is a longitudinal approach, comparisons are meaningless.

Cheating Behaviors

Just as amounts of cheating differ, so too do actual kinds of cheating behaviors reported. Different types of cheating behaviors have been examined in several studies and the frequency of different behaviors has been monitored.

Barnett and Dalton (1981) found that, of the seven types of behaviors that were most commonly agreed upon as cheating by students and faculty, six related to cheating on examinations. Oaks (1975) found (a) that students most frequently related

cheating to exam situations and (b) that exam cheating was more frequently considered cheating than other behaviors. This finding was confirmed by Eve and Bromley (1981).

Several investigators have discovered that cheating on exams is the most frequently admitted cheating behavior. Bowers (1964) found exam cheating to be the most frequently admitted type of cheating, accounting for 59% of reported incidents in his sample of 5000 college students. Cole (1976, 1980) found that cheating on examinations was consistently reported in higher proportions than cheating in other situations. Additionally, in a study of 681 undergraduates at a southwestern state university, the two most frequently reported cheating behaviors were found to be giving another student answers during an exam and copying answers from another student during an exam, with reported percentages of 43 and 42 respectively (Eve and Bromley, 1981). Nuss (1984) found that students believe exam cheating is more serious than other types of cheating. Finally, in a study of UCLA students (Hanson, 1986), the frequency of 18 different cheating behaviors was examined. It was discovered that the most frequent admissions of cheating were related to exam taking.

When soliciting opinions as to what is considered cheating, more faculty (84%) see copying homework as a serious offense than do students (48%) (Barnett and Dalton, 1981). Bowers (1964), Cole (1976, 1981) and Hanson (1986) each report relatively moderate levels of self-reported homework copying--10% to 20% of students

admitted this behavior. Schab (1980a) found that 90% of the boys and 95% of the girls in his Georgia high school student sample admitted to copying homework. Singhal (1982) reported that 62% of his students admitted copying homework. Singhal, however, asked about lifetime behavior while the other four researchers asked about behavior in the past year (or in the current institution).

Reasons for Cheating

There are a great many studies in which an effort is made to pinpoint the reasons why students cheat. The most frequently cited reason for cheating is the pressure to get good grades (Adams, 1960; Baird, 1980; Barnett & Dalton, 1981; Bowers, 1966b; Farley, 1974; Hanson, 1986; Houston, 1976b; Montor, 1971; Milton, Pollio & Eison, 1986; Schab, 1969b; Trabue, 1962; Wright & Kelly, 1974; Zastrow, 1970). Bowers (1964) found that if students believed good grades are important they are less likely to cheat, but if they believed that their parents felt getting grades was important then they were more likely to cheat.

It is not surprising that students feel pressure to get good grades. While grades were originally intended to facilitate learning, they have become a means of student evaluation which are frequently criticized as being not only arbitrary but also subjective. Grades were once used as a measure of learning. Currently they are used as a measure of performance, as well as to evaluate eligibility for admission to courses, departments, major

fields, honors programs, graduate schools and even some jobs. They can determine who wins awards and fellowships, particular class rankings, honors, and even commencement roles. Grades can effect self-concept, eligibility for participation in clubs, organizations, and even campus residence status. During the Vietnam War, grades even affected draft status--those who did not maintain sufficient academic standing were suspended from college and consequently were eligible for the draft.

Among many students, the goal of learning has been replaced by a goal of getting good grades. Milton, Pollio and Elson (1986) found that 69% of those students who were oriented towards earning high grades cheated, compared with 53% of students with other orientations.

Astin (1968) described competitive environments as those in which interactions are characterized by risk-taking, adventurousness, and aggressive desires to defeat an opponent. One can see why some researchers identify the competitive system as the villain responsible for cheating (Cole, 1981; Drake, 1941; Singhal, 1982; Smith, Ryan & Diggins, 1972).

Other reasons listed for cheating include being unprepared for a test (Zastrow, 1970); opportunity to cheat or making it too easy to cheat (Bushway & Nash, 1977; Zastrow, 1970); desire to impress teachers, parents, peers (Baird, 1980; Zastrow, 1970); peer pressure (Baird, 1980, Zastrow, 1970); fear of failure, or desire to avoid failure (Hanson, 1986; Nuss, 1984; Zastrow, 1970);

laziness (Hanson, 1986; Schab, 1969b); insufficient time or too much work (Baird, 1980; Hanson, 1986; Smith, Ryan & Diggins, 1972); hostility toward the professor or class requirements (Steininger, Johnson & Kirts, 1964), and an attitude that everyone cheats or that one needs to cheat to survive (Adams, 1960; Montor, 1971). Researchers have also substantiated the importance of parental pressure as a common reason for cheating (Adams, 1960; Baird, 1980; Bowers, 1964; Montor, 1971; Schab, 1969b).

Some students cheat because they never learned it was wrong (Montor, 1971). Bowers (1966b) looked at the reasons students did not cheat. Of those he studied, 80% took a moral stance and did not cheat because they felt it was wrong. Kohlberg (1970; cited in Barnett and Dalton, 1981) identified stages of moral reasoning and moral development. He believed those students who reached higher levels of moral development would cheat less than other students. Leming (1978) found that students showed similar behaviors without regard to their moral development. Houston (1983c) studied morality and tested the effects of moral instruction which related directly to cheating and general moral instruction. Houston's work indicates that moral instruction specifically related to cheating resulted in significantly less cheating than did a less specific moral instruction.

Methodological Problems

As we have seen, the body of literature in which cheating is examined is plentiful. Cheating has been investigated from a variety of perspectives, both as an end in itself and as a means of looking at personality characteristics and psychological development. One of the biggest difficulties in studying cheating is the lack of a universal definition of cheating.

Discrepancies in definitions of cheating have been documented in several studies. Eve and Bromley (1981) asked students to rate certain actions as academically dishonest. They found no items on which there was consensus, and considerable ignorance of some items. Some of the more common cheating behaviors came closest to achieving consensus. Nuss found that while students and faculty generally agreed on what were the least serious kinds of cheating, there was a great deal of variance in what was considered the most serious (1984). In a study at Iowa State (Barnett & Dalton, 1981) there was considerable disagreement among faculty and students as to what constitutes cheating, a finding confirmed by Oaks (1975).

Clearly, the terms "cheating" or "academic dishonesty" refer to a wide variety of behaviors. In some instances students cheat because they do not know the rules or because they do not accept particular actions as dishonest. Definitions of cheating vary from institution to institution. For example, at the military academies, academic honor is applied to both school work and personal behavior, and a cadet is expected to act "honorably" at

all times. At other schools, academic "honor" refers only to areas of academic work, and is not related to one's personal conduct. Guidelines regarding footnoting, test taking and computer practices are carefully spelled out at some colleges. At others a general statement about doing honest academic work is shared with students, but they are left to their own interpretations.

Studies in this area have used diverse methods of detecting cheating, including wax backing or backings of other invisible coatings on answer sheets to detect answer changes (Zastrow, 1970), returning answer sheets to students "ungraded" when in reality they have been graded or xeroxed, treating papers with special chemicals to display altered answers or using classroom spies. Many of these methods may have led students to be suspicious of detection.

Ironically, the most effective means of detection is probably to study deceit by deceiving students, allowing them to believe they are being tested on word recall or basic knowledge when their own honesty is being monitored (Campbell, 1935; Howells, 1938). This led one researcher to label this practice an "ethical double standard" (Ackerman, 1971).

The study of cheating has been marred by a number of difficulties. Most studies have been limited to the analysis of a single institution (Antion & Michael, 1983; Barnett & Dalton, 1981; Campbell, 1935; Drake, 1941; James, 1933; Newhouse, 1982; Uhlig & Howes, 1967) and some even to a class within the institution (Fakouri, 1972; Hawley, 1984; Zastrow, 1970). Nevertheless,

results of such studies are frequently used to generalize to a larger population.

Some studies lack appropriate control groups to use as comparisons. For example, students are "tempted" to cheat, but a similar group of students is not monitored in a non-temptation setting to determine how the experimental procedure affects cheating (Walker, Wiemeler, Procyk & Kanke, 1966). In still other studies, investigators have asked for opinions on how much cheating occurs (Budig, 1979; Sisson & Todd-Mancillas, 1984) instead of looking at actual behavior. Bowers (1964), Goldsen, Rosenberg, Williams and Suchman (1960) and Cole (1976) all show in their research that people tend to under-report cheating.

Self-reports are often collected from students. These measures can be either helpful or inaccurate, depending upon the environment in which the students are asked to report. Because of a fear of detection and given some college's severe policies against cheating, self-reports can lead students to under-report.

This analysis of the existing literature suggests a number of questions that require further study: Are there certain personal and demographic characteristics that predict cheating? How important are cognitive versus affective traits? Is cheating dependent on the interactions among drive and ambition, academic self-concept and effort? Are there certain institutional qualities (size, control, selectivity, etc.) which affect the level of cheating? How do they interact with entering student

characteristics? Institutional response to cheating varies tremendously. Are there administrative systems for handling academic honesty that are more effective than others for reducing cheating? Regardless of administrative system for handling academic honesty, which specific practices (communication and methods of communication and administrative response to infractions) predict the lowest levels of cheating? Do administrative practices interact with student characteristics? Which theories of cheating appear to be most valid in accounting for the complex interrelationships between these student and institutional factors?

CHAPTER III

A NEW APPROACH

Existing literature, for the most part, is focused on examining character flaws or situational factors that affect cheating. Some of these studies are neither methodologically nor conceptually sound (for a more complete criticism of the literature, see Chapter 2) largely because of the extensive use of cross-sectional correlations. Those studies that are predictive reveal a variety of individual student characteristics that predict cheating. Unfortunately, these characteristics are often confounded by uncontrolled environmental factors. Conversely, findings suggesting that cheating is determined by environmental factors usually ignore individual factors. Because individuals both shape and are shaped by the environment, what is needed is a holistic approach that recognizes the context in which cheating occurs while also recognizing individual characteristics of cheaters.

While the literature review indicates that much of the research on cheating is atheoretical, and a host of empirical studies have been conducted to determine which variables are correlated with cheating, very few studies have either refined existing theory or developed new theory. Clearly, cheating is a complex and complicated behavior that involves a variety of factors both personal and environmental.

In this study, the investigator has examined the validity of theories of cheating, and has developed and tested a new interactive theory. Both individual and environmental factors that predict cheating are investigated. Certain students have a greater propensity to cheat than do others, but even among those individuals with a high propensity to cheat, some will elect to cheat and others will not. At the same time, the college environment can either enhance, retard or have no effect on an individual's propensity to cheat. In this study the effects of both college characteristics (size, selectivity, control, etc.) and administrative climate (policies toward cheating) are examined. It is acknowledged that classroom environment also affects cheating behavior, and studies of classroom behavior can help us ascertain a great deal about institutional environment. Previous research on classroom environment has been discussed, but classroom environment is beyond the scope of this study.

Of particular interest in this study are three issues: the interactions between academic self-concept, effort, and drive and ambition as they relate to cheating; the effects of the environment on cheating; and the interactions between student characteristics and environments as they predict cheating.

While many empirical studies have been conducted and many explanations given for who cheats and in what situations, these studies do not fill in all of the gaps in cheating theory. There is evidence that a new breed of student attends college today, and

that (for whatever reasons) a new breed of cheater has also developed. This new breed of cheater is characterized by Levine's focus on individual ascendancy (Levine 1980) and is affected by increased academic and postgraduate competition.

This change in college students is reflected in the reasons which students give for attending college. The findings from the Cooperative Research Programs's Freshman Survey in 1977 and 1987 (Astin, Green, & Korn, 1987; Astin, Green, Korn, Schalit, 1987) indicate that among the reasons that students note as very important in deciding to go to college, there are increases in the percentages of students who attend so they can "get a better job," (from 77% to 83%) and "make more money", (from 62% to 71%). There are corresponding decreases in students who indicate that it is very important to attend college to "gain a general education" (71% to 61%) and "become a more cultured person" (39% to 32%). These changes are notable, especially in that they occurred within a 10-year period.

Declines in percentages of students who are attracted to the intrinsic aspects of education suggest that fewer students today believe in the value of learning for its own sake. This decline has been accompanied by a stronger orientation toward the practical outcomes of education. The goal for many students is the step beyond college--a better job or more money. To achieve that goal, students see education less for the sake of learning than for what it can get for them later. This may have led to a greater

propensity to cut corners, to attain goals by whatever means necessary--which could certainly include the tendency to cheat.

Theory

Within the cheating literature there are three implicit theories which have helped shape this study. The theories are considered "implicit," because the theory is not always formally stated, but is implied in the investigator's choice of variables and subsequent interpretations of results. The first implicit theory relates to self-concept.

Academic Self-Concept

Students cheat because they do not believe they have the academic ability to succeed on their own. In this theory, the importance of a student's self-confidence in predicting cheating behavior is recognized--students who do not believe they can handle the rigors of academic work often cheat.

In the literature review this author traces the effects of self-concept or self-esteem on cheating. Findings in the literature suggest the existence of a relationship between the two; however, whether high self-esteem or low self-esteem leads to more cheating is unclear. This ambiguity in the relationship between high and low self-esteem and cheating may be explained by any one of several factors: (a) differences from study to study in the definitions of self-esteem; (b) the difference between academic

self-concept (which is considered in this study) and a more general measure of self-concept; or (c) the unaccounted-for interactions between self-concept and drive to achieve.

Effort

The second theory which served to help focus this study is based on effort. The amount of effort a student puts into his or her academics is an important factor related to cheating. General findings indicate that if a student is "lazy" and does not devote adequate time to schoolwork, the student is much more likely to cheat.

The actual amount of time spent studying is an important component in predicting cheating. As Astin (1985) explained, time is a finite resource. How students choose to spend their limited time becomes an important indication of effort and priorities. Bowers (1964) found an inverse relationship between time spent studying and percentages of self-reported cheating. Effort in terms of length of time is the focus of this study; how efficiently time is used is beyond the scope of this study.

Drive and Ambition

Finally, the literature indicates that drive is an important variable related to cheating. The student who is highly driven and ambitious is more likely to use cheating as a means to meet his or her goals.

There is support in the literature for focusing on drive as a predictor of cheating. McClelland, Atkinson, Clark and Lowell; (1953, cited in Johnson, 1981), Johnson (1981), and Smith, Ryan and Diggans (1972) all found drive an important variable related to cheating. Although none defined drive in quite the same way as it is defined in this study (in combination with ambition), it seems apparent, given this generation of college students, that drive is an important variable to consider.

While all three of these theories have been looked at separately in previous studies, this investigator will define and test their importance both individually and collectively (i.e., their interactions). It is predicted that certain combinations of these variables will increase their predictive power. Specifically, it is expected that high drive and ambition will be more strongly related to cheating when combined with high effort and low academic self-concept.

These predicted interactions are based not only on the literature but also on the author's own work-related experience. Six years at a small college, for which this author provided administrative support to students charged with infractions of the academic honor system, made the investigator aware that many students found guilty of infractions were not necessarily in academic difficulty. Rather, they often were highly driven, ambitious students who were so focused on getting ahead that they often lost sight of the means they were using to achieve their

goals. Some felt as though they could not meet their goals through their own abilities, yet they did not compensate for these perceived inadequacies by spending more time studying. Sometimes even greater effort could not replace lack of self-confidence. These factors formed the basis of the theory to be tested.

Other Student Characteristics

While the combination of high drive and ambition was anticipated to be a positive predictor of cheating, lower rates of cheating were expected among those students who are more concerned with altruism and social responsibility. Is it possible that such students see cheating as an anti-group or antisocial act? To test this possibility the investigator included measures of altruism and social responsibility to determine their effects on cheating.

Administrative Climate

The administrative climate of college campuses is of particular interest in this study. While the importance of a type of academic honesty system has been identified in several studies--such as the honor system or the proctor system--there is little information about what is important within those systems to reduce cheating. In this study, the investigator examined several characteristics of an academic honesty system to determine the relative importance of these characteristics and their effects in combination with one another.

There are several components of an academic honesty system that contribute to its effectiveness. This study was focused on communication of information and the administrative responses to violations; individually and collectively, data about these issues provide a much more thorough picture of deterrents to cheating behaviors than could be gained by knowing the type of system.

Type of system

The proctoring system places the responsibility for enforcement on the instructor and administration; the formal honor system shares this responsibility with students. For purposes of this study, "honor system" applies only to academic work.

The literature is inconsistent about which system is more effective. In the majority of studies, less cheating has been found in honor systems than in proctor systems (Bowers, 1964; Bonjean & McGee, 1965; Campbell, 1935; Fischer, 1970; Williams & Barth, 1967). It is possible that those who found proctor systems to be more effective may, in fact, have really seen the effects of some of the other characteristics (such as an explicit policy, or frequent reminders about cheating) which are being examined in this study.

It is anticipated that honor systems are more successful in reducing cheating because they are more "active" and cooperative--there is a community commitment to reduce cheating and a number of specific actions and procedures are undertaken to meet

that goal. Academic honor systems do not operate successfully in a vacuum. If they are effective, it is because they combine attention to the issues, a commitment to working with students to reduce levels of dishonesty, and a sharing of the importance of this value to the community.

Communication of Administrative Policies

The ways in which an institution's policy is communicated to its students, along with feedback about infractions and resulting sanctions, are essential components of an effective academic honesty system. Most colleges supply students with at least minimal information about academic honesty regulations, usually in either the handbook or the catalogue. Among those features of a system which merit exploration are the explicitness of the code, the frequency and methods of information dissemination, and the results of adjudicated cases or sanctions.

Institutions vary substantially in the explicitness of their regulations. On one end of this continuum are colleges that offer highly explicit regulations, informing students of exactly what is considered dishonest. At the other end are colleges that tell students simply that it is against regulations to cheat, without explaining what is considered to be cheating; in some cases, these colleges have no rules at all about academic dishonesty.

There are contrasting rationales for these approaches. The "laundry list" approach offers an extensive and thorough amount of

information to students about what is expected. However, there are usually specific types of infractions that do not appear on the list, particularly if the list is dated. If a student commits one of those unaccounted-for infractions, that student can claim the institution does not consider it cheating. At the other extreme, when rules are vague, and if there is a great deal of inconsistency or ambiguity about what is considered cheating, students may become honestly confused about the meaning of their actions.

Frequency of communication is another important area for consideration. Most colleges disseminate information about academic honesty to students at the time of their initial registration/orientation. Again there is wide variation. Some colleges provide this information only once (or not at all); others provide their students with frequent reminders about academic honesty throughout their college careers.

In addition to frequency of reminders about honesty, there are a variety of methods used to disseminate this information. Written reminders, verbal announcements in class, and pledges of honesty attached to work are among the techniques that are examined and whose effects are compared.

Finally, there is the matter of communication of sanctions imposed. The results of judicial administrative action may or may not be reported back to the community in a regular and systematic fashion. When administrative action is reported, community members can use such feedback to estimate the likely consequences of their

possible actions. In some academic communities, little information about sanctions is ever disseminated to the community; in others, quarterly, semester or yearly reports are issued.

Administrative Response

Administrative response is another key area which is believed to be important. Three areas of administrative response are examined: the range and application of sanctions for specific infractions, the level of activity of the system (as measured by the numbers of cases adjudicated annually compared to student enrollment), and the representation of various constituencies in the adjudication process.

Many institutions employ a variety of deterrents, ranging from warnings or failing grades on an assignment to failing a course or being suspended or expelled from school. Astin (1968) found that cheating is negatively related to the severity of administrative policies used as cheating deterrents. This project includes an examination of the effects of a range of sanctions and applications of those sanctions to particular behaviors.

Another important factor is the extent to which the faculty and the administration initiate action for violations. Even if the college has a severe policy, if infractions are not detected or not acted upon, the policy may be ineffective. Some institutions assume it is sufficient to have severe sanctions in and of themselves. Yet Houston (1976; cited in Barnett & Dalton, 1981)

found that the absence of the apprehension of cheaters leads to subsequent cheating.

Finally, there is some research which indicates that the official "body" which adjudicates a case has an effect on cheating. Schools are surveyed for this study to determine the effects of the various constituent representation in the adjudication process.

CHAPTER IV.

METHODOLOGY AND RESEARCH DESIGN

Astin's "Input/Environment/Output" model (Astin, 1970a; 1970b; 1977) is used as a frame for exploring the research questions. Output refers to the dependent variables, which for the purposes of this study are cheating behaviors. Environmental variables are those factors inherent in the college environment or atmosphere that might affect the output. These can include college characteristics, such as size and selectivity, as well as policies on cheating. Variables representing background and personal characteristics of students, or inputs, are included as part of the design because one must first control for inputs before assessing the effects of environmental factors on outcomes. Input characteristics are thus included to partial out the effect, if any, that entering student variables may have on the outputs. Input variables, then, are those characteristics or features possessed by students at the time of arrival at college.

The model for this study is diagrammed in Figure 1.

In this study the investigator has examined the main effects of student characteristics, college type, and administrative climate, as well as selected interactions between and among these key independent variables.

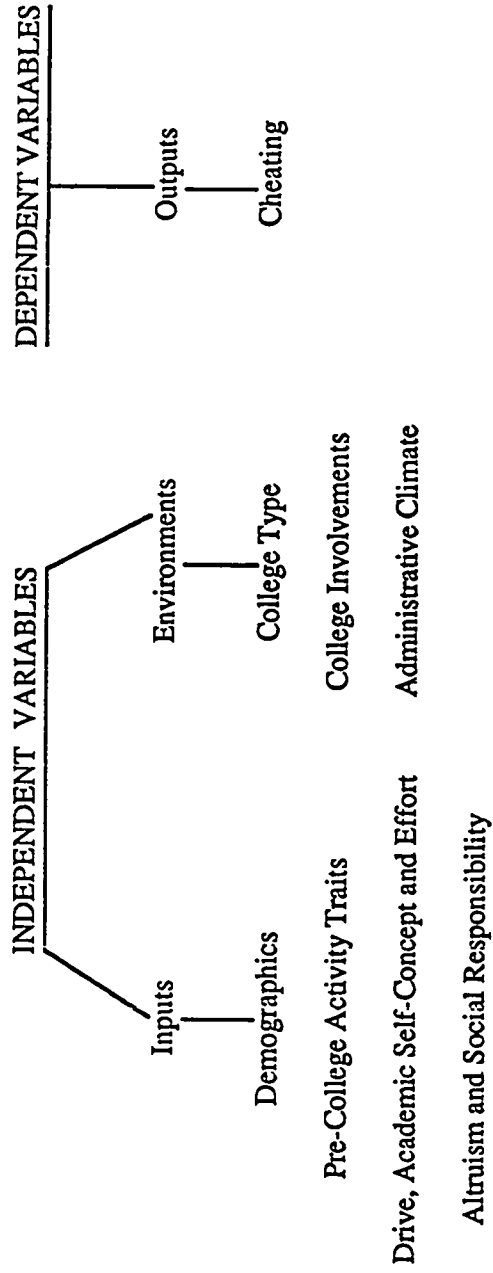


Figure 1. Model for the Study

Sample

The sample used for the study was drawn from the Cooperative Institutional Research Program's (CIRP) Annual Freshman Survey and Follow-Up Survey (FUS). Initiated at the American Council on Education, and now affiliated with the Higher Education Research Institute at the University of California at Los Angeles, the CIRP is a longitudinal, multi-institutional research program in its 23rd year. Entering college freshmen at participating institutions complete a four-page questionnaire and, although they submit their identifications for follow-up purposes, are promised anonymity. Responses are mailed directly to a data analysis center, and aggregated results are returned to participating colleges.

The freshman survey is administered annually to approximately 250,000-300,000 entering college students at approximately 600 institutions. The 1985 cohort of freshmen and the 1987 Follow-Up Survey were used in this study. Of the 280,000 students who were surveyed in 1985, a random sample of 14,534 students was selected to participate in the Follow-Up Survey (FUS). The FUS was mailed to these students at the end of their sophomore year, and approximately 26% of the students responded (see appendix A).

All of the member institutions of CIRP in 1985 for which follow-up information had been received on students were sent an administrative climate survey and a corresponding cover letter (see Appendix B). These requests were directed to the CIRP

representatives with the requests that they forward the questionnaire to a more appropriate respondent if the representative was unable to provide the necessary information.

The surveys included a request that institutions provide information about their academic honesty systems, the frequency and methods by which they communicated regulations to students, and the ways in which they responded to infractions.

Data Analysis

Means and standard deviations were calculated to determine the characteristics of the sample and the distributions of the variables. Pearson correlations were used to determine the relationships among the variables. Cross-tabulations were used to test the relationships of key independent and dependent variables for linearity.

Multivariate stepwise regression, the primary method of analysis to be used in this study, allows one to estimate the effects of any particular environmental variable while controlling for various inputs and other environmental factors. Thus, if a specific environmental factor positively affects an outcome (in this case, cheating), the actual rate of cheating will exceed the expected rate (based on inputs). In other words, the mean actual rate for those particular students will be significantly higher for the mean rate expected from inputs (and possibly even from other environmental variables). Conversely, if the environment has a

negative effect, the actual cheating rate will be less than predicted rate.

The relative contributions of inputs and environments using three stepwise linear regressions (one for each of three cheating measures) are analyzed in this study. In each regression, the same independent variables were entered, and variables were blocked in temporal order. The dependent and independent variables are described in the next sections.

Dependent Variables: Outputs

Three dependent variables will be examined. The first will be student responses to whether, during the past year, the student engaged in cheating on a school quiz or examination. Possible responses were "frequently," "occasionally," or "not at all" to be scored as 3, 2, and 1, respectively. The second outcome, scored in the same way, was whether in the past year the student copied homework from another student. The third regression combined cheating in both situations, and the variable was coded with a range of scores from cheating in both situations (frequently/frequently = 6) to cheating in neither situation (not at all/not at all = 2).

The selection of these cheating measures is based on the literature as well as a pilot study conducted at UCLA during the spring of 1986 (Hanson). Because there is no general consensus on what constitutes cheating, research studies of both definitions of

cheating as well as self-reported behaviors were examined to select appropriate dependent variables.

The incidence of cheating on an examination gives some insight into the institutional environment. If examination cheating is rampant, then one can assume there is some sort of breakdown in the institutional environment and academic honesty is not a valued community trait. Examination cheating can be a relatively public infraction and can set a tone which often affects other students. For purposes of this study, a broad question related to cheating on examinations is asked to maximize the possible positive response.

While the literature shows that examination cheating is considered to be a serious infraction, and that there is consensus in this belief, there is a great variance of opinion on the seriousness of conspiring on homework. Copying homework was chosen because it was considered to be a less serious infraction by students, as we have seen in Chapter 2. It is also, however, admitted by one-tenth to one-fifth of the student populations studied (Bowers, 1964; Cole, 1976; 1981; Hanson, 1986). It is anticipated that those students who might feel threatened about admitting cheating on an exam might be more likely to report a lesser infraction. Additionally, copying homework is a more private behavior. It usually takes two to conspire, but others may be unaware of their actions (unlike cheating during examinations). This behavior, therefore, could more easily occur in an environment in which cheating was discouraged.

Independent Variables: Inputs

Block 1 - Demographics

The literature specifies a number of characteristics that have been found to be related to cheating. The demographic characteristics that were controlled are: sex, age, race, citizenship, parental education, parental occupation, parental income and religion. These are all characteristics of a student that are in place before the student enters college, and are a product of one's particular upbringing and family background.

Block 2 - Pre-College Activity Traits

Included in this block of variables are achievement (high school grade point average and rank in class), probable major field, and probable career. Additionally, for purposes of exploration, the strengths of predictions based on student reasons for attending college were tested. Students attending college for the intrinsic value of education were compared with those who attended college for instrumental purposes (i.e., as a means to another end). A measure of "education for intrinsic value" will be developed, based on the sum of the students' responses to the following reasons for going to college: "to gain a general education," "to learn more about things that interest me," and "to become a more cultured person." A contrasting measure of "education as a means to another goal" will be developed by summing

student responses to the following reasons for attending college: "to get a better job," "to prepare for graduate school," and "to make money." Items for these goals are scored on a three-point scale: very important (as a reason for going to college) (score 3); somewhat important (score 2) and not important (score 1).

All of these responses were measured before college attendance (at the beginning of a student's college career), but are blocked separately because temporally they occur subsequent to the demographic characteristics described.

Block 3 - Drive and Ambition, Academic Self-Concept and Effort; Altruism and Social Responsibility

Three additional constructs were made from the CIRP data to measure Drive and Ambition, Academic Self-concept, and Effort.

Drive and ambition. Drive and Ambition are defined as the sum of the student's self-ranking on drive to achieve (five-point scale), level of highest degree to which the student aspires (five-point scale), and responses to four personal goals oriented toward self-advancement: "to become an authority in my field," "to obtain recognition from my colleagues for contributions to my special field," "to have administrative responsibility for the work of others" and "to be very well-off financially" (all responded to on a four-point scale of importance).

Academic self-concept. Academic Self-concept is defined as the sum of the student's self-ratings of academic ability, mathematical ability and writing ability. These self-ratings involve a five-point scale: top 10% (5), above average (4), average (3), below average (2), and lowest 10%(1).

