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Loyola University

THE INTERRELATIONSHIP OF CHEATING, ATTITUDES ABOUT CHEATING, AND ANXIETY IN COLLEGE STUDENTS

A Thesis

Submitted to the Graduate School

In Partial Fulfillment of the Requirements

For the Degree

Master of Arts

Department of Psychology

Walter P. Knake, Jr.

Chicago, Illinois

January, 1966

LIFE

Walter P. Knake, Jr., was born in Pittsburgh, Pennsylvania on April 2, 1941. After obtaining an elementary school education at St. Bernard's School in Pittsburgh, he entered the minor seminary for the Roman Catholic priesthood at St. Fidelis Seminary, Herman, Pennsylvania. He remained there for two and one half years and then transferred to St. Justin High School in Pittsburgh wherefrom he obtained his diploma in June, 1959.

The author obtained a Bachelor of Science Degree in Social Science from John Carroll University, Cleveland, Ohio in June, 1963 at which time he was also commissioned a Second Lieutenant in the United States Army Reserves.

Since September, 1963 the author has been a graduate student in the Department of Psychology, Loyola University, Chicago, Illinois where he is studying for a degree in clinical psychology. From September, 1963 until February, 1965 he served as an assistant in the experimental laboratory under Reverend Vincent V. Herr, S. J. From February, 1965 until October, 1965 he obtained a clinical clerkship at the Loyola University Child Guidance Center under Dr. Thomas Kennedy. He is presently employed as a Psychology trainee at Downey Veterans Administration Hospital, Downey, Illinois.

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Introduction

The purpose of this research is to determine whether a relationship exists between the anxiety level of college students and 1) their cheating on an examination 2) their attitudes toward such cheating.

Cheating in schools, especially at the college level, has been given considerable attention in the press, even reaching into the military academies where the code of honor was long thought to prevent such occurances (Alexander, 1965; Barclay, 1958; Ellison, 1960; Kayser, 1960; Van Pool, 1958).

The investigations concerning cheating have reached back to the child's earlier years and have progressed with him through his years of education. One of the questions which had to be answered was a primeval one in that it sought to find out how dishonesty begins in the child. Stains (1954) studied this question and gave much credence to the parental influence of inconsistent training in right versus wrong. Mowrer (1953) has added another factor in his article concerning the development of neurosis when he stresses the point that cheating comes about through fear of punishment. Gordon and Davidoff (1943) concur that fear of punishment plays a large part in the dishonesty of students.

Mowrer views the neurotic person as super-ego deficient, and the person who cheats is one example of a neurotic individual. He believes that the genesis of neurosis occurs in three stages. First, the young child is said to discover that punishment may be avoided through deceit although at a cost of feelings of guilt. "By the time most children are of school age, they have been powerfully conditioned on this score . . . so that when a child . . . cheats, he experiences pangs of conscience." Second, the pangs of conscience are repressed and, third, " the repudiated sense of responsibility and self-criticism begins to return . . . as symptoms." A neurosis is thus developed. Mowrer, therefore, is of the opinion that the child who cheats has, because of his fear of punishment and his weak super-ego, repressed any guilt which may have arisen because of his dishonesty.

Keehn (1956), however, sees Mowrer as postulating a continuum from normality through irresponsibility to anxiety neurosis which would indicate that the cheater is more anxious than the non-cheater. This Keehn says would follow along with Eysenck's theory (1955) that irresponsibility is a part of the hysterical syndrome and Hildebrand's thesis (1953) in which he viewed cheating as a function of hysteria rather than neurosis. Eysenck restricted Mowrer's theory of neurosis to hysteria or extraverted neurosis as opposed to neurosis as an anxiety state. That cheating is a function of hysteria as extraverted neurosis rather than an anxiety state was supported by Hildebrand in confirmation of Eysenck. However, in testing the difference between cheating as a function of extraverted neurosis as opposed to cheating as a function of anxiety neurosis, Keehn was unable to differentiate between the two because a high incidence of cheating occurred for both groups. It is quite possible that the cheater exhibits both characteristics, that of extraversion as defined by Eysenck and that of an anxiety state as defined by Mowrer, or possibly there are two kinds of cheaters exhibiting either one or the other characteristic.

There have been various other studies which agree with what both Mowrer and Eysenck have postulated. Mowrer stressed the importance of repressed guilt, and in a study by Unger (1962) with a population of 6th grade children Unger was able to show that 63% of those who cheated were high in success motivation plus low in guilt whereas only 34% of those who cheated were low in success motivation and high in guilt reactivity. It is possible, therefore, that repressed guilt is a factor in those who cheat.

In addition to the guilt factor Unger has touched on an area of much importance - that of motivation. Mischel and Gilligan (1964) believe that motivation is a strong factor in those who cheat. Also using a 6th grade population they suggest that response to temptation cannot be regarded simply as a function of internal controls or super-ego strength, but consideration also should be given to the reward value of the prohibited gratification. The lure of the prohibited reward is also emphasized by Omwake (1939) in which he believes that honesty is merely relative to the situation at hand - how much reward value the prohibited stimulus has for the student at a particular time.

There are a number of studies which contradict Unger's findings concerning high success oriented motivation in cheaters. Drake (1941) in his study on cheating in college found that the students who cheat express a general lack of interest and a lack of motivation. This finding is also reported by Henricks (1958) and the Columbia University Bureau of Applied Research (1965). However, the success motivation of which Unger speaks may well have been motivation to succeed or pass a certain test or course in particular while at the same time still lacking in over-all interest for the course as a course as well as in general motivation to succeed. This would then agree with the findings by Mischel and Gilligan as well as the studies just mentioned. However, Unger may have hit upon this over-all lack of interest and motivation in his 34% low success motivation and high guilt reactivity. The type of motivation for immediate reward or for immediate personal gain is also emphasized by Maller (1932) when he compared personal and social motivation.

In Maller's study social or group motivation plays a large role in determining dishonest behavior in school. Maller discovered that "when honesty and cooperation are thrown into conflict, that is, when one may add to the gain of the group by means of dishonesty, the correlation becomes definitely negative" - the more group pressure the less one is honest. Group pressures or conformity to the standards of the group are also mentioned as being added motivating factors in the incidence of cheating in schools as reported in the studies by Drake (1941), Ellison (1960), Hartshorne and May (1928a), and Thomasson (1941). These studies involve pupils in elementary school, high school, and students in college which is a fair sampling of the student population.

Related to this tendency on the part of those who cheat to conform to the group are various studies (Columbia University Bureau of Applied Research, 1965; Drake, 1941; Parr, 1936) in which it has been found a higher incidence of cheating among students who are in fraternities and sororities as opposed to those students who are not affiliated in this manner. Columbia University has also found that cheating is "especially rife on campuses that have sororities and fraternities" thus showing a school comparison in addition to student comparisons.

There have been a number of other studies which have attempted to discover some underlying rationale for the incidence of cheating in the schools. Henricks (1958) emphasizes group pressures from the outside - parental pressure to succeed as well as pressures of the society for education. Columbia

University (1965) concurs with this finding. On a more concrete basis there are pressures for good grades (Campbell, 1933; Columbia University, 1965; Drake, 1941; Omwake, 1939). Analogous to this type of pressure is the finding that cheating increases in proportion to the conscious significance of the exam in relation to the final grades thus making the final examination grades less reliable for indicating the students' true worth than earlier examinations (Anonymous, 1930).

Investigations of situational factors related to cheating have indicated that a difficult test (Howells, 1938), lack of supervision, a poor test, or a poorly organized course may encourage cheating (Campbell & Koch, 1930; Gillentine, 1937; Miner, 1930; Stang, 1937). According to the students themselves as reported by Thomasson (1941) "a large number believe that certain factors, such as attitude toward the teacher, being required to sign a pledge, the importance of the test, the difficulty of the subject, and the prevalence of the practice of cheating among other pupils, should influence the giving and receiving of aid."

A thorough study by Hartshorne and May (1928b) records the results of 23 tests of deception given to 850 children in grades five to eight. The situations involved cheating in the schoolroom, at parties, during athletics, and at home. The importance of the situation is noted by the authors:

> Of these (109 children who are most dishonest),

> 106 or 97 per cent, are lacking in consistency in the sense that their behavior is primarily determined by the test situation or test procedure. Only three cases out of the 109 can be said to be even relatively consistent in their dishonesty. And even among these three most consistently dishonest children, there is not one but who upon occasion and in certain test situations will prove entirely honest.

The same authors report in another study (1928a):

> . . . the consistency of a child's behavior was described as a function of the situations in which he is placed in so far as (a) these situations have common elements, (b) he has learned to be honest or dishonest in them, and (c) he has become aware of their honest or dishonest implications or consequences.

The authors believe that the children whose behavior is relatively consistent have learned to be honest or dishonest in more situations or have become more acutely aware of the honest or dishonest implications of these situations than have children in general. McQueen (1957) agrees with Hartshorne and May in concluding that cheating is not a stable trait across situations.

However, a recent survey of the literature (Burton, 1963) including a reanalysis of the original Hartshorne and May data indicates that there is some generality of moral behavior, but that much of the variance in honesty measures can be attributed to specific test determinants. Hetherington and Feldman (1964) believe that different situations tend to elicit specific types of cheating behavior. They further state that:

> It seems likely that lack of evidence for a consistent tendency to cheat may be due to the selective interaction of types of cheating behaviors and subject

characteristics. Since situations differ in the types of cheating that they facilitate, cheating may only occur when a situation arises that permits the form of cheating compatible with the individual's personality structure.

In Hetherington and Feldman's attempt to provide academic situations which would elicit various types of cheating and to isolate subject characteristics associated with cheating they have compared the individualistic with the socialistic cheater. Among other findings they have discovered that there are persons who cheat mainly for their own personal goal without conformity to the group and that there are those cheaters who are quite socially oriented to group pressures or standards. Thus within the dishonest population of students there are those who are more motivated to cheat because of their own immediate needs as well as those who cheat to conform to the standards set up by the group, society, parents, or whatever the group may be.

According to Hetherington and Feldman's study it might be said that there are cheaters who are introverts and cheaters who are extraverts. It would seem then that there is some evidence for the proposals of Eysenck (1955), Hildebrand (1953), and Keehn (1956) in which they stated that cheating is a function of extraverted neurosis. Brownell (1928) in his early study on cheaters in college bears this out when he states that 71% of his discovered cheaters could be classified as extraverts when compared to the average campus student. He also states that among his dishonest population 80% could be classified as psychoneurotic. Various other studies (Columbia University, 1965; Jacob, 1957; Parr, 1936; Strang, 1937; Trabue, 1962) imply in their emphasis on the social life of the cheater that he would be called an extravert.