Effort. Effort is defined by the average number of hours per week spent on studying and homework, in classes, and in labs. The measure of this variable is time spent studying and in related academic work, as well as time spent attending class and laboratory sessions.

Hypotheses: Input Characteristics

Based on the dependent and independent variables described in the definitions of Blocks 1, 2 and 3 these hypotheses were tested:

Main Effects

Hypothesis 1. Students with high Drive and Ambition will cheat more than students with low Drive and Ambition.

Hypothesis 2. Students who have poor Academic Self-concept will cheat more than students who have high Academic Self-concept. A student's belief that he or she does not have the academic ability to succeed will increase the likelihood of cheating.

Hypothesis 3. Students who expend great effort on their academic work will cheat less than those who exert little effort. In

short, the more time a student spends on academic activities, the less likely that student will be to cheat.

Interactions

Hypothesis 4. The effect of High Drive and Ambition will be greatest among those students with poor Academic Self-Concept.

Hypothesis 5. The effect of High Drive and Ambition will be greatest among students who exert a low level of effort.

Hypothesis 6. There will be a three-way interaction between Drive and Ambition, Academic Self-concept and Effort.

- a. The effect of High Drive and Ambition and low Academic Self-concept will be greatest among students who exert the least effort.
- b. The effects of High Drive and Ambition and low Effort will be greatest among students with low Academic Self-concept.
- c. The effects of low Academic Self-concept and low Effort will be greatest among students with High Drive and Ambition.

For exploration

One additional student input measure was added to the study for exploratory purposes: Altruism and Social Responsibility. While Drive and Ambition was expected to be a positive predictor of cheating, it seemed likely that students who are focused on

Altruism and Social Responsibility would be less likely to cheat because they may regard cheating as an anti-group or antisocial act. Altruism and Social Responsibility were measured by the sum of the student's responses to statements concerning specific life goals: "to influence social values," "to help others who are in difficulty," "to participate in a community action program," and "to help promote racial understanding." Each of these was answered on a four-point scale of importance.

Independent Variables: Environmental Characteristics

Two types of the environmental characteristics that are expected to affect cheating behaviors were examined: college characteristics and administrative climate. Because college "involvements" have also been found to be related to cheating, this category was added in a separate block to test relative contributions to the prediction of cheating.

Block 4 - Administrative Climate

Three main areas of administrative climate were considered (see Appendix B for a copy of the questionnaire). Schools were asked to provide information about the type of system they had (honor system, proctor system, or other). Information with regard to the communication of policies was also examined. In particular, three aspects of communication were investigated: explicitness of

code, methods of communication of rules and reminders, and frequency of communication of results of infractions.

Explicitness of code has previously been unexplored and is important to investigate. In order to examine explicitness of code, a content analysis of codes was conducted. Surveyed institutions were asked to submit copies of their policies. References to types of infractions were analyzed and tabulated.

Finally, administrative response to infractions were examined, including range of sanctions, severity of sanctions applied to specific infractions, the numbers of cases adjudicated compared to student enrollment, and constituent participation in the adjudication process.

Main Effects.

Hypothesis 7. Schools with academic honor systems will have significantly lower levels of cheating than proctor systems.

This hypothesis is based on the belief that honor system schools, in general, place a greater effort in educating and reminding the community about the system.

Hypothesis 8. Institutions will exhibit lower levels of cheating if they have the following characteristics:

- a) an explicit code
- b) methods of communicating rules and reminders
- c) sanctions communicated frequently
- d) larger proportions of cases adjudicated to students

enrolled

- e) harsh sanctions for serious infractions
- f) students involved in the adjudication process

For exploration. It was important to examine the effects of the relationship of each of these components (a-f) to each other, in order to determine which are the stronger predictors of academic honesty.

Block 5 - College Characteristics

Six measures of college characteristics were considered: selectivity, size, college "gender" (men, women, coeducational), control (public, private), region, and college "race" (historically black, white). College type information will be attained from the Higher Education General Information System (HEGIS).

Selectivity was of particular interest in relation to cheating. Bowers (1964) found that the more selective the institution, the less the cheating. Both Levine (1980) and Centra (1970) supported this finding. Additional research is needed in this area, however. Of particular concern is the potential confounding of these factors with other institutional variables. For example, highly selective schools may also be more likely to have honor systems.

The more highly selective schools, which place a great deal of emphasis on academics, will frequently also place a higher premium

on academic honesty and will therefore be more likely to invest the effort in a system which requires more effort.

Size has also been examined in regard to cheating. Researchers have found that colleges with greater proportions of cheaters tend to have the largest enrollments (Bowers, 1964; Goldsen, Rosenberg, Williams & Suchman, 1960).

Coeducational schools have been found to have greater levels of cheating than single sex schools (Bowers, 1964; Centra, 1970) and men's colleges have higher reported levels of cheating than women's colleges (Bowers, 1964; Centra, 1970). Bowers and Salem (1969) found the highest rates of plagiarism or exam copying occurred at men's colleges; however, college sex is partially confounded with selectivity, size and honor systems, so it will be useful to separate the effects of these different variables.

Examining the relationship between institutional control and cheating, Astin, Panos and Creagar (1967) found that the highest percentages of students who reported having cribbed on an exam (25%) were found in Catholic four year colleges. Conversely, the lowest levels of exam cribbing (15%) occurred at Protestant four-year colleges (15%).

Very little attention has been given to either college region or race as they relate to cheating; both these measures have been found to be related to severity of administrative code.

It was not anticipated that any one college characteristic alone would account for high levels of cheating, but rather that

various college characteristics will combine or interact with other variables to predict cheating. It was not expected that there would be main effects based on college characteristics such as size and selectivity, once the effects of entering-student characteristics (inputs) and administrative climate have been taken into account. Thus it was expected that there would be a simple negative correlation between cheating and selectivity, and that this correlation would be accounted for to a large extent by the high Self-Concept and high Ability of the students who attend selective institutions and by the honor code and other administrative variables that one frequently encounters in such institutions.

Interactions.

Hypothesis 9. There will be an interaction between college size and several aspects of the administrative climate:

- a. Infrequent communication of rules will lead to more cheating in large versus small institutions.
- b. Infrequent adjudication of infractions will lead to more cheating in large versus small institutions.

Large student enrollments will make the communication and administrative aspects of the systems more difficult, both in terms of effort and expense. For larger institutions, it will be both more timely and more costly to communicate with students and to follow through with adjudication of large numbers of cases;

therefore, larger institutions will demonstrate lower levels of these three characteristics.

Block 6 - College Involvements

According to the literature several different college activities and characteristics have been found to be correlated with cheating. The following college activity traits were considered on an exploratory basis: major field; career choice; achievement (college grades and graduate school admission test scores); full- or part-time student status, academic involvement characteristics (participated on a research project or a college professor's research project, took an honors course, failed to complete homework on time); social involvements (was a member of a fraternity or sorority, drank alcohol); extracurricular involvements (held a job, held a student office, participated in a political campaign, participated in a campus demonstration or protest), and athletic involvement (played an intercollegiate sport, participated in intramural sports).

CHAPTER V

DESCRIPTIVE RESULTS:

CORRELATES OF CHEATING POLICIES AND BEHAVIORS

As part of the Cooperative Institutional Research Program, approximately 280,000 college freshman were surveyed in the fall of 1985. Of those initially surveyed, a random sample was identified to follow up with a second survey two years later. In the summer of 1987, 3,756 of 14,534 students surveyed (26%) responded to the Follow-Up Survey (FUS). Subsequently, institutions these students attended were identified, student data were matched to the institutional data, and analyses were performed to determine individual characteristics of student cheaters in specific institutional environments.

Sampling information and data on cheating behaviors, key constructs, and academic honesty systems are presented in this chapter. Because of the large amount of data, only selected descriptive results are discussed here. (The bulk of the descriptive statistics are to be found in Appendix D.)

Dependent Variables

Information about the three measures of cheating behavior is presented in Table 1. For this sample, 17% of the students

Table 1
 Cheating Measures
 Means, Standard Deviations and Distributions (N = 3,035)

Variables	Mean	Standard deviations	Percentages
In the past year have you:			
Cheated on an exam or quiz	1.18	.40	
(1) Not at all			82.3
(2) Occasionally			17.3
(3) Frequently			.4
Copied homework from student	1.30	.48	
(1) Not at all			70.6
(2) Occasionally			28.5
(3) Frequently			.9
Combined cheating measure	1.48	.71	
(1) Not at all			64.2
(2) Cheats in one situation			25.8
(3) Occasional cheating			9.9
(4) Cheats more than occasionally			1.1
(5) Regular cheating			0.0

reported in the past year that they occasionally cheated on an examination or a quiz. Very few students (less than 1%) reported that they cheated frequently; 29% reported copying homework occasionally and approximately 1% reported they copied homework frequently. Cheating on a quiz or examination has a correlation of .33 with copying homework.

Independent Variables

Results with independent variables are discussed separately by the block in which they were ordered for entry into the regression.

Block 1 - Demographic Characteristics

The demographic and background characteristics of the sample are presented and described in Appendix D.

Block 2 - Precollege Activity Traits

Precollege activity traits are those college interests expressed at college matriculation as well as a few high school activities and traits. The bulk of the traits are described in Appendix D; however, two sets of items are discussed here because it was anticipated that they might affect cheating behaviors. Both sets have to do with students' reasons for attending college. It was anticipated, on the one hand, that a student who chooses to go to college because that student values education might be less likely to cheat. On the other hand, a student whose primary

motivation in attending college is related to rewards attained after college might be more inclined to cheat. Two variables were constructed using data focused on these questions: "Intrinsic Reasons for Attending College" and "Extrinsic Reasons for Attending College." Intrinsic Reasons is a scale made from three variables: "gain a general education," "learn more about things," "make me a more cultured person." Extrinsic Reasons was constructed from three other items: "get a better job," "make more money," "prepare for graduate school." All items were scored from "not important" (score 1), "somewhat important" (score 2) to "very important" (score 3). Thus, the scores on the two scales could range from 3 to 9. The mean response for intrinsic reasons for attending college was 7.60 and the mean response for extrinsic reasons for attending college was 7.61 (see Table 2).

Responses to the six individual items from which constructs were made are also shown in Table 2. Students most frequently identified as very important "get a better job," "learn more about things," and "gain a general education."

Many of these reasons for attending college have small but statistically significant correlations with the measures of cheating. Significant correlations for each construct and its individual variables are presented in Table 3.

As hypothesized, the construct Intrinsic Reasons for Attending

Table 2
Means, Standard Deviations and Distributions of Reasons for
Attending College (N = 3,035)

Reasons for attending college	Mean	Standard deviation
Reasons for attending college:		
(1) not (2) somewhat (3) very important		
Intrinsic reasons		
(Construct; scored 3-9)	7.60	1.21
Gain general education	2.62	.53
Learn more about things	2.74	.46
Make me more cultured person	2.24	.65
Extrinsic Reasons		
(Construct; scored 3-9)	7.61	1.27
Get a better job	2.76	.51
Make more money	2.57	.59
Prepare for graduate school	2.28	.75

Table 3
 Correlations of Cheating Measures with Reasons for Attending
 College (N = 3,035)

Reasons for attending college	Cheating on:		
	Homework	Exams	Overall
Reasons for Attending College:			
Intrinsic reasons (construct)	-.05	-.05	-.06
Gain general education	-.04	-.04	-.05
Learn more about things	-.04	-.06	-.06
More cultured person			
Extrinsic Reasons (construct)	.06	.04	.06
Get a better job	.07		.06
Make more money	.11	.08	.12
Prepare for graduate school			

Note: All correlations shown are significant at the .01 level.

College was negatively related to cheating in every instance. Two of the individual variables making up the construct, "gain a general education" and "learn more about things," also have significant negative relations with cheating behaviors. The third variable used in the construct, attending college to become a "more cultured person," was not significantly related to cheating. Similarly, there was a significant positive relationship between the construct, "Extrinsic Reasons for Attending College," and all measures of cheating behaviors. There were also significant positive relations between cheating and the items, wanting to "make more money," and "getting a better job." Attending college to "prepare for graduate school" was not significantly related to cheating.

Block 3 - Drive and Ambition, Academic Self-Concept, and Effort

Using the approach set forth in this study, the three constructs, Drive and Ambition, Academic Self-concept and Effort, were examined. As Table 4 indicates, Drive and Ambition has a range of scores from 6 to 26, with a mean of 18.30. When examining the individual items making up Drive and Ambition, the highest percentages of students perceive their drive to be above average and their degree aspirations to be in the category of bachelor of

Table 4

Scales and Items Used to Assess Four Constructs:
Means, Standard Deviations and Distributions (N = 3,035)

<u>Construct</u>	Mean	Standard	Percentage
Items making up construct		deviation	distribution
			of responses
<u>Drive and Ambition:</u>			
(construct; scored 6-26)	18.30	2.84	
Self rating of drive	3.90	.76	
(1) Lowest 10%			.2
(2) Below average			2.0
(3) Average			27.1
(4) Above average			49.1
(5) Highest 10%			21.7
Degree aspirations	3.71	.87	
(1) None			1.0
(2) Vocational certificate			
/AA degree			1.9
(3) BA,BS			44.6
(4) Masters/professional degree			30.4
(5) Other			22.1

(table continues)

Table 4

Scales and Items Used to Assess Four Constructs: Means, Standard Deviations and Distributions (N = 3,035) (continued)

Construct	Mean	Standard	Percentage
Items making up construct		deviation	distribution
			of responses
Goal: become authority in field	2.91	.83	
(1) Not important			4.3
(2) Somewhat important			26.5
(3) Very Important			42.8
(4) Essential			.4
Goal: recognition of colleagues	2.61	.80	
(1) Not important			6.9
(2) Somewhat important			38.7
(3) Very Important			41.0
(4) Essential			13.4
Goal: administrative responsibility	2.33	.82	
(1) Not important			15.1
(2) Somewhat important			44.4
(3) Very Important			33.1
(4) Essential			7.4

(table continues)

Table 4

Scales and Items Used to Assess Four Constructs: Means, Standard Deviations and Distributions (N = 3,035) (continued)

<u>Construct</u>	Mean	Standard	Percentage
Items making up construct		deviation	distribution
			of responses
Goal: be well-off financially	2.84	.84	
(1) Not important			4.4
(2) Somewhat important			31.4
(3) Very Important			40.4
(4) Essential			23.8
<u>Academic Self-concept:</u>			
(construct; scored 5-15)	10.80	1.89	
Self-ratings of:			
Academic ability	3.92	.72	
(1) Lowest 10%			.0
(2) Below average			.6
(3) Average			28.2
(4) Above average			49.5
(5) Highest 10%			21.8
Mathematical ability	3.40	1.00	
(1) Lowest 10%			3.0

(table continues)

Table 4

Scales and Items Used to Assess Four Constructs: Means, Standard Deviations and Distributions (N = 3,035) (continued)

<u>Construct</u>	Mean	Standard	Percentage
Items making up construct		deviation	distribution
			of responses
(2) Below average			14.8
(3) Average			35.5
(4) Above average			32.6
(5) Highest 10%			14.0
Writing ability	3.48	.86	
(1) Lowest 10%			1.2
(2) Below average			9.5
(3) Average			40.8
(4) Above average			37.4
(5) Highest 10%			11.0
<u>Effort:</u>			
(construct; scored 2-16)	12.01	2.31	
Time spent attending class (hours)	6.29	1.35	
(1) None			1.2
(2) Less than one			.5
(3) 1-2			2.7

(table continues)

Table 4

Scales and Items Used to Assess Four Constructs: Means, Standard Deviations and Distributions (N = 3,035) (continued)

<u>Construct</u>	Mean	Standard	Percentage
Items making up construct		deviation	distribution
			of responses
(4) 3-5			5.6
(5) 6-10			9.4
(6) 11-15			30.5
(7) 16-20			34.7
(8) Over 20			15.5
Time spent studying	5.71	1.47	
(1) None			.2
(2) Less than one			.6
(3) 1-2			4.5
(4) 3-5			15.3
(5) 6-10			28.6
(6) 11-15			20.4
(7) 16-20			14.0
(8) Over 20			16.5
<u>Altruism and social responsibility:</u>			
(construct; scored 4-16)	9.34	2.29	

(table continues)

Table 4

Scales and Items Used to Assess Four Constructs: Means, Standard Deviations and Distributions (N = 3,035) (continued)

<u>Construct</u>	Mean	Standard	Percentage
Items making up construct		deviation	distribution
			of responses
Influence social values	2.23	.78	
(1) Not important			16.0
(2) Somewhat important			51.1
(3) Very important			27.2
(4) Essential			5.7
Help others	2.84	.75	
(1) Not important			2.1
(2) Somewhat important			31.3
(3) Very important			47.1
(4) Essential			19.5
Participate in community action	2.07	.76	
(1) Not important			21.4
(2) Somewhat important			54.4
(3) Very important			20.0
(4) Essential			4.2

(table continues)

Table 4

Scales and Items Used to Assess Four Constructs: Means, Standard Deviations and Distributions (N = 3,035) (continued)

<u>Construct</u>	Mean	Standard	Percentage
Items making up construct		deviation	distribution
			of responses
Promote racial understanding	2.22	.85	
(1) Not important			19.5
(2) Somewhat important			47.5
(3) Very important			25.1
(4) Essential			8.0

arts and bachelor of science. "Becoming an authority" and "being very well-off financially" are seen as more important than either having "administrative responsibility for others" or "obtaining the recognition of colleagues."

The scale measuring the construct, Academic Self-concept, is scored from 5-15, with a mean score of 10.8. In specific academic abilities, the majority of students rate themselves above average in their academic ability and average in their writing ability and mathematical ability.

Effort, in this study, is defined by time spent attending class and studying. Scores range from 2-16, and the mean for the construct is 12.01. An examination of these two variables individually reveals that 31% of the students spend 11-15 hours attending class, and 35% spend 16-20 hours attending class. Twenty-nine percent of the students spend 6-10 hours per week studying and 20% spend 11-15 hours per week studying.

Finally, a scale comprising four variables was developed to measure "Altruism and Social Responsibility." Students were asked to indicate how important each of the following goals were: "influencing social values," "helping others," "participating in community action," and "promoting racial understanding." Each goal was measured on a four-point scale of importance. The mean for the construct was 9.34. Individually, the variable "helping others" is the value viewed as most important.

Table 5
 Correlations of Cheating Measures with Scales and Individual Items
 (N = 3,035)

<u>Scale</u>	<u>Cheating on:</u>		
	Homework	Exams	Overall
<u>Individual Items</u>			
<u>Drive and Ambition:</u>			.04
Self rating: drive to achieve	-.06	-.07	-.07
Degree aspirations		-.05	-.05
<u>Goals:</u>			
Become authority in field			
Recognition of colleagues			
Administrative responsibility	.07	.05	.08
Well-off financially	.13	.10	.15
<u>Academic self-concept:</u>	-.05	-.07	-.07
Self-ratings of	-.06	-.09	-.08
Academic ability	-.08	-.11	-.10
Mathematical ability		-.05	
Writing ability	-.07	-.04	-.06
<u>Effort:</u>	-.10	-.10	-.12
Time spent attending class	-.05	-.04	-.05
Time spent studying	-.11	-.13	-.14

(table continues)

Table 5
 Correlations of Cheating Measures with Scales and Individual Items
 (N = 3,035) (continued)

Scale	Cheating on:		
	Homework	Exams	Overall
Individual items			
<u>Altruism and social responsibility:</u>			
Influence social values	-.07		-.06
Help others	-.07	-.06	-.08
Participate in community action	-.05		
Promote racial understanding	-.06	-.06	-.07

Note: All correlations shown are significant at the .01 level.

In Table 5, the correlations between these variables and the three measures of cheating are presented. Drive and Ambition is not significantly correlated with either exam cheating or homework copying; however, for the overall cheating measure, there is a weak but significant positive relationship ($r = .04$).

Several of the variables used to construct Drive and Ambition have significant correlations with cheating. The goals of being "very well-off financially" ($r = .13$, $r = .10$, and $r = .15$) and having "administrative responsibility for others" ($r = .07$, $r = .05$, $r = .08$) both have significant positive relations to the measures of cheating. The goals of wanting to become an "authority in one's field" or to "obtain recognition from one's colleagues," however, are not related to cheating, and while the relation between self-rating of drive to achieve is significant, it is a negative relationship rather than the hypothesized positive one. Furthermore, the correlations between degree aspirations and cheating are negative for examination cheating and overall cheating. This conflicting pattern of positive and negative correlations involving items making up the Drive and Ambition construct helps to explain why the construct had no or only a marginal correlation with cheating. This suggests that the construct as currently defined may not involve a homogeneous set of items.

As was anticipated, low self-ratings on measures of ability are related to cheating behaviors. This is true for the construct

as well as the individual variables from which it is scaled. The Effort construct, as well as its individual items, are all also related to admitted cheating in the hypothesized direction. The multivariate relations of all of these constructs and individual variables will be further examined in Chapter VI.

The construct "Altruism and Social Responsibility" was significantly correlated with two of the cheating measures (homework copying and overall cheating) in the expected negative direction. Individually, three of the items which were combined to make this construct had weak but significant negative relations with the cheating variables. "Influencing social values," however, does not appear to be related to cheating.

Block 4 - Administrative Climate Survey

Institutions were surveyed for information about three areas of their academic honesty policies: academic honesty systems, methods of communicating of policies, and administrative response to infractions. A total of 358 institutions out of 440 institutions surveyed (81%) responded to the Administrative Climate Survey. (See Appendix C). Survey results will be discussed separately for each area.

Academic honesty systems. Table 6 provides information about honesty systems institutions employ. As can be seen, 23% of the institutions surveyed had honor systems, 71% had proctor systems

Table 6
Academic Honesty Systems (N = 358)

Variables	Percent responding	Percentage (respondents only)
SYSTEM	100.0	
Honor system		23.1
Proctor system		70.8
Other system		6.1
Students bound take action	27.3	54.6

systems and 6% had some other type of system. Institutions reporting "other systems," in their written descriptions, often described the "other system" as the absence of a system, or a combination of the honor and proctor systems. Only 27% of the respondents (or 97 institutions) provided information about whether they required students to report other students they observed cheating. Fifty-five percent of those who responded reported that students were bound to take some action.

Communication of policies. A variety of methods institutions use to communicate policies and to inform students about regulations which govern academic honesty are explored in this study. Eighty-one percent of the institutions provided academic honesty regulations. These regulations were analyzed for content. Policies were examined to determine the specificity of regulations on a five-point scale. Those institutions that had only a broad general statement about academic honesty were scored as a "1," while institutions that gave explicit explanations of what constitutes cheating (incorporating 11 or more descriptions or definitions) were scored as a "5." As can be seen in Table 7, the majority of respondents had regulations with either six-to-ten examples (34%) or three-to-five examples (23%) of infractions.

Because some institutions referred to "cheating" or "plagiarism" without defining it, policies were examined to see if definitions were included. Fifty-eight percent of the institutions

Table 7

Administrative Climate Survey: Communication of Policy (N = 358)

Variables	N	Mean	Standard deviation	Percentage
Policy provided	353			80.5
Specificity of regulations	281	3.22	1.20	
Broad statement				10.3
Broad, 1-2 examples				18.9
3-5 examples				23.1
6-10 examples				34.2
11+ examples				13.5
Definitions in regulations	283			58.0
Computer application in code	283	1.30	.72	
No mention				82.3
Word only				8.5
2-5 examples				6.0
6+ examples				3.2
Plagiarism examples in code	279			8.2

(table continues)

Table 7
 Administrative Climate Survey: Communication of Policy
 (N = 358) (continued)

Variables	N	Mean	Standard deviation	Percentage
Students reminded rules:	353			
No reminders				2.3
Notification of admission				9.1
Orientation meetings				60.9
Signing pledge-beginning year				13.9
Handbook/catalogue				88.1
Academic honesty handout				21.0
First class session				45.9
Each test/examination				15.6
Each final				13.3
Honesty pledge on all work				9.1
Other reminders				16.1
Institution releases data	1.41	.86		
Does not release				77.5
Annually				10.4
Semi-annually				5.6
More frequently				6.5

had policies which included definitions of plagiarism and/or other types of cheating. Additionally, policies were examined to determine if examples of correct or incorrect citation were provided. Only eight percent of the institutions had codes that provided examples of proper methods of citation.

Policies were also analyzed to determine if references to computer usage were included. As can be seen in Table 7, the vast majority (82%) made no mention of academic honesty as it relates to computer use.

Twenty-three percent of the institutions reported they release information regarding infractions and sanctions. Of these, 10% release it annually.

Respondents were also questioned about the methods they employed for informing and reminding students about policies (Table 8). The most frequent reminders or sources of information about policies were handbooks or catalogues (used by 88% of the institutions), orientation meetings (61%), first class sessions (46%), and special academic honesty handouts (21%). The least common methods used to inform students of policies were either to inform them when they are first admitted to the institution or to require them to sign an honesty pledge on all work they submit (both 9%). Only 2% of the institutions reported that they neither communicated policies nor reminded students about academic honesty.

Administrative response. Institutions were asked to identify the range of sanctions they use to respond to infractions. Each institution could indicate any sanction in response to any academic honesty infraction. As can be seen in Table 8, most institutions report using such sanctions as: failing the course (89%), failing the assignment (85%), suspension (76%), and warning and/or reprimand (72%). The two sanctions most infrequently reported were "no action" (24%) or "other punishments" (10%). Written comments indicate that "other punishments" were often educational or community-oriented such as writing a report on plagiarism, writing a column on cheating for the student newspaper, or rewriting the paper correctly.

Respondents were asked to report the single most likely consequence of an infraction, assuming there were no mitigating circumstances. Because many institutions reported more than one likely consequence, it was decided to use all of the data. Instead of treating multiple responses as missing data, when a response resulted in multiple sanctions, the most severe sanction was scored. Table 8 also provides information about sanctions as they apply to specific cheating violations.

Of the eight infractions, institutions appear to regard "submitting a paper written by someone else" (mean 4.09) and "entering another's computer file and copying from it" (mean 3.76) as being the most serious. Conversely, the least serious

Table 8
Administrative Response to Violations

Sanction or violation	Percentage mentioning or "using" sanction	"Severity" Code	N	Mean	Standard Deviation
Range of sanctions:			358		
No action	23.5	1			
Warning/reprimand	71.8	2			
Falling grade/assignment	85.2	3			
Falling grade in course	88.5	4			
Official discipline					
/probation	46.1	5			
Suspension	76.3	6			
Permanent expulsion	58.4	7			
Other punishment (coded as "missing" for computing means)	10.1	(0)			

(table continues)

Table 8
Administrative Response to Violations (continued)

Sanction or violation	Percentage mentioning or "using" sanction	"Severity" Code	"Severity"	
			N	Mean Standard Deviation
Violation				
Cheated on quiz/exam			352	3.49 1.32
Copied homework from another			354	3.05 1.26
Changed answer/graded exam resubmitted			355	3.41 1.53
Same paper two classes/no permission			354	3.22 1.37
Submitted paper written by another			354	4.09 1.47
Items added bibliography/unused sources			354	2.92 1.25
Copied sentences from source/no citation			352	3.34 1.37
Entered another's computer file/copied			335	3.76 1.59

Note: percentages do not total to 100% because of rounding.

infractions appear to be "adding items to a bibliography from unused sources" (mean 2.92) and "copying homework" (mean 3.05).

Another measure of the institutional climate for academic dishonesty is student perceptions. Respondents were asked to anticipate how students on their campuses felt about a series of five infractions. These findings are reported in Table 9. The largest majorities of respondents reported that their students believe that "submitting a paper written by another," "entering another's computer file and copying," or "cheating on an exam or quiz," are dishonest and not acceptable. For the other two cheating behaviors, student opinion was perceived to be more ambiguous. Administrators are most likely to report that their students see "copying homework" (59%) and "adding items to a bibliography from sources not used" (60%) as "probably dishonest but acceptable." Substantial numbers of administrators also report that these two infractions are also perceived by students to be "acceptable and not dishonest" (12% and 14%, respectively).

Respondents were asked to indicate all persons and offices involved in the adjudication process for handling possible infractions. The majority of institutions reported that faculty refer cases (79%), that deans are involved (56%), and that they have academic honesty boards (52%). Only 35% of the institutions reported that students are given a choice as to who handles the infraction (see Table 10).

Table 9
 Student Perceptions of Academically Dishonest Practices
 as Reported by Administrators (N = 358)

Student perception of infraction	N	Mean	Standard Deviation	Percentage
Cheat on exam, quiz	338	2.72	.47	
Acceptable/not dishonest				1.2
Probably dishonest/acceptable				25.4
Dishonest/not acceptable				73.4
Copy homework	336	2.18	.62	
Acceptable/not dishonest				11.6
Probably dishonest/acceptable				58.6
Dishonest/not acceptable				29.8
Submit paper written by another	339	2.84	.37	
Acceptable/not dishonest				.0
Probably dishonest/acceptable				15.9
Dishonest/not acceptable				84.1

(table continues)

Table 9
 Student Perceptions of Academically Dishonest Practices
 as Reported by Administrators (N = 358) (continued)

Student perception of infraction	N	Mean	Standard Deviation	Percentage
Bibliography citations				
/unused sources	328	2.11	.62	
Acceptable/not dishonest				14.3
Probably dishonest/acceptable				60.1
Dishonest/not acceptable				25.6
Enter another's computer				
file/copy	329	2.78	.44	
Acceptable/not dishonest				1.2
Probably dishonest/acceptable				19.5
Dishonest/not acceptable				79.3

Table 10
 Administrative Mechanisms for Responding to Potential Infractions
 (N = 358)

Institutional mechanism for response	N	Percentage
Who handles infractions?	352	
Faculty only		44.0
Faculty refers		79.0
Department chair		33.2
Dean		56.0
Appointed institutional office		15.6
Academic honesty board		52.3
Other		11.1
Student can choose who handles	269	34.9
Composition of the honesty board:	241	
Students only		11.2
Faculty only		4.1
Administrators only		1.2
Students and faculty		24.9
Students and administrators		1.7
Faculty and administrators		8.7
Students, faculty and administrators		48.1

The majority of academic honesty boards are composed of "students, faculty and administrators" (48%) or "students and faculty" (25%). Least common are boards composed of "students and administrators" or "administrators only."

Table 11 provides information about the numbers of cases per year, and the number of findings of guilt. Responses indicate that most institutions have five or fewer cases annually, and similar numbers of findings of guilt.

In order to examine the simple relations between administrative responses, honesty systems and the three measures of cheating, correlations were calculated. Institutional responses were matched with student respondents for whom freshman survey and follow-up survey data was available. Table 12 provides correlations for all variables significantly related to cheating at the .01 level of confidence.

As can be seen, none of these correlations is particularly strong (the largest being $-.15$). Institutions that have academic honesty boards composed only of students and those that have honor systems appear to have the least cheating. Conversely, institutions that experience the greatest amount of cheating tend to have proctor systems, weak sanctions (e.g., failing grade on assignment where cheating occurred), and honesty boards composed of students and faculty or students and administrators.

Table 11
 Numbers of Cases Adjudicated During the Past Year
 (N=358)

Variables	N	Mean	Standard deviation	Percentage
Number of cases last year	358	1.70	1.24	
5 or less				68.2
6-10				11.7
11-20				10.3
21-30				4.5
31-50				3.6
51-100				.8
101 and above				.8
Number findings of guilt	358	1.61	1.16	
5 or less				69.6
6-10				14.0
11-20				8.9
21-30				3.4
31-50				2.5
51-100				.8
101 and above				.8

Table 12
Correlations of Cheating Variables with Administrative Policies
and Practices (N = 3,035)

Administrative policy or practice	Cheating on:		
	Exams	Homework	Overall
<u>System</u>			
Honor system	-.06	-.09	-.09
Proctor system	.06	.08	.09
Students bound to take action	-.14	-.12	-.15
<u>Communication of policy</u>			
Regulations include definitions		-.05	
<u>Methods of communication/frequency</u>			
Notification of admission	-.04	-.04	-.05
Orientation meetings	-.05	-.04	-.06
Honesty pledge-beginning year		-.05	-.05
Academic honesty handout	-.06	-.05	-.07
Each test/examination	.04	.05	.05
Honesty pledge on all work	-.06	-.06	-.07
<u>Administrative response</u>			
Range of sanctions:			
Falling grade on assignment	.04	.05	.05

(table continues)

Table 12
 Correlations of Cheating Variables with Administrative Policies
 and Practices (N = 3,035) (continued)

Administrative policy or practice	Cheating on:		
	Exams	Homework	Overall
Range of violations/penalties:			
Cheated on quiz or exam			-.07
Copied homework from another			-.07
Changed answer on graded exam			
/resubmitted			-.04
Same paper two classes			
/no permission			-.06
Submitted paper written by another			-.06
Items added bibliography			
/unused sources			-.06
Copied sentences from source			
/no citation			-.05
Entered another's computer file			
/copied			-.06

(table continues)

Table 12

Correlations of Cheating Variables with Administrative Policies
and Practices (N = 3,035) (continued)

Administrative policy or practice	Cheating on:		
	Exams	Homework	Overall
Handling infractions?			
Department chair	.06		.04
Appointed institutional office		.04	.05
Other		-.06	-.05
Composition honesty board:			
Students only	-.09	-.09	-.11
Faculty only		-.06	
Students and faculty	.05		.05
Students and administrators		.05	
Student perceptions of:			
Cheat on exam, quiz	-.05		-.04
Copy homework		-.06	-.05
Submit another's paper	-.05	-.05	-.06

Note: All correlations shown are significant at .01 level

Block 5 - Institutional Characteristics

Several institutional environmental qualities were examined: college selectivity, control, size, region and race. Institutional descriptive statistics are found in Appendix D.

Block 6 - College Involvements

The Follow-Up Survey (FUS) provides a wealth of information about student activities and choices during the college years. In Appendix D the these college activities are presented and discussed.

Summary

For this sample, 17% of the students reported that during the past year they occasionally cheated on examinations or quizzes. Less than 1% of the students reported that they cheated frequently. Over one-fourth (29%) of the students report that they occasionally copied homework, and less than 1% reported that they frequently copied homework.

Several scales were proposed to represent constructs implied in various theories. In general, the scales that measure these constructs correlate with cheating measures in the expected direction. Drive and Ambition, however, is an exception. The pattern of both positive and negative correlations for items in this scale suggests that this scale is not made up of a homogeneous

set of items. While the life goals of "being very-well off financially" and "having administrative responsibility for others" both have the expected positive correlations with cheating, two other items in the scale--wanting to become an "authority in one's field" or to "obtain recognition from one's colleagues"--are not related to cheating, and two other items--drive to achieve and degree aspirations--have significant positive correlations. The scales for Academic Self-concept and Effort were correlated as hypothesized. Likewise, the two measures of reasons for attending college were correlated in the anticipated directions. Some of the individual items making up these scales have even stronger correlations than the scales, however.

A scale for Altruism and Social Responsibility was also correlated with two of the cheating measures; however, one of the items in the construct, "influencing social values," does not appear to be related to cheating.

From the Administrative Climate survey we have learned that the proctor system was the most common academic honesty system used by institutions, while the honor system was used by less than one-fourth of the institutions. Four-fifths of the institutions provided information about their academic honesty policies. The majority of institutions had detailed codes, and slightly more than half included definitions of cheating in their codes. Approximately one-fifth of the colleges and universities referred to computer usage in the code, and only one-tenth gave examples of

plagiarism. Most institutions have five or fewer cases adjudicated annually, and the same numbers of findings of guilt.

Colleges and universities that provide academic honesty information to students most frequently do so through handbooks or catalogues, or at orientation meetings. Only two percent of all institutions provided no information or guidelines to students about honesty regulations.

Several practices have significant relations to cheating. The use of honor systems, the requirement that students sign honesty pledges on all submitted work, and adjudication boards composed only of students generally have negative correlations with cheating. That is, cheating is lower in schools that use these practices than in settings where they are not used. Conversely, proctor systems, cases handled by departmental chairs or other appointed administrative officers, and adjudication boards of students and administrators, are positively correlated with cheating, i.e., the incidence of cheating is higher than in institutions where alternate practices are used.

The multivariate results with all of these variables used jointly will be presented and discussed in Chapters 6 and 7.

CHAPTER VI

MULTIVARIATE RESULTS

The empirical findings from this study will be organized as follows: The first part of the chapter includes a discussion of the constructed scales and the variables from which they were constructed. Next, results from tests of the nine hypotheses will be presented, after which the model will be reviewed and additional significant findings discussed. Finally, the chapter will conclude with a discussion and summary of the results.

Constructed Variables

The purpose of developing the "constructed" variables is to obtain measures of key constructs by combining individual items together to form "scales." These scales are assumed to be better measures of the constructs than are the individual items because they are more reliable (i.e., contain less measurement error). If, however, the items used to generate a particular scale are not sufficiently homogeneous in terms of what they are actually measuring, the scales may not necessarily represent an improvement over the original items. For example, the preliminary examination of these constructs in Chapter 5 suggested that at least one of them--Drive and Ambition--does not comprise a homogeneous set of items. Therefore, when using a priori scales such as the ones constructed for this project, one must question the reliability of

each construct and the homogeneity of the individual variables from which it is constructed.

In order to resolve this dilemma and to provide a more complete test of the proposed theories, the scales and the individual items from which they were constructed were allowed to compete against each other in the regression equations to determine which measures--scales or individual items--might more accurately measure each construct. By allowing variables to enter the regression independently, the scales will need stronger partial correlations than their individual components.

As we have seen in Chapter 5, (Tables 3 and 5), the constructs as well as the individual items from which they were made were significantly related to the three cheating measures; therefore, this study will provide an opportunity to assess the relative predictive power of the scales and the individual variables from which they were constructed.

Hypotheses and Exploratory Analyses

In this section, each hypothesis is examined and relevant results are presented and discussed. The scales which were included for exploration will also be considered. Three stepwise, multiple linear regressions were calculated, each using one of the three dependent variables: homework copying, examination or test cheating, and a combined measure of cheating based on the first

two. (The third measure of cheating will subsequently be referred to as overall cheating.)

Variables were allowed to enter the regression in nine separately ordered blocks. The six blocks previously described include (in order): demographic characteristics; pre-college activity traits; measures of Drive and Ambition, Academic Self-concept and Effort; institutional academic honesty systems and characteristics; institutional environmental characteristics; and students' activities in college. In Block 7 all of the two-way interactions were tested. Block 8 tested three-way interactions. Finally, Block 9 allowed variables which were no longer significant to drop out of the regression and newly significant variables from earlier blocks to enter.

The three multivariate analyses, at the final step of the regression, produced multiple correlation coefficients of .40 (homework copying), .34 (examination cheating), and .42 (overall cheating). The variance accounted for by each regression is thus 16%, 12% and 18%, respectively.

Reasons for Attending College (Exploratory)

One issue included in this study for exploratory purposes was the reasons students give for attending college. It was hypothesized that those students who attend college for the intrinsic value of an education would cheat less, and that those who attend college for extrinsic gains such as making money would

cheat more. The results offer strong support for these hypotheses.

In Chapter 5, we saw that the scale measuring "Intrinsic Reasons" for attending college had significant negative relationships with each of the three cheating measures. (Chapter V, Table 3). That is, those students who attend college for the intrinsic benefits of an education cheat less.

At the same time, the scale measuring "Extrinsic Reasons" for attending college had significant positive correlations with each of the three cheating measures. (Chapter 5, Table 3).

Both of these constructs were allowed to enter the regressions, together with the individual variables from which they were scaled. While neither construct entered any of the three regressions, a number of their constituent items did, and in every instance the sign of the Beta coefficient was in the hypothesized direction. The reason why neither scale entered was (a) that one or more had higher partial correlations with cheating than did the scale; and (b) that their partial correlations were reduced to insignificance when one or more of the individual items entered. (The results of the three regression analyses are presented in Tables 13, 14, and 15, and will be referred to frequently throughout this chapter).

The item, "attend college to learn more about things that interest me" entered the regressions for predicting examination cheating and overall cheating. As hypothesized, it serves as a

Step	Variable Entering	R	Simple r									
				1	2	3	4	5	6	7	8	9
Block 1												
	1 Student Sex	.10	-.10	<u>-.10</u>	-.10	-.10	-.07	-.07	-.06	-.05	-.05	-.05
	2 Mother's Education	.11	-.04	-.05	<u>-.05</u>	-.05	-.04	-.04	-.03	-.02	-.02	-.01
	3 Mother's Career -- Other	.12	-.04	-.04	-.04	<u>-.04</u>	-.04	-.04	-.04	-.05	-.05	-.05
Block 2												
	4 Career -- Engineer	.16	.13	.11	.11	.11	<u>.11</u>	.13	.12	.13	.13	.14
	5 Major -- Business	.19	.08	.08	.08	.08	.10	<u>.10</u>	.09	.09	.09	.08
	6 Attend College -- Make Money	.20	.11	.10	.10	.10	.09	.08	<u>.08</u>	.08	.07	.07
	7 High School Grade Point Average	.22	-.08	-.07	-.07	-.07	-.08	-.08	-.07	<u>-.07</u>	-.07	-.05
	8 Major -- English	.22	-.06	-.06	-.05	-.06	-.05	-.05	-.04	-.04	<u>-.04</u>	-.04
Block 3												
	9 Hours Studying	.24	-.11	-.11	-.10	-.10	-.12	-.12	-.12	-.11	-.11	<u>-.11</u>
	10 Goal -- Be Very Well Off Financially	.25	.13	.12	.12	.12	.12	.10	.08	.08	.08	.08
	11 Goal -- Promote Racial Understanding	.25	-.06	-.06	-.06	-.06	-.06	-.05	-.05	-.05	-.05	-.05
	12 Self-Rating Academic Ability	.26	-.07	-.09	-.08	-.08	-.09	-.09	-.09	-.07	-.06	-.06
Block 4												
	13 Honor System	.27	-.09	-.09	-.09	-.09	-.09	-.08	-.08	-.08	-.07	-.07
	14 Adjudication Board -- Students and Administrators	.27	.06	.05	.05	.05	.04	.04	.04	.05	.05	.05
	15 Adjudication Board -- Faculty Only	.27	-.05	-.05	-.05	-.05	-.04	-.05	-.05	-.04	-.04	-.04
	16 Faculty Handle Infraction -- Do Not Refer	.28	-.02	-.02	-.02	-.02	-.01	-.01	-.01	-.02	-.02	-.02
	17 Regulations Include Definitions	.28	-.06	-.06	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.04
	18 Specific Regulations	.28	.01	.01	.01	.01	.01	.01	.01	.01	.01	.02
	19 Permanent Expulsion	.29	-.04	-.04	-.04	-.04	-.04	-.05	-.05	-.04	-.04	-.04
Block 5												
	20 All Male College	.29	-.05	-.06	-.05	-.05	-.05	-.05	-.05	-.06	-.06	-.05
	21 University	.29	.02	.02	.02	.02	.02	.02	.01	.03	.02	.03
Block 6												
	22 Hours Spent Partying	.33	.17	.17	.17	.17	.17	.17	.16	.16	.16	.16
	23 Late Homework	.35	.18	.17	.17	.17	.17	.16	.16	.16	.16	.15
	24 Played Intramurals	.37	.12	.11	.11	.11	.11	.11	.11	.11	.11	.12
	25 Full-Time Enrollment Sophomore Year	.37	.05	.04	.05	.05	.04	.05	.04	.05	.05	.07
	26 FUS Career -- Forester/Farmer	.37	.05	.04	.04	.04	.05	.05	.06	.05	.05	.06
	27 FUS Career -- Undecided	.38	-.06	-.06	-.06	-.06	-.06	-.05	-.05	-.05	-.05	-.05
	28 Hours Spent Socializing	.38	.11	.11	.12	.12	.12	.12	.12	.12	.12	.13
	29 FUS Major -- Engineering	.38	.12	.10	.10	.10	.04	.05	.05	.05	.05	.06
	30 FUS Major -- Business	.39	.08	.09	.08	.08	.09	.05	.05	.05	.05	.05
	31 FUS Major -- Other Technical	.39	.03	.03	.02	.02	.03	.04	.03	.03	.03	.03
	32 FUS Major -- Education	.39	.01	.02	.02	.02	.02	.03	.04	.03	.03	.03
	33 Worked on Professor's Research	.39	.04	.04	.04	.04	.05	.05	.05	.05	.05	.05
	34 Performed Independent Research	.40	-.05	-.05	-.05	-.05	-.05	-.04	-.04	-.04	-.04	-.03
	35 Drank Beer	.40	.15	.14	.14	.14	.14	.14	.13	.13	.13	.13
	36 FUS Career -- Engineer	.40	.08	.06	.06	.06	-.01	-.01	-.01	-.01	-.01	.00
Block 9												
	43 Institution Selectivity	.40	-.07	-.08	-.07	-.07	-.08	-.08	-.07	-.05	-.05	-.03
	45 College Grade Point Average	.40	-.14	-.13	-.13	-.13	-.12	-.12	-.11	-.10	-.10	-.09
	47 No Reminders of Academic Honesty Policies	.40	.03	.03	.03	.03	.04	.04	.03	.03	.03	.03
	48 Case Handled and Referred by Faculty	.40	.03	.03	.03	.03	.03	.02	.03	.03	.03	.04
	49 FUS Major -- English	.40	-.09	-.08	-.08	-.08	-.08	-.07	-.06	-.06	-.06	-.06
	Intrinsic Reasons		-.05	-.03	-.03	-.03	-.03	-.02	-.03	-.03	-.02	-.01
	Extrinsic Reasons		.06	.06	.05	.05	.05	.05	-.02	-.02	-.02	-.01
	Drive and Ambition		.02	.03	.03	.03	.03	.02	.00	.02	.02	.02
	Academic Self-Concept		-.05	-.06	-.07	-.07	-.09	-.08	-.08	-.05	-.05	-.04
	Effort		-.09	-.09	-.09	-.09	-.11	-.10	-.10	-.09	-.09	.00
	Altruism and Social Responsibility		-.08	-.06	-.06	-.06	-.05	-.05	-.04	-.04	-.04	-.04
	Proctor System		.08	.08	.08	.08	.07	.07	.07	.06	.06	.06
	Institutional Enrollment		.03	.03	.03	.03	.03	.02	.02	.03	.05	.02

Stepwise Regression

Step	Variable Entering	R	Simple r	1	2	3	6	7	8	9	10	11
Block 1												
1	Religion - Catholic	.07	.07	.07	.08	.08	.08	.08	.08	.07	.07	.07
2	Student Sex	.10	-.06	-.07	-.07	-.07	-.07	-.06	-.06	-.06	-.05	-.05
3	Father's Career -- Doctor	.11	.06	.06	.06	.06	.06	.06	.06	.06	.06	.07
4	Race -- Other	.12	.05	.04	.04	.04	.04	.04	.04	.04	.04	.05
5	Mother's Career -- Research Scientist	.13	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
6	Father's Career -- Unemployed	.13	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Block 2												
7	High School Grade Point Average	.17	-.12	-.11	-.11	-.11	-.11	-.11	-.11	-.10	-.10	-.09
8	History/Political Science Major	.19	-.08	-.08	-.08	-.08	-.08	-.07	-.07	-.07	-.07	-.07
9	Attend College -- Make Money	.20	.07	.07	.07	.07	.07	.06	.06	.06	.06	.06
10	Attend College -- Learn More	.20	-.06	-.06	-.05	-.05	-.06	-.05	-.05	-.05	-.05	-.05
11	Student Career -- Doctor	.21	-.04	-.04	-.04	-.05	-.05	-.04	-.04	-.04	-.04	-.04
Block 3												
12	Hours Studying	.23	-.12	-.12	-.12	-.12	-.12	-.10	-.10	-.10	-.10	-.09
13	Goal -- Influence Social Values	.23	.03	.03	.04	.04	.04	.04	.05	.05	.05	.06
14	Goal -- Promote Racial Understanding	.24	-.06	-.05	-.05	-.05	-.05	-.06	-.05	-.04	-.04	-.04
15	Goal - Be Very Well Off Financially	.24	.10	.10	.09	.09	.09	.08	.08	.07	.06	.07
16	Self-Rating Academic Ability	.25	-.11	-.11	-.12	-.12	-.12	-.08	-.07	-.07	-.07	-.07
Block 4												
17	Adjudication Board -- Students Only	.25	-.08	-.07	-.07	-.08	-.08	-.07	-.06	-.06	-.06	-.05
18	Sanction -- Failing Grade Course	.26	-.02	-.03	-.03	-.03	-.03	-.02	-.03	-.03	-.03	-.03
19	Case Handled Other Office	.26	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
Block 5												
20	Institutional Enrollment	.26	.05	.04	.04	.04	.04	.06	.06	.05	.05	.05
Block 6												
21	Drank Beer	.29	.15	.15	.14	.14	.14	.13	.13	.13	.13	.13
22	Late Homework	.31	.14	.14	.13	.13	.13	.12	.12	.12	.12	.12
23	Played Intercollegiate Sports	.31	.09	.09	.09	.09	.09	.08	.08	.08	.08	.08
24	Member -- Fraternity/Sorority	.32	.06	.06	.06	.06	.06	.07	.07	.07	.07	.07
25	FUS Career -- Lawyer	.32	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
26	Full-time Enrollment Sophomore Year	.32	.02	.02	.02	.02	.02	.03	.03	.03	.03	.03
27	FUS Career -- Health Profession	.33	-.05	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04
Block 8												
28	Interaction Effect: High Well-Off, Low Ability, Few Hours Spent Studying	.33	.13	.13	.13	.13	.13	.10	.10	.10	.09	.09
Block 9												
33	FUS Career -- Engineer	.33	.05	.05	.03	.03	.03	.04	.03	.03	.03	.03
34	Severe Sanction -- Copy Homework	.33	-.07	-.07	-.07	-.08	-.07	-.06	-.05	-.05	-.05	-.05
35	Drank Liquor	.34	.12	.11	.11	.11	.11	.11	.11	.11	.11	.11
36	Reminder -- Each Test	.34	.05	.05	.05	.05	.05	.04	.04	.04	.04	.04
37	Special Honesty Handout	.34	-.07	-.07	-.07	-.07	-.07	-.06	-.06	-.06	-.05	-.05
39	Father's Education	.34	.02	.02	.02	.01	.00	.02	.03	.03	.04	.04
40	Adjudication Board -- Faculty and Administrator	.34	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.02	-.02
41	Career -- Elementary Education	.34	.03	.03	.04	.04	.04	.03	.03	.04	.04	.03
Block 10												
	Intrinsic Reasons		-.04	-.05	-.04	-.04	-.05	-.04	-.04	-.04	-.01	-.01
	Extrinsic Reasons		.03	.03	.03	.03	.03	.03	.03	-.03	-.02	.00
	Drive and Ambition		.01	.02	.01	.01	.01	.03	.03	.02	.02	.03
	Academic Self-Concept		-.07	-.09	-.10	-.10	-.10	-.05	-.05	-.05	-.04	-.04
	Effort		-.12	-.10	-.10	-.10	-.10	-.08	-.07	-.08	-.07	-.07
	Altruism and Social Responsibility		-.03	-.03	-.02	-.03	-.03	-.03	-.02	-.01	-.01	.00
	Honor System		-.06	-.05	-.05	-.05	-.05	-.04	-.04	-.04	-.04	-.03
	Proctor System		.06	.05	.05	.05	.05	.04	.04	.04	.04	.04
	College Grade Point Average		-.12	-.12	-.11	-.12	-.12	-.08	-.07	-.07	-.07	-.07

Table 14

Regression Predicting Examination or Test Cheating (N = 2,675)

	Beta		After		Step															
	9	10	11	12	13	14	15	16	17	20	21	22	26	28	31	34	35	37	40	41
.07	.07	.07	.08	.08	.08	.08	.07	.07	.07	.05	.05	.06	.05	.05	.05	.05	.05	.05	.06	.06
.06	-.05	-.05	-.05	-.06	-.06	-.06	-.06	-.06	-.06	-.05	-.04	-.03	-.02	-.03	--	--	--	--	--	--
.06	.06	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.06	.07	.07	.07	.06	.06
.04	.04	.05	.04	.04	.05	.04	.04	.04	.04	.04	.05	.04	.04	.04	.04	.04	.04	.05	.05	.05
.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04
.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.04	.05	.05
.10	-.10	-.09	-.07	-.07	-.07	-.07	-.03	-.03	-.04	-.03	-.02	-.03	-.02	--	--	--	--	--	--	--
.07	-.07	-.07	-.07	-.08	-.07	-.07	-.07	-.06	-.06	-.07	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.05	-.06	-.05
.06	.06	.06	.06	.06	.06	.03	.03	.03	.03	.03	.03	.03	.03	.03	.05	.04	.04	.04	.04	.04
.05	.05	-.05	-.04	-.05	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.05	-.05	-.05	-.05	-.05	-.05	-.05
.04	-.04	-.04	-.04	-.04	-.04	-.04	-.03	-.03	-.03	-.02	-.02	-.02	-.02	--	--	--	--	--	--	--
.10	-.10	-.09	-.09	-.09	-.10	-.09	-.09	-.09	-.09	-.09	-.07	-.08	-.07	-.07	-.07	-.07	-.07	-.07	-.08	-.08
.05	.05	.06	.06	.06	.06	.07	.07	.07	.07	.07	.08	.08	.08	.08	.08	.08	.08	.08	.08	.08
.04	-.04	-.04	-.04	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06	-.06
.07	.06	.07	.06	.06	.06	.06	.06	.06	.05	.04	.04	.04	.02	--	--	--	--	--	--	--
.07	-.07	-.07	-.06	-.06	-.06	-.06	-.06	-.05	-.05	-.06	-.06	-.06	-.04	-.05	-.05	-.05	-.05	-.05	-.05	-.05
.06	-.06	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.06	-.06	-.06	-.06	-.06	-.06	-.04	-.04	-.03	--	--
.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.04	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.04	-.04
.04	.04	.04	.04	.04	.04	.04	.04	.04	.03	.03	.03	.03	.03	.03	.03	.03	.03	.04	.04	.04
.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.03	.03	.04	.03	.03	.03	.04	.04	.04	.04	.04
.13	.13	.13	.13	.13	.13	.12	.13	.13	.12	.12	.11	.10	.10	.10	.11	.11	.08	.08	.08	.08
.12	.12	.12	.11	.11	.11	.11	.11	.11	.11	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10	.10
.08	.08	.08	.09	.08	.08	.08	.08	.08	.08	.08	.08	.07	.07	.07	.07	.07	.07	.07	.07	.07
.07	.07	.07	.07	.07	.07	.07	.07	.07	.07	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
.05	.05	.05	.05	.05	.05	.05	.05	.04	.04	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
.03	.03	.03	.04	.05	.05	.05	.05	.05	.05	.05	.05	.04	.04	.04	.04	.04	.04	.04	.04	.04
.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04
.10	.09	.09	.07	.07	.07	.06	.05	.05	.05	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06
.03	.03	.03	.04	.04	.05	.04	.05	.05	.04	.04	.04	.05	.04	.05	.05	.06	.06	.06	.06	.06
.05	-.05	-.05	-.04	-.04	-.04	-.04	-.04	-.03	-.04	-.04	-.05	-.05	-.05	-.05	-.05	-.05	-.05	-.06	-.06	-.06
.11	.11	.11	.11	.11	.11	.11	.11	.11	.11	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05	.05
.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.03	-.03	-.03	-.03	-.03	-.03	-.04	-.04	-.04	-.04	-.06	-.06
.06	-.05	-.05	-.04	-.04	-.04	-.04	-.04	-.04	-.03	-.03	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.04	-.06	-.06
.03	.04	.04	.05	.05	.05	.05	.06	.06	.06	.04	.04	.03	.03	.03	.04	.04	.04	.04	.04	.04
.02	-.02	-.02	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.04	-.04	-.04
.04	.04	.03	.03	.03	.03	.04	.03	.03	.03	.03	.03	.04	.04	.04	.04	.04	.04	.04	.04	.04
.04	-.01	-.01	.00	-.01	.00	.00	.00	.00	.01	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
.03	-.02	.00	.00	.00	.01	.00	.00	.00	.00	.01	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00
.02	.02	.03	.04	.02	.03	.00	.01	.01	.01	.01	.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.05	-.04	-.04	-.03	-.03	-.03	-.03	.02	.03	.02	.02	.01	.01	.01	.01	.00	.00	.00	.01	.00	.00
.08	-.07	-.07	.02	.03	.03	.03	.03	.03	.03	.02	.02	.01	.02	.01	.01	.01	.01	.01	.02	-.02
.01	-.01	.00	.00	-.07	-.02	-.02	-.03	-.03	-.02	.00	.01	.00	.00	.00	.00	.00	.00	-.01	.00	-.01
.04	-.04	-.03	-.03	-.02	-.02	-.02	.00	.00	.00	-.01	.00	-.01	-.01	-.01	-.01	-.01	-.01	-.01	-.01	.00
.04	.04	.04	.03	.03	.03	.03	.03	.01	.01	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
.07	-.07	-.07	-.06	-.06	-.06	-.05	-.05	-.05	-.04	-.04	-.02	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03	-.03

negative predictor of these two behaviors and was significant at the final step for examination cheating. Neither becoming a "more cultured person" nor "gaining a general education" entered any of the regressions. In short, students who attend college because they want to learn are less likely to take short cuts by cheating. It may well be that cheating on an examination is seen as being inconsistent with the desire to learn.

As far as the items measuring Extrinsic Reasons for Attending College were concerned, "attend college to make money" entered all three regressions. It serves as a positive predictor for cheating in each instance, and it is significant at the final step for examination cheating. Students who attend college because they strongly value the monetary rewards of a college education are apparently more inclined to cheat on tests.