However, on the other side of the extravert-introvert scale there seems to be evidence, besides that of Hetherington and Feldman (1964), which suggests that cheaters are more introverted than they are extraverted. Campbell (1933) states that cheaters are more introverted than non-cheaters and that they are deficient in emotional stability. Even though the weight of evidence seems to lie in favor of the extraverted person as the cheater more so than the introverted person, it is quite possible that certain introverted persons also become cheaters when the situation is right. Possibly the authors may be tapping the resources of the extraverted cheater while for the most part the introverted cheater remains dormant for a longer period of time. This may be the type of person Mowrer (1953) was calling the anxiety neurotic - the type of person he believes is more apt to cheat.

In contrast to Hetherington and Feldman's approach in isolating subject characteristics of cheaters it is the purpose of this present research project to generalize the characteristics of cheaters into one - anxiety. Itmight help to explain Keehn's (1956) inability to differentiate between cheating as a function of extraverted neurosis as opposed to cheating as a function of anxiety neurosis if it is found that cheaters are significantly more anxious than are non-cheaters. Possibly then extraverted neurosis and anxiety neurosis may be both one and the same. And since the characteristics of extraversion and introversion are at opposite ends of a continuum, it may be that for the cheater the one common element between the two personality characteristics is that of anxiety. However, it is not the express purpose of this research to delve into cheating as related to extraversion and introversion but merely to see if the cheater is more anxious than the non-cheater. If so, then hypotheses can be further drawn in accord with this finding. But with the pressures placed upon students it seems that the cheater may well be one who has succumbed to the subsequent anxiety.

There have been some interesting studies dealing with various other qualities found in cheaters. Intelligence and scholastic achievement seem to be well correlated though negatively with cheating - the higher the student's intelligence quotient (IQ) and the better he is in scholastic achievement the less he will cheat and the more honest he will be. Likewise, the lower his IQ and the poorer he performs in school the more apt he is to cheat. Quite a number of researchers have found that the mean IQ of the honest students was higher than that of the dishonest students (Atkins & Atkins, 1936; Brownell, 1928; Campbell, 1933; Drake, 1941; Fenton, 1927; Gross, 1946;

Hoff, 1940; Johnson, 1943; Tuttle, 1931b). Many investigators have likewise found that students with poor grades tend to cheat more often than better students (Campbell, 1933; Canning, 1956; Columbia University, 1965; Fenton, 1927; Hartshorne & May, 1928a; Hoff, 1940; Howells, 1938; Parr, 1936). Along with these studies Atkins and Atkins (1936) and Drake (1941) have discovered that the cheaters possess a lower level of effort which coincides with the studies (Henricks, 1958; Columbia University, 1965) which were discussed previously in connection with motivation.

However, good students also cheat as was discovered by Columbia University (1965), Henricks (1958), and Hoff (1940). The survey conducted by Cloumbia University in which 5000 students were polled in some 99 colleges and universities disclosed that 37% of the "A" students admitted cheating at some point in college. Henricks feels that the poor students (as to intelligence) cheat because the work is too hard and the good students cheat because the work is too easy and doesn't offer them a challenge. Both groups cheat because the work is too meaningless and non-interesting.

Cheaters have also been categorized and analyzed according to their sex. In a study of why children cheat Barclay (1958) reports that girls cheat more than boys because they want to please the teacher more than the boys do. Canning (1956) agrees with this by saying that in a college population "more women will cheat when they can get away with it." However, Columbia University (1965) found that cheating is more common among men than women in a college or university. Maller (1932) discovered that with children " . . . the sex group that was in the majority in the classroom was more motivated by the class spirit and endeavored to raise the class score even at the cost of honesty."

Anderson (1957) reports from his use of a questionnaire on student attitudes about cheating that " . . . women students have stricter (more moralistic) attitudes toward cheating than men." However, he feels that "a limitation to these findings exists in the thought that the college woman, rather than being more moralistic toward cheating, might actually be more defensive when responding and might consciously or unconsciously bias her ratings to a greater degree."

Anderson also discovered that the sexes differed in the variability with which they responded. He found that in general men were more variable in their responses than women which suggested to him that men are more unpredictable in their attitudes toward specific cheating situations. He also claims that men and women " . . . acquire more tolerant attitudes toward cheating as they advance as undergraduates and experience the numerous pressures of college, but when they graduate and teach they shift in role and acquire stricter attitudes.

This progression of more liberal attitudes towards cheating as students advance in college brings into discussion the category of age. Hartshorne and May (1928a) discovered that "older pupils are slightly more deceptive than younger children." In a study by James (1933) in which he interviewed students in elementary school, high school, and college he found that cheating gradually increases as the student progresses through the educational levels. This might then explain Henricks finding (1958) that 75% of college seniors cheat, or have reported that they have cheated sometime through school. However, these studies do not take into account that with increasing age the students may have more opportunities to cheat. The studies merely report the incidence of cheating at various age levels.

It is of interest to note that in two studies (Anderson, 1957; Columbia University, 1965) it was found that students in career-oriented fields like business and engineering are more likely to cheat than students majoring in history, the humanities or language. In between are students majoring in the sciences or the arts. Anderson reports that graduate students who teach have strict attitudes about cheating. However, in the studies by Cowen (1927), and Kayser (1960) it was found that teachers, although they may express stricter attitudes about cheating, actually cheat themselves when they are in a student role in a graduate course. This finding was also expressed by Atkins and Atkins (1936) concerning prospective teachers who actually cheat. Therefore, it seems that the teacher's attitudes about cheating are in contrast to what he actually does himself.

It is often said but not so often varified that athletes get through college on their ability to cheat and get away with it. There may be some resentment implied in this statement against the athletes, but there may be some truth in it, for in the study by Columbia University (1965) it was found that 74% of students with athletic scholarships admitted to having cheated as opposed to 45% of students who had academic scholarships and 41% of students with financial scholarships. Alexander (1965) in his report about the incidence of cheating recently disclosed at the Air Force Academy declares that a large number of the cheaters were athletes. But here again pressure may play a significant role - that of time. The athletes must spend a good proportion of their time in preparation for and in the actual game itself, so that they find that they must cheat to keep up with the other students.

As to the socio-economic status of the student's parents Hartshorne and May (1928a) have found a negative correlation between the parental socio-economic status and cheating - the lower one's parental status the more he will cheat and the higher the status the less cheating. However, in opposition to this finding is that by Parr (1936) who fails to find a significant relationship between parental socio-economic status and student cheating.

Parr did find, however, that students who must spend a proportion of their time in working to earn their way through college do cheat more than those who don't have to work, for they do not as a consequence spend as much time on their course work. This in a way seems to contradict his statement about parental socio-economic status, for if the parent were higher on the status bracket in all probability the student wouldn't have to work his way through college and could spend more time on his course work. Parr further states that an increase in activity load, a job or extracurricular activity, tends to increase the cheating. This is born out by Columbia University's survey (1965) which states that cheating has a direct relationship to study habits. "Only 42% of the students who study for 30 hours or more per week admitted to cheating. Among the cheaters 57% study only 19 hours a week or less."

Throughout the literature on cheating in schools a number of investigators have proposed various individual factors which they believe to be underlying the practice of cheating in the schools. However, there are also a number of researchers who disclaim any one factor or group of factors which might be the cause or causes to cheating. These authors claim that cheating is merely relative to the situational variables at hand whether it be the time, the place, the test, or the student himself (Campbell & Koch, 1930; Hartshorne & May, 1928a; James, 1933; McQueen, 1957; Miller, 1927; Mischel & Gilligan, 1964; Omwake, 1939; Woods, 1957).

In addition to proposing a relationship between cheating and anxiety it is also the purpose of this research project to investigate the possible relationship between the student's own attitudes about cheating with his actual cheating performance and also to explore the relationship between the cheater's attitudes and his anxiety. There have been a number of studies that have specifically used questionnaires in order to determine the incidence of cheating as expressed by the students themselves (Anderson, 1957; Bond, 1939; Carter, 1929; Corey, 1937; Freeman & Ataöv, 1960; Henricks, 1958; James, 1933; Mathews, 1933; Mills, 1958; Schnepp, 1940; Thomasson, 1941). From these studies the percentage of students who admit to cheating range anywhere from 30 to 50 per cent.

Although this has been a widely used medium for exploring the amount of cheating and for determining some of the underlying causes some investigators have criticized the validity of the questionnaire as a measuring device (Corey, 1937; Freeman & Ataöv, 1960). Corey in his study tried to find a relationship between actual cheating as determined by a certain detection method and the students' attitudes concerning cheating. From his data he came to the conclusion that the overt cheating behavior is not significantly related to the students' attitudinal scores as measured by his questionnaire. He is, therefore, of the opinion that attitudinal measures are not valid indicators of the actual incidence of cheating. Corey's conclusion, therefore, is in opposition to that of the present investigation which hypothesizes that there is a significant relationship between overt cheating behavior and the students' attitudes concerning cheating. The proper test of the questionnaire's validity in determining overt cheating behavior is in the make-up of the questionnaire itself, so that possibly Corey's questionnaire was not measuring what it was geared to measure - that of cheating. However, it is also possible that his population was overly defensive, or it is also possible that his findings are correct.

Since the publication of the two volume work dealing with honesty and dishonesty in children by Hartshorne and May (1928), many investigators have borrowed their empirical method for the detection of cheating behavior, that is, having the students correct their own test papers after they had been previously corrected by the teacher or experimenter and then comparing the students' test scores with the true test scores. This method seemingly was effective in the studies reported by Canning (1956), Corey (1937), Drake (1941), Gross (1946), Hoff (1940), Moore (1934), Parr (1936), and Weinland (1947). Fenton (1927), Miller (1927), and Yepsen (1927) in their studies on dishonesty were actually the first ones to use such a method of detection, but the magnitude of Hartshorne and May's work plus their empirical precision in carrying it out have caused authors to credit them with the actual beginning of this experimental method of discovering overt cheating behavior. The present investigation has also borrowed this method and used it to determine cheating in a college sample.

There are other methods which have been used to determine cheating behavior. A common one has been to analyze test scores for identical wrong errors after first having some idea, through proctoring or some other subjective means, of suspected cheaters. The mathematical probability for the identity of the wrong errors is determined and then checked with the student's seating position during the test. This would then generally be followed by directly questioning the student to see if he would admit to having cheated which the authors report usually did follow. In general, even without the confession of the student the authors (Bird, 1927; Bird, 1929; Crawford, 1930; Dickenson, 1945; Robinson, 1957; Saupe, 1960) feel that this mathematical method of discovering cheating behavior is quite effective. However, Saupe wasn't entirely convinced that just analyzing identical wrong answers was the best method. He believed that the method could be improved by also analyzing identical right answers when more than one answer was accepted as correct. From his results his system appears to have more validity than does the "identical wrong answer only" method which as Saupe states as being true. This system, however, was not chosen for the present project, for it appears to be too time consuming with a large sample.

In the studies by Campbell (1931) and Krueger (1947) they report their efforts to detect cheating behavior by having the students correct the teacher's deliberate errors in scoring their tests. The general finding in both reports is that the students will correct the teacher's errors by raising their lowered grades to the higher grade when the mistake counted against them, but they would not lower a higher grade when the mistake counted for them.

As to controlling cheating there has been much controversy expressed concerning the effectiveness or ineffectiveness of the honor system. There have been reports which have stated that the honor system is an effective means of controlling cheating (Cole, 1960; Columbia University, 1965; Glicksberg, 1957; Van Pool, 1958). Columbia University states that:

> Cheating is most prevalent at schools which try to control it by a joint student-faculty system of monitoring. It is slightly less common at schools where the faculty alone tries to cope with the problem. And it occurs far less often at colleges with an honor system, in which the students themselves do the policing and enforcing.

According to one of the Air Force Academy cadets who was involved in the recent cheating episode (Anonymous, 1965) the honor code was scoffed at for the very reason that the faculty was attempting to aid in the control of cheating and not permitting the students full executive power as the honor system was originally set up. This statement would then agree with the results of the survey conducted by Columbia University.

However, in opposition to the studies which report that the honor system is an effective means of controlling cheating are those studies which state that the honor system does not control cheating but rather adds to the incidence of cheating. Campbell and Koch (1930) state that "relatively more students trained under an honor system in high school cheated on their education course examinations in college than students who had been more closely supervised in their secondary school days." Canning (1956) reports that women will cheat more when they can get away with it. Fenton (1927) believes that unless the student's honor is trained and stressed in his early years of life the honor system will have no controlling effect. Mathews (1933) and Miner (1930) concur that the honor system is ineffective possibly because the students have different moral standards so that the situations determine whether or not the student will cheat. The honor system will not work, therefore, if the students have been raised under varying moral or ethical standards.

Some investigators have reported their attempts to control cheating by directly influencing the attitudes of the students. Carlson (1935) has tried to show the need for and the results of an increased instructor responsibility in promoting character and personality development in students. His results pointed to the fact that if the instructor has a positive attitude towards honesty and has an earnest concern for the student as a person cheating will decrease. Gillentine (1937) agrees with Carlson in that the teacher-student relationship must be good which depends upon the attitude of the instructor towards his students as well as the material to be taught. The relationship must be a friendly one but one in which the teacher and the student have respect for one another. Gillentine further states that the subject matter must be clearly organized and presented and that examinations and grades should not be stressed.

However, in contrast to Carlson's and Gillentine's contention that in order to decrease cheating the instructor must indirectly posit a commitment to honesty through his own attitude, Miner (1930) and Mueller (1953) state that the instructor must firmly and directly make the students aware of the serious consequences for those who cheat. Mueller also states that the teacher must play up to the better person - that it is the stronger person who doesn't cheat.

But Mills (1958) and Columbia University (1965) strongly contend the point of view offered by both Miner and Mueller. They say that more students are likely to cheat and will become more liberal in their attitudes about cheating when restraints against cheating are placed upon them.

In summary then it has been shown that investigators have postulated a variety of factors to help explain the cheating behavior evidenced in the schools. Various methods have been used to explore cheating as well as to control it. It is the general purpose of this present investigation to determine if there is a significant relationship between the anxiety induced by the stress and pressure placed upon college students today and overt cheating behavior as well as college students' attitudes about cheating. The students' levels of anxiety will be defined operationally by means of the Taylor Manifest Anxiety Scale (MAS) and by means of the Nicolay-Walker Personal Reaction Schedule (PRS), (Taylor, 1953; Walker-Nicolay, 1963 respectively). The students' attitudes about cheating will be measured through the use of questionnaires (Anderson, 1957; Knake, 1965). The students' actual cheating behavior will be measured by means of the self-scoring technique of Hartshorne and May (1928a). The hypotheses are as such:

1) There will be a significant positive correlation between anxiety and actual cheating in college students - the higher the anxiety level the more cheating will occur.

2) The students who cheat will justify their cheating expressing more liberal attitudes about cheating; therefore, a significant positive correlation will exist between actual cheating performance and attitudes about cheating.

3) The higher the anxiety level in college students the more liberal their attitudes will be concerning cheating; therefore, a significant positive correlation will exist between anxiety and attitudes concerning cheating.

Method

Subjects: The subjects that were used for this study were college students enrolled in the general psychology course at the Lake Shore Campus of Loyola University, Chicago, Illinois. The project was undertaken during the second semester of the school year at which time there were 300 students enrolled in the course. The total number of students had been divided into six class sections - four of them being taught by one instructor and two by another. In order to control any instructor variables it was decided to use just the students who were taught by the instructor who had the four sections. This brought the total number of students down to 203 of which 121 were males and 82 were females. However, because a number of these students were absent on the day in which the project was to be completed, the final number was reduced to 196, 116 males and 80 females. Of these remaining approximately 95% were second semester freshmen, and the rest were either sophomores or juniors. The experimental population was also restricted almost entirely (92%) to Catholic students as Loyola University is a Catholic university.

Apparatus: Upon entry into the general psychology course at the Lake Shore Campus of Loyola University all students are administered the Taylor's Manifest Anxiety Scale (MAS), (Taylor, 1953) and the Nicolay-Walker Personal Reaction Schedule (PRS), (Walker & Nicolay, 1963) in order to operationally define their anxiety levels. This data is then available for experiments undertaken by both the faculty and graduate students in the psychology department.

The MAS was developed by Janet Taylor originally for the purpose of testing certain hypotheses concerning the effect of anxiety upon learning in an extension of Hull's theory of drive. However, it has been used quite extensively by many researchers as an index of general anxiety. The PRS was developed at Loyola University, Chicago, Illinois by Nicolay and Walker in order to measure three subtypes of anxiety: motor tension, object inadequacy, and personal inadequacy. These three subtypes of anxiety were felt to be finer delineations of the general anxiety as found in Taylor's scale.

Two questionnaires (Anderson, 1957; Knake, 1965) were administered to the students as an attempt to measure their attitudes concerning cheating. Two questionnaires were given (a) to see if there would be a significant correlation between them, and (b) to see if there would be any difference as to the students' responses. In addition, they were also given to hide the real purpose of the project - the students being told that the purpose of the two questionnaires was to check one with the other.

Anderson developed his questionnaire (Hereafter referred to as Q 1) concerning student attitudes towards cheating in school from college students themselves. The cases which he used were obtained through the classes of a number of his colleagues and were selected without intentional bias. These students stated in response to direct questioning what situations they would classify as indicating cheating. From these statements, which may or may not be classified as cheating situations by all students, the author used fictitious names within the situation and presented them again to the students to determine their composite attitudes. An example of the questions used is:

> Mabel Johnson borrowed a term paper from her roommate Ruth and after a few small changes handed it in to her botany professor.

or again:

> Sonny Brown who had not studied for a quiz nudged his neighbor Jim and asked for the answers to the first five multiple choice questions.

Q 1 was composed of 28 situations in all, and it was administered to 505 university students from the same school. The subjects were instructured to use a 5 point rating scale giving the situation 5 points if they felt that the college student described is definitely justified in behaving the way he did. They were to place a figure 1 in front of the situation if they felt that the college student described is definitely not justified in behaving in this manner. They were to assign the intervening numbers according to these two end levels of justification.

Q 1 was employed in this present study with only one minor change. In the present study the number of case situations was increased from 28 to 30. The questionnaires were scored by adding the total number of points - the maximum total being 150. It was determined that as the score rose the less strict would be the person's moral attitudes towards cheating - he would become more liberal in his attitudes towards cheating in school. Likewise, the lower the total score the more moral and less liberal as to justification for cheating the student would be.

The questionnaire by Knake (Hereafter referred to as Q 2) was developed similarly to that of Anderson's. A number of college seniors were personally interviewed as to what they judged as cheating in college and what methods to their knowledge had been employed by the students in their four years at the university. Situations were then presented on the questionnaire as an attempt to force the students to admit to their own cheating if they in fact do cheat. The subjects were given four choices on the questionnaire as to what they thought Should be done in response to the situation. They were to rate the four choices using the numbers 1 to 4, the number 1 given to the choice which primarily Should be done on down to number 4 which would be the last thing that one should do. Then from these same four choices the subjects were to designate what they in actuality Would do if the same situation were presented to them. They were to rate the four choices in the same manner as what they thought Should be done. An example is such:

In taking an exam and another student's paper is left uncovered and you are having difficulty with the answers:

Should You		Would You:
______	a) Tell the student to cover his test.	______
______	b) Get as many answers as you can from him.	______
______	c) Keep your eyes on your own paper.	______
______	d) Look at his paper only when you don't know the answer.	______

The Q 2 protocols were scored according to points of difference between what they thought should be done and what they in actuality would do. The summation of the deviation scores were then taken as a measure of the college students' attitudes about cheating in which a higher deviation score meant a more liberal view towards cheating - their own cheating in this case. A lower deviation score approaching zero would then mean higher moralistic attitudes and less justification for cheating. It was thought that by directly asking the students what they would do in a cheating situation themselves they would be more compelled to answer in a thoughtful manner instead of being haphazard in answering when the questionnaire did not pertain to them directly. It was thought that this in turn would cause the students to be either more honest or more defensive in answering questions as to their own cheating.

An introductory questionnaire composed of various identifying questions was also presented to the students. The purpose of this questionnaire was merely in adding additional data about the subjects to the experiment in case further research and analysis would be generated. The questions were identifying in that they asked for the student's name, age, sex, religion, parental ancestry, parental occupation, major field of study, and grade point average in college. This information, however, was not made a part of the present research project.

As to the actual apparatus which was employed in order to measure the overt cheating behavior a regularly scheduled examination in general psychology - the last major test before the final - was used to which the technique of Hartshorne and May (1928a) was applied. The test was composed of 41 multiple choice questions each consisting of five choices. There were two forms, A and B, given to all four class sections. The forms were comparable to one another as to context, number of questions, and number of choices for each question. The questions were based on a combination of textbook plus instructor notes concerning general psychology.

Procedure: As was previously stated the MAS and the PRS were presented to all students during the first week of classes of the Spring Semester, 1965. Therefore, other than obtaining the scores of the students on these two scales of anxiety the procedure of the present project was limited to the administration of the two questionnaires plus employing the self-scoring technique to determine the actual cheating behavior.

Since there had been recent publicity concerning cheating in college students, the cheating scandal at the Air Force Academy, and a speech given by a university administrator on the Loyola University campus, it would have been advantageous to have the questionnaires taken anonymously. However, since it was necessary to compare the attitude questionnaires with the actual cheating behavior and the MAS and PRS scores, and since a time factor was involved in the administration of each subdivision of the experiment, it was decided to have the subjects place their name on each questionnaire and to administer the questionnaires a week apart. The following instructions were given to the students by the instructor of the course:

> This experiment is being conducted by a graduate student from another university for the purpose of comparing the results of two questionnaires. Therefore, he would like you to please put your name on each questionnaire. After the second questionnaire is given at a later date the names will be coded. However, in order that the subjects be awarded with an experimental point for their participation in this experiment the names will merely be used to record that they have participated. This will be counted toward the five points necessary for your course work. However, both questionnaires must be taken to receive the one point credit. The experimenter is not interested in the results *per se* but only in comparing the two questionnaires.