In summary, it appears that a student's reason for attending college can be an important indication of that student's inclination toward academic dishonesty. Students who see college primarily as a place to learn are less inclined to cheat than are those who see it more as a means of enhancing their incomes. This finding is important. If administrators and faculty want to discourage cheating, it would be worthwhile to help students understand and appreciate the intrinsic value of an education. College orientation could stress the value of learning in-and-of itself, which in turn, could diminish some student's emphasis on the monetary rewards associated with higher education.

At this point the reader should be cautioned about certain interpretive strategies with Tables 13, 14 and 15. First of all, it should be recognized that, because of the considerable degree of multicollinearity in the independent variables, variables that measure similar constructs (and that are substantially correlated with each other) will display smaller regression coefficients when two or more of them are in the equation at the same time. Thus, it is risky to make inferences about the relative "importance" of particular student characteristics merely by looking at the final regression weights for an individual variable. Rather, the reader would be better advised to see how the multiple correlation coefficient changed when all variables in a particular class entered the regression equation.

Another cautionary note concerns the effects on the regression coefficients of variables entering from the Follow-Up Survey. For example, beginning in Block 6 in each of the three regressions variables from the Follow-Up questionnaire were allowed to enter and, in many cases, substantially changed the coefficients for variables from the freshman questionnaire. Since the information about the dependent variables (cheating behavior) and these Follow-Up questionnaire items were obtained at the same time from the same student questionnaire, it may not necessarily be the case that those Follow-Up items that were used as independent variables "preceded" the dependent variables in time. In other words, the direction of causation could, in theory, go from dependent to

"independent" variable. Accordingly, to get a better estimate of the "relative" importance of freshman characteristics in predicting cheating behavior, the reader is advised to use the regression coefficients as they are immediately prior to the entry of any follow-up questionnaire items (that is, prior to the entry of variables from Block 6).

The Effects of Drive and Ambition, Academic Self-concept and Effort
(Hypotheses 1-3)

Hypothesis 1: Students with high Drive and Ambition will
cheat more than students with low Drive and Ambition.

The Drive and Ambition scale was constructed from four personal goals: "to be very well-off financially," "to have administrative responsibility for others," "to become an authority in one's field," and "to receive recognition from one's colleagues," and a self-rating of "drive to achieve" and one's degree aspirations. As noted, in Chapter 5, Table 5, this construct has a weak positive correlation with the overall measure of cheating, but was not significantly related either to homework copying or to examination cheating.

While the scale measuring Drive and Ambition did not enter any of the regressions, the life goal of "being very well-off financially" did enter each of the three regressions and remained significant at the final step for both homework copying and overall

cheating. The importance of the goal of being very well-off financially is further illustrated in Tables 16, 17 and 18. Students who see this goal as "essential" are nearly three times as likely to copy homework and four times as likely to cheat on exams as are student who rate this goal as "unimportant."

That two of the items making up the Drive and Ambition scale--Highest Degree Aspired to and self-rating on Drive to Achieve--actually had simple correlations with cheating that were opposite in sign from the hypothesized relationships (neither entered the regression) suggests that the hypothesis concerning the construct of "Drive and Ambition" is not really supported by the data.

It is noteworthy that wanting to be very well-off financially, as well as attending college in order to make more money, were both significant predictors in all three regressions. These items are substantially correlated with each other ($r = .49$) and, given that they both entered each regression, it would appear that having strong materialistic values is an important determining factor in cheating behavior.

Hypothesis 2: Students who have poor Academic Self-concept will cheat more than students who have high Academic Self-concept. A student's belief that he or she does not have the academic ability to succeed will increase the likelihood of cheating.

Table 16
 Cheating on Exams by the Importance of Being Very Well-Off
 Financially
 (N = 2,875)

Goal: to be very well-off financially	<u>Percent Cheating on Examinations</u>			Total
	Not at all	Occasionally	Frequently	
Not Important	93.7	5.5	.8	4.4
Somewhat Important	86.3	13.3	.4	31.4
Very Important	80.2	19.5	.3	40.4
Essential	77.6	22.0	.4	23.8

*Significant at .0000 level.

Table 17
 Homework Copying by the Importance of Being Very Well-Off
 Financially
 (N = 2,869)

Goal: to be very well-off financially	Percent Copying Homework			Total
	Not at all	Occasionally	Frequently	
Not Important	86.6	12.6	.8	4.4
Somewhat Important	77.2	22.5	.3	31.4
Very Important	67.2	32.0	.8	40.3
Essential	64.6	33.7	1.8	23.8

*Significant at .0000 level.

Table 18
 Overall Cheating by the Importance of Being Very Well-Off
 Financially
 (N = 2,859)

Goal: to be very well-off financially	Percent Who Cheat Overall					Total
	Not at all	Cheats in one situation	Occasional cheating	More than occasional cheating	Regular cheating	
Not Important	84.0	13.6	2.3	.0	.0	4.4
Somewhat Important	71.0	21.7	7.1	.0	.2	31.4
Very Important	59.1	29.4	10.7	.6	.2	40.4
Essential	57.5	27.4	13.7	1.2	.3	23.8

*Significant at .0000 level.

This hypothesis was supported by the regression results, but once again the scaled variable was not as good a measure of the construct as one of the individual items from which it was made. Thus, while the Academic Self-concept scale (which was constructed from self-ratings of academic ability, mathematical ability, and writing ability) had significant negative correlations with all three cheating variables (see Table 5), it did not enter any of the regressions. Instead, the self-rating of academic ability entered all three regressions and serves as a significant, negative predictor of examination cheating at the final step (see Table 14). For the other two regressions (Tables 13 and 15) it becomes insignificant after college grade point average enters. Tables 19, 20 and 21 further illustrate the relation between cheating and self-ratings of academic ability. As perceived academic ability increases, cheating decreases. When one considers the effects of self-concept on cheating, therefore, the student's self-rating of academic ability appears to be a better measure of academic self-concept than the scale comprising three self-ratings. Specific self-ratings of mathematical and writing ability, in other words, do not add to the construct in a manner which enhances its predictive power.

Table 19
 Examination Cheating by Self-Rating of Academic Ability
 (N = 3,005)

Self-Rating of academic ability	<u>Percent Who Cheat on Examinations</u>			Total
	Not at all	Occasionally	Frequently	
Lowest 10 %	100.0	.0	.0	.0
Below average	64.7	35.3	.0	.6
Average	77.0	21.9	1.2	28.2
Above average	83.3	16.5	.2	49.5
Highest 10%	87.0	13.0	.0	21.8

*Significant at .0000 level.

Table 20
 Homework Copying by Self-Ratings of Academic Ability
 (N = 2,998)

Self-rating of academic ability	Percent Who Copy Homework			Total
	Not at all	Occasionally	Frequently	
Lowest 10%	.0	100.0	.0	.0
Below average	52.9	47.1	.0	.6
Average	66.8	31.9	1.3	28.2
Above average	71.0	28.2	.8	49.4
Highest 10%	75.6	24.0	.5	21.8

*Significant at .01 level.

Table 21
 Overall Cheating By Self-Ratings of Academic Ability
 (N = 2,987)

Self-Rating of academic ability	Percent Who Cheat Overall					Total
	Not at all	Cheats In one situation	Occasional cheating	More than occasional cheating	Regular cheating	
Lowest 10%	.0	100.0	.0	.0	.0	4.4
Below average	41.2	35.3	23.5	.0	.0	.6
Average	59.3	25.6	14.0	.7	.5	28.0
Above average	64.3	25.9	9.2	.5	.1	49.4
Highest 10%	69.2	24.3	6.1	.5	.0	21.9

*Significant at .0000 level.

Hypothesis 3: Students who expend great Effort on their academic work will cheat less than those who exert little Effort. In short, the more time a student spends on academic activities, the less likely that student will be to cheat.

This hypothesis was generally supported by the regressions. Effort is a scale made from two variables: hours per week spent attending class and laboratory sessions, and hours per week spent studying and doing homework. As was seen in the last chapter (Table 5), this scale had significant negative correlations with each of the three cheating variables. While the scale did not enter any of the three regressions, the number of hours per week spent studying and doing homework did enter all regressions and remained significant at the final step. Tables 22, 23, and 24, further define the relation between the amount of time spent studying and doing homework and the three cheating measures. These tables show that, as time engaged in studying increases, cheating behavior decreases. Students who study more than 20 hours per week are only half as likely to cheat on exams or copy homework as are students who study less than six hours per week. Clearly, those students who invest large amounts of time in their academic work cheat less than those students who do not spend as much time. For each regression, time spent studying and doing homework is significant and has one of the largest Beta weights at the final

Table 22

Examination Cheating By Time Spent Studying and Doing Homework (N
= 3,003)

Time spent studying (in hours)	Percent Who Cheat on Exams			Total
	Not at all	Occasionally	Frequently	
None	100.0	.0	.0	.2
Less than one	73.7	21.1	5.3	.6
1-2	69.4	28.4	2.2	4.5
3-5	76.7	22.9	.4	15.3
6-10	80.9	18.9	.2	28.6
11-15	82.5	17.3	.2	20.4
16-20	85.9	14.1	.0	14.0
Over 20	90.5	8.7	.8	16.5

*Significant at .0000 level.

Table 23
 Homework Copying By Time Spent Studying and Doing Homework
 (N = 2,996)

Time spent studying (in hours)	Percent Who Copy Homework			Total
	Not at all	Occasionally	Frequently	
None	100.0	.0	.0	.2
Less than one	57.9	36.8	5.3	.6
1-2	64.9	32.1	3.0	4.5
3-5	62.0	37.1	.9	15.2
6-10	69.5	29.5	.9	28.6
11-15	71.0	28.4	.7	20.4
16-20	73.4	26.4	.2	14.0
Over 20	79.6	19.6	.8	16.5

*Significant at .0000 level.

Table 24
 Overall Cheating By Time Spent Studying and Doing Homework
 (N = 2,984)

Time spent studying (in hours)	Percent Who Cheat Overall					Total
	Not at all situation	Cheats in one situation	Occasional cheating	More than occasional cheating	Regular cheating	
None	100.0	.0	.0	.0	.0	.2
Less than	61.1	11.1	22.2	5.6	.0	.6
1-2	55.7	23.7	18.3	1.5	.8	4.4
3-5	54.7	29.4	15.2	.4	.2	15.2
6-10	62.6	25.3	11.4	.6	.1	28.6
11-15	63.8	26.0	9.7	.5	.0	20.5
16-20	66.4	26.6	6.7	.2	.0	13.9
Over 20	73.9	22.5	2.8	.2	.6	16.6

*Significant at .0000 level.

step ($B = -.09, -.08, -.09$) (Tables 13, 14, and 15). Although class attendance also had a significant negative relation to cheating, it did not contribute to the predictive power of the Effort construct.

In summary, the main effects hypothesized in this block of independent scales were generally supported by the results. However, it seems clear that the multi-item scales developed to represent the constructs of Drive and Ambition, Academic Self-concept, and Effort are not really very good measures of these constructs, since none proved to be as effective in predicting cheating as did certain of the individual items used to construct those scales. Academic Self-concept appears to be best reflected by the student's self-rating on academic ability, and Effort seems to be represented best by hours per week spent studying and doing homework. Furthermore, it would appear that "Drive and Ambition" does not really function as anticipated, and that it should be replaced by the construct of "materialism."

Interactions Among Constructs (Hypotheses 4-6)

After the first six blocks of variables were allowed to enter the three regressions, interaction effects were tested. Because none of the three scales entered the regression, each individual variable which entered the regression in place of its corresponding scale was used instead of the scale; therefore, interaction effects were tested using being very well-off financially, the self-rating

of academic ability, and time spent studying. In Block 7 each of the two-way interactions among these items was allowed to enter the regressions. Three-way interaction effects were allowed to enter in Block 8.

Hypothesis 4: The effects of High Drive and Ambition

("materialism") will be greatest among those students with poor Academic Self-concept.

This hypothesis was not supported. The interaction term involving being very well-off financially and self-rating of academic ability did not enter the regressions.

Hypothesis 5: The effects of high Drive and Ambition

("materialism") will be greatest among those students who exert the least Effort.

There was an interaction between high Drive and Ambition (being very well-off financially) and Effort (hours studying and doing homework), but it was of only marginal significance ($F = 3.9$; the .05 level for F is 3.86). When these two variables were made into dummy variables representing combinations of scores (see Appendix E), none of the four possible combinations (high-high, high-low, low-high, and low-low) entered the regression. Furthermore, the dummy variable with the largest Beta weight was the low-low combination (i.e., low on being very well-off financially and low on time spent studying) rather than the

high-low combination as hypothesized ($F = 3.3.$). Therefore, it must be concluded that this hypothesis was not supported by the findings.

Hypothesis 6: There will be a three-way interaction between Drive and Ambition, Academic Self-concept and Effort. Specifically, there are three ways to state this hypothesis:

- a. The effects of high Drive and Ambition (materialism) and low Academic Self-concept will be greatest among students who exert the least effort.
- b. The effects of high Drive and Ambition (materialism) and low Effort will be greatest among students with low Academic Self-concept.
- c. The effects of low Academic Self-concept and low Effort will be greatest among students with high Drive and Ambition (materialism).

This hypothesis was supported by the analyses. In Block 8, the three-way interaction between the goal of being very well-off financially, self-rating of academic ability and time spent studying did enter the regressions for examination and overall cheating. Eight dummy variables, representing all possible

combinations of high and low scores on these three items, were made and allowed to compete against each other in a rerun of the regression. (See Appendix E for an explanation of these dummy variables.) As predicted, the dummy representing high scores on being very well-off financially and low scores on self-rating on academic ability and amount of time spent studying and doing homework was the one that entered the regression analyses. The Beta weights at the entering steps were .06 ($F = 6.06$) and .05 ($F = 5.72$), respectively, in the regressions for exam cheating and overall cheating. In short, it appears that the positive effect on cheating of wanting to be very well-off financially is exaggerated when the student has a poor academic self-concept and exerts relatively little effort studying. Because of the complex nature of such higher-order interaction effects, it is possible to state them in alternative ways. Thus, we could also say that the tendency of those who expend little academic effort to cheat is exacerbated if they also have a poor academic self-concept and strong materialistic tendencies. Or, we could say that the tendency for materialistically-oriented students to cheat is strengthened if they also have a poor academic self-concept and expend relatively little effort on their studies.

Altruism and Social Responsibility (Exploratory)

One additional construct was tested in Block 3. Since it was anticipated that the effects of "Altruism and Social

Responsibility" might be related to cheating behavior, a measure of this construct was added to the regression for exploratory purposes. The scale was constructed from four variables, each of which represented a different life goal: influencing social values, helping others in difficulty, participating in community action programs and promoting racial understanding. While the scale had a significant negative relation with homework copying and overall cheating (see Chapter V, Table 5), when the construct was allowed to compete against its individual items in the regressions, the items once again proved to be better predictors of cheating.

In the regression predicting homework copying (Table 13), the goal of "promoting racial understanding" enters the regression with a negative weight (step 11) and remains significant at the final step. For examination cheating (Table 14), influencing social values (step 13) and promoting racial understanding (step 14) both enter the regression and both stay significant at the final step. Finally, in the regression predicting overall cheating (Table 15), three of the four individual variables defining the construct enter the regression: promoting racial understanding (step 14), influencing social values (step 15), and helping others in difficulty (step 16). Each of these is a negative predictor of cheating, and the first two remain significant at the final step.

One can assume, therefore, that when one's life goals are focused on contributing to the social good, cheating is less likely to occur. These results support the notion that those who are

concerned about the welfare of others would be unlikely to take unfair advantage of others in order to further their own goals.

One of the four items, the goal of influencing social values, does not have a significant correlation with any of the cheating measures (Table 5). (This is probably the reason why the scale was not as good a predictor as the other individual items.) Indeed, as can be seen in Tables 14 and 15, as other variables enter the regression, this variable eventually enters the regression with a significant positive weight. It was anticipated, of course, that this life goal, like the other three, would serve as a negative predictor of cheating. While the reasons for this result are not clear, it may be that wanting to influence social values reflects not only altruism but also a desire for power.

Administrative Climate (Hypotheses 7-8)

Hypothesis 7: Schools with academic honor systems will have significantly lower levels of cheating than schools which have proctor systems.

This hypothesis was partially supported. First, let us look at the simple relationships. For all three measures of cheating, there were significant correlations between types of academic honesty systems and cheating behaviors (Tables 25, 26, and 27). For each dependent variable there is less cheating under an honor system than under a proctor system. Since "other" system produces

Table 25

Examination Cheating As a Function of the Type of Academic Honesty
System (N = 2,978)

Type of system	<u>Percent Who Cheat on Examinations</u>			Total
	Not at all	Occasionally	Frequently	
Honor system	88.3	11.4	.4	17.1
Proctor system	81.0	18.6	.5	75.0
Other system	81.0	19.0	.0	7.9

*Significant at .002 level.

Table 26
 Homework Copying As a Function of the Type of Academic Honesty
 System
 (N = 2,983)

Type of system	Percent Who Copy Homework			Total
	Not at all	Occasionally	Frequently	
Honor System	79.3	20.4	.4	17.1
Proctor System	68.5	30.5	1.1	75.0
Other System	71.6	28.0	.4	7.9

*Significant at .0001 level.

Table 27

Overall Cheating As a Function of the Type of Academic Honesty
System
(N = 2,996)

Type of system	Percent Who Cheat Overall					Total
	Not at all	Cheats In one situation	Occasional cheating	More than occasional cheating	Regular cheating	
Honor	73.3	21.0	5.3	.2	.2	17.1
Proctor	61.4	27.0	10.8	.7	.2	75.0
Other	65.1	22.6	12.3	.0	.0	7.9

*Significant at .0000 level.

results very much like the proctor system, it appears that the unique system is really the honor system.

The honor system variable, however, did not always enter the regressions. Honor system does enter the regression at step 13 for predicting homework copying (Table 13) with the anticipated negative weight and remains significant at the final step. The effects of proctor system cease to be significant at step 13 when honor system enters the equation.

When examining Table 14, it is interesting to note that neither honor system nor proctor system enters the regression. At the beginning of Block 4, however, when the variable which signifies having an adjudication board composed only of students (usually associated with honor systems) enters the regression, (step 17), the residual effects of honor and proctor systems are reduced to near zero. The simple correlation of having a student-run adjudication board is .44 with having an honor system and -.37 with having a proctor system. Since the simple correlations with cheating of student-run adjudication board and honor system are not significantly different (-.08 and -.06, respectively), one may represent a substitute for the other.

In Table 15 (overall cheating), honor system enters the regression in the last block at step 53 and has a final Beta weight of -.05, which makes it significant at the final step.

Table 28 presents significant correlations of selected variables with honor system and proctor system. These are useful in assessing interrelations between these types of systems and specific administrative practices. Clearly, under an honor system students are more likely to be informed of policies at admissions or orientation, and are more likely to receive special handouts and to sign pledges. On the other hand, honor systems are also likely to have student-run adjudication boards and to be found at single-sex or selective institutions. Students attending colleges with proctor systems, on the other hand, are more likely to be reminded of policies during their first classes and to have their cases handled by faculty or administrators. Proctor systems are most common at coeducational institutions.

That honor and proctor systems are unlikely to be found in the same institution ($r = -.71$) suggests that, in the regression analyses, the entry of one of these might account for the effects of the other. This indeed happens in the regression for homework copying (Table 13), when honor system enters at step 13 with a Beta of $-.06$. The entry of this variable causes the Beta for proctor systems to drop from a significant $.06$ to a nonsignificant $.03$. Since both variables had Betas of $[-.06]$ at step 12, which one of the two is actually entered is somewhat arbitrary.

Table 28
Correlations Between Type of Academic Honesty System and Selected
Administrative Variables

Variables	Honor System	Proctor System
Honor system		-.71
Proctor system	-.71	
Notification about policy:		
At admissions	.48	-.31
At orientation	.28	-.12
Sign pledge/beginning of year	.40	-.34
Special handout	.36	-.23
Reminded at first class	-.08	.22
Pledge on all work	.48	-.44
Sanctions:		
Warning	-.03	.15
Frequency of sanction release	.12	-.14
Handling of case:		
Faculty only	-.21	.17
Faculty refer	-.04	.13
Department chair	-.30	.14
Dean	-.22	.20

(table continues)

Table 28

Correlations Between Type of Academic Honesty System and Selected
Administrative Variables (continued)

Variables	Honor System	Proctor System
Adjudication board composition:		
Students only	.44	-.37
Institutional selectivity	.24	-.19
Male college	.15	-.13
Female college	.18	-.18
Coeducational college	-.21	.20

Hypothesis 8: Institutions will exhibit lower levels of cheating if they have one or more of the following characteristics:

- a) an explicit code
- b) methods of communicating rules and reminders
- c) sanctions communicated frequently
- d) larger proportions of cases adjudicated to students enrolled
- e) harsh sanctions for serious infractions
- f) involving students in the adjudication process

We shall consider each characteristic separately.

- a) an explicit code

There was a significant relationship between having an explicit academic honesty code and copying homework. This characteristic does not seem to make a difference in examination cheating. It does make a difference, however, with copying of homework, but not in the anticipated manner. More copying homework occurs in schools that have more detailed codes.

It is possible that students who attend schools with specific codes do not realize that homework copying is not allowed. It is reasonable to assume that virtually all students recognize that cheating on examinations is wrong, regardless of how specific the

code may be. Those who cheat know that they should not, but choose to cheat anyway.

That having a specific code is a positive predictor of "cheating" is counter-intuitive. A careful reexamination of the codes, however, indicates that very few of the detailed codes make any reference to homework copying. Therefore, when the specific code fails to mention homework copying, some students may feel they can engage in this practice with impunity. Apparently, having an explicit code may be counterproductive in the sense that it implicitly sanctions any behavior that is not explicitly mentioned.

One final result bears mentioning: honesty regulations which contain definitions of cheating, plagiarism or other types academic dishonesty also entered the regression for copying homework with a negative weight. In short, being clear about the meaning of particular forms of academic dishonesty serves to deter certain types of cheating.

b) methods of communicating rules and reminders

Several of the methods of communicating rules and reminders had significant correlations with the three cheating measures (Chapter V, Table 12). As Table 13 indicates, the only method which enters the regression for copying homework is having no reminders. It enters with a positive weight at step 47, and remains significant at the final step (.04). It is not unexpected to find that having no reminders at all leads to more homework

copying. Students might well assume that an institution which does not even make mention of academic honesty does not consider it important. Therefore, students might feel freer to cheat.

Having a special academic honesty handout seems to reduce both examination cheating and overall cheating. This variable enters in Block 9 and remains significant at the final step. One can assume that a special publication (brochure or pamphlet) might remind students of the importance of academic honesty and thus serves to discourage cheating.

Interestingly, one of the methods of communicating reminders seems to encourage cheating. "Reminders at each test" was positively associated with cheating on examinations (Table 14, step 36). This finding is an anomaly. One would assume that reminding students of the rules at an exam would discourage rather than encourage cheating. One possibility is that the direction of causation is reversed here: perhaps professors find it necessary to remind students if they feel there is too much cheating. Another possibility might be that the more anxious and stressed students, after hearing a reminder of the honesty code or expectations for the exam, might view cheating an option which they did not consider earlier. Because information was not collected about the types of reminders and what was said, it is hard to interpret this finding. Clearly, this is one area which requires further research.

c) sanctions communicated frequently

The frequency with which sanctions are communicated back to the community (measured not at all, annually, semiannually, and more frequently) was not related to any of the three measures of cheating in this study. Therefore, communicating sanctions does not appear to be a deterrent to cheating.

d) larger proportions of cases adjudicated to students enrolled

Neither the numbers of cases adjudicated, the numbers of findings of guilt, nor their relation to student enrollment had significant correlations with any of the measures of cheating. Additionally, these variables did not enter any regressions. Therefore, we can assume that high proportions of cases and high proportions of guilty findings are not related to the occurrence of cheating.

e) harsh sanctions for serious infractions

The severity of sanction against cheating had significant correlations with examination cheating (see Chapter V, Table 12). Permanent expulsion entered the regression for homework copying (step 19) with a negative weight. Retaining the possibility of permanent expulsion as a sanction for academic honesty violations seems to reduce homework copying.

When considering examination cheating, the possibility of failing a student in the course seems to reduce the amount of examination cheating that occurs (Table 14). To receive a failing grade in the course remains significant at the final step, its final Beta weight being $-.04$. One can assume that both these severe sanctions--expulsion and failing a course--serve as effective deterrents to cheating.

In addition to the severity of sanctions, sanctions related to specific behaviors were examined. Each institution was asked to identify the most likely consequence of a specific behavior. Only one sanction related to a specific type of behavior entered the regression. Imposing a relatively severe sanction against homework copying seems to reduce examination cheating. This is consistent with the finding for expulsion described above. A very harsh sanction, applied to an action (interpreted by some to be acceptable) discourages that action. In this instance, imposing a very severe sanction for homework copying appears to serve as a deterrent to examination cheating.

f) Involving students in the adjudication process

It was hypothesized that student involvement in the adjudication process would discourage cheating. This was clearly supported in the case of cheating on examinations and overall cheating, where student-only boards were associated with less cheating. For homework copying, however, this hypothesis was not

supported. Although student-only boards did not enter this regression, when students and administrators serve together on the adjudication board, there seems to be more cheating. This variable remained as a significant positive predictor of cheating at the final step (.05).

On the other hand, when the adjudication board consists only of faculty, there is less tendency to copy homework. A board composed of only faculty entered the regression at step 15, and remained a significant negative predictor of cheating with a final Beta weight of -.05.

That student involvement in the adjudication process has a different effect on examination cheating merits some discussion. Student-only boards is substantially correlated with having an honor system ($r = .44$, Table 28), and may be serving as a proxy for honor system (see the changes in the Betas for honor system when student-only boards enters the regressions in Tables 14 and 15). Nevertheless, honor system also enters the regression at step 53 in Table 15.

Table 14 provides some evidence that an adjudication board composed of faculty and administrators tends to reduce cheating on examinations. This lends further support to the finding that faculty involvement is important in reducing academic dishonesty.

Another factor associated with cheating on exams is the resolution of cases by "another institutional office," but in this

case, there tends to be more examination cheating. This variable remains significant at the final step (Beta = .04).

These patterns with cheating on exams are mirrored in the regression for overall cheating (Table 15). Having either a student-only board or a faculty-only board is associated with reduced cheating, while having the case handled by another institutional office is associated with increased cheating.

One can piece together these findings to conclude that direct involvement in adjudication of academic honesty infractions by either students or faculty is important and discourages cheating. When cases are handled by another institutional office, more cheating occurs. Possibly these patterns reflect that students identify more with their peers or their teachers than with other institutional personnel. Another possibility is that student awareness or issues relating to academic dishonesty is heightened when either the students themselves or their teachers are directly responsible for enforcement of policy.

Institutional Characteristics (Hypothesis 9)

Hypothesis 9: There will be an interaction between college size and several aspects of the administrative climate.

- a) Infrequent communication of results of hearings will lead to more cheating in large versus small institutions.

- b) Infrequent adjudication of infractions will lead to more cheating in large versus small institutions.

Although the main effects of institutional size are significant in predicting cheating behaviors, the interaction effects are not. (While institutional size did not enter the regression for copying homework, the dummy variable "university" did. Since university has a substantial correlation with size ($r = .40$), it may serve as a surrogate for size.)

In predicting examination cheating (Table 14), size (institutional enrollment) enters the regression at step 20 and is significant at the final step ($B = .04$). That more cheating occurs in the larger institutions makes sense. Large enrollment adds a certain anonymity to classes; it is probably easier to cheat on exams in a large, rather than a small class, and it is also harder for one faculty member to monitor cheating. Because faculty often give exams with short answers or multiple choice responses, in order to expedite the grading process in large classes, it becomes easier for students to copy responses. Both of these question types enhance cheating opportunity. Smaller classes more often are given essay questions, however, thus making it harder to cheat.

None of the interaction effects involving size with frequency of communication of results, numbers of cases adjudicated, and numbers of findings of guilt was significant. Clearly, none of the

hypotheses concerning interactions of institutional size gains support from these analyses.

General Regression Results

Since more than 40 variables entered each of the three regression equations, it would be too time-consuming and tedious to examine every single variable in each regression and to follow the course of the regression weights across each step in the analysis. Rather, what will be presented here is, first, a brief portrait of the typical student who is either academically honest or dishonest, as reflected in the pattern of demographic and personal variables that predict cheating in the three equations, and then comments on a few of the more interesting findings from the different regressions.

A Typical Student Profile

The typical student who is most inclined to be academically dishonest in college is a male who has strong materialistic values and is planning a career either in business or engineering. Once in college this student is inclined to join a social fraternity, participate in intercollegiate or intramural sports, to drink beer frequently, and to hand in homework assignments late. This student is also inclined to spend a considerable number of hours partying and socializing, and by the end of their sophomore year, to aspire to a career as a lawyer.

The profile of the typical student who is inclined to be academically honest in college, is that of a woman from a well-educated family, who had good grades in high school, who spends many hours studying, who has a strong academic self-concept, who has altruistic inclinations, and who is attending college primarily to learn more rather than earn more. Such students frequently major in English, history or political science, and aspire to careers in medicine. Once in college, these students get good grades and are inclined to work on independent research projects.

Other Regression Results

On several occasions there were changes in the regression coefficients for certain predictors that merit some discussion. One of the most peculiar findings emerged from the analysis of homework copying (Table 13). The variable that entered at step 36, the career choice of engineer at the time the Follow-Up Survey, had a significant simple correlation of .08, indicating that students who planned careers as engineers at the time of the follow-up are inclined to copy other students' homework assignments. This coefficient, however, shrinks to non-significance at step 4 when the freshman career choice of engineering enters the regression equation. In other words, the positive relationship between the Follow-Up career choice of engineer and homework copying can be accounted for entirely by the effects of the freshman career

choice. The coefficient for follow-up career choice of engineering continues on for a number of steps as insignificant, but becomes negative at step 29, when the follow-up major of engineering enters the regression equation. What is occurring?

To explicate these findings in more detail a three-way matrix was formed using three dummy variables: freshman career choice of engineering, follow-up career choice of engineering, and the follow-up major of engineering. For each of the eight cells formed by these three dummy variables, the mean student score on copying homework was computed. The means for each of the eight cells ranged from 1.09 to 1.74, with an overall mean of 1.30. By far, the highest mean score (1.73) was obtained by students who started out with an engineering career choice and whose last (follow-up) major was also engineering, but whose follow-up career choice was not engineering. These are students who started college with the intention of becoming engineers, who after two years of college are still majoring in engineering, but who no longer wish to pursue engineering careers. In other words, these are the students who majored only in engineering but who had abandoned plans to pursue an engineering career at the time of the Follow-Up. In all likelihood, these students include many of those who drop out of college altogether before completing their undergraduate work. It may well be that many of these students had substantial difficulties with their freshman engineering curriculum (which in turn prompted them to leave school) to the extent that they found

It necessary to cut corners by copying other students' homework assignments. It is also possible that, after two years of college, they have discovered that they no longer want to have careers as engineers, but they have completed too much of the major to start another. For this group then, not pursuing an engineering career is a crude indicator of a propensity to copy homework. Such an interpretation is consistent with the regression coefficients which showed that, once the freshman career of engineering and the follow-up major of engineering were controlled, aspiring to an engineering career at the time of the follow-up was negatively associated with copying homework.

Another interesting finding is related to a student's gender. Other studies have indicated being male is positively related to cheating. In this study, the variable "student sex" is a measure of "femaleness," since female is scored "2" and male "1". Being female is a negative predictor of cheating--females, compared to males, copy homework less, and cheat less on tests. For homework copying the predictive power of being female (Table 13) decreases at step 4 when engineering career enters and again at step 24 when playing intramurals enters. It can be assumed that these decreases result from the relatively large proportions of males who traditionally select engineering as a career or who play intramural sports. Therefore, being male is not so much a predictor of homework copying as are some of the behaviors associated with being male--careers in engineering and playing intramurals. Gender

(being female) is also a significant negative predictor of examination cheating (Table 14). The coefficient for this item decreases gradually as the variables enter the equation and become insignificant before the final step. The regression results predicting overall cheating mirror the same pattern (Table 15). Sex (being female) becomes insignificant at step 40. These findings support much of the literature showing that men cheat more than women do, but they also suggest that gender per se is not the important variable.

It will be recalled from a review of the literature (Chapter II) that a student's grade point average is usually negatively correlated with cheating. This particular analysis seems to put that particular finding in a somewhat different light. Some investigators have speculated that this negative association might involve a different kind of causal relation, where the student is able to raise the grade point average as a result of cheating. This particular study, however, indicates that somewhat different mechanisms may be at work. Specifically, the results suggest that the effects of high school grades on cheating are indirect, in the sense that the coefficient for high school grade point average becomes insignificant when two other variables are controlled: hours spent studying and self-rating of academic ability. What this suggests is that students who cheat get poorer grades, not because of any direct causal link between these two variables, but because (a) students who study little and who have poor academic

self-concepts are more inclined to cheat and (b) students get poorer grades in part because of inadequate studying and poor academic self-concepts.

The effects of college grade point average also yielded some interesting patterns. As Table 13 indicates (step 45), the effects of college grade point average are decreased as hours partying and late homework are considered, but grades still remain significant. Likewise, for examination cheating, (see Table 14), the effects of college grade point average are decreased, but not eliminated entirely, when high school grade point average enters and late homework assignments are controlled. For overall cheating, college grade point average also remains significant at the final step.

Among the other variables that serve as negative predictors of cheating are majoring in English, history or political science. Students who major in these fields might not cheat on tests because, in many situations, the tests require essay response which makes it more difficult to cheat. It might also be argued that many of these students may be pre-law students and a finding of guilt might disqualify them from law school admission; however, this interpretation is contradicted by the fact that a follow-up career choice of lawyer is positively related to exam cheating (Table 14).

Students who aspire to careers as physicians cheat less on examinations, possibly because getting caught could preclude their being accepted to medical school. Another explanation might be

that these students want to build strong premedical backgrounds to prepare them to be better doctors. Having a father who is a doctor, however, is a positive predictor of examination cheating. This finding suggests that it may be the pressure from parents who want successful children which encourages students to cheat, but that wanting to be a doctor, in and of itself, discourages cheating.

Institutional qualities, while they contribute to the model, are not as important in determining cheating behaviors as some of the other items of interest. Nevertheless, institutional selectivity (Table 13) enters and remains a significant negative predictor of copying homework. As selectivity increases, cheating decreases. According to the literature as well as other findings from this study, high achievement is negatively related to cheating. Those students who are serious about their work, who get good grades, and who study hard are more likely to attend selective schools. Perhaps their presence in the selective institutions creates an environment which is conducive to academic honesty.

Discussion

Several patterns emerge from this multivariate examination of cheating behaviors. While several precollege activity traits and high school activities had significant relations with cheating, their effects were diminished considerably in size when the follow-up survey variables entered the regression. However, this

does not necessarily mean that precollege variables are not important; clearly, many of the follow-up survey variables were tapping similar qualities, so there was substantial redundancy in the two sets of variables.

We have seen that students' reasons for attending college can be important indicators of their inclination toward academic honesty. The student who sees college primarily as a place to learn is less inclined to cheat than the student who sees it as a step in enhancing earning power.

This is an important finding. If preventing cheating and fostering an atmosphere that promotes academic honesty and intellectual sharing are desirable goals, it would be worthwhile to help incoming students understand and appreciate the intrinsic value of learning and education. The institution will not be able, in every instance, to change a student's reasons for attending college; however, to foster a greater appreciation for learning for its own sake may serve to diminish student cheating.

With some modification, the proposed theories of Drive and Ambition, Academic Self-concept and Effort are supported by this study. The a priori scales, however, did not appear to measure each construct as effectively as did certain individual items from which each scale was made. Specifically, a high self-rating of "academic ability" and many hours "spent studying" are negatively associated with cheating and appear to be the best measures of Academic Self-concept and Effort, respectively. "Being very

well-off financially" was the strongest positive predictor of cheating among the variables making up the Drive and Ambition scale. A better label for the Drive and Ambition construct would be "materialism."

The effects of any one of these characteristics--being strongly materialistic, having a poor academic self-concept, and spending little time studying or doing homework--is strengthened when the other two are present.

Can colleges develop programs which are responsive to these findings? Even though college students these days appear to be more materialistic than ever, there are ways to discourage materialism. A number of colleges have recently begun promoting "volunteerism," and are fostering the idea of community service as an important part of the undergraduate experience. It would be interesting in future research to determine whether these programs have had any impact on the importance of materialistic student goals vis-a-vis activities involving community service or volunteerism.

College counselors and other personnel concerned with enhancing academic study skills would be well-advised to work with students to help them develop positive, strong academic self-concepts. As students strengthen their belief in their own abilities, cheating may well decrease. The twin goals of improving academic self-confidence and improving academic performance both will be realized if students are encouraged to spend more time

studying and doing homework. These factors are, of course, all interrelated. More time studying will, in most cases, enhance grades and, therefore, lead to increased academic self-confidence. Such changes should all lead to less cheating.

The importance of Altruism and Social Responsibility was also tested. When students' life goals are focused on contributing to the social good, less cheating occurs. A student who is concerned about the general welfare of others is less likely to cheat.

Homework copying appeared to be most prevalent among engineering majors. Lots of required homework, coupled with a very rigorous curriculum, may encourage engineering students to copy as a practical response for a very demanding major. Students who select engineering as a career also cheat on examinations, which suggests the possibility that engineering students are more willing than other students to take unethical shortcuts.

If cheating among engineering students is to be deterred, engineering faculty members and administrators need to reexamine the requirements and structures of this major. Those engaged in future research might also wish to examine the effects of materialism, time spent studying, and academic self-concept as these issues relate to engineering as a major and career preference.

While gross environmental institutional characteristics contribute to the model, administrative practices and policies play

a more important role. In general, students cheat less in honor system schools than in proctor system schools.

Certain practices in addition to honor systems also reduce cheating. Notifying students of academic honesty regulations, for example, appears to deter cheating behavior. However, if explicit codes are used, they need to be inclusive. The absence in a written code of specific reference to certain marginal behaviors such as copying homework may, in fact, encourage rather than discourage cheating. It is thus important that institutions providing explicit codes make sure that all types of prohibited cheating behavior are mentioned and are clearly defined.

Institutions that have no rules or reminders have more cheating than institutions that have specific policies and communicate them to students. Likewise, institutions that have and provide special academic honesty handouts to students experience less cheating.

The possibility of invoking a harsh sanction such as course failure or permanent expulsion for minor cheating seems to discourage homework copying. Interestingly, more cheating occurs in settings where students are reminded in class (before an examination) not to cheat. Whether such reminders are actually a cause of, or the result of, excess cheating needs to be examined in future research.

The participation of peers or teachers in the adjudication of cases decreases cheating; more cheating occurs when another institutional office handles the infraction.

That more cheating occurs in large institutions may have to do with large class sizes, the sense of anonymity that a large institution gives a student, and the particular forms of mass testing used in large institutions. Because highly selective institutions have less cheating over and above the effects of honor codes and individual student characteristics, it would be of interest in future studies to determine if the "climate" of a selective institution--where most students are well-prepared, highly motivated, and interested in the intrinsic value of learning--is especially conducive to academic honesty.

The multivariate results suggest that gender per se is not so much a cause of cheating as are particular values and behaviors associated with being male. For example, with regard to homework copying, when the effect of playing intramural sports or choosing an engineering career is controlled, being male becomes nonsignificant.

Finally, college involvements play a very important role in determining cheating behavior. While heavy involvement in academic work reduces cheating, involvement in certain nonacademic activities leads to increased cheating. Specifically, cheating tends to increase among students who spend excessive time partying and socializing, frequently drink beer, hand in homework late, play

intramurals or intercollegiate sports, or are members of fraternities or sororities.

CHAPTER VII
SUMMARY AND CONCLUSIONS

The purpose of this study was to provide a basic framework in which to study academic dishonesty in current college environments and to determine effective ways of discouraging cheating. The theoretical foci of this study were three personal qualities--Drive and Ambition, Academic Self-Concept and Academic Effort--and their effects on cheating. While each of these personal qualities had been studied independently, and each had been shown to have some importance in determining cheating behavior, the present study was designed to assess the combined predictive power of these variables and to examine how they interact with one another and with the college environment. Student reasons for attending college and life goals related to altruism and social responsibility were also examined to determine their possible effects on cheating behavior.

In addition to students' personal qualities, college characteristics and administrative climate were studied to assess the comparative impact on cheating of a variety of academic settings. A national survey was conducted to examine academic honesty systems and their respective components on several hundred campuses. This study went beyond previous studies not only to investigate the type of system used, but also to examine the characteristics of those systems in order to determine which qualities account for their impact on student cheating.

The data for this study came from both the Cooperative Institutional Research Program (CIRP), a multi-institutional, national, longitudinal study of college undergraduates, and an institutional survey developed in conjunction with this study. Of the approximately 280,000 freshman surveyed in the Fall of 1985 as part of the CIRP annual freshman survey, a random sample of 14,534 students was identified for a Follow-Up Survey (FUS). In the summer of 1987, 3,756 students responded to the Follow-Up questionnaire. Institutions attended by the students were subsequently surveyed to obtain information about academic honesty systems and administrative practices at each student's college.

The research design for this study was Astin's Input / Environment / Output model which controls for inputs (both background and pre-college traits) by partialing out their effects on the dependent variable (cheating). Blocked stepwise multiple regression was the major method of statistical analysis. This technique allowed for the controlling of multiple independent variables in the following temporal order: demographic characteristics, pre-college activity traits, measures of the three constructs (Drive and Ambition, Academic Self-concept, and Effort), academic honesty systems and characteristics, institution and environmental characteristics and students' activities in college.

Three measures of college cheating were used as dependent variables: students were asked whether, in the past year they had "cheated on a school quiz or examination," or whether they had

"copied homework." The third was a combined cheating measure incorporating both of these behaviors (referred to as "overall cheating"). Each of these cheating measures served as the dependent variables in separate regression analyses.

Major Findings

For this sample, 17% of the students reported that in the past year they occasionally cheated on an examination or a quiz, while less than one percent of the students reported that they cheated frequently. Twenty-nine percent of the students reported that they occasionally copied homework, and less than one percent reported that they frequently copied homework.

It was determined that a student's reasons for attending college can be an important indication of inclinations towards academic honesty. Students who attend college because they want to learn cheat less, students who attend college because they want to enhance their earning power cheat more, and students who have life goals that are aimed at contributing to the "greater good" of society are less inclined to cheat.

As hypothesized, the personal qualities of Drive and Ambition, Academic Self-Concept and Effort turned out to be important determinants of cheating. However, in each instance, an a priori multi-item scale designed to measure the construct was not as good a predictor as was one of the individual items from which the scale was made. Wanting to be very well-off financially (Drive and

Ambition) is a positive predictor of cheating, whereas having a high self-rating of academic ability (Academic Self-concept) and spending a great deal of time studying (Effort) are both important negative determinants of cheating behavior. Additionally, the hypothesis that the effects of these factors would be exaggerated when they are combined together was confirmed: The positive effect on cheating of wanting to be very well-off financially is strengthened when the student also has a low academic self-concept and spends relatively little time on academic work.

A typical student who is most likely to be academically dishonest in college is a male who has a strong materialistic orientation and who plans a career either in business or in engineering. Once in college, this student is likely to join a fraternity, participate in intercollegiate or intramural sports, drink beer frequently, and hand in homework assignments late. This student has what could be described as hedonistic characteristics: he is inclined to spend a considerable number of hours partying and socializing.

On the other hand, the student who is most likely to be academically honest is a woman from a well-educated family who had good grades in high school, spends long hours studying, has a strong academic self-concept, is altruistically inclined, is attending college primarily to learn more rather than earn more, plans to major in English, history or political science, and aspires to a career in medicine. Once in college, this student

earns good grades and is inclined to work on independent research projects.

Analyses of the effects of different types of academic honesty systems indicate that cheating is least likely to occur in institutions with honor systems, explicit academic honesty codes, special academic honesty handouts, adjudication boards with students or faculty involved, and harsh sanctions against cheating. On the other hand, institutions that have proctor systems, handle academic honesty cases by means of another (i.e. a special) institutional office, or give reminders not to cheat to students before or during examinations all tend to have more cheating.

It should be noted that if the institution has an explicit code that enumerates specific behaviors that are considered to be infractions, but fails to mention certain other behaviors, those unnamed behaviors may be more likely to occur than if there were no explicit code. This problem was seen with homework copying: less homework copying occurred in schools without explicit codes than in schools that had detailed codes (most of which failed to mention homework copying).

Gross institutional characteristics in general did not play an important role in predicting cheating behavior. It was found, however, that large institutions had slightly more cheating than small institutions, and all male colleges and highly selective institutions had less cheating than coeducational or nonselective institutions.

While gender did show a significant simple relationship to cheating (men cheat more than women), these sex differences disappeared when other variables were controlled. Other studies have also shown that men cheat more than women do, but the current study suggests that gender per se is not a factor in cheating; rather, certain traits associated with being male (e.g., majoring in engineering, pursuing an engineering career, playing intramural sports) are the determining factors. Once these factors are controlled in the regression, the effects of gender decreased and eventually became nonsignificant.

The results also confirmed earlier studies showing that grades are an important determinant of cheating. However, in the current study the effects of high school grades disappeared when variables such as the student's self-rating of academic ability and amount of time spent studying were controlled. Students who believe they are academically capable and put in a considerable amount of time on their work cheat less. College grades, however, remain a significant negative predictor of both homework copying and overall cheating; students with higher college grades cheat less. Given the obvious importance college achievement, future research on academic dishonesty should examine the possible interactions among academic achievement, effort and academic self-concept.

Limitations of the Study

One of the frequent criticisms of this kind of research is that student self-reports might be unreliable. Research about undesirable behavior (crime, delinquency, drug and alcohol use, etc.) is often suspect because there is a distrust of self-reported behavior. Students need, skeptics argue, to be placed in a situation in which their behavior is observed so that one may have an independent basis for judging the veracity of student responses. It then can be determined if they actually cheat or are simply tempted to cheat. In this study the investigator used student self-reports of their own cheating behavior. Because student names were included on the follow-up surveys, some might worry that actual behavior might not be reported, even though students were guaranteed anonymity and were assured that institutions would only receive aggregated data. Several steps were taken to assure anonymity and to determine if students were actually being honest about their own cheating behaviors.

Freshman data were collected by institutions at the time of matriculation. Respondents returned follow-up surveys (reporting on cheating behavior), not through academic institutions, but rather by mailing the survey directly to a compilation center where results were aggregated, leaving students more at liberty to admit cheating without fear of repercussion.

Over 15% of the students admitted cheating on examinations even though their names were attached to the surveys, and more than 25% admitted copying homework. These data alone suggest that there is a certain amount of honesty in these self-reported behaviors. Since one likely effect of not reporting one's true behavior would be to introduce additional error which would weaken the correlations between cheating and other variables, it is reasonable to assume that the correlations obtained in this study have been somewhat attenuated. The level of reported cheating in this study is lower than in many recent studies, a result which suggests nonreporting of cheating but which could also be attributed to nonresponse bias (see below). Nevertheless, the fact there are many significant correlations and that the findings are highly consistent with previous theory and research suggests that there is a good deal of honesty in these reports.

There are two kinds of dishonesty in self-reporting about which one might be concerned. The first is the "false positives," those persons who say they cheat but who really do not. One would imagine that this group would be very small, as there seems to be little incentive for saying in these follow-up questionnaires that one cheats if one does not.

The second group, one which presents a potentially greater problem, is the "false negatives," those students who cheat but who do not report their cheating behavior. Some students might deny their cheating behavior because they fear repercussions such as

punishments for cheating (at some schools quite severe), disapproval of peers, or even because they feel embarrassment or guilt about their dishonesty.

Since the "false negatives" represent the most likely and potentially most serious problem, it was decided to conduct some additional analyses to determine if there are any systematic biases operating within this false negative group. How, then, do we identify such people?

The basic approach to this question was to identify a subgroup of students who would be likely to include a relatively large number of false negatives, and to compare this group with a similar group of students likely to contain fewer false negatives. The latter group is most easily identified by selecting people who do report cheating (a group which presumably contains no false negatives); the former group would include those who resemble cheaters in their personal characteristics but who deny cheating. In this study we have identified a "cheater profile" which includes such things as being a male, having materialistic values, expending little effort on studies, and so on. The simplest way to identify such "cheating-prone" students is by means of the regression composite \hat{Y} . The higher one's \hat{Y} , the more that person resembles the stereotypical cheater in his or her personal attributes.

Now if we identify all those people with very large \hat{Y} 's (i.e., the most cheating-prone students), those who deny ever cheating would presumably include many of the false negatives, whereas those

who report cheating would, by definition, include no false negatives. If we were then to compare these two groups in terms of a wide variety of personal characteristics, it should be possible to determine if the false negatives differ from honest (but equally "cheating-prone") students in any systematic way. The two groups would, of course, be comparable in terms of variables that are associated with cheating, since they would be matched in terms of \hat{Y} s. The purpose of comparing them would be to determine if they differ from each other in any other respects besides their reports on cheating.

Students with \hat{Y} s above 1.35 were divided into two groups: those who reported cheating (N = 159) and those who did not (N = 198). Significance tests (t-ratios) were run on 12 variables to determine if the two groups differed in any systematic respects. Since none of the tests yielded t values that were statistically significant ($p < .05$), it would appear that there is no evidence of systematic bias between those who do and do not admit cheating.

Other findings suggest that self-reported behavior is reasonably honest: the results make sense and are consistent both with previous research and with theory. For example, the significant cheating predictors among college activities indicate that academic irresponsibility and hedonistic behaviors are associated with cheating. Students who hand in homework late, who party, drink beer, and spend little time studying and a lot of time in intramurals and sports tend to cheat. Students who spend a

great deal of time studying and who feel confident about their academic abilities, on the other hand, are unlikely to cheat.

One other major area of concern has to do with the issue of nonrespondents. Because only 26% responded, one needs to be concerned about the other 74% of the students sampled.

How have the results been affected by nonresponse bias? One unique feature of the CIRP is that considerable amounts of data are available on all nonrespondents by virtue of the freshman survey (Hurtado, Astin, Korn, & Dey, 1989) and because data on retention and academic progress are provided by institutions on all students. When respondents are compared with nonrespondents, they are found to differ considerably in terms of certain characteristics, especially those having to do with academic progress (grades, retention, etc.). However, the relationships among variables appear to be affected only slightly, if at all, by nonresponse bias. (Astin, 1968; Astin and Panos, 1969). These effects on the interrelationships among variables, when they occur, are to attenuate slightly the observed correlations. Since the present study was concerned primarily with relationships among variables, the main risk from nonresponse bias would be to increase the likelihood of "Type II" errors. Given that the findings were generally positive, it seems safe to conclude that the same significant relationships would have been obtained if more students had responded, and that the magnitude of these relationship might in some cases be slightly larger. As far as simple cheating rates

are concerned, the rates probably would turn out to be somewhat higher if more students had responded, since many of the variables that are associated with not responding to the questionnaire appear to be positively associated with cheating (see Hurtado, Astin, Korn, & Dey, 1989).

Implications for Practice

The many personal trait correlates of cheating identified in this study raise an interesting policy question: Could cheating behavior be reduced if ways could be found to change some of these personal qualities? While we cannot be sure about such causal implications because of the correlational nature of the data, the nature of these personal qualities is such that institutions would tend to benefit from changes in the "less cheating" direction, even if the changes did not in every case result in lowered cheating rates. Let us now turn to a discussion of each of these personal qualities and its association with cheating.

"Students who attend college for the sake of learning cheat less." High schools and colleges have been increasingly concerned about the growing tendency of students to see education in instrumental terms: as a means to get a job or high income rather than for the love of learning, discovery, or self-development. Indeed cheating is perhaps the prototypic manifestation of such an attitude: to "succeed" at any cost. A number of means are available for encouraging students to appreciate the intrinsic

value of learning and discovery: orientation, advising, curriculum content, and teaching techniques. It would seem that all parties concerned (students, faculty, staff, employees) would stand to benefit from a more concerted effort by schools and colleges to imbue students with a greater love of learning even if such efforts do not always result in reduced cheating.

"Students who have poor academic self-concepts cheat more." A positive academic self-concept has also been shown to be related to improved academic performance and retention. "Mini-courses," seminars, lectures, classes, etc., reinforcing study habits, test-taking skills, writing skills, and other academic approaches would all serve to provide students with greater means to believe in their abilities. One program which might be particularly successful is a transcript mentoring program, in which the student takes a skills test, and then works with a mentor to develop a plan for reaching a desired skill level. One would hope that by being part of the assessment and proscriptive process, students would take even more responsibility for their own growth and that as academic self-confidence increases, cheating will decrease.

"Students who exert little effort (who do not put much time into their academic work) cheat more." Effort, of course, is a major factor in academic success, retention, and satisfaction. Again, mini-courses, seminars, and lectures can help students appreciate the importance of spending adequate time on their academic work. Beyond its possible effects on cheating, helping

students to develop good study habits (including more time studying and doing homework) will also tend to enhance grades and retention.

"Students who are materialistically oriented cheat more. Students who are altruistic cheat less." This generation of college students has been referred to as a "me-first," materialistic group. Recently, national leaders, including President Derek Bok of Harvard (1988) have stressed the importance of values and ethics in education. Today's young people have been urged to look at their own values and at the betterment of society. A national focus on the benefits of volunteerism has been initiated, and such projects as Campus Compact have appeared at colleges across the country. Being able to foster greater appreciation for altruism and social responsibility among students would be a benefit in its own right, but it might also serve to encourage a greater degree of academic honesty.

"Honor systems, explicit codes, special academic honesty handouts, adjudication boards with student and faculty involvement and harsh sanctions, decrease cheating." Institutions which are willing to designate the funds and energy necessary to modify their policies on academic dishonesty may effectively deter cheating by employing some of these practices. However, none of these efforts works in a vacuum. To discourage cheating effectively, a long-term perspective needs to be adopted and yearly "re-education" needs to occur. Because student turnover is high, and "institutional memory" short, efforts need to be ongoing. The student who is

aware that a premium is placed at the college on academic honesty, and who sees these concerns manifest in specific policies and practices, will be inclined to cheat less.

~Engineering students cheat extensively. Engineering faculty and administrators may wish to explore in greater depth the possible causes of academic dishonesty. Perhaps the unique course and homework demands such as continual problem sets and computer simulations contribute to the problem.

Future Research

The modest size of the multiple correlation coefficients (.34 to .42) suggest that there is still a great deal of information to be discovered about the determinants of cheating behavior. In future research, classroom environmental characteristics might be added to the analysis with the goal of enhancing the amount of variance accounted for by the model.

This study provided information about homework copying and examination cheating. Future research needs to be focused on other kinds of cheating, including both computer cheating and plagiarism. Given the continuing emergence of new and better technologies, students have a plethora of new cheating opportunities. With regard to plagiarism, it would be particularly interesting to understand its role among English majors. In this study, majoring in English served as a negative predictor of homework copying and overall cheating, that is, students who

majored in English tended to cheat less than other students. Given the heavy writing burden experienced by most English majors, would they still tend to cheat less if cheating were defined in terms of plagiarism?

One of the more interesting findings from this study is the complex relationship between examination cheating and medical careers. Students whose fathers are physicians cheat more; however, the student career goal of being a doctor is a negative predictor of cheating. Since the two variables (father's career and student's career) are positively associated, the negative Beta coefficient for the student's choice becomes even stronger when having a father who is a doctor enters the regression. Why should having a father who is a physician be associated with cheating, while selecting a career in medicine be associated with academic honesty? Perhaps students whose fathers are doctors feel greater parental pressure to succeed academically; being a premedical student, on the other hand, may alert one to the great practical risks associated with cheating (i.e., getting caught might well derail a medical career). Whatever the explanation, further study of the relationships among these variables seems to be warranted.

In short, it would appear that there are many issues that call for continued research on this topic. Although academic dishonesty has been with us for hundreds of years, there is much that we still need to understand. As long as academic achievement is competitive, and rewards (both direct and indirect) are associated

with grades, some students will cheat. The more we are able to learn about the determinants of cheating, the better the academic community will be able to enhance and foster an appreciation for honest work, sharing, and cooperation. This study makes a small contribution to the still incomplete, yet growing body of literature about academic honesty.

APPENDICES

APPENDIX A
STUDENT INFORMATION SURVEY FORMS

1985 Student Information Form
1987 Follow-up Survey of College Freshmen

273781

PLEASE PRINT: YOUR NAME _____

First Middle or Maiden Last

HOME STREET ADDRESS _____

When were you born?

Month Day Year

(01-12) (01-31)

CITY STATE ZIP CODE Area Code Home Phone No.

1985 STUDENT INFORMATION FORM

DIRECTIONS

Your responses will be read by an optical mark reader. Your careful observance of these few simple rules will be most appreciated.
Use only black lead pencil (No. 2 is ideal).
Make heavy black marks that fill the circles.
Erase cleanly any answer you wish to change.
Make no stray markings of any kind.
EXAMPLE:
Will marks made with ballpoint or felt-tip marker be properly read? Yes No

Dear Student:

The information in this form is being collected as part of a continuing study of higher education conducted jointly by the American Council on Education and the University of California at Los Angeles. Your voluntary participation in this research is being solicited in order to achieve a better understanding of how students are affected by their college experiences. Detailed information on the goals and design of this research program are furnished in research reports available from the Higher Education Research Institute, UCLA. Identifying information has been requested in order to make subsequent mail follow-up studies possible. Your response will be held in the strictest professional confidence.
PLEASE USE #2 PENCIL

Alexander W. Astin, Director
Higher Education Research Institute

MARK IN THIS AREA ONLY IF DIRECTED ORP. CODE
Grid for marking answers with circles and numbers.

- 1. Your sex: Male Female
2. How old will you be on December 31 of this year? (Mark one)
16 or younger 21-24
17 25-29
18 30-39
19 40-54
20 55 or older
3. Are you a twin? (Mark one)
No Yes, identical Yes, fraternal
4. In what year did you graduate from high school? (Mark one)
1985 Did not graduate but passed G.E.D. test
1984 Never completed
1983 high school
1982 or earlier
5. Are you enrolled (or enrolling) as a: (Mark one)
Full-time student?
Part-time student?