It was felt that with these instructions the students would not object to signing their names on the questionnaires so that the comparisons could be made. The students were also to be rewarded for participating in the experiment which might act as a motivating factor for their cooperation and honesty in answering the questionnaires.

There was a time lapse of one month between the administration of Q 2 and testing to find the cheating behavior. At the time of testing for cheating there were only two weeks remaining in the semester. The instructor wished to give the students a test on the last few chapters of the textbook before the comprehensive final exam two weeks hence. As usual he administered the test separately to all four class sections and proctored the test himself. As was his policy throughout the semester the students were warned as to the consequences of cheating. He also reviewed for them his grading system - only 50% of the questions had to be answered, and they were to be scored by using the number right minus one third the number wrong. Therefore, the students would be penalized for guessing. The answers were marked on an IBM answer sheet in which one of the spaces 1-5 were to be filled in corresponding to the student's choice of the five multiple choices. The answer sheets were then turned in to the instructor to be machine scored.

However, using Hartshorne and May's self-scoring technique (1928a) as a determiner of cheating behavior the experimenter received the tests from the instructor and scored all of the tests manually without putting any marks on the answer sheets. A record was then kept as to the true score which the students made on the test. The students' right and wrong answers and also the number of questions unanswered were recorded. The answer sheets were then returned to the instructor before the next meeting of his classes at which time the instructor gave the answer sheets to the students and explained that the test correcting service was so busy that they couldn't get them finished for a week and he had to have them completed before then, which incidentally was the case. The students were asked to correct their own papers in class. The scoring system was explained further to the students and the correct answers were read to the class. When the students were finished grading their own papers they returned them to the instructor who thanked them for their help and cooperation. The student corrected papers were then given to the experimenter who checked them against their true scores. The deviation score was then taken as a measure of actual cheating behavior.

In analyzing the data the number of variables that were used were limited to twelve. The PRS was broken down into the three subtypes of anxiety, and with the addition of the composite score the PRS made up four of the twelve variables. According to the authors (Walker & Nicolay, 1963) the M scale of anxiety "is characterized by concern with external achievements coupled with physical tension which acts as a defense against feelings of inadequacy." This subtype of anxiety is labeled motor tension. The O scale or object inadequacy "is characterized by concern that external demands and perceived expectancies may be over-whelming and one may suffer harm." The third variable is the P scale of the PRS or personal inadequacy which "is characterized by concern that one may not be capable of meeting the difficulties of life." The fourth variable, PRS - Total, is the composite score of the three subtypes of anxiety. The fifth variable that was used in this study was the composite MAS score or the general anxiety score. The K scale - the sixth variable employed - was adopted from the Minnesota Multiphasic Personality Inventory (MMPI). It is a social desirability scale in which the person tries to make himself appear better or worse than he really is. Thus the first six variables dealt with anxiety measures.

As to the remaining sections of the project, variables seven through nine dealt with the actual cheating behavior: seven was designated as the true score of the students, eight was the student test score, and nine the test difference score or cheating score. The tenth variable was the total score on Q 1, while the eleventh variable was the total score on Q 2. The final variable that was employed in the analysis of the data was the students' accumulated examination grade points for the entire semester which included their true test scores for the exam used in this study in addition to all other exams for the course.

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Results

The twelve variables were analyzed by means of the Pearson product moment correlation coefficient and by means of the Chi Square test of significance. With the use of Loyola University's Data Processing Center and their computer all twelve variables were correlated with one another as to Pearson's correlation coefficient. The frequency charts used in determining the Chi Square values for the six anxiety variables were divided into three categories of high, medium, and low on a 20 - 60 - 20 percentage basis respectively. As to the scores on the questionnaires and the total semester accumulated points the categories remained divided into high, medium, and low but on a 33 and one third percentage basis for each. The categories were then dichotomized as to the cheaters versus the non-cheaters.

Various samples of the tested population were analyzed by the correlation coefficient. The variables were correlated in regards to: a) the total population, b) the male and female sex, c) the cheating sample versus the non-cheating sample, d) the sex differences in the cheating sample and non-cheating sample, e) the students' final grades in the course - A through F, and f) the four class sections. In general, the tables are broken down into the male and female samples of the total investigated population, for it was discovered that many of the significant relationships dealt with the sex groupings and not with the combined population.

One important fact which was discovered by an analysis of the data but which is not necessary for detailed description is the finding that by running the data by class section, even though the classes were comprised of a different number of students, they were found to be relatively comparable to one another. Therefore, in spite of the time factor in administering the questionnaires to the four classes over a two day period and the same time period for the students in correcting their own tests it might be said that, in general, the students did not become experimentally wise to the project and attempt to ruin it.

In Tables 1-4 the means and the standard deviations of the population according to the twelve variables are shown. Table 1 gives the means and standard deviations of the total tested population, 196 subjects, and also the male and female samples of this population. The $\underline{t}$ test of significance was run to determine the significance between the male and the female sample means in regards to: a) Q 1, b) Q 2, and c) their achievement in the course as measured by their total accumulated semester points on all of the exams. For Q 1 the male and female sample means were found to be significantly different ($\underline{t}$= 2.55, p>.02). For Q 2 these means were also found to differ significantly

Table 1

Means and Standard Deviations

Of the Population on all Variables

Variable	Both Sexes (N=196) M	Both Sexes (N=196) SD	Male (N=116) M	Male (N=116) SD	Female (N=80) M	Female (N=80) SD
M Scale of PRS	11.33	4.12	11.05	4.34	11.74	3.76
O Scale of PRS	9.51	4.15	10.10	4.19	8.66	3.95
P Scale of PRS	11.08	4.67	11.23	5.01	10.85	4.15
PRS - Total	31.97	10.36	32.38	10.88	31.37	9.59
MAS - Total	17.85	7.84	17.58	8.01	18.24	7.62
K Scale	14.50	3.77	14.18	3.96	14.96	3.42
True Test Score	18.44	7.38	18.02	7.74	19.06	6.82
Student Test Score	20.44	6.59	20.00	6.79	21.07	6.28
Difference Score	1.99	4.09	1.98	3.65	2.01	4.67
Q 1	59.35	15.57	61.25	16.24	56.60	14.18
Q 2	18.34	10.96	19.77	11.83	15.76	8.73
Semester Points	364.00	100.35	357.41	105.86	373.55	91.59

(t = 2.32, p>.05). These two findings agree and suggest that males are significantly more liberal in their attitudes about cheating than are females. However, as to achievement in the general psychology course the females were shown to achieve at a significantly higher level than do the males in considering their total accumulated semester points on all the exams (t = 3.52, p>.001). By observation, however, Table 1 shows that the sexes are not appreciably different when considering their cheating scores or difference scores - student test scores minus the true test scores. In addition, there also appears to be no appreciable difference between the male and the female sample means in regards to the six anxiety variables.

Tables 2 and 3 show the means and standard deviations of those who cheated and those who did not cheat respectively as measured by the self-scoring technique. As is true for the total population there seems to be significant differences between the sexes on the two questionnaires and on the achievement variable - semester points - when considering the sample of cheaters as shown on Table 2. In addition, by observation there do not seem to be significant differences between the sexes of those who cheated in respect to their anxiety variables. A t test was run to determine if there was a significant difference between the means of the male and the female cheaters in reference to their actual cheating scores. It was found that there was no significant difference the t value being .51. In observing the non-cheating sample as shown on Table 3 there do not seem to be any appreciable differences between the sexes on any of the twelve variables.

However, in comparing the cheating sample on Table 2 with the non-cheating sample on Table 3 there are significant differences in relation to the two questionnaires and to the students' achievement in the course. A t test for Q 1 between the means of the cheating sample and the means of the non-cheating sample, both sexes considered, was found to be significant (t = 4.45, p>.001). For Q 2 the means were also found to be significantly different (t = 4.17, p>.001). Likewise, the means were found to be significantly different on the achievement variable (t = 3.56 p>.001). Therefore, one might say with justification that for the population studied cheaters are more liberal in their attitudes towards cheating than are non-cheaters. But non-cheaters are significantly better achievers than are cheaters at least in the general psychology course under consideration.

A t test was also run between the cheating and non-cheating sample means in respect to actual cheating performance. It was found that for both sexes considered the means were significantly different (t = 11.43, p>.001). For the male sample only the means were also significantly different (t = 10.09, p>.001). The same was true for the female sample considered by itself (t = 6.54, p>.001). Therefore, in all respects it could be said that those who were discovered cheating did actually cheat.

Table 2

Means and Standard Deviations

of the Cheating Sample on all Variables

Variable	Cheating Sample: Both Sexes (N=73) M	SD	Male (N=45) M	SD	Female (N=28) M	SD
M Scale of PRS	11.90	3.88	11.84	4.15	12.00	3.47
O Scale of PRS	9.64	4.29	10.09	4.09	8.93	4.57
P Scale of PRS	11.36	5.30	11.42	5.67	11.25	4.76
PRS - Total	32.90	10.88	33.36	11.08	32.18	10.74
MAS - Total	18.62	7.35	18.65	7.41	18.57	7.39
K Scale	13.99	4.10	13.51	4.17	14.75	3.95
True Test Score	15.12	7.62	14.11	7.47	16.75	7.72
Student Test Score	20.48	6.81	19.22	6.65	22.50	6.69
Difference Score	5.36	5.20	5.11	4.31	5.75	6.44
Q 1	64.35	20.30	66.84	19.68	60.54	21.00
Q 2	23.18	12.04	25.88	13.15	17.77	7.06
Semester Points	332.27	93.64	320.80	97.72	350.71	85.14

Table 3

Means and Standard Deviations

of the Non-cheating Sample on all Variables

Variable	Non-cheating Sample					
	Both Sexes (N=123)		Male (N=71)		Female (N=52)	
	M	SD	M	SD	M	SD
M Scale of PRS	10.99	4.23	10.55	4.41	11.60	3.93
O Scale of PRS	9.44	4.09	10.11	4.30	8.52	3.61
P Scale of PRS	10.91	4.26	11.11	4.58	10.64	3.82
PRS - Total	31.41	10.03	31.76	10.78	30.94	8.99
MAS - Total	17.39	8.11	16.90	8.35	18.06	7.81
K Scale	14.81	3.54	14.61	3.79	15.08	3.15
True Test Score	20.41	6.49	20.49	6.87	20.31	5.99
Student Test Score	20.41	6.49	20.49	6.87	20.31	5.99
Difference Score	0.00	0.05	0.00	0.07	0.00	0.10
Q 1	56.39	10.98	57.81	12.69	54.40	7.69
Q 2	15.87	9.52	16.48	9.65	14.84	9.34
Semester Points	382.83	99.80	380.62	104.88	385.85	93.35

Table 4 shows how the subjects were compared when they were evaluated in terms of their letter grades for their semester work in the course. As is observable from the means of the students classified according to their grades A through F the students who achieve poor grades cheat more than those who receive the higher grades. The poorer students are also more liberal in their attitudes about cheating. However, there do not seem to be any appreciable differences in the students classified according to their grades when considering their anxiety levels on the six variables of anxiety.

The major findings of this study are reported in Tables 5-10. The first hypothesis presented for this study was that there would be a significant positive correlation between anxiety and actual cheating in college students - the higher the anxiety level in the students the more that cheating would occur. However, as is shown on Table 5 and Table 6 in which the tested population and just the cheating sample were given respectively it is seen that there is no significant positive or negative correlation between any one of the six anxiety variables and the actual cheating behavior of the students. This finding applies also when the sexes are considered separately. Therefore, since there are no significant correlations between anxiety and cheating behavior in the population tested, the first hypothesis must be rejected.

Table 4

Means of Students' Grades

In the Course on All Variables

Variable	Grades In Course A	B	C	D	F
M Scale of PRS	11.76	11.46	11.15	12.31	11.09
O Scale of PRS	10.43	9.00	9.21	10.69	11.09
P Scale of PRS	11.47	10.39	10.78	14.00	11.82
PRS - Total	33.67	30.85	31.22	37.00	34.00
MAS - Total	18.38	16.65	18.03	19.39	15.73
K Scale	14.29	14.50	14.81	13.62	12.45
True Test Score	28.19	23.46	17.29	12.92	7.64
Student Test Score	28.43	24.31	19.47	16.77	11.36
Difference Score	0.24	0.85	2.18	3.85	3.73
Q 1	54.52	54.00	60.86	59.77	63.90
Q 2	17.61	14.57	19.10	20.45	19.83
Semester Points	533.05	458.31	347.88	231.92	157.64

Table 5

Correlations Between Anxiety Scales and Cheating Behavior for Total Population

Anxiety Scales	Cheating Behavior (Difference Scores) Total Population Both Sexes (N=196)	Male (N=116)	Female (N=80)
M Scale of PRS	.08	.08	.09
O Scale of PRS	-.05	.01	-.12
P Scale of PRS	-.00	-.04	.04
PRS - Total	.01	.02	-.00
MAS - Total	-.02	-.03	-.01
K Scale	-.01	-.03	.02

Table 6

Correlations Between Anxiety Scales

and Cheating Behavior for Cheating Sample

Anxiety Scale	Cheating Behavior (Difference Scores) Cheating Sample Both Sexes (N=73)	Male (N=45)	Female (N=28)
M Scale of PRS	.03	-.05	.14
O Scale of PRS	-.13	.02	-.28
P Scale of PRS	-.06	-.12	.00
PRS - Total	-.07	-.07	-.07
MAS - Total	-.15	-.24	-.06
K Scale	.11	.12	.08

The second hypothesis states that the students who cheat will justify their cheating expressing more liberal attitudes about cheating - a significant positive correlation will exist between actual cheating performance and attitudes about cheating. The results as to this hypothesis are presented in Tables 7-8. The correlations shown in Table 7 show significant relationships between attitudes about cheating and actual cheating performance when both sexes are considered and when just the male sample is considered out of the total tested population. On Table 7 it is seen that the male sample is responsible for the significance given to the combination of the both sexes. On Q 1 the male sample shows a positive correlation of .39 which is significant beyond the .01 level of significance which also holds true on Q 2 which yields a positive correlation of .43. Table 8 which merely considers the cheating sample also yields significant positive correlations for the males: .37 significant at the .05 level for Q 1, and .47 significant at the .01 level of significance for Q 2. On both tables the female sample fails to show any significant correlation either positive or negative.

It can, therefore, be said that males who express more liberal attitudes about cheating cheat significantly more than those who are stricter in their attitudes about cheating. However, there are no significant relationships between attitudes about cheating and cheating behavior in the female sample. The second hypothesis is verified, therefore, for the male sample.

Table 7

Correlations Between Attitudes About Cheating and Cheating Behavior for Total Population

Attitude Measures	Cheating Behavior (Difference Scores) Total Population Both Sexes	Male	Female
Q 1	.28**	.39**	.15
Q 2	.27**	.43**	.03

** = significant beyond the .01 level of significance

Table 8

Correlations Between Attitudes About Cheating and Cheating Behavior for Cheating Sample

Attitude Measures	Cheating Behavior (Difference Scores) Cheating Sample Both Sexes	Male	Female
Q 1	.19	.37*	.04
Q 2	.18	.47**	-.21

* = significant beyond the .05 level of significance

** = significant beyond the .01 level of significance

The third hypothesis which stated that there would be a significant positive correlation between the students' anxiety and their attitudes about cheating is considered in Tables 9 and 10. It is proposed that the students who are more anxious will express more liberal attitudes towards cheating than students who are less anxious as measured by either the subtypes of anxiety of the PRS or by the general anxiety of the MAS.

From the results as given on Table 9 the females show significant positive correlations between their attitudes about cheating on both Q 1 and Q 2 and their anxiety as seen on the O scale of the PRS. Q 1 yields a positive correlation of .27 and Q 2 a positive correlation of .26 which are both significant beyond the .05 level of significance. As defined by Walker and Nicolay (1963) the O type of anxiety "is characterized by concern that external demands and perceived expectancies may be over-whelming and one may suffer harm . . . the emphasis here is on the external as a source of uncertainty or unrest." From the results on Table 9 females are, therefore, shown to be anxious about external demands, and the more anxious they are about the pressures they perceive from the environment the more liberal they tend to become in their attitudes concerning cheating.

Table 9 also shows that on Q 2 there is a significant negative correlation, -.41 which exceeds the .01 level of significance, in the female sample between attitudes about cheating and the I scale which determines whether or not the person is

Table 9

Correlations Between Anxiety Scales and Attitudes About Cheating for Total Population

Anxiety Scale	Q 1 B.Sex. (N=191)	Q 1 Male (N=113)	Q 1 Female (N=78)	Q 2 B.Sex. (N=151)	Q 2 Male (N=97)	Q 2 Female (N=54)
M Scale of PRS	.01	.01	.06	.08	.11	.10
O Scale of PRS	.09	-.05	.27*	.16*	.09	.26*
P Scale of PRS	-.08	-.20*	.14	.12	.10	.22
PRS - Total	.00	-.11	.19	.15	.12	.24
MAS - Total	-.03	-.10	.12	.11	.11	.16
K Scale	.01	.13	-.15	-.26**	-.19	-.41**

Attitude Measures; Total Population

* = significant beyond the .05 level of significance

** = significant beyond the .01 level of significance

being defensive. This, therefore, points out that females tend to be less defensive when they express more liberal attitudes towards cheating. They are frank in expressing their liberal attitudes about cheating. It seems that females are not as defensive as males in this regard, for the male sample yields no significant correlation.

On Q 1 one sees a significant negative correlation in the male sample, -.20 which exceeds the .05 level of significance, between attitudes about cheating and the P scale of the PRS which "is characterized by concern that one may not be capable of meeting the difficulties of life." The person feels inadequate himself - the inadequacy being an inner quality or personality characteristic. Therefore, it might be said that the more adequate the male feels or less anxious he is about his own adequacy the more liberal he will be in his attitudes concerning cheating.

In subdividing the population and looking merely at those students who cheated Table 10 duplicates some of the results as shown on Table 9. However, there are also some differences. What has been said concerning the female sample on Table 9 is also to be observed on Table 10. There is a significant positive correlation, .51 which is significant beyond the .05 level of significance, between external anxiety, the O scale of the PRS, and attitudes about cheating for the female sample on Q 2. The more anxious the females are about external pressures the

Table 10

Correlations Between Anxiety Scales and

Attitudes About Cheating for Cheating Sample

	Attitude Measures					
	Q 1			Q 2		
	Cheating Sample					
Anxiety Scale	B.Sex. (N=71)	Male (N=43)	Female (N=28)	B.Sex. (N=51)	Male (N=34)	Female (N=17)
M Scale of PRS	-.06	-.17	.14	.03	.03	.23
O Scale of PRS	.06	-.22	.36	.19	.13	.51*
P Scale of PRS	-.09	-.25	.17	.08	.09	.36
PRS - Total	-.04	-.27	.28	.13	.10	.45
MAS - Total	-.08	-.29	.23	.07	.03	.40
K Scale	.11	.36*	-.21	-.25	-.20	-.50*

* = significant beyond the .05 level of significance

more liberal they are in their attitudes about cheating. It also holds true that on Q 2 females are less defensive about admitting their more liberal attitudes about cheating as is shown by the negative correlation -.50 which is significant beyond the .05 level of significance.

On Q 1, however, it shows that males are quite defensive in admitting to their attitudes about cheating. There is a positive correlation of .36 which is significant beyond the .05 level of significance between the K scale and attitudes about cheating which points to the tendency of males to be more defensive as they express more liberal attitudes about cheating. But there is a large difference between Q 1 and Q 2 as to the K scale and attitudes about cheating in the male sample which will be discussed later.

In general, as to the third hypothesis it is shown by the results on Tables 9 and 10 that in certain instances and with the different sexes there are significant relationships between the anxiety in college students and their attitudes about cheating. Therefore, with reservations the hypothesis can be accepted.

Tables 11 and 12 show the correlations that exist between Q 1 and Q 2 in relation to the total tested population and in relation to the cheating sample considered separately. The sexes are again broken down, and it is seen that in all instances all correlations are significant beyond the .01 level.

Table 11

Correlations Between Q 1 and Q 2

for Total Population

	Q 2 Total Population		
	Both Sexes	Male	Female
Q 1	.48**	.49**	.45**

** = significant beyond the .01 level of significance

Table 12

Correlations Between Q 1 and Q 2

for Cheating Sample

	Q 2 Cheating Sample		
	Both Sexes	Male	Female
Q 1	.42**	.37**	.62**

** = significant beyond the .01 level of significance

Q 2 was found to have a .89 split-half reliability coefficient which gives more meaning to the significant correlations found between Q 1 and Q 2.

Tables 13-15 show the correlations between the students' anxiety, their attitudes about cheating, and their actual cheating behavior and their achievement in the course as measured by their total semester accumulated points on all the exams. As was true generally when considering the anxiety scales it was found that there are no significant correlations between the anxiety levels and the students' achievement as shown by Table 13.

However, there do exist significant correlations between the students' attitudes about cheating and their achievement. On Q 1 there is a negative correlation of -.17 which is significant at the .05 level of significance which is the case on Q 2 yielding a significant negative correlation of -.18. Therefore, it might be said that there is a significant relationship between attitudes about cheating and achievement in the student population tested so that the students who express more liberal attitudes concerning cheating achieve lower grades than those who are more strict in their attitudes. This finding seems to be truer for males than for females, but neither is significant in themselves as shown on Table 14.