- 6. Where did you get the money to pay for college this year? (Write in actual dollar amounts; write "0" if none)
Grants and scholarships
All loans
Work or savings
Parents and/or spouse
Other sources
7a. How many persons are currently dependent on your parents for support (exclude yourself and your parents, if applicable)?
1 2 3 4 5 6 or more
7b. How many of these dependents other than yourself are currently attending college?
None 1 2 3 or more
8. What was your average grade in high school? (Mark one) A or A+ B C
A- B- D
B+ C+
9. Where did you rank academically in your high school graduating class? (Mark one)
Top 20% Fourth 20%
Second 20% Lowest 20%
Middle 20%
10. Are you: (Mark one)
Not presently married
Married, living with spouse
Married, not living with spouse
11. Prior to this term, have you ever taken courses for credit at this institution?
Yes No
12. Since leaving high school, have you ever taken courses at any other institution? (Mark all that apply in each column)
No Yes, at a junior or com. college Yes, at a four-year college or university Yes, at some other postsecondary school (For ex., technical, vocational, business)

- 13. What is the highest academic degree that you intend to obtain?
None
Vocational certificate
Associate (A.A. or equivalent)
Bachelor's degree (BA, BS, etc.)
Master's degree (MA, MS, etc.)
Ph.D. or Ed.D.
M.D., D.O., D.D.S., or D.V.M.
LL.M. or J.D. (Law)
S.D. or M.Div. (Divinity)
Other
14. Where do you plan to live during the fall term? If you had a choice, where would you have preferred to live? (Mark one in each column)
With parents or relatives
Other private home, apt. or rm.
College dormitory
Fraternity or sorority house
Other campus student housing
Other
15. Is this college your: (Mark one)
First choice? Less than third
Second choice? choice?
Third choice?
16. How many miles is this college from your permanent home? (Mark one)
5 or less 11-50 101-500
6-10 51-100 More than 500
17. To how many colleges other than this one did you apply for admission this year?
No other 1 3 5
2 4 6 or more
Note: If you applied to no other college, skip to item 19 on the next page.
18. How many other acceptances did you receive this year? (Mark one)
None 1 3 5
2 4 6 or more

19. How much of your first year's educational expenses (room, board, tuition, and fees) do you expect to cover from each of the sources listed below? (Mark **one** answer for each possible source)

a. My Own or Family Resources

Parents, other relatives or friends None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Spouse None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Savings from summer work None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Other savings None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Full-time job while in college None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Part-time job while in college None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

b. Aid Which Need Not Be Repaid

Fell Grant None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Supplemental Educational Opportunity Grant None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

State Scholarship or Grant None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

College Work-Study Grant None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

College Grant/Scholarship (other than above) None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Corporate Tuition Assistance None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Other private grant None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Your GI benefits None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Your parent's GI benefits None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Other government aid (ROTC, BIA, Social Security, etc.) None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

c. Aid Which Must Be Repaid

Federal Guaranteed Student Loan None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

National Direct Student Loan None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Other College Loan None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

Other Loan None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

d. Other Than Above

Other None \$1,000 \$1,000-1,999 \$2,000-2,999 \$3,000-3,999 \$4,000-4,999 \$5,000-5,999 \$6,000-6,999 \$7,000-7,999 \$8,000-8,999 \$9,000-9,999 \$10,000 or more

If you are receiving any form of aid indicated in sections b or c, please answer Question No. 20. Otherwise go on to Question 21.

20. Was the aid you are receiving awarded on the basis of: (Mark all that apply)

Academic merit Yes No

Financial need Yes No

Athletic talent Yes No

Other talent (music, art, etc.) Yes No

Other Yes No

21. Were you last year, or will you be this year:

	1984	1985
	Yes	No
Living with your parents (for more than five consecutive weeks)	<input checked="" type="radio"/>	<input type="radio"/>
Listed as a dependent on your parents' Federal Income Tax Return	<input checked="" type="radio"/>	<input type="radio"/>
Receiving assistance worth \$600 or more from your parents	<input checked="" type="radio"/>	<input type="radio"/>

22. Are you: (Mark all that apply)

White/Caucasian

Black/Negro/Afro-American

American Indian

Asian-American/Oriental

Mexican-American/Chicano

Puerto Rican-American

Other

23. Are you a U.S. citizen? Yes No

24. For the activities below, indicate which ones you did during the past year. If you engaged in an activity frequently, mark . If you engaged in an activity one or more times, but not frequently, mark . If you have not performed the activity during the past year, mark (not at all). (Mark one for each item)

Used a personal computer

Played a musical instrument

Attended a religious service

Participated in a speech or debate contest

Elected president of one or more student organizations

Was bored in class

Had a major part in a play

Won a varsity letter for sports

Failed to complete a homework assignment on time

Won a prize or award in an art competition

Edited the school paper, yearbook, or literary magazine

Tutored another student

Asked a teacher for advice after class

Participated in a science contest

Did extra (unassigned) work/reading for a course

Was a guest in a teacher's home

Studied with other students

Overlapped and missed a class or appointment

Smoked cigarettes

Performed volunteer work

Missed school because of illness

Attended a recital or concert

Drank beer

Stayed up all night

Felt overwhelmed by all I had to do

Felt depressed

25. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself. (Mark one in each row)

	None	A Little	Some	A Lot
Academic ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Artistic ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drive to achieve	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mathematical ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Popularity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (intellectual)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-confidence (social)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing ability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. In deciding to go to college, how important to you was each of the following reasons? (Mark one answer for each possible reason)

To be able to get a better job

To gain a general education and appreciation of ideas

To improve my reading and study skills

There was nothing better to do

To make me a more cultured person

To be able to make more money

To learn more about things that interest me

To prepare myself for graduate or professional school

My parents wanted me to go

I could not find a job

Wanted to get away from home

27. Do you have any concern about your ability to finance your college education? (Mark one)

None (I am confident that I will have sufficient funds)

Some concern (but I will probably have enough funds)

Major concern (not sure I will have enough funds to complete college)

28. How would you characterize your political views? (Mark one)

Far left

Liberal

Middle-of-the-road

Conservative

Far right

29. What is your best estimate of your parents' total income last year? Consider income from all sources before taxes. (Mark one)

<input type="radio"/> Less than \$5,000	<input type="radio"/> \$35,000-39,999
<input type="radio"/> \$5,000-9,999	<input type="radio"/> \$40,000-49,999
<input type="radio"/> \$10,000-14,999	<input type="radio"/> \$50,000-59,999
<input type="radio"/> \$15,000-19,999	<input type="radio"/> \$60,000-74,999
<input type="radio"/> \$20,000-24,999	<input type="radio"/> \$75,000-89,999
<input type="radio"/> \$25,000-29,999	<input type="radio"/> \$100,000-149,999
<input type="radio"/> \$30,000-34,999	<input type="radio"/> \$150,000 or more

30. What is the highest level of formal education obtained by your parents? (Mark one in each column)

	Father	Mother
Grammar school or less	<input type="radio"/>	<input type="radio"/>
Some high school	<input type="radio"/>	<input type="radio"/>
High school graduate	<input type="radio"/>	<input type="radio"/>
Postsecondary school other than college	<input type="radio"/>	<input type="radio"/>
Some college	<input type="radio"/>	<input type="radio"/>
College degree	<input type="radio"/>	<input type="radio"/>
Some graduate school	<input type="radio"/>	<input type="radio"/>
Graduate degree	<input type="radio"/>	<input type="radio"/>

31. Mark only three responses, one in each column.

- Your mother's occupation
 Your father's occupation
 Your probable career occupation
- NOTE: If your father or mother is deceased, please indicate his or her last occupation.
- Accountant or actuary V F M
 - Actor or entertainer V F M
 - Architect or urban planner (V) (F) (M)
 - Artist (V) (F) (M)
 - Business (clerical) V F M
 - Business executive (management, administrator) (V) (F) (M)
 - Business owner or proprietor (V) (F) (M)
 - Business salesperson or buyer (V) (F) (M)
 - Clergyman (minister, priest) (V) (F) (M)
 - Clergy (other religious) (V) (F) (M)
 - Clinical psychologist (V) (F) (M)
 - College teacher (V) (F) (M)
 - Computer programmer or analyst (V) (F) (M)
 - Conservationist or forester (V) (F) (M)
 - Dentist (including orthodontist) (V) (F) (M)
 - Designer or home economist (V) (F) (M)
 - Engineer (V) (F) (M)
 - Farmer or rancher (V) (F) (M)
 - Foreign service worker (including diplomat) (V) (F) (M)
 - Homemaker (full-time) (V) (F) (M)
 - Interior decorator (including designer) (V) (F) (M)
 - Interpreter (translator) (V) (F) (M)
 - Lab technician or hygienist (V) (F) (M)
 - Law enforcement officer (V) (F) (M)
 - Lawyer (attorney) or judge (V) (F) (M)
 - Military service (career) V F M
 - Musician (performer, composer) V F M
 - Nurse V F M
 - Optometrist V F M
 - Pharmacist (V) (F) (M)
 - Physician (V) (F) (M)
 - School counselor (V) (F) (M)
 - School principal or superintendent (V) (F) (M)
 - Scientific researcher (V) (F) (M)
 - Social, welfare or recreation worker (V) (F) (M)
 - Statistician (V) (F) (M)
 - Therapist (physical, occupational, speech) (V) (F) (M)
 - Teacher or administrator (elementary) (V) (F) (M)
 - Teacher or administrator (secondary) V F M
 - Veterinarian V F M
 - Writer or journalist V F M
 - Skilled trades V F M
 - Other (V) (F) (M)
 - Undecided (V) (F) (M)
 - Laborer (unskilled) (V) (F) (M)
 - Semi-skilled worker (V) (F) (M)
 - Other occupation (V) (F) (M)
 - Unemployed (V) (F) (M)

32. Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here? (Mark one answer for each possible reason)

- Very Important
 Somewhat Important
 Not Important
- My relatives wanted me to come here. (V) (M) (N)
 - My teacher advised me (V) (M) (N)
 - This college has a very good academic reputation (V) (M) (N)
 - This college has a good reputation for its social activities (V) (M) (N)
 - I was offered financial assistance. (V) (M) (N)
 - This college offers special educational programs (V) (M) (N)
 - This college has low tuition (V) (M) (N)
 - My guidance counselor advised me (V) (M) (N)
 - I wanted to live near home (V) (M) (N)
 - A friend suggested attending (V) (M) (N)
 - A college rep. recruited me (V) (M) (N)
 - The athletic dept. recruited me (V) (M) (N)
 - This college's graduates gain admission to top graduate/professional schools (V) (M) (N)
 - This college's graduates get good jobs. (V) (M) (N)
 - Not offered financial aid by first choice college (V) (M) (N)

33. Do you have a disability? (Mark all that apply)

- None
- Learning disability
- Hearing
- Health-related
- Speech
- Partially sighted or blind
- Orthopedic
- Other

BE SURE TO ANSWER QUESTIONS 34, 35, AND 36.

37. Mark one in each row:

- The Federal government is not doing enough to protect the consumer from faulty goods and services (V) (M) (N)
- The Federal government is not doing enough to promote disarmament (V) (M) (N)
- The Federal government is not doing enough to control environmental pollution (V) (M) (N)
- The Federal government should do more to discourage energy consumption (V) (M) (N)
- The Federal government should raise taxes to help reduce the deficit (V) (M) (N)
- Federal military spending should be increased (V) (M) (N)
- Nuclear disarmament is attainable (V) (M) (N)
- The death penalty should be abolished (V) (M) (N)
- A national health care plan is needed to cover everybody's medical costs (V) (M) (N)
- Abortion should be legalized (V) (M) (N)
- Grading in the high schools has become too easy (V) (M) (N)
- The activities of married women are best confined to the home and family (V) (M) (N)
- A couple should live together for some time before deciding to get married (V) (M) (N)
- Women should receive the same salary and opportunities for advancement as men in comparable positions (V) (M) (N)
- Wealthy people should pay a larger share of taxes than they do now (V) (M) (N)
- Marijuana should be legalized (V) (M) (N)
- Busing is O.K. if it helps to achieve racial balance in the schools (V) (M) (N)
- It is important to have laws prohibiting homosexual relationships (V) (M) (N)
- College officials have the right to regulate student behavior off-campus (V) (M) (N)
- Faculty promotions should be based in part on student evaluations (V) (M) (N)
- College officials have the right to ban persons with extreme views from speaking on campus (V) (M) (N)
- Realistically, an individual person can do little to bring about changes in our society (V) (M) (N)
- The chief benefit of a college education is that it increases one's earning power (V) (M) (N)

34. Current religious preference: (Mark one in each column)

- Yes
 Father's
 Mother's
- Baptist (V) (F) (M)
 - Buddhist (V) (F) (M)
 - Congregational (U.C.C.) (V) (F) (M)
 - Eastern Orthodox (V) (F) (M)
 - Episcopal (V) (F) (M)
 - Islamic (V) (F) (M)
 - Jewish (V) (F) (M)
 - Latter Day Saints (Mormon) (V) (F) (M)
 - Lutheran (V) (F) (M)
 - Methodist (V) (F) (M)
 - Presbyterian (V) (F) (M)
 - Quaker (Society of Friends) (V) (F) (M)
 - Roman Catholic (V) (F) (M)
 - Seventh Day Adventist (V) (F) (M)
 - Other Protestant (V) (F) (M)
 - Other Religion (V) (F) (M)
 - None (V) (F) (M)

35. Are you a born-again Christian? Yes . . . No . . .

36. During high school (grades 9-12) how many years did you study each of the following subjects? (Mark one for each item)

- 0 1 2 3 4 5 6 7 8 9 10 11 12
- English (V) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
 - Mathematics (V) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
 - Foreign Language (V) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
 - Physical Science (V) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
 - Biological Science (V) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
 - History/Am. Govt. (V) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
 - Computer Science (V) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
 - Art and/or Music (V) (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

Disagree Strongly
 Disagree Somewhat
 Agree Somewhat
 Agree Strongly

38. Below is a list of different undergraduate major fields grouped into general categories. Mark only one circle to indicate your probable field of study.

- ARTS AND HUMANITIES
- Art, fine and applied
- English (language and literature)
- History
- Journalism
- Language and Literature (except English)
- Music
- Philosophy
- Speech
- Theater or Drama
- Theology or Religion
- Other Arts and Humanities
- BIOLOGICAL SCIENCE
- Biology (general)
- Biochemistry or Biophysics
- Botany
- Marine (Life) Science
- Microbiology or Zoology
- Other Biological Science
- BUSINESS
- Accounting
- Business Admin. (general)
- Finance
- Marketing
- Management
- Secretarial Studies
- Other Business
- EDUCATION
- Business Education
- Elementary Education
- Music or Art Education
- Physical Education or Recreation
- Secondary Education
- Special Education
- Other Education
- ENGINEERING
- Aeronautical or Astronautical Eng.
- Civil Engineering
- Chemical Engineering
- Electrical or Electronic Engineering
- Industrial Engineering
- Mechanical Engineering
- Other Engineering
- PHYSICAL SCIENCE
- Astronomy
- Atmospheric Science (incl. Meteorology)
- Chemistry
- Earth Science
- Marine Science (incl. Oceanography)
- Mathematics
- Physics
- Statistics
- Other Physical Science
- PROFESSIONAL
- Architecture or Urban Planning
- Home Economics
- Health Technology (medical, dental, laboratory)
- Library or Archival Science
- Nursing
- Pharmacy
- Pre dental, Pre medicine, Pre veterinary
- Therapy (occupational, physical, speech)
- Other Professional
- SOCIAL SCIENCE
- Anthropology
- Economics
- Ethnic Studies
- Geography
- Political Science (gov't, international relations)
- Psychology
- Social Work
- Sociology
- Women's Studies
- Other Social Science
- TECHNICAL
- Building Trades
- Data Processing or Computer Programming
- Drafting or Design
- Electronics
- Mechanics
- Other Technical
- OTHER FIELDS
- Agriculture
- Communications (radio, TV, etc.)
- Computer Science
- Forestry
- Law Enforcement
- Military Science
- Other Field
- Undecided

Prepared by the Higher Education Research Institute, University of California, Los Angeles, California 90024.

39. Indicate the importance to you personally of each of the following: (Mark one for each item)

- Not Important
 Somewhat Important
 Very Important
 Essential
- 39.1. Becoming accomplished in one of the performing arts (acting, dancing, etc.)
 - 39.2. Becoming an authority in my field
 - 39.3. Obtaining recognition from my colleagues for contributions to my special field
 - 39.4. Influencing the political structure
 - 39.5. Influencing social values
 - 39.6. Raising a family
 - 39.7. Having administrative responsibility for the work of others
 - 39.8. Being very well off financially
 - 39.9. Helping others who are in difficulty
 - 39.10. Making a theoretical contribution to science
 - 39.11. Writing original works (poems, novels, short stories, etc.)
 - 39.12. Creating artistic work (painting, sculpture, decorating, etc.)
 - 39.13. Being successful in a business of my own
 - 39.14. Becoming involved in programs to clean up the environment
 - 39.15. Developing a meaningful philosophy of life
 - 39.16. Participating in a community action program
 - 39.17. Helping to promote racial understanding
 - 39.18. Becoming an expert on finance and commerce

40. What is your best guess as to the chances that you will: (Mark one for each item)

- No Chances
 Very Little Chances
 Some Chances
 Very Good Chances
- 40.1. Change major field?
 - 40.2. Change career choice?
 - 40.3. Fail one or more courses?
 - 40.4. Graduate with honors?
 - 40.5. Be elected to a student office?
 - 40.6. Get a job to help pay for college expenses?
 - 40.7. Work full time while attending college?
 - 40.8. Join a social fraternity, sorority, or club?
 - 40.9. Live in a coeducational dorm?
 - 40.10. Play varsity/intercollegiate athletics?
 - 40.11. Be elected to an academic honor society?
 - 40.12. Make at least a "B" average?
 - 40.13. Need extra time to complete your degree requirements?
 - 40.14. Get tutoring help in specific courses?
 - 40.15. Have to work at an outside job during college?
 - 40.16. Seek vocational counseling?
 - 40.17. Seek individual counseling on personal problems?
 - 40.18. Get a bachelor's degree (B.A., B.S., etc.)?
 - 40.19. Participate in student protests or demonstrations?
 - 40.20. Drop out of this college temporarily (exclude transferring)?
 - 40.21. Drop out permanently (exclude transferring)?
 - 40.22. Transfer to another college before graduating?
 - 40.23. Be satisfied with your college?
 - 40.24. Find a job after college in the field for which you were trained?
 - 40.25. Get married while in college? (skip if married)
 - 40.26. Get married within a year after college? (skip if married)

The Higher Education Research Institute at UCLA actively encourages the colleges that participate in this survey to conduct local studies of their students. If these studies involve collecting follow-up data, it is necessary for the institution to know the students' ID numbers so that follow-up data can be linked with the data from this survey. If your college asks for a tape copy of the data and signs an agreement to use it only for research purposes, do we have your permission to include your ID number in such a tape?

Yes No

- 41.
- 42.
- 43.
- 44.
- 45.
- 46.
- 47.
- 48.
- 49.
- 50.

THANK YOU!

FOLLOW-UP SURVEY OF COLLEGE FRESHMEN

PLEASE PRINT (one letter or number per box)

NAME	FIRST	M										LAST		When were you born?				
ADDRESS	SAMPLE															Month	Day	Year
CITY	STATE										ZIP	PHONE						

DIRECTIONS:
 Your responses will be read by an optical mark reader. Your observance of these few directions will be most appreciated.
 Use only a black lead pencil (No. 2 is best).
 Make heavy black marks that fill the circle.
 Erase clearly any answer you wish to change.
 Make no stray markings of any kind.
 EXAMPLE: Write marks with a ball-point or felt-tip pen are properly read?
 YES NO

1. If you could make your college choice over again, would you still choose to enroll at the college you entered as a freshman?
 Definitely yes Probably not Don't know
 Probably I would Definitely not

2. Since entering college have you:
- | | | |
|---|-----------------------|-----------------------|
| | YES | NO |
| Enrolled in honors or advanced courses | <input type="radio"/> | <input type="radio"/> |
| Joined or been a member of a fraternity or sorority | <input type="radio"/> | <input type="radio"/> |
| Got married | <input type="radio"/> | <input type="radio"/> |
| Failed a course or class | <input type="radio"/> | <input type="radio"/> |
| Had a part-time job on campus | <input type="radio"/> | <input type="radio"/> |
| Had a part-time job off-campus | <input type="radio"/> | <input type="radio"/> |
| Worked full-time while attending school | <input type="radio"/> | <input type="radio"/> |
| Participated in campus protests/demonstrations | <input type="radio"/> | <input type="radio"/> |
| Been elected to a student office | <input type="radio"/> | <input type="radio"/> |
| Worked in local/state/national political campaign | <input type="radio"/> | <input type="radio"/> |
| Received career/vocational counseling | <input type="radio"/> | <input type="radio"/> |
| Received personal/psychological counseling | <input type="radio"/> | <input type="radio"/> |
| Worked on a professor's research project | <input type="radio"/> | <input type="radio"/> |
| Participated in intercollegiate sports | <input type="radio"/> | <input type="radio"/> |

3. Please provide information about your scores on the tests listed below:

GRE: Verbal	<input type="text"/>	GRE: Quantitative	<input type="text"/>
GMAT	<input type="text"/>	LSAT	<input type="text"/>
MCAT	<input type="text"/>		

4. How much money have you borrowed to help pay for college expenses since you entered college as a freshman?

From family \$

From all other sources (banks, colleges, etc.) \$

5. Are you? (Mark all that apply)

- White/Caucasian
- Black/Negro/ Afro-American
- American Indian
- Asian-American/Oriental
- Mexican-American/Chicano
- Puerto Rican-American
- Other

6. Since entering college as a freshman, have you taken a leave of absence, withdrawn from school, or transferred to another college? (If more than one applies, mark only the MOST RECENT)

- NO → Please go to question 6 on page 2.
 Took a leave of absence
 Withdrew from school
 Transferred before completing my program
- Please answer Question 7

7. How important were each of the reasons listed below in your decision to take a leave of absence, withdraw from school, or transfer? (Mark answer for each reason)

- Wanted to reconsider my goals and interests
- Changed my career plans
- Wanted practical experience
- Didn't feel like I "fit in" at my first college
- Was bored with my coursework
- Wanted to go to a school with a better academic reputation
- Wanted a better social life
- Wanted to be closer to home
- Had a good job offer
- Wasn't doing as well academically as I had expected
- Family responsibilities
- Tired of being a student
- Had money problems and could no longer afford to attend college
- Wanted to go to a school that offered a wider selection of courses or more major field choices



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PLEASE DO NOT MARK IN THIS AREA

8. Please rate your satisfaction with the college you entered as a freshman on each of the aspects of campus life listed below.

	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied
Science and mathematics courses	1	2	3	4
Humanities courses	1	2	3	4
Social science courses	1	2	3	4
Courses in your major field	1	2	3	4
Overall quality of instruction	1	2	3	4
Laboratory facilities and equipment	1	2	3	4
Library facilities	1	2	3	4
Computer facilities	1	2	3	4
Opportunities to discuss coursework and assignments outside of class with professors	1	2	3	4
Opportunities to participate in extracurricular activities	1	2	3	4
Campus social life	1	2	3	4
Regulations governing campus life	1	2	3	4
Tutorial help or other academic assistance	1	2	3	4
Academic advising	1	2	3	4
Career counseling and advising	1	2	3	4
Student housing	1	2	3	4
Financial aid services	1	2	3	4
Amount of contact with faculty and administrators	1	2	3	4
Overall relationships with faculty and administrators	1	2	3	4
Opportunities to attend films, concerts, etc.	1	2	3	4
Job placement services for students	1	2	3	4
Campus health services	1	2	3	4
Overall college experience	1	2	3	4

9. What do you plan to be doing in the fall of 1987? (Mark all that apply)

Attending undergraduate college full-time

Attending undergraduate college part-time

Attending graduate or professional school

Attending a vocational training program

Working full-time

Working part-time

Serving in the Armed Forces

Traveling, hosteling, or backpacking

Doing volunteer work

Staying at home to be with (or start) my family

10. Mark the one circle that best describes your undergraduate grade average.

A (3.75-4.0) B- (2.25-2.74)

A- (3.25-3.74) C (1.75-2.24)

B (2.75-3.24) C- or less (below 1.75)

11. Which option listed below best describes your enrollment status for each year after you first entered college?

(Mark one in each column.)

	YEAR			
	1	2	3	4
Attended full-time	1	2	3	4
Attended part-time	1	2	3	4
Not enrolled	1	2	3	4

12. Compared with when you entered college as a freshman, how would you now describe your:

	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied
General knowledge	1	2	3	4
Analytical and problem-solving skills	1	2	3	4
Knowledge of a particular field or discipline	1	2	3	4
Ability to speak and write clearly	1	2	3	4
Job related skills	1	2	3	4
Religious beliefs and convictions	1	2	3	4
Interest in pursuing a graduate/professional degree	1	2	3	4
Concern about financial security	1	2	3	4
Preparation for graduate or professional school	1	2	3	4
Leadership abilities	1	2	3	4
Ability to work independently	1	2	3	4
Interpersonal skills	1	2	3	4
Cultural awareness and appreciation	1	2	3	4
Commitment to a specific career	1	2	3	4
Tolerance of persons with different beliefs	1	2	3	4
Confidence in your academic abilities	1	2	3	4
Motivation to earn a college degree	1	2	3	4

13. Indicate the importance to you personally of each of the following:

(Mark one for each item)

	Very Unimportant	Unimportant	Important	Very Important
Becoming accomplished in one of the performing arts (acting, dancing, etc.)	1	2	3	4
Becoming an authority in my field	1	2	3	4
Obtaining recognition from my colleagues for contributions to my special field	1	2	3	4
Influencing the political structure	1	2	3	4
Influencing social values	1	2	3	4
Getting married	1	2	3	4
Raising a family	1	2	3	4
Having administrative responsibility for the work of others	1	2	3	4
Being very well off financially	1	2	3	4
Helping others who are in difficulty	1	2	3	4
Making a theoretical contribution to science	1	2	3	4
Writing original works (poems, novels, short stories, etc.)	1	2	3	4
Creating artistic work (painting, sculpture, decorating, etc.)	1	2	3	4
Being successful in a business of my own	1	2	3	4
Becoming involved in programs to clean up the environment	1	2	3	4
Developing a meaningful philosophy of life	1	2	3	4
Participating in a community action program	1	2	3	4
Helping to promote racial understanding	1	2	3	4
Becoming an expert on finance and commerce	1	2	3	4

14. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.

(Mark one in each row)

	Very Below Average	Below Average	Average	Above Average	Very Above Average
Mathematical ability	1	2	3	4	5
Physical health	1	2	3	4	5
Academic ability	1	2	3	4	5
Popularity	1	2	3	4	5
Artistic ability	1	2	3	4	5
Popularity with the opposite sex	1	2	3	4	5
Drive to achieve	1	2	3	4	5
Public speaking ability	1	2	3	4	5
Emotional health	1	2	3	4	5
Self-confidence (intellectual)	1	2	3	4	5
Ability to learn a foreign language	1	2	3	4	5
Self-confidence (social)	1	2	3	4	5
Leadership ability	1	2	3	4	5
Writing ability	1	2	3	4	5

15. Below is a list of statements about the goals of higher education. In your opinion, how important was each goal at the college you entered as a freshman?

- To convey an appreciation of the liberal arts
- To master knowledge in a discipline
- To increase students' abilities to undertake self-directed learning
- To develop the ability to think clearly
- To develop creative capacities
- To conduct research
- To prepare students for employment after college
- To prepare students for graduate school
- To develop moral character
- To develop religious beliefs/convictions
- To assist students to gain a deeper level of self-understanding
- To provide for students' emotional development
- To develop responsible citizens
- To provide the local community and business with skilled workers
- To provide students with critical tools for living in a contemporary society
- To prepare students for family living

	Very Important	Important	Not Important	Not Applicable
To convey an appreciation of the liberal arts	○	○	○	○
To master knowledge in a discipline	○	○	○	○
To increase students' abilities to undertake self-directed learning	○	○	○	○
To develop the ability to think clearly	○	○	○	○
To develop creative capacities	○	○	○	○
To conduct research	○	○	○	○
To prepare students for employment after college	○	○	○	○
To prepare students for graduate school	○	○	○	○
To develop moral character	○	○	○	○
To develop religious beliefs/convictions	○	○	○	○
To assist students to gain a deeper level of self-understanding	○	○	○	○
To provide for students' emotional development	○	○	○	○
To develop responsible citizens	○	○	○	○
To provide the local community and business with skilled workers	○	○	○	○
To provide students with critical tools for living in a contemporary society	○	○	○	○
To prepare students for family living	○	○	○	○

16. For the activities listed below please indicate how often—Frequently, Occasionally, or Not at all—you engaged in each during the past year. (Mark only one for each item.)

- Jogged
- Worked on an independent research project
- Been a guest in a professor's home
- Smoked cigarettes
- Been lonely or homesick
- Confided in a friend about a personal problem
- Felt depressed
- Felt overwhelmed by all I had to do
- Stayed up all night
- Copied homework from another student
- Participated in intermural sports
- Cheated on a school quiz or exam
- Attended a musical recital or concert
- Missed classes because of illness
- Felt like leaving college
- Failed to complete homework on time
- Drank beer
- Drank wine or liquor

	Frequently	Occasionally	Not at all
Jogged	○	○	○
Worked on an independent research project	○	○	○
Been a guest in a professor's home	○	○	○
Smoked cigarettes	○	○	○
Been lonely or homesick	○	○	○
Confided in a friend about a personal problem	○	○	○
Felt depressed	○	○	○
Felt overwhelmed by all I had to do	○	○	○
Stayed up all night	○	○	○
Copied homework from another student	○	○	○
Participated in intermural sports	○	○	○
Cheated on a school quiz or exam	○	○	○
Attended a musical recital or concert	○	○	○
Missed classes because of illness	○	○	○
Felt like leaving college	○	○	○
Failed to complete homework on time	○	○	○
Drank beer	○	○	○
Drank wine or liquor	○	○	○

17. During your last year in college, how much time did you spend during a typical week doing the following activities?

	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	21-22	23-24	25-26	27-28	29-30
Classes/labs	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Studying/homework	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Societizing with friends	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Talking with faculty outside of class	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Exercising/sports	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Using a personal computer	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Partying	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Working (for pay)	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Volunteer work	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Student clubs/groups	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Watching TV	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Commuting to campus	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Religious services/meetings	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Hobbies	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

18. Please indicate your agreement with each of the following statements.

- The Federal government is not doing enough to promote disarmament
- Federal military spending should be increased
- The Federal government should raise taxes to help reduce the deficit
- Grading in colleges has become too easy
- Faculty promotions should be based in part on student evaluations
- If two people really like each other, it's all right for them to have sex even if they've known each other for only a very short time
- College officials have the right to regulate student behavior off-campus
- Colleges should not invest funds in companies that do business with South Africa
- The activities of married women are best confined to the home and family
- The chief benefit of a college education is that it increases one's earning power
- Living in G.I.K. if it helps to achieve racial balance in the schools
- It is important to have laws prohibiting homosexual relationships
- A national health care plan is needed to cover everybody's medical costs
- A couple should live together for some time before deciding to get married
- Marijuana should be legalized
- Abortion should be legalized

	Very Strongly Agree	Strongly Agree	Agree	Disagree	Strongly Disagree	Very Strongly Disagree
The Federal government is not doing enough to promote disarmament	○	○	○	○	○	○
Federal military spending should be increased	○	○	○	○	○	○
The Federal government should raise taxes to help reduce the deficit	○	○	○	○	○	○
Grading in colleges has become too easy	○	○	○	○	○	○
Faculty promotions should be based in part on student evaluations	○	○	○	○	○	○
If two people really like each other, it's all right for them to have sex even if they've known each other for only a very short time	○	○	○	○	○	○
College officials have the right to regulate student behavior off-campus	○	○	○	○	○	○
Colleges should not invest funds in companies that do business with South Africa	○	○	○	○	○	○
The activities of married women are best confined to the home and family	○	○	○	○	○	○
The chief benefit of a college education is that it increases one's earning power	○	○	○	○	○	○
Living in G.I.K. if it helps to achieve racial balance in the schools	○	○	○	○	○	○
It is important to have laws prohibiting homosexual relationships	○	○	○	○	○	○
A national health care plan is needed to cover everybody's medical costs	○	○	○	○	○	○
A couple should live together for some time before deciding to get married	○	○	○	○	○	○
Marijuana should be legalized	○	○	○	○	○	○
Abortion should be legalized	○	○	○	○	○	○

18. Your sex: Male...○ Female...○

20. Please mark your probable career/occupation below:

- Accountant or actuary
- Actor or entertainer
- Architect or urban planner
- Artist
- Business (clerical)
- Business executive (management, administrator)
- Business owner or proprietor
- Business salesperson or buyer
- Clergyman (minister, priest)
- Clergy (other religious)
- Clinical psychologist
- College teacher
- Computer programmer or analyst
- Conservationist or forester
- Dentist (including orthodontist)
- Dietician or home economist
- Engineer
- Farmer or rancher
- Foreign service worker (including diplomat)
- Homemaker (full-time)
- Interior decorator (including designer)
- Interpreter (translator)
- Lab technician or hygienist
- Law enforcement officer
- Lawyer (attorney) or judge
- Military service (career)
- Musician (performer, composer)
- Nurse
- Optometrist
- Pharmacist
- Physician
- School counselor
- School principal or superintendent
- Scientific researcher
- Social, welfare or recreation worker
- Statistician
- Therapist (physical, occupational, speech)
- Teacher or administrator (elementary)
- Teacher or administrator (secondary)
- Veterinarian
- Writer or journalist
- Skilled trades
- Other
- Undecided

21. Below is a list of different undergraduate major fields grouped into general categories. Mark only circle to indicate your current/next field of study.
- ARTS AND HUMANITIES**
 - Art, fine and applied
 - English (except oral literature)
 - History
 - Journalism
 - Language and Literature (except English)
 - Music
 - Philosophy
 - Speech
 - Theater or Drama
 - Theology or Religion
 - Other Arts and Humanities
 - BIOLOGICAL SCIENCE**
 - Biology (general)
 - Biochemistry or Biophysics
 - Botany
 - Marine (Life) Science
 - Microbiology or Bacteriology
 - Zoology
 - Other Biological Science
 - BUSINESS**
 - Accounting
 - Business Administration (general)
 - Finance
 - Marketing
 - Management
 - Secretarial Studies
 - Other Business
 - EDUCATION**
 - Business Education
 - Elementary Education
 - Music or Art Education
 - Physical Education or Recreation
 - Secondary Education
 - Special Education
 - Other Education
 - ENGINEERING**
 - Aeronautical or Astronautical Engineering
 - Civil Engineering
 - Chemical Engineering
 - Electrical or Electronic Engineering
 - Industrial Engineering
 - Mechanical Engineering
 - Other Engineering
 - PHYSICAL SCIENCE**
 - Astronomy
 - Atmospheric Science (incl. Meteorology)
 - Chemistry
 - Earth Science
 - Marine Science (incl. Oceanography)
 - Mathematics
 - Physics
 - Statistics
 - Other Physical Science
 - PROFESSIONAL**
 - Architecture or Urban Planning
 - Home Economics
 - Health Technology (medical, dental, laboratory)
 - Library or Archival Science
 - Nursing
 - Pharmacy
 - Podiatric, Podiatry, Pre-veterinary
 - Therapy (occupational, physical, speech)
 - Other Professional
 - SOCIAL SCIENCE**
 - Anthropology
 - Economics
 - Ethnic Studies
 - Geography
 - Political Science (gov't, international relations)
 - Psychology
 - Social Work
 - Sociology
 - Women's Studies
 - Other Social Science
 - TECHNICAL**
 - Building Trades
 - Data Processing or Computer Programming
 - Drafting or Design
 - Electronics
 - Mechanics
 - Other Technical
 - OTHER FIELDS**
 - Agriculture
 - Communications (radio, TV, etc.)
 - Computer Science
 - Forestry
 - Law Enforcement
 - Military Science
 - Other Field
 - Undecided

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 Prepared by the Higher Education Research Institute,
 University of California, Los Angeles, California 90024.

22. Please indicate (A) the highest degree you have earned as of June 1987 and (B) the highest degree you plan to complete. (Mark in each column.)
- | | | |
|----------------------------------|-----------------------|-----------------------|
| None | <input type="radio"/> | <input type="radio"/> |
| Vocational certificate | <input type="radio"/> | <input type="radio"/> |
| Associate (A.A. or equivalent) | <input type="radio"/> | <input type="radio"/> |
| Bachelor's degree (BA, BS, etc.) | <input type="radio"/> | <input type="radio"/> |
| Master's degree (MA, MS, etc.) | <input type="radio"/> | <input type="radio"/> |
| Ph.D. or Ed.D. | <input type="radio"/> | <input type="radio"/> |
| M.D., D.O., D.D.S., or D.V.M. | <input type="radio"/> | <input type="radio"/> |
| J.D. or J.D. (Law) | <input type="radio"/> | <input type="radio"/> |
| B.D. or M.Div. (Divinity) | <input type="radio"/> | <input type="radio"/> |
| Other | <input type="radio"/> | <input type="radio"/> |
23. How would you characterize your political views? (Mark one)
- Far left Liberal Middle-of-the-road Conservative Far right
24. Which option listed below best describes where you lived during each year you attended college?
- | | YEAR | | | |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | 1 | 2 | 3 | 4 |
| With parents or relatives | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other private home, apt., rm. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| College dormitory | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Fraternity or sorority house | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other campus student housing | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
25. How important are each of the following reasons for your career choice or career preference?
- (Mark one in each row.)
- | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| Job opportunities are generally available | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I enjoy working with the kind of people involved in this field | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The work would be interesting | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| This is a well-paying career | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| This choice satisfies my parents' hopes | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The work would be challenging | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I feel this enables me to make a contribution to society | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There are opportunities for rapid career advancement | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| There are opportunities for freedom of action | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

The Higher Education Research Institute of UCLA conducts the National Survey of Student Attitudes in the country to provide information on the attitudes of students in higher education. The data from this survey is used by the Institute to design educational programs and to provide information to the public. The data from this survey is also used by the Institute to design educational programs and to provide information to the public. The data from this survey is also used by the Institute to design educational programs and to provide information to the public.

26. PLEASE PROVIDE YOUR SOCIAL SECURITY NO.

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

COLLEGE QUESTIONS:

If you received an additional page of questions from the college you entered as a freshman, please mark your answers below. Find the number of the college question and fill in the circle of your answer:

27.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
44.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
45.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
46.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
47.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
48.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

THANK YOU!

Please return your completed questionnaire in the postage-paid envelope to:

Higher Education Research Institute
 2510 N. Dodge St.
 Iowa City, IA 52244

APPENDIX B
SURVEY FORMS

Cover Letter to Perspective Participants

Follow-Up Cover Letter

Cooperative Institutional Research Program (CIRP)

Institutional Survey on Academic Honesty



COOPERATIVE INSTITUTIONAL RESEARCH PROGRAM
OF THE AMERICAN COUNCIL ON EDUCATION AND
THE UNIVERSITY OF CALIFORNIA, LOS ANGELES

HIGHER EDUCATION RESEARCH INSTITUTE
GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90084

May 3, 1988

Dear

As you know, the annual ACE-UCLA Freshmen Survey collects an array of data about student behaviors and expectations of college. Some of the most interesting findings from the 1987 survey came from two new items on student cheating, as shown below:

<i>Cheating Behavior Among Entering Freshmen</i>				
(percentages reporting frequently or occasionally, Fall 1987 freshmen)				
	All Freshmen	2-year colleges	4-year colleges	universities
Cheated on a test in school:	30.4	27.2	32.6	31.7
Copied homework from another student	52.7	47.1	55.7	56.0

The Higher Education Research Institute is doing additional analysis on institutional and environmental differences in student cheating behavior. As part of this work we are looking at longitudinal data from our follow-up surveys of 1983 and 1985 freshmen, including the responses of some students from your campus. Consequently, we would like to know more about institutional policies and procedures in the area of academic honesty and honor codes. Would you please take a few minutes to complete the enclosed questionnaire and return it in the envelope provided? In answering the questionnaire, please respond to questions as they applied to your institution in the 1986-1987 academic year. If someone else at your institution is a more appropriate respondent, would you please forward this request to that individual?

Along with the survey we would also like a copy of the academic honesty regulations which are provided to students. The results of this study will be sent to your institution. We greatly appreciate your assistance and cooperation.

Sincerely,

Alexander W. Astin
Professor and Director

Kenneth C. Green
Associate Director

enclosures

6222

UNIVERSITY OF CALIFORNIA, LOS ANGELES

UCLA

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SANTA BARBARA • SANTA CRUZ

COOPERATIVE INSTITUTIONAL RESEARCH PROGRAM
OF THE AMERICAN COUNCIL ON EDUCATION AND
THE UNIVERSITY OF CALIFORNIA, LOS ANGELES

HIGHER EDUCATION RESEARCH INSTITUTE
GRADUATE SCHOOL OF EDUCATION
LOS ANGELES, CALIFORNIA 90094

June 9, 1988

Dear

We wrote you several weeks ago to solicit your help in collecting information for a study on academic honesty currently being conducted by the Higher Education Research Institute. We are examining cheating behavior of students who were freshmen in 1983 or 1985 and who were followed up in 1987 with another survey. Because students from your institution participated in these surveys, we would like to collect institutional data from you. We are interested in examining cheating behaviors in the context of institutional policies and procedures related to academic honesty.

If you have completed the attached survey please disregard this letter. If you have not returned the survey, could you please take a few minutes to complete and return it in the envelope provided? Please include a copy of your 1986-1987 academic honesty regulations. Your assistance in this undertaking is greatly appreciated.

Sincerely,

Alexander W. Astin
Professor and Director

Kenneth C. Green
Associate Director

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CIRP Institutional Survey on Academic Honesty

Please answer the questions as they applied to your institution for the Academic Year 1986-1987:

1. What methods are used at your institution to inform or remind students about academic honesty? Check all that apply:

- no reminders
- at notification of admission
- at orientation meetings
- by signing an honesty pledge at the beginning of the academic year
- in handbook
- special academic honesty handout
- at the first session of each course
- at each test/examination
- at each final examination
- by signing an honesty pledge on all submitted work
- other (please explain)

2. At your present institution, which type of academic honesty system is used?

- a formal honor code (students are placed on their honor not to cheat).
are students bound to take some action if they observe
cheating? yes no
- a proctor system (faculty and/or T.A. proctor exams)
- other (please explain)

3. When an infraction or violation of your academic honesty regulations occur, it is handled by: (Check all that apply)

- the involved faculty member only (no other institutional involvement)
- the involved faculty member (refers incident)
- department chair
- dean
- appointed institutional office (if different from above)
- academic honesty board
- other (please explain)

4. If your institution has more than one way to handle an incident is the student given a choice as to how to resolve the case?

- yes
- no

5. If the incident is referred to an academic honesty board, which response most accurately reflects the composition of the academic honesty board?

- students only
- faculty only
- administrators only
- students and faculty
- students and administrators
- faculty and administrators
- students, faculty and administrators

6. What are the possible sanctions a student could receive for being found guilty of an academic honesty violation? Please check all possible sanctions:

- no action
- warning/reprimand
- failing grade on that assignment
- failing grade in the course
- official college discipline (notation on college record)
- suspension (specific time period)
- permanent expulsion from institution
- other (please explain)

7. While recognizing that every situation is unique (and in the absence of mitigating circumstances), if a student were found guilty of the following infractions, what is the single most likely consequence? Place most appropriate numbers in blanks.

- (1) no action
- (2) warning/reprimand
- (3) failing grade on that assignment
- (4) failing grade in the course
- (5) official college discipline (notation on college record)
- (6) suspension (stated time period)
- (7) permanent expulsion from institution
- (8) other (please explain)

- cheated on a school quiz or exam
- copied homework from another student
- changed an incorrect answer on a graded exam and resubmitted it for a higher grade
- handed in the same paper for more than one class without permission from the involved faculty
- submitted a paper written by someone else
- added items to a bibliography from sources not used
- copied whole sentences from a source without acknowledgement
- entered another student's computer file and copied information

8. From your experience at your current institution, how would students perceive each of the following actions. Please place most appropriate number in blanks.

- (1) acceptable; not dishonest
- (2) probably dishonest; but acceptable
- (3) dishonest; not acceptable

- ___ cheated on a school quiz or exam
- ___ copied homework from another student
- ___ submitted a paper written by someone else
- ___ added items to a bibliography from sources not used
- ___ entered another student's computer file and copied information

9. Does your institution release information about numbers of infractions and resulting sanctions released?

- ___ yes
- ___ no

If yes, information is released

- ___ annually
- ___ semi-annually
- ___ more frequently

10. How many undergraduates had academic honesty charges brought against them in the 1986-1987 academic year? (Please include total cases handled by faculty, committees or other bodies).

- ___ Number of cases
- ___ Number of findings of guilt

11. Please attach a copy of the academic honesty regulations which describe/define academic honesty at your institution (from your catalogue, handbook or other official source).

Results of this study will be sent to the address below. Please indicate any changes necessary.

APPENDIX C
LIST OF RESPONDENTS

Appendix C

Abilene Christian University	Abilene	Texas
Adrian College	Adrian	Michigan
Agnes Scott College	Decatur	Georgia
Albertus Magnus College	New Haven	Connecticut
Albion College	Albion	Michigan
Allegheny College	Meadville	Pennsylvania
Allentown College of St. Francis de Sales	Center Valley	Pennsylvania
Alma College	Alma	Michigan
Amherst College	Amherst	Massachusetts
Anderson College	Anderson	South Carolina
Aquinas College	Grand Rapids	Michigan
Arkansas College	Batesville	Arkansas
Augsburg College	Minneapolis	Minnesota
Augustana College	Rock Island	Illinois
Augustana College	Sioux Falls	South Dakota
Austin College	Sherman	Texas
Autin Peay State University	Clarksville	Tennessee
Babson College	Babson Park	Massachusetts
Bard College	Annandale-Hudson	New York
Barnard College	New York	New York
Barton County Community College	Great Bend	Kansas
Bates College	Lewiston	Maine
Bay Path Junior College	Longmeadow	Massachusetts
Baylor University	Waco	Texas
Beloit College	Beloit	Wisconsin
Benedictine College	Atchison	Kansas
Berea College	Berea	Kentucky
Berry College	Mount Berry	Georgia
Bethany College	Lindsborg	Kansas
Bethany College	Bethany	West Virginia
Bethany Lutheran College	Mankato	Minnesota
Bloomsburg University	Bloomsburg	Pennsylvania
Bowdoin College	Brunswick	Maine
Bradley University	Peoria	Illinois
Brandeis University	Waltham	Massachusetts
Brenau College	Gainesville	Georgia
Brevard College	Brevard	New York
Bryn Mawr College	Bryn Mawr	Pennsylvania
Buena Vista College	Storm Lake	Iowa
California Institute of Technology	Pasadena	California
Canisius College	Buffalo	New York
Carleton College	Northfield	Minnesota
Carnegie-Mellon University	Pittsburgh	Pennsylvania
Carroll College	Waukesha	Wisconsin
Case Western Reserve University	Cleveland	Ohio
Catawba College	Salisbury	North Carolina
Catholic University of America	Washington	D.C.
Cedar Crest College	Allentown	Pennsylvania
Centre College of Kentucky	Danville	Kentucky
Chapman College	Orange	California
Chatham College	Pittsburgh	Pennsylvania
Chowan College	Murfreesboro	North Carolina

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Claremont McKenna College	Claremont	California
Clark University	Worcester	Massachusetts
Colby College	Waterville	Maine
Colgate University	Hamilton	New York
College of Boca Roton	Boca Raton	Florida
College of Mt. Saint Joseph on the Ohio	Mount St. Joseph	Ohio
College of New Rochelle	New Rochelle	New York
College of Saint Catherine	St. Paul	Minnesota
College of Saint Scholastica	Duluth	Minnesota
College of Saint Teresa	Winona	Minnesota
College of Saint Thomas	St. Paul	Minnesota
College of the Sequoias	Visalla	California
Colorado College	Colorado Springs	Colorado
Concordia College	Portland	Oregon
Connecticut College	New London	Connecticut
Converse College	Spartanburg	South Carolina
Cornell College	Mount Vernon	Iowa
Corning Community College	Corning	New York
CUNY-Queensborough Community College	Bayside	New York
Dakota Wesleyan University	Mitchell	South Dakota
Davis and Elkins College	Elkins	West Virginia
DePaul University	Chicago	Illinois
DePauw University	Greencastle	Indiana
Dominican College of Blauvelt	Orangeburg	New York
Dominican College of San Rafael	San Rafael	California
Drake University	Des Moines	Iowa
Drew University	Madison	New Jersey
Drury College	Springfield	Missouri
Dutchess Community College	Poughkeepsie	New York
Earlham College	Richmond	Indiana
East Carolina University	Greenville	North Carolina
Eastern Mennonite College Inc.	Harrisonburg	Virginia
Elizabethtown College	Elizabethtown	Pennsylvania
Elon College	Elon College	North Carolina
Emory and Henry College	Emory	Virginia
Emory University	Atlanta	Georgia
Erskine College	Due West	South Carolina
Ferrum College	Ferrum	Virginia
Findlay College	Findlay	Ohio
Florida State University	Tallahassee	Florida
Fort Hays State University	Hays	Kansas
Franklin and Marshall College	Lancaster	Pennsylvania
Furman University	Greenville	South Carolina
Gannon University	Erie	Pennsylvania
Garden City Community College	Garden City	Kansas
Georgia Institute of Technology	Atlanta	Georgia
Georgian Court College	Lakewood	New Jersey
Gettysburg College	Gettysburg	Pennsylvania
GMI Engineering and Management Institute	Flint	Michigan
Gonzaga University	Spokane	Washington
Grand Rapids Baptist College	Grand Rapids	Michigan
Grinnell College	Grinnell	Iowa
Guilford College	Greensboro	North Carolina

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Gulf Coast Community College	Panama City	Florida
Hamilton College	Clinton	New York
Hamline University	St. Paul	Minnesota
Hampden-Sydney College	Hampden-Sydney	Virginia
Harcum Junior College	Bryn Mawr	Pennsylvania
Harvey Mudd College	Claremont	California
Haverford College	Haverford	Pennsylvania
Hendrix College	Conway	Arkansas
Herkimer County Community College	Herkimer	New York
Hocking Technical College	Nelsonville	Ohio
Hollins College	Hollins College	Virginia
Hood College	Frederick	Maryland
Houghton College	Houghton	New York
Huntington College	Huntington	Indiana
Illinois Benedictine College	Lisle	Illinois
Iowa State University	Ames	Iowa
Iowa Wesleyan College	Mount Pleasant	Iowa
Itasca Community College	Grand Rapids	Minnesota
Jamestown Community College	Jamestown	New York
Jefferson Community College	Watertown	New York
John Brown University	Siloam Springs	Arkansas
Juniata College	Huntingdon	Pennsylvania
Kentucky Wesleyan College	Owensboro	Kentucky
Kenyon College	Gambier	Ohio
Keystone Junior College	La Plume	Pennsylvania
King's College	Wilkes-Barre	Pennsylvania
Kirtland Community College	Roscommon	Michigan
Knox College	Galesburg	Illinois
La Salle College	Philadelphia	Pennsylvania
Lafayette College	Easton	Pennsylvania
Lake Forest College	Lake Forest	Illinois
Lambuth College	Jackson	Tennessee
Lander College	Greenwood	South Carolina
Lawrence University	Appleton	Wisconsin
Le Moyne College	Syracuse	New York
Lebanon Valley College	Anville	Pennsylvania
Lewis and Clark College	Portland	Oregon
Lewis University	Romeoville	Illinois
Lincoln University	Lincoln	Pennsylvania
Linfield College	McMinnville	Oregon
Louisiana College	Pineville	Louisiana
Louisiana State University-Alexandria	Alexandria	Louisiana
Louisiana State University-Eunice	Eunice	Louisiana
Loyola College	Baltimore	Maryland
Loyola Marymount University	Los Angeles	California
Loyola University of Chicago	Chicago	Illinois
Lynchburg College	Lynchburg	Virginia
Macalester College	St. Paul	Minnesota
Madison Area Technical College	Madison	Wisconsin
Manchester College	North Manchester	Indiana
Manhattan College	Bronx	New York
Manhattanville College	Purchase	New York
Manor Junior College	Jenkintown	Pennsylvania

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Marietta College	Marietta	Ohio
Marion College	Marion	Indiana
Marquette University	Milwaukee	Wisconsin
Marymount College	Tarrytown	New York
Marymount College of Kansas	Salina	Kansas
Marymount University	Arlington	Virginia
Marywood College	Scranton	Pennsylvania
Master's College	Newhall	California
Mayville State College	Mayville	North Dakota
McPherson College	McPherson	Kansas
Medaille College	Buffalo	New York
Mercyhurst College	Erie	Pennsylvania
Miami University	Oxford	Ohio
Mid-American Nazarene College	Olathe	Kansas
Middlesex Community College	Bedford	Massachusetts
Midway College	Midway	Kentucky
Milligan College	Milligan College	Tennessee
Mills College	Oakland	California
Monmouth College	Monmouth	Illinois
Monmouth College	West Long Branch	New Jersey
Montana College/Mineral Science and Tech.	Butte	Montana
Montana State University	Bozeman	Montana
Morningside College	Sioux City	Iowa
Mount Holyoke College	South Hadley	Massachusetts
Mount Olive College	Mount Olive	North Carolina
Mount Saint Mary's College	Los Angeles	California
Mount Saint Mary's College	Emmitsburg	Maryland
Mount Vernon College	Washington	D.C.
Mount Vernon Nazarene College	Mount Vernon	Ohio
Mundelein College	Chicago	Illinois
Nazareth College of Rochester	Rochester	New York
Nebraska Wesleyan University	Lincoln	Nebraska
New Mexico Military Institute	Roswell	New Mexico
North Dakota State University	Fargo	North Dakota
North Shore Community College	Beverly	Massachusetts
Northeast Missouri State University	Kirksville	Missouri
Northeastern State University	Tahlequah	Oklahoma
Northeastern University	Boston	Massachusetts
Northern Illinois University	Dekalb	Illinois
Northwest Missouri State University	Maryville	Missouri
Northwestern University	Evanston	Illinois
Oakland University	Rochester	Michigan
Ohio Dominican College	Columbus	Ohio
Ohio State University	Columbus	Ohio
Ohio State University at Marion	Marion	Ohio
Ohio University at Chillicothe	Chillicothe	Ohio
Ohio Wesleyan University	Delaware	Ohio
Oklahoma Baptist University	Shawnee	Oklahoma
Otterbein College	Westerville	Ohio
Our Lady of the Lake U. of San Antonio	San Antonio	Texas
Pacific University	Forest Grove	Oregon
Penn State University-Altoona	Altoona	Pennsylvania
Penn State University-Beaver	Monaca	Pennsylvania

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Penn State University-Delaware County	Media	Pennsylvania
Penn State University-Dubois	Dubois	Pennsylvania
Penn State University-Fayette	Uniontown	Pennsylvania
Penn State University-Hazleton	Hazleton	Pennsylvania
Penn State University-McKeesport	McKeesport	Pennsylvania
Penn State University-Mont Alto	Mont Alto	Pennsylvania
Penn State University-New Kensington	New Kensington	Pennsylvania
Penn State University-Ogontz	Abington	Pennsylvania
Penn State University-Schuylkill	Schuylkill Haven	Pennsylvania
Penn State University-Shenango Valley	Sharon	Pennsylvania
Penn State University-Wilkes-Barre	Wilkes-Barre	Pennsylvania
Penn State University-Worthington Scranton	Dunmore	Pennsylvania
Penn State University-York	York	Pennsylvania
Philadelphia College of Art	Philadelphia	Pennsylvania
Philadelphia College/Pharmacy and Science	Philadelphia	Pennsylvania
Philadelphia College/Textiles and Science	Philadelphia	Pennsylvania
Pikeville College	Pikeville	Kentucky
Pine Manor College	Chestnut Hill	Massachusetts
Pitzer College	Claremont	California
Presbyterian College	Clinton	South Carolina
Princeton University	Princeton	New Jersey
Rainy River Community College	International Falls	Minnesota
Randolph-Macon College	Ashland	Virginia
Randolph-Macon Woman's College	Lynchburg	Virginia
Regis College	Weston	Massachusetts
Rhode Island College	Providence	Rhode Island
Rhode Island School of Design	Providence	Rhode Island
Rhodes College	Memphis	Tennessee
Rider College	Lawrenceville	New Jersey
Robert Morris College	Coraopolis	Pennsylvania
Rockhurst College	Kansas City	Missouri
Rollins College	Winter Park	Florida
Rosary College	River Forest	Illinois
Russell Sage College	Troy	New York
Salem College	Winston-Salem	North Carolina
Santa Clara University	Santa Clara	California
Scripps College	Claremont	California
Shippensburg University	Shippensburg	Pennsylvania
Simpson College	Indianola	Iowa
Skidmore College	Saratoga Springs	New York
Smith College	Northampton	Massachusetts
Southern Arkansas University	Magnolia	Arkansas
Southern Baptist College	Walnut Ridge	Arkansas
Southern Illinois University-Edwardsville	Edwardsville	Illinois
Southwestern University	Georgetown	Texas
Spring Hill College	Mobile	Alabama
Springfield College in Illinois	Springfield	Illinois
St. Andrews Presbyterian College	Laurinburg	North Carolina
St. Edward's University	Austin	Texas
St. John's University	Collegeville	Minnesota
St. Joseph's College	Rensselaer	Indiana
St. Lawrence University	Canton	New York
St. Mary College	Leavenworth	Kansas