Table 15 shows the relationships between the students' actual cheating behavior and their achievement in the course.

Table 13

Correlations Between Anxiety Scales and Students' Semester Points

Anxiety Scale	Semester Points Both Sexes (N=196)	Male (N=116)	Female (N=80)
M Scale of PRS	-.01	-.05	.06
O Scale of PRS	-.03	.04	-.12
P Scale of PRS	-.06	-.03	-.11
PRS - Total	-.04	-.02	-.08
MAS - Total	-.01	.01	-.05
K Scale	.06	.06	.04

Table 14

Correlations Between Attitudes About Cheating and Students' Semester Points

Attitude Measure	Semester Points Both Sexes	Male	Female
Q 1	-.17*	-.17	-.13
Q 2	-.18*	-.18	-.14

* = significant beyond the .05 level of significance

From the results shown on Table 15 there are significant correlations at the .01 level of significance between the students' true test scores, their own corrected scores, their difference scores or cheating scores and their achievement in the course. Therefore, it can be said that the higher the students' true scores the better they achieve which is self evident. Also, it is shown that the better students as to achievement cheat less than the poorer students. However, when considering the sexes separately it is true for males but not for females, so that the better male students as to achievement cheat less. But this is not necessarily so for females.

Chi Squares were also run between the students who did cheat and those who did not for the following variables: anxiety, attitudes about cheating, and achievement in the course. As was stated previously the frequency charts used in determining the Chi Square values for the six anxiety variables were divided into three categories of high, medium, and low on a 20 - 60 - 20 percentage basis respectively. For the scores on Q 1, Q 2, and the total semester accumulated points the categories remained divided into high, medium, and low but on a 33 and one third percentage basis for each. Significant relationships were discovered between the cheaters and the non-cheaters on Q 1, Q 2, and on the achievement scores, but there was found no relationship when considering the anxiety scales. Relationships existed for the total tested population as well as with the male sample

Table 15

Correlations Between Students' Cheating Behavior and Their Semester Points

Cheating Behavior	Semester Points Both Sexes	Male	Female
True Test Score	.70**	.77**	.55**
Student Test Score	.62**	.67**	.50**
Difference Score	-.26**	-.37**	-.12

** = significant beyond the .01 level of significance

but not so far as the female sample is concerned. Thus, it might be said that the female sampling of cheaters and non-cheaters is independent of the attitudes about cheating and achievement in the course, but males and the population taken as a whole are dependent on these variables. Neither of the samples is dependent upon the anxiety variables.

Discussion

As was shown the results in part support the hypotheses presented for this research project. Non-significant results, however, were consistently evident as regards the first hypothesis which stated that significant positive correlations between the students' anxiety levels and their actual cheating behavior would result. The predicted correlations were unattainable when the tested population was considered as was true when the sexes were viewed separately. The first hypothesis was thus rejected, so that one cannot say that the more anxious a student is the more likely that he will cheat. Therefore, no support can be given to Mowrer's contention (1953) that the person who cheats is one example of a neurotic individual - neurotic referring to anxiety neurosis as defined by Keehn (1956).

With the negation of this hypothesis it might be said that student cheating is merely relative to the many situational variables at hand. Opposed to any specific factors, including student anxiety, honesty or dishonesty may be relative to the time, the place, and the stimulus as well as the individual student himself as has been reported by a number of investigators (Campbell & Koch, 1930; Hartshorne & May, 1928a; James, 1933; McQueen, 1957; Miller, 1927; Mischel & Gilligan, 1964; Omwake, 1939; Woods, 1957).

However, even though the results did not show any significant correlations with respect to anxiety and actual cheating behavior, there were findings which showed that females who expressed their liberal mindedness as to their attitudes about cheating were in fact anxious as to external demands placed upon them. These females were also less defensive in admitting to these attitudes - the more liberal their attitudes the less defensive they were. But yet these females were not found to be actually cheating to any significant degree. Although they admitted to having more liberal attitudes by expressing them, their cheating behavior did not coincide with these attitudes. But from the results it was shown that their more liberal attitudes correlated with their anxiety over external or social pressures. So, in a way, it seems that females are affected, even though it may be just their views and not their actual behavior that is affected, by the anxiety which they experience. But again whether this external anxiety is in effect pressure from the outside or whether it is just falsely perceived by the females is yet another question which would have to be further explored. In fact, however, the findings show that this anxiety is real to them whichever it may be. So it is seen that these results in some way do give credance to the findings of numerous other researchers who have discovered that external pressure does play a part in cheating even though in this case it is merely linked to attitudes about cheating.

The results have also pointed to the fact that males are more liberal in their attitudes about cheating than are females. However, whereas this trend of thinking has not produced more cheating in the female sample it has shown in the male sample that the more liberal or less moralistic attitudes concerning cheating the more the males cheat. This leads to a partial acceptance of the second hypothesis which expected a significant positive correlation between actual cheating performance and attitudes about cheating. With the partial confirmation of this hypothesis then it is possible to question the findings of Corey (1937) and Freeman and Ataöv (1960) who have stated in their articles about attitudes and cheating that overt cheating behavior is not significantly related to the students' attitudes about cheating. Possibly their attitude measures did not actually measure what they were supposed to measure, or possibly their subjects were too defensive in admitting to their attitudes about cheating. Whatever the case may be the findings of this study are in opposition to their results in regards to the present male sample.

In contrast to the females who seem to be anxious about external pressure which may be effecting their voiced values or attitudes there seems to be a tendency for males who are less anxious about their personal adequacy or inadequacy as the case may be to express more liberal attitudes towards cheating. This was shown on Q 1 in regards to the P scale of the PRS (Refer to

Table 9). There appeared a significant negative correlation of -.20, significant beyond the .05 level of significance, between anxiety as to personal adequacy and attitudes about cheating - the more liberal the attitudes the less anxious the males felt concerning their own adequacy. This finding might possibly have reference to the hypothesis first presented by Brownell (1928) and later by Hildebrand (1953) and Eysenck (1955) that the cheater is usually an extravert, or that cheating is a function of extraverted neurosis which has also been implied by numerous authors (Columbia University, 1965; Jacob, 1957; Parr, 1936; Strang, 1937; Trabue, 1962) in their emphasis on the social life of the cheater as a predominant feature.

If one could justifiably say that the male extravert is one who feels adequate about his own self, then possibly this finding could in reality substantiate these past conclusions. And as to females it may be just that their anxiety concerning external demands causes them to seek conformity in an extraverted manner. This could possibly be checked by means of another study on cheating in which more personal data as to the students' extracurricular activities would be ascertained. It does seem likely that males and females could show their extraverted personalities in such a manner as shown by these present results; the male who feels adequate in himself expresses liberal attitudes towards cheating and overtly does cheat whereas the female who feels pressure from outside and shows anxiety about it will justify cheating more but will not cheat in accordance with her attitudes - she will go along with conformity up to a point.

However, in checking the differences in results between Q 1 and Q 2 there is inconsistency in the male sample as to the P scale of the PRS and attitudes about cheating. In reference to Table 9 Q 2 shows no significant correlation between these two variables - personal adequacy and attitudes about cheating. As was mentioned previously Q 1 yielded a significant negative correlation. There is a difference of .30 between the two questionnaires. Q 2 shows a positive correlation, though not significant. However, it does point to a trend for the male to feel inadequate as he expresses more liberal attitudes about cheating. In checking the K scale (Refer to Tables 9 and 10) in reference to attitudes about cheating it appears that possibly the males were more defensive in answering Q 1 than they were in answering Q 2, for Q 1 gives positive correlations while Q 2 gives negative correlations.

Thus, if such is the case, then what was pointed out in the Method section of this present project as being a purpose for the use of Q 2 - student honesty in ascertaining their own personal reactions if they themselves were placed in a cheating situation - did in fact occur. The students, both male and female, appeared to be less defensive in answering Q 2 when it pertained to them directly than they were in answering Q 1 when it concerned itself with fictitious characters. The students were less intent on making themselves appear good, and thus possibly expressed more honest opinions on Q 2 than on Q 1.

Therefore, if the differences in the two questionnaires are attributed to the subjects attending more on Q 2 as to their attitudes about cheating, then possibly the expressed adequacy of the males as seen on Q 1 really was just a defense against their true feelings of inadequacy. However, although the difference was large between the questionnaires in relation to personal adequacy and attitudes about cheating there remained just a tendency on Q 2 for the inadequate feelings on the part of the male to be significant in relation to their expressed attitudes about cheating. Extraversion then might just possibly be a defense against feelings of inadequacy also. But this would have to be further explored to be able to say with any certainty.

Another factor that showed up in the results was the finding that females were less defensive than males on the K scale when correlated with their attitudes about cheating. This is in contrast to the suggestion by Anderson (1957) that college women might be more defensive in expressing their attitudes about cheating than were college men. However, his finding that males are more liberal in their attitudes about cheating than are females is supported by the present results as was mentioned previously. In general then, with reservations in respect to the anxiety levels or types of anxiety that one speaks about the third hypothesis which expected to find significant positive correlations between the students' expressed attitudes about cheating and their anxiety levels is substantiated by the present results when consideration is given to the sex differences.

The findings of this study in relation to achievement and cheating versus non-cheating have substantiated the numerous researchers (Campbell, 1933; Canning, 1956; Columbia University, 1965; Fenton, 1927; Hartshorne & May, 1928a; Hoff, 1940; Howells, 1938; Parr, 1936) in which it was found that students who receive poorer grades tend to cheat more than students who receive the better grades (Refer to Table 15). In general, the present study has shown that the better students cheat less. This has been shown to be true at a significant level for the male sample but not necessarily so for the female sample. This may possibly stem from the females' anxiety over external pressures that no matter how good they are as students the need to cheat is still present.

It also appears from the results of this study that with more liberal attitudes towards cheating the achievement level decreases so that students who justify their cheating to a greater extent receive lower grades than those who are stricter in their attitudes concerning cheating (Refer to Table 14). However, the correlations found on both attitude measures just did reach significance at the .05 level for the total population tested, but this did not occur for either sex considered separately, so that possibly the correlations might not hold up consistently.

In concluding, the results pointed to a rejection of the first hypothesis - there were no significant correlations, positive or negative, between the tested students' anxiety and their actual cheating performance. However, it is felt that if the anxiety tests - the PRS and the MAS - were administered in closer proximity to the administration of the two questionnaires and to the administration of the self-scoring technique to determine actual cheating behavior, then possibly the results may have substantiated the hypothesis concerning a relationship between anxiety and actual cheating. The pressures of college may not have been evident at the beginning of the semester to show appreciable anxiety.

As to the second hypothesis there was a significant positive correlation between male attitudes about cheating and their cheating behavior but not so for the female sample.

And in regards to the third hypothesis females showed significant positive correlations between their anxiety about external demands and their attitudes about cheating. The main question for males was their feeling of adequacy or inadequacy in expressing their attitudes about cheating. In the final analysis it was felt that the more inadequate the male feels the more he is inclined to express liberal attitudes about cheating. This, however, was not fully substantiated by the results. Females were shown to be less defensive than males in expressing their attitudes about cheating.

Finally it might be stated that the males and females did not differ significantly (t = .51) as to their actual cheating behavior. It was discovered that 38.7% of the male sample cheated while 35% of the female sample cheated. The total percentage of cheaters of the 196 students tested was found to be 37%.

Summary

The purpose of this study was to determine whether a relationship existed between the anxiety level of college students, their cheating on an examination, and their attitudes towards such cheating.

196 college freshmen enrolled in a general psychology course were used as subjects. They were administered the Manifest Anxiety Scale and the Nicolay-Walker Personal Reaction Schedule as measures of their anxiety. Two questionnaires concerning their attitudes about cheating also were administered. To discover their actual cheating behavior the self-scoring technique of Hartshorne and May was used with a regularly scheduled examination.

The results were correlated, and the findings showed: 1) no significant correlations between anxiety and cheating behavior, 2) significant correlations only in the male sample between attitudes about cheating and cheating behavior, and [illegible]nificant correlations in the female sample between anxiety [illegible] pressures and attitudes about cheating.

References

Alexander, S. Tarnish buttons: cheating scandal at Air Force Academy. _Life_, 1965, 58 (Feb. 12), 25+.

Anderson, F. Attitudes of university students toward cheating. _J. educ. Res._, 1957, 50, 581-588.

Anonymous. A cadet involved sizes up the scandal. _Life_, 1965, 58 (Feb. 19), 68-73.

Anonymous. Honesty in college examinations under the honor system. _Sch. & Soc._, 1930, 31, 577-580.

Atkins, Blanche E., & Atkins, Ruth E. A study of the honesty of prospective teachers. _Elem. Sch. J._, 1936, 36, 595-603.

Barbu, Z. Studies in children's honesty. _Quart. Bull. Brit. psychol. Soc._, 1951, 2, 53-57.

Barclay, Dorothy. Why children cheat in school. _New York Times Magazine_, 1958, (Jan. 19), 52.

Bird, C. The detection of cheating in objective examinations. _Sch. & Soc._, 1927, 25, 261-262.

Bird, C. An improved method of detecting cheating in objective examinations. _J. educ. Res._, 1929, 19, 341-348.

Bond, C. M. Honesty attitudes of 300 college students. _Relig. Educ._, 1939, 34, 92-97.

Bothurst, J. E. Written tests of honesty. _Publ. Person Stud._, 1929, 7, 98-106.

Brownell, H. C. Mental test traits of college cribbers. _Sch. & Soc._, 1928, 27, 764.

Burton, R. V. Generality of honesty reconsidered. _Psychol. Rev._, 1963, 70, 481-499.

Cabot, R. C. _Honesty_. New York: Macmillan, 1938.

Campbell, W. G., & Koch, Helen. Student honesty in a university with an honor system. _Sch. & Soc._, 1930, 31, 232-240.

Campbell, W. C. Student honesty as revealed by reporting of teacher's errors in grading. _Sch. & Soc._, 1931, 33, 97-100.

Campbell, W. G. Measurement in determining the personality and behavior of the college cribber. _Education_, 1933, 53, 403-408.

Campbell, W. G. A comparative investigation of the behavior of students under an honor system and a proctor system in the same university. _Univ. Sth. Calif. educ. Monogr._, 1935, 6, xiii + 95.

Canning, R. R. Does an honor system reduce classroom cheating? An experimental answer. _J. exp. Educ._, 1956, 24, 291-296.

Carlson, H. S. Teachers' attitudes in relation to classroom morale and cheating. _J. exp. Educ._, 1935, 4, 154-213.

Carter, T. M. Cheating as seen by college students. _Int. J. Eth._, 1929, 39, 341-351.

Cattell, R., & Gruen, W. Primary personality factors in the questionnaire medium for children eleven to fourteen years old. Educ. psychol. Measmt., 1954, 15, 50-76.

Chambers, E. V. A study of dishonesty among the students of a parochial secondary school. Ped. Sem., 1926, 33, 717-728.

Cole, W. G. Cheating your way through college. Nation, 1960, 190, 416-418.

Columbia University Bureau of Applied Research. Startling survey on college cribbing. Life, 1965, 58 (Feb. 5), 84 +.

Corey, S. M. Professed attitudes and actual behavior. J. educ. Psychol., 1937, 28, 271-280.

Cowen, P. A. Professional spirit. Sch. & Soc., 1927, 26, 108-109.

Crawford, C. C. Dishonesty in objective tests. Sch. Rev., 1930, 38, 776-781.

Dickenson, H. F. Identical errors and deception. J. educ. Res., 1945, 38, 534-542.

Drake, C. A. Why students cheat. J. higher Educ., 1941, 12, 418-420.

Ellison, J. American disgrace: college cheating. Sat. Even. Post, 1960, 232, 13-58.

Eysenck, H. J. A dynamic theory of anxiety and hysteria. J. ment. Sci., 1955, 101, 28-51.

Fenton, N. An objective study of student honesty during examinations. Sch. & Soc., 1927, 26, 341-344.

Finkenbinder, E. O. A measure of the amount of cheating in college students. *Proc. Ia. Acad. Sci.*, 1933, 40, 201.

Franklin, R., Mater, M., & Remmers, H. *Youth looks at education.* Lafayette, Ind.: Purdue Univ., 1959.

Freeman, L., & Ataöv, T. Invalidity of indirect and direct measures of attitude toward cheating. *J. Pers.*, 1960, 28, 443-447.

Gillentine, Flora M. Why do college students cheat? *Peabody J. Educ.*, 1937, 15, 15-17.

Glicksberg, C. I. Student ethics and the honor system. *Sch. & Soc.*, 1957, 85, 181-183.

Gordon, H., & Davidoff, P. Honesty of pupils in answering adjustment questionnaires. *Sch. & Soc.*, 1943, 57, 54-56.

Gross, M. Mynette The effect of certain types of motivation on the "honesty" of children. *J. educ. Res.*, 1946, 40, 133-140.

Hartshorne, H., & May, M. *Studies in deceit.* New York: Macmillan, 1928. (a)

Hartshorne, H., & May, M. *Studies in the organization of character.* New York: Macmillan, 1928. (b)

Henricks, M. L. Changing mores concerning cheating on examinations. *Sch. & Soc.*, 1958, 86, 413-414.

Hetherington, E. M., & Feldman, S. E. College cheating as a function of subject and situational variables. _J. educ. Psychol._, 1964, 55, 212-218.

Hildebrand, H. P. A factorial study of introversion-extraversion by means of objective tests. Unpublished doctoral dissertation, London Univ., 1953.

Hoff, A. G. A study of the honesty and accuracy found in pupil checking of examination papers. _J. educ. Res._, 1940, 34, 127-129.

Hoke, R. L. Attacking the cheating menace. _Ky. Person. Bull._, 1933, 8, 29-34.

Hoult, T. F., & Hudson, J. W. Blindness and sightedness as factors in student cheating: an experiment. _Calif. J. educ. Res._, 1964, 15, 199-204.

Howells, T. H. Factors influencing honesty. _J. soc. Psychol._, 1938, 9, 97-102.

Jacob, P. E. _Changing values in college._ New York: Harper & Bros., 1957.

James, H. W. Honesty as a character trait among young people. _J. educ. Res._, 1933, 26, 572-578.

Johnson, L. H. Pupil cheating. _Clearing House_, 1943, 10, 72-74.

Kayser, D. Cheating in college: how much and how bad. _U. S. News & World Report_, 1960, (March 16), 110+.

Keehn, J. D. Unrealistic reporting as a function of extroverted neurosis. _J. clin. Psychol._, 1956, 12, 61-63.

Krueger, W. C. Students' honesty in correcting grading errors. J. appl. Psychol., 1947, 31, 533-535.

Lacombe, P. The problem of the identical twin as reflected in a masochistic compulsion to cheat. Int. J. Psycho-Anal., 1959, 40, 6-12.

Lewis, A. A. Looking for an honest man. Sci. Monogr. N. Y., 1939, 49, 267-275.

McNally, J. Summaries of researches reported in degree theses: a study in classroom cheating in arithmetic and spelling. Brit. J. educ. Psychol., 1950, 20, 137-139.

McQueen, R. Examination deception as a function of residual, background, and immediate stimulus factors. J. Pers., 1957, 25, 643-650.

Maller, J. B. The measurement of conflict between honesty and group loyalty. J. educ. Psychol., 1932, 23, 187-191.

Mathews, C. O. The honor system. J. higher Educ., 1932, 3, 411-415.

Mathews, C. O. Attitudes toward academic honesty. Ment. Health Observ., 1933, 1, 3.

Miller, G. F. An experimental test of intellectual honesty. Sch. & Soc., 1927, 26, 852-854.

Mills, J. Changes in moral attitudes following temptation. J. Pers., 1958, 26, 517-531.

Miner, J. B. The control of college cheating. Sch. & Soc., 1930, 32, 199-201.

Mischel, W., & Gilligan, Carol. Delay of gratification motivation for the prohibited gratification, and responses to temptation. J. abnorm. soc. Psychol., 1964, 69, 411-417.

Moore, E. H. A technique for scoring honesty in classroom performance. J. educ. Sociol., 1934, 8, 34-43.

Mowrer, O. H. Neurosis: a disorder of conditioning or problem solving? Ann. New York Acad. Sci., 1953, 56, 273-288.

Mueller, Kate H. Can cheating be killed? Personnel Guid. J., 1953, 31, 465-468.

Omwake, G. Honesty is relative. Sch. & Soc., 1939, 49, 714-716.

Parr, F. W. The problem of student honesty. J. higher Educ., 1936, 7, 318-326.

Pendleton, J. D. Education for honesty? Nat. educ. assn. J., 1957, 46, 598.

Robinson, E. A. Choice, chance, and cheating. Educ. Theory, 1957, 7, 63-67.

Saupe, J. L. An empirical model for the corroboration of suspected cheating on multiple-choice tests. Educ. psychol. Measmt., 1960, 20, 475-489.

Schnepp, A. F. College students' principles of honesty. J. higher Educ., 1940, 11, 81-84.

Stains, Katherine B. The beginnings of dishonesty. Understanding the child, 1954, 23, 55.

Strang, Ruth. Behavior and background of students in college and secondary schools. Harper, 1937, 62-91.

Taylor, Janet A. A personality scale of manifest anxiety. _J. abnorm. soc. Psychol._, 1953, 48, 285-290.

Thomasson, C. W. Some student attitudes. _Peabody J. Educ._, 1941, 19, 417-423.

Trabue, Ann. Classroom cheating: an isolated phenomenon? _Educ. Rec._, 1962, 43, 309-316.

Tuttle, H. S. Honesty trends in children. _J. educ. Sociol._, 1931, 5, 233-239. (a)

Tuttle, H. S. Honesty trends of elementary school children. _Relig. Educ._, 1931, 26, 742-747. (b)

Unger, S. M. On functioning of guilt potential in a conflict dilemna. _Psychol. Rep._, 1962, 11, 681-682.

Van Pool, G. M. On your honor? _Sen. Schol._, 1958, 71, 6-7.

Walker, R. E., & Nicolay, R. C. A reexamination of anxiety: the Nicolay-Walker Personal Reaction Schedule. Unpublished manuscript, Loyola Univ., 1963.

Weinland, J. D. An attempt to measure "cribbing" in objective examinations. _J. educ. Sociol._, 1947, 21, 97-100.

Woods, R. C. Factors affecting cheating and their control. _Proc. W. Va. Acad. Sci._, 1957, 29, 79-82.

Yepsen, L. M. The reliability of self-scored measures. _Sch. & Soc._, 1927, 26, 657-660.

APPENDIX

1) Introductory Questionnaire
2) Questionnaire 1 (Anderson)
3) Questionnaire 2 (Knake)

Introductory Questionnaire

This experiment is being conducted by a graduate student from another university for the purpose of comparing the results of two questionnaires. Therefore, he would like you to please put your name on each questionnaire. After the second questionnaire is given at a later date the names will be coded. However, in order that the subjects be awarded with an experimental point for their participation in this experiment the names will merely be used to record that they have participated. This will be counted toward the five points necessary for your course work. However, both questionnaires must be taken to receive the one point credit. The experimenter is not interested in the results <u>per</u> <u>se</u> but only in comparing the two questionnaires.

Name: ______________________ Age: ______ Sex: _____

Year in College: Fr So Ju Se Major: ______________

Accumulative Point Average:___ Average in Major: ___

Religion: ______________ Father's Occupation: __________

Parental Ancestry: F ________ Goal in Life as to Occupation:
M ________ ______________ If uncertain, state as such.

Encircle the appropriate letter; if neither, qualify.

1. Would you say that:
   a) You are more interested in education for education's sake (increasing your self knowledge), or
   b) You are more interested in obtaining a degree from the university.

2. Whom would you choose?
   a) A hard teacher (as to work and grades), but a good teacher (implants knowledge), or
   b) A soft teacher with whom you could get an easy grade without much work.

3. In doing an assignment do you:
   a) Do the bare minimum for a grade, or
   b) Put extra time and effort into it to do the best job possible.

4. In writing a book report and the time is available do you:
   a) Read the book entirely, or
   b) Try to find a summary.

5. If you don't understand a point in class, do you:
   a) Ask the teacher to explain, or
   b) Let it ride.

6. Do you:
   a) Attend academic lectures given outside the classroom, or
   b) Not attend.

7. Do you:
   a) Read extra academic books other than your textbooks, or
   b) Not read any extra books other than textbooks on the academic level.

Questionnaire 1

INSTRUCTIONS: Using a five point rating scale rate the following behavioral situations. Place a figure (5) in front of the situation if you feel that the college student described is definitely justified in behaving this way. Place a figure (1) in front of the situation if you feel that the college student described is definitely not justified in behaving in this way. Assign the remaining numbers in the scale as to how you deem the justification to be or not to be. Example - place (3) before a situation which you deem to be midway between being justified and not.

_____ 1. Pat Lake makes a habit of stopping after class to talk with her instructor about material she didn't understand.

_____ 2. Nancy Smith, a college sophomore, was having difficulty with a chemistry test, so she let her eyes wander to her neighbor's paper and got the necessary help.

_____ 3. Sonny Brown, who had studied for a quiz, nudged his neighbor Jim and asked for the answers to the first five multiple choice questions.

_____ 4. Rufus Palmer, who hadn't studied for a month prior to his chemistry final, enlisted the help of Neal Parker who had completed this course and could help him cram on the type of questions his professor usually asked.

_____ 5. Mabel Johnson borrowed a term paper from her roommate, Ruth and after a few small changes handed it in to her botany professor.

_____ 6. The Alpha Beta Gamma Sorority hired an advanced graduate student to tutor their pledges in English. (Respond to the sorority.)

_____ 7. Jane Jones, realizing that the instructor was not watching the class carefully during a quiz, opened her notebook which was lying at her feet and used it during the quiz.

_____ 8. During a hard part of a test Mary Mooney opened her purse and pulled out a cheat sheet which she used.

_____ 9. The night prior to the test, Al Kennedy got together with four of his classmates to study for the law exam.

_____ 10. John noticed that Sally was having difficulty on the math test and so he showed her his answers. (Respond to John's behavior.)

_____ 11. Kenneth Oswall went to the fraternity file and took out the stack of old tests which he reviewed in readying himself for the history exam.

_____ 12. Katie Wilt's friend, Myrtle, was also the secretary to Katie's math instructor. Through Myrtle, Katie obtained a copy of the approaching final exam.

_____ 13. As the end of the semester was approaching Hank Keck needed a term paper for his political science course, and so he found one he had formerly used in a history class, typed up a new front page, and turned it in for credit.

_____ 14. Barney Pate and his friend Hubert Parton used a system on a true-false test whereby if the answer was true Hubert coughed once and if false Hubert coughed twice. Thus Barney received the help he needed.

_____ 15. Miriam Moore, knowing that her friend has just finished a finance test which was coming up the next hour for herself, hurried to ask her friend about the test questions.

_____ 16. As the history instructor was copying the discussion questions on the blackboard, Jim Brown hurriedly opened his textbook where he found the answer to the first question.

_____ 17. Having been told by the math instructor that the test would utilize five formulas, Joan Kelly hurriedly entered the classroom and wrote the formulae, which she had memorized, on the desk before forgetting took place.

_____ 18. Knowing that their English exam was being mimeographed, Tom and Vic searched through the waste paper dumped in cans behind the building and found discarded imperfect copies of the test.

_____ 19. Sue Evens, feeling that it might help her grade, stopped to tell her instructor how much she had enjoyed the course.

_____ 20. Jim Williams needed a term paper for his English literature course. In order to satisfy this requirement he hired an English major to complete this project.

_____ 21. Alex Jordan, knowing that his psychology instructor used a grader - a graduate student, persuaded this young lady to accept $10.00 for a grade of A on the final. (Respond to Alex's behavior.)

_____ 22. Connie Owen, feeling that she was poorly prepared for the coming quiz, printed some notes on adhesive tape which she placed on the inside hem of her skirt and to which she referred during the quiz.

_____ 23. In a class in which Professor Jones placed all students on their honor, Michael Kalb referred to notes which he had brought to the exam.

_____ 24. Sylvester Lancaster, in his biology course in which there are 212 students, paid Bob Bearon to take his final exam. (Respond to Sylvester's behavior.)

_____ 25. Being advised that no books would be permitted in the testing room during the exam, Joe Watts asked to go to the men's room where he referred to notes he had previously left for this purpose.

_____ 26. Daisy Boone, having neglected her zoology course, made tiny notes which she held in the palm of her hand and which she found useful during the final exam.

_____ 27. During an exam, Frances Mize used a scroll made of adding machine tape and match sticks. By rolling the tape on the match sticks she was able to look at the notes she had prepared for the psychology test.

_____ 28. Lois Wheaton, realizing that she didn't know the answers to the instructor's economics test, turned in an empty blue book, and after going to the library and putting the correct answers in another blue book, persuaded the janitor, under some pretext, to let her into the instructor's office where she switched tests before they were corrected.

_____ 29. Larry has ten physics problems to hand in tomorrow. Instead of doing them himself, he copies the answers from his friend Bob. (Respond to Larry's behavior.)

______ 30. The philosophy professor tells his students a week before the final exam what the three essay questions will be, but there will only be one of these three on the exam which will take up the entire testing period. So Ray Erickson writes the three questions and answers in three blue books and makes the switch in the exam after writing on anything during the exam.

Questionnaire 2

<u>INSTRUCTIONS</u>: Immediately below each situation numbered 1-16 you will find four alternative actions. On each side of these alternatives you will find a column: the one preceding the alternative actions is labled <u>Should You</u>, and the column following the alternatives is labled <u>Would You</u>. Under each column and beside each alternative rank each action from 1 to 4. Give the number (1) to that alternative action to the situation which <u>primarily Should</u> be done and which <u>primarily</u> you yourself <u>Would</u> do. Rank the others accordingly on down the scale to 4 which would be the last action - that which should not be done or that which you would not do.

1. You are sitting next to a good friend of yours while taking an exam and you notice that he doesn't know an answer:

<u>SHOULD YOU</u>:		<u>WOULD YOU</u>:
______	a) Do nothing.	______
______	b) Show him your answer.	______
______	c) Tell him the right answer.	______
______	d) Move away from him.	______

2. You have a term paper to hand in next week and you don't have much time:

<u>SHOULD YOU</u>:		<u>WOULD YOU</u>:
______	a) Borrow one and make a few changes.	______
______	b) Get to work and do it on your own.	______
______	c) Get late permission even though it means a lowered grade.	______
______	d) Take one from the fraternity or sorority files.	______

3. If you knew that the exam was to be mimeographed and you knew where the waste paper was dumped:

<u>SHOULD YOU</u>:		<u>WOULD YOU</u>:
______	a) Keep your knowledge secret and do nothing about it.	______
______	b) Keep your knowledge secret but try to find discarded copies.	______
______	c) Make the information known to others as a way of obtaining the imperfect copies.	______

d) Inform the professor to take measures in guarding against this. _____ _____

4. In taking an exam and another student leaves his paper uncovered and you are having difficulty with the answers:

SHOULD YOU: WOULD YOU:

_____ a) Tell the student to cover his test. _____
_____ b) Get as many answers as you can from him. _____
_____ c) Keep your eyes on your own paper. _____
_____ d) Look at his paper only when you don't know an answer. _____

5. You are in a large class taking an exam and the teacher isn't proctoring closely and you haven't studied a great deal:

SHOULD YOU: WOULD YOU:

_____ a) Try to obtain an answer you don't know from somebody else. _____
_____ b) Open your notebook to find the answer. _____
_____ c) Do the best you can and take the grade you receive. _____
_____ d) Guess on the ones you don't know. _____

6. The teacher is writing the exam questions on the blackboard; you see that you don't know the first question and while the teacher is still writing on the blackboard:

SHOULD YOU: WOULD YOU:

_____ a) Skip it and wait to go on to Number 2. _____
_____ b) Try to do the best you can. _____
_____ c) Open your book and find the answer. _____
_____ d) Ask your neighbor for the answer. _____

7. You are given three test essay questions a week previous to the final exam, but you don't know which one will be the question asked:

SHOULD YOU: WOULD YOU:

_____ a