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St. Mary of the Plains College	Dodge City	Kansas
Stanford University	Stanford	California
Stephens College	Columbia	Missouri
Stetson University	De Land	Florida
Sue Bennett College	London	Kentucky
SUNY A&T College at Alfred	Alfred	New York
SUNY A&T College at Cobleskill	Cobleskill	New York
SUNY A&T College At Delhi	Delhi	New York
SUNY at Binghamton	Binghamton	New York
SUNY at Buffalo	Buffalo	New York
SUNY at Stony Brook	Stony Brook	New York
SUNY College at Brockport	Brockport	New York
SUNY College at Buffalo	Buffalo	New York
SUNY College at Geneseo	Geneseo	New York
SUNY College at Potsdam	Potsdam	New York
SUNY College at Purchase	Purchase	New York
Suomi College	Hancock	Michigan
Susquehanna University	Selinsgrove	Pennsylvania
Swarthmore College	Swarthmore	Pennsylvania
Sweet Briar College	Sweet Briar	Virginia
Taft College	Taft	California
Talladega College	Talladega	Alabama
Texas Christian University	Fort Worth	Texas
Texas Wesleyan College	Fort Worth	Texas
The Johns Hopkins University	Baltimore	Maryland
Towson State University	Towson	Maryland
Trenton State College	Trenton	New Jersey
Trinity College	Hartford	Connecticut
Trinity University	San Antonio	Texas
Tulane University	New Orleans	Louisiana
Tuskegee University	Tuskegee Institute	Alabama
Union College	Schenectady	New York
United States Air Force Academy	Colorado Springs	Colorado
United States Naval Academy	Annapolis	Maryland
University of Arkansas-Pine Bluff	Pine Bluff	Arkansas
University of California-Los Angeles	Los Angeles	California
University of California-Santa Cruz	Santa Cruz	California
University of Connecticut	Storrs	Connecticut
University of Connecticut-Stamford	Stamford	Connecticut
University of Delaware	Newark	Delaware
University of Georgia	Athens	Georgia
University of Indianapolis	Indianapolis	Indiana
University of Louisville	Louisville	Kentucky
University of Maine-Machias	Machias	Maine
University of Maine-Orono	Orono	Maine
University of Massachusetts-Amherst	Amherst	Massachusetts
University of Miami	Coral Gables	Florida
University of Missouri-Columbia	Columbia	Missouri
University of Missouri-Kansas City	Kansas City	Missouri
University of North Carolina-Chapel Hill	Chapel Hill	North Carolina
University of North Dakota	Grand Forks	North Dakota
University of Notre Dame	Notre Dame	Indiana
University of Pittsburgh	Pittsburgh	Pennsylvania

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University of Pittsburgh-Greensburg	Greensburg	Pennsylvania
University of Pittsburgh-Johnstown	Johnstown	Pennsylvania
University of Pittsburgh-Titusville	Titusville	Pennsylvania
University of Redlands	Redlands	California
University of Richmond	Richmond	Virginia
University of Rochester	Rochester	New York
University of San Diego	San Diego	California
University of South Carolina	Columbia	South Carolina
University of South Florida-New College	Sarasota	Florida
University of Tennessee-Knoxville	Knoxville	Tennessee
University of the Pacific	Stockton	California
University of the South	Sewanee	Tennessee
University of Vermont	Burlington	Vermont
University of Virginia	Charlottesville	Virginia
University of Wisconsin-Milwaukee	Milwaukee	Wisconsin
Valparaiso University	Valparaiso	Indiana
Vanderbilt University	Nashville	Tennessee
Villanova University	Villanova	Pennsylvania
Virginia Military Institute	Lexington	Virginia
Virginia Wesleyan College	Norfolk	Virginia
Wabash College	Crawfordsville	Indiana
Wagner College	Staten Island	New York
Walsh College	Canton	Ohio
Washington and Jefferson College	Washington	Pennsylvania
Washington and Lee University	Lexington	Virginia
Washington College	Chestertown	Maryland
Wellesley College	Wellesley	Massachusetts
Wesleyan College	Macon	Georgia
Western New England College	Springfield	Massachusetts
Western Washington University	Bellingham	Washington
Westminster College	Fulton	Missouri
Westminster College	New Wilmington	Pennsylvania
Wharton Community Junior College	Wharton	Texas
Wheaton College	Norton	Massachusetts
Wheeling College	Wheeling	West Virginia
Wheelock College	Boston	Massachusetts
Whitman College	Walla Walla	Washington
Whitworth College	Spokane	Washington
Williamsport Area Research Comm. College	Williamsport	Pennsylvania
Wingate College	Wingate	North Carolina
Wittenberg University	Springfield	Ohio
Wofford College	Spartanburg	South Carolina
Worthington Community College	Worthington	Minnesota

APPENDIX D

DESCRIPTION OF THE DATA SAMPLE

Demographic Characteristics

Pre-College Activity Traits

Institutional Characteristics

College Involvements

APPENDIX D

DESCRIPTION OF DATA SAMPLE

Demographic Characteristics (Block 1)

This sample of students has more women than men, is predominantly white, and has a majority of respondents who are 20 years of age (see Table D1).

The majority of these students have mothers who have achieved the status of high school graduates (35%), fathers who are distributed in approximately equal proportions between high school, college and graduate school graduates. Students most frequently report father's career as "businessman," or "other;" mother's career is most frequently reported as "homemaker," or "other." The highest percentages of students have parents whose income is in the range of \$40,000 to \$49,999 with the majority of parents in income brackets above \$30,000 and below \$75,000. As might be expected, the majority of students report their religion to be either Protestant or Roman Catholic.

In Table D2, demographic and background variables are presented that have significant correlations to the three cheating behaviors. While none of the correlations is particularly strong, the characteristic which has the strongest relation to reported cheating is gender ($r = -.11$, $r = -.06$ and $r = -.10$): women cheat less than men.

Table D1
Means, Standard Deviations and Distributions of Demographic
Characteristics (N = 3035)

Demographics	Mean	Standard deviation	Percentage
Sex	1.65	.48	
(1) male			35.3
(2) female			64.7
Age	3.22	.63	
(1) 18 or younger			.1
(2) 19			2.7
(3) 20			76.6
(4) 21			18.4
(5) 22			.9
(6) 23-26			.8
(7) 27 and older			.5
Race (1) no (2) yes			
White			89.3
Black			6.3
Asian			1.8
American Indian			1.0

(table continues)

Table D1
Means, Standard Deviations and Distributions of Demographic
Characteristics (N = 3035) (continued)

Demographics	Mean	Standard deviation	Percentage
Chicano			1.0
Puerto Rican			.5
Other race			1.1
Citizen (1) no (2) yes			97.2
Mothers education	4.54	1.83	
(1) Grammar school or less			2.3
(2) Some high school			5.0
(3) High school graduate			34.3
(4) Postsecondary, no college			8.3
(5) Some college			15.7
(6) College degree			19.5
(7) Some graduate school			3.7
(8) Graduate degree			9.7

(table continues)

Table D1
Means, Standard Deviations and Distributions of Demographic
Characteristics ($N = 3035$) (continued)

Demographics	Mean	Standard deviation	Percentage
Fathers education	5.02	2.09	
(1) Grammar school or less			3.5
(2) Some high school			6.5
(3) High school graduate			24.7
(4) Postsecondary, no college			5.5
(5) Some college			14.5
(6) College degree			21.6
(7) Some graduate school			3.1
(8) Graduate degree			20.7
Fathers career (1) no (2) yes			
Artist			.8
Businessperson			29.4
Clergy			1.0
College teacher			1.9
Doctor			2.4

(table continues)

Table D1
Means, Standard Deviations and Distributions of Demographic
Characteristics (N = 3035) (continued)

Demographics	Mean	Standard deviation	Percentage
Secondary education			3.5
Elementary education			.6
Engineer			8.4
Farmer/forester			4.0
Health professional			1.0
Lawyer			1.7
Military			1.4
Research scientist			.8
Skilled worker			9.1
Semi-skilled worker			3.7
Unskilled worker			2.8
Unemployed			2.2
Other			19.4
Mothers career (1) no (2) yes			
Artist			1.4
Businessperson			11.5

(table continues)

Table D1
Means, Standard Deviations and Distributions of Demographic
Characteristics (N = 3035) (continued)

Demographics	Mean	Standard deviation	Percentage
Clerical			11.2
Clergy			.1
College teacher			.4
Doctor			.3
Secondary education			3.6
Elementary education			6.4
Engineer			.1
Farmer/forester			.2
Health professional			1.9
Homemaker			24.7
Lawyer			.1
Nurse			6.8
Research scientist			.2
Social/welfare/recreation/worker			1.1
Skilled worker			1.7

(table continues)

Table D1
Means, Standard Deviations and Distributions of Demographic
Characteristics (N = 3035) (continued)

Demographics	Mean	Standard deviation	Percentage
Semi-skilled worker			2.4
Unskilled worker			1.9
Unemployed			5.1
Other			15.2
Parental income	7.49	3.22	
(1) \$6000 or less			3.9
(2) \$6000-9999			3.7
(3) \$10000-14999			5.4
(4) \$15000-19999			7.0
(5) \$20000-24999			8.8
(6) \$25000-29999			8.0
(7) \$30000-34999			11.4
(8) \$35000-39999			9.9
(9) \$40000-49999			12.6

(table continues)

Table D1
Means, Standard Deviations and Distributions of Demographic
Characteristics (N = 3035) (continued)

Demographics	Mean	Standard deviation	Percentage
(10) \$50000-59999			11.2
(11) \$60000-74999			8.3
(12) \$75000-99999			3.8
(13) \$100,000-149,999			3.6
(14) \$150,000 or more			2.4
Student religion			
(1) Protestant			48.9
(2) Roman Catholic			36.0
(3) Jewish			2.6
(4) Other			4.6
(5) None			8.0

Table D2
 Correlations Between Cheating and Demographic Characteristics
 (N = 3,035)

Demographics	Cheating on:		
	Homework	Exam	Overall
Sex	-.11	-.06	-.10
Race:			
White			-.04
Mother's education	-.04	-.04	
Father's career			
Doctor		.06	
Secondary education		-.04	

*Correlations significant at the .01 level.

There are weak but significant negative relations for students who are white ($r = -.04$), who have mothers who are highly educated ($r = -.04$), or who have fathers who teach secondary school ($r = -.04$); they cheat less than average. Students whose fathers are doctors ($r = .06$) cheat more on tests. Whether these correlations will serve as predictors of cheating behaviors will be examined in the multivariate analysis.

Pre-College Activity Traits (Block 2)

Pre-college activity traits are a variety of college interests and high school achievements, all indicated at the time of entry to college. The activities are those in which students participated in high school.

The means, standard deviations and percentages for variables in this block are presented in Table D3. There are several measures of achievement included in the this block. The highest percentages of students report high school grade average as "B+" (24%), and the majority of students report being ranked in the top 20% of their high school class (61%). Average SAT verbal scores were 487; math SAT means were 517.

Students most frequently declare intended majors of "business" (22%) or "health professional," (10%), while students select "business," "engineer," "other" or "undecided" as the most frequent career choices. (It is not unusual for large percentages of students to be unsure of career choices at matriculation).

Table D3
Means, Standard Deviations and Distributions of Pre-College
Activity Traits (N = 3,035)

Traits	Mean	Standard deviation	Percentage
High school grade point average	5.88	1.58	
(1) D			.2
(2) C			2.3
(3) C+			6.4
(4) B			8.7
(5) B			21.2
(6) B+			23.5
(7) A-			19.0
(8) A or A+			18.6
High school rank	4.40	.86	
(1) Lowest 20%			.2
(2) Fourth 20%			2.6
(3) Middle 20%			15.8
(4) Second 20%			20.0
(5) Highest 20%			61.4
SAT verbal	486.74	99.36	
SAT math	517.27	107.31	

(table continues)

Table D3
Means, Standard Deviations and Distributions of Pre-College
Activity Traits (N = 3,035) (continued)

Traits	Mean	Standard deviation	Percentage
ACT Verbal	21.33	4.45	
ACT math	21.10	7.12	
ACT science	23.67	6.12	
ACT Social Science	22.16	6.48	
Majors (1) no (2) yes			
Agriculture			.9
Biology			5.1
Business			22.1
Education			6.7
Engineering			9.1
English			1.5
Health professional			9.9
History/political science			4.3
Humanities			2.6
Fine arts			3.2
Mathematics/statistics			1.4
Physical sciences			2.5

(table continues)

Table D3
Means, Standard Deviations and Distributions of Pre-College
Activity Traits (N = 3,035) (continued)

Traits	Mean	Standard deviation	Percentage
Social sciences			5.6
Other-technical			4.7
Other-non-technical			8.3
Undecided			6.4
<u>Student Career Choices</u> (1) no (2) yes			
Artist			6.7
Businessperson			21.5
Clergy			.4
College teacher			.2
Doctor			6.3
Secondary education			3.3
Elementary education			4.1
Engineer			9.0
Farmer/forester			.8
Health professional			5.6
Lawyer			4.3

(table continues)

Table D3
Means, Standard Deviations and Distributions of Pre-College
Activity Traits (N = 3,035) (continued)

Traits	Mean	Standard deviation	Percentage
Nurse			2.5
Research scientist			2.6
Other			15.6
Undecided			11.8

Table D4 indicates that academic achievement and intelligence are negatively related to cheating. High school grade point average, rank in class, SAT verbal and, in some instances, SAT math scores all have negative relationships with the cheating measures. As grades, rank, or SAT scores increase, levels of admitted cheating decrease. The ACT measures are not significantly related to cheating behaviors.

A variety of major fields are also related to cheating behaviors. Business majors and engineering majors are positively related to cheating behaviors (homework copying and overall cheating). That is, students with these majors are more likely to admit cheating. These major fields, however, may be confounded by gender. Both engineering and business attract large numbers of males. When the multivariate analysis is conducted, these items will compete against each other to enter the equation and their relationships will be clarified.

Several major fields have weak significant, negative correlations with homework copying. They may be explained by the subject matter. In "English," or "history/political science," for instance, it is harder to copy homework than it might be in other subjects. Likewise, when considering career choice, a student who chooses a career as an artist would be less likely to copy homework than someone in an area of study in which homework has "correct" answers.

Table D4
 Correlations Between Cheating and Pre-College Activity Traits
 (N = 3,035)

Pre-College Activity Traits	Cheating on:		
	Homework	Exams	Overall
High school g.p.a.	-.09	-.12	-.12
High school rank	-.06	-.09	-.08
SAT verbal	-.11	-.10	-.13
SAT math		-.05	
Majors			
Business	.08	.05	.08
Engineering	.11		.09
English	-.05	-.04	-.06
Health professional	-.04		-.04
History/political science	-.05	-.07	-.08
Student Career Choices			
Artist	-.04		
Businessperson	.06	.04	.06
Clergy		-.04	
Secondary education	-.05		-.05
Engineer	.10	.12	.10

*Correlations significant at the .01 level.

Institutional Characteristics (Block 5)

Several institutional environmental qualities were examined: college selectivity, control, size, region and race. Descriptive statistics for institutional characteristics are presented in Table D5. In order to determine institutional selectivity, combined SAT scores were examined and an institutional average was determined. This sample of institutions has an average combined SAT score of 966. The vast majority of schools have coeducational student populations, are historically white/integrated colleges (as opposed to historically black colleges) and are located in the North Atlantic region of the United States. Institutions were divided into five groups according to enrollment size. As can be seen, only 21% of the students attend institutions which have enrollments above 3500. For the group of institutions that have enrollments above 3500, the range of maximum enrollments exceeds 30,000 students. Finally, students are divided into roughly equal proportions between those who attend public and those who attend private institutions.

Pearson correlations (presented in Table D6) were calculated for all institutional characteristics to examine their relationships with the cheating measures used in this study. Institutions with high selectivity, private colleges and four-year colleges have lower levels of reported cheating. Additionally, single-sex institutions have a negative relation to homework copying and the overall cheating variable, while coeducational

Table D5
Means, Standard Deviations and Percentages Institutional
Characteristics (N = 3,035)

Institutional Characteristics	N	Mean	Standard deviation	Percentage
Selectivity	3035	966.48	134.21	
Size (student enrollment)	3014	3.90	1.33	
(1) 1-750				21
(2) 751-1050				18
(3) 1051-1600				19
(4) 1601-3500				22
(5) 3500 and above				21
Sex	3035			
(1) Male only				.5
(2) Female only				4.0
(3) Coeducational				95.2
(4) Coordinate				.3
College control	3035			
(1) Public				51.0
(2) Private				49.0
Institutional Type	3035			
(1) University				22.3
(2) 4 year college				64.6

(3) 2 year college		12.9
(4) 4 year campus multiversity		.0
(5) 2 year campus multiversity		.1
Region (1)	3035	
(1) North Atlantic		36.1
(2) Great Plains and Lakes		31.2
(3) Southeast		20.0
(4) West and Southwest		12.2
(5) US Service Schools		.5
(6) Outlying areas		.0
College Race	3035	
(1) White		96.7
(2) Black		3.3

Table D6
 Correlations Between Admitted Cheating and Institutional
 Characteristics (N = 3,035)

Institutional characteristics	Cheating on:		
	Homework	Exams	Overall
Selectivity	-.06	-.06	-.08
Size	.04		.04
Sex			
(1) Male only	-.05		-.05
(2) Female only	-.05		-.04
(3) Coeducational	.07		.05
College control	-.06	-.07	-.09
(1) Public (2) Private			
Institutional Type			
(2) 4-year college	-.04		-.05
(3) 2-year college		.05	.05
Region (1)			
(1) North Atlantic		.06	
College Race		.04	.04
(1) White (2) Black			

*Correlations significant at the .03 level.

institutions have a positive relationship to homework copying and overall cheating. These relationships will be further examined in the next chapter.

College Involvements (Block 6)

The Follow-Up Survey provides college information about student's college activities, and this information is summarized in Table D7. The most frequently occurring majors are "business" (22%), "social sciences" (10%), "education" (10%), "engineering" (7%), and "other non-technical majors" (8%). Student career choices also reflect a preference for business or "other careers" not specified on the FUS.

Students in the sample most frequently receive college grades in the "B" range and have aspirations of earning a "bachelor of arts" or "bachelor of science" degree. Additionally, the vast majority attended college full-time during both their first and second years.

Activities in which students participated in the past year were examined. The two in which students report they participated most frequently are "drinking beer" (only 27% report not drinking beer) and "drinking liquor" (only 20% report not drinking liquor).

Students were asked to identify a variety of activities in which they participate. Most frequently they hold a part-time job on- or off-campus and participate in an honors program.

Table D7
Means, Standard Deviations and Distributions of College Activities
(N =3,035)

Variables	Mean	Standard deviations	Percentages
MaJors (1)no (2)yes			
Agriculture			3.6
Biology			4.9
Business			22.4
Education			9.6
Engineering			7.0
English			3.5
Health professional			5.3
History/political science			5.1
Humanities			3.3
Fine arts			3.6
Mathematics/statistics			1.7
Physical sciences			2.7

(table continues)

Table D7

Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
Social sciences			9.8
Other-technical			4.2
Other-non-technical			8.4
Undecided			1.2
<u>Student Career Choices</u> (1) no (2) yes			
Artist			5.3
Businessperson			22.0
Clergy			.4
College teacher			.8
Doctor			3.1
Secondary education			4.0
Elementary education			6.1

(table continues)

Table D7

Means, Standard Deviations and Distributions of College Activities

(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
Engineer			6.4
Farmer/forester			.8
Health professional			4.3
Lawyer			1.0
Nurse			2.5
Research scientist			2.2
Other			20.7
Undecided			6.3
College grade point average	3.89	1.18	
(1) C- or less			2.0
(2) C			11.3
(3) C+, B-			23.0
(4) B			30.7

(table continues)

Table D7
Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
(5) B+, A-			25.8
(6) A			7.1
Degree aspirations	3.68	.90	
(1) None			2.2
(2) Vocational certificate/AA			2.3
(3) BA,BS			41.6
(4) MA, Professional			33.4
(5) Other			20.4
Enrolled first year	2.98	.17	
(1) Not enrolled			.5
(2) Attended part-time			1.1
(3) Attended full-time			98.4

(table continues)

Table D7
Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
Enrolled second year	2.90	.37	
(1) Not enrolled			2.5
(2) Attended part-time			4.5
(3) Attended full-time			93.0
Activities in the past year:			
Independent research	1.56	.66	
(1) Not at all			53.0
(2) Occasionally			37.7
(3) Frequently			9.3
Intramural sports	1.68	.76	
(1) Not at all			50.4
(2) Occasionally			31.1
(3) Frequently			18.6

(table continues)

Table D7
Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
Jogged	1.82	.70	
(1) Not at all			35.1
(2) Occasionally			47.9
(3) Frequently			17.0
Did not complete homework on time	1.62	.56	
(1) Not at all			41.9
(2) Occasionally			54.2
(3) Frequently			3.9
Drank beer	2.04	.75	
(1) Not at all			26.5
(2) Occasionally			43.3
(3) Frequently			30.2

(table continues)

Table D7

Means, Standard Deviations and Distributions of College Activities

(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
Drank liquor	2.00	.63	
(1) Not at all			19.7
(2) Occasionally			60.9
(3) Frequently			19.7
Participated honors program			31.8
Participated professors research project			11.8
Failed course in college			25.3
Participated fraternity or sorority			24.2
Held part-time job on campus			46.2
Held part-time job off campus			47.1
Held full-time job			8.7
Elected student office			17.9

(table continues)

Table D7
Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
Participated student protest			12.4
Participated political campaign			5.8
Played varsity sport			25.3
Hours per week:			
Socializing	5.83	1.56	
(1) None			.3
(2) Less than one			1.0
(3) 1-2			4.1
(4) 3-5			15.0
(5) 6-10			25.7
(6) 11-15			19.2
(7) 16-20			12.5
(8) Over 20			22.2

(table continues)

Table D7

Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
Partying	3.73	1.72	
(1) None			13.6
(2) Less than one			11.0
(3) 1-2			17.4
(4) 3-5			25.6
(5) 6-10			20.1
(6) 11-15			6.3
(7) 16-20			3.2
(8) Over 20			2.8
Playing sports/exercising	3.87	1.54	
(1) None			5.0
(2) Less than one			13.1
(3) 1-2			22.5

(table continues)

Table D7
Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
(4) 3-5			30.6
(5) 6-10			16.4
(6) 11-15			6.4
(7) 16-20			2.9
(8) Over 20			3.3
Working for money	4.27	2.60	
(1) None			32.3
(2) Less than one			1.9
(3) 1-2			2.5
(4) 3-5			8.1
(5) 6-10			17.5
(6) 11-15			13.1
(7) 16-20			11.4

(table continues)

Table D7

Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
(8) Over 20			13.2
In volunteering	1.77	1.23	
(1) None			62.0
(2) Less than one			15.3
(3) 1-2			12.5
(4) 3-5			6.7
(5) 6-10			2.0
(6) 11-15			.7
(7) 16-20			.3
(8) Over 20			.5

(table continues)

Table D7

Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)

Variables	Mean	Standard deviations	Percentages
Participating religious			
Services	2.09	1.18	
(1) None			44.3
(2) Less than one			17.1
(3) 1-2			28.8
(4) 3-5			7.0
(5) 6-10			2.0
(6) 11-15			.4
(7) 16-20			.1
(8) Over 20			.3

(table continues)

Table D7

**Means, Standard Deviations and Distributions of College Activities
(N = 3,035) (continued)**

Variables	Mean	Standard deviations	Percentages
In clubs	2.54	1.58	
(1) None			39.6
(2) Less than one			11.8
(3) 1-2			20.6
(4) 3-5			17.2
(5) 6-10			7.3
(6) 11-15			1.6
(7) 16-20			.9
(8) Over 20			1.0

In order to ascertain how students spend their time, students were asked how many hours per week they spent on specific activities. Most frequently, students report spending, on average, 6-10 hours per week socializing, 3-5 hours per week playing sports and exercising or partying; and very few do any volunteer service.

When correlations were calculated for college activities, several interesting relationships emerged (see Table D8). Among majors, there were several that had weak but significant negative correlations with cheating: biology (exam and overall cheating), English (all cheating behaviors), history/political science (homework and overall cheating.) Two majors had positive but weak significant relations: business (in each instance) and engineering (homework copying and overall cheating). This pattern also emerges with student career preferences. The career choice of business (homework and overall cheating) has a significant positive correlation, while engineering is related to homework copying and overall cheating.

In general, the literature has indicated that achievement is negatively related to cheating. The correlations in this sample reflect this trend. There is a significant, negative relationship between cheating and college grade point average ($r = -.13$, $r = -.11$, $r = -.15$). There is a negative relationship between high degree aspirations and cheating: as degree aspirations increase, levels of admitted cheating decrease.

Table D8
 Correlations Between Admitted Cheating and Various College
 Activities (N = 3,035)

Activities	Cheating On:		
	Homework	Exams	Overall
<u>Majors (FUS)</u>			
Biology		-.05	-.05
Business	.07	.04	.07
Engineering	.11		.08
English	-.09	-.05	-.09
History/political science	-.04		-.04
Humanities	-.05		-.05
Physical sciences	-.05		
Social sciences	-.05		
<u>Student career choices</u>			
Businessperson	.07		.06
Doctor		-.05	-.05
Engineer	.08		.06
Farmer/forester	.05		.04
Lawyer		.06	.04
Undecided	-.05		-.05

(table continues)

Table D8
 Correlations Between Admitted Cheating and Various College
 Activities (N = 3,035) (continued)

Activities	Cheating On:		
	Homework	Exams	Overall
College grade point average	-.13	-.11	-.15
Degree aspirations	-.07	-.06	-.07
Enrolled second year	.05		.05
Activities in the past year:			
Independent research	-.05		-.05
Intramural sports	.12	.08	.12
Late homework	.18	.13	.19
Drank beer	.16	.16	.20
Drank liquor	.12	.13	.15
Participated:			
Honors program	-.07	-.08	-.09
Fraternity or sorority	.06	.05	.07
Failed course in college	.07	.06	.07
Held part-time job off-campus	.04		
Played a varsity sport	.09	.09	.10

(table continues)

Table D8
 Correlations Between Admitted Cheating and Various College
 Activities (N = 3,035) (continued)

Activities	Cheating On:		
	Homework	Exams	Overall
Hours per week:			
Socializing	.11	.07	.12
Partying	.18	.16	.21
Playing sports	.08	.06	.09
Participating religious services		-.04	

*Correlations significant at the .01 level.

A number of activities have significant correlations with cheating. Among the activities that have positive correlations are participating in intramural sports ($r = .12$, $r = .08$, $r = .08$), handing in homework late ($r = .18$, $r = .13$, $r = .19$), drinking beer ($r = .16$, $r = .16$, $r = .20$) or liquor ($r = .12$, $r = .13$, $r = .15$), failing a college course ($r = .07$, $r = .06$, $r = .07$) and playing a varsity sport ($r = .09$, $r = .09$, $r = .09$). As the level of participation increases in these pastimes, (from not at all to frequently), the amount of admitted cheating also increases. Conversely, as participation in an honors program ($r = -.07$, $r = -.08$, $r = -.09$) or in a professor's research project ($r = -.05$, $r = -.05$) increases, students are less likely to admit cheating.

When one considers hours spent in activities, there are three activities which reflect that an increase in the time spent on the activity is related to cheating: partying, socializing and playing sports. As the amount of time increases, so too does the amount of admitted cheating.

When the regression analysis is performed, these relations will be clarified.

APPENDIX E
LIST OF DUMMY VARIABLES

Two-Way Interactions
Three-Way Interactions

APPENDIX E

Two-way Interactions:

1. dummy hh = high on the scale of importance for the goal of being well-off financially, high on the scale for time spent studying.
2. dummy hl = high on the scale of importance for the goal of being well-off financially, low in the amount of time studying and doing homework.
3. dummy lh = low on the goal of being well-off financially, high on the amount of time studying and doing homework.
4. dummy ll = low on the scale of being well-off financially, low on the amount of time spent studying and doing homework.

Three-way Interactions:

1. dummy hhh = high rating on the goal of being well-off financially, high self-rating of academic ability and high amounts of time spent studying.
2. dummy hhl = high rating on the goal of being well-off financially, high self-rating of academic ability and low amounts of time spent studying.
3. dummy hlh = high rating on the goal of being well-off financially, low self-rating of academic ability and high amounts of time spent studying.
4. dummy hll = high rating on the goal of being well-off financially, low self-rating of academic ability and low amounts of time spent studying.
5. dummy lhh = low rating on the goal of being well-off financially, high self-rating of academic ability and high amounts of time spent studying.
6. dummy llh = low rating on the goal of being well-off financially, low self-rating of academic ability and high amounts of time spent studying.
7. dummy lhl = low rating on the goal of being well-off financially, high self-rating of academic ability and low amounts of time spent studying;

8. dummy 111 = low rating on the goal of being well-off financially, low self-rating of academic ability and low amounts of time spent studying

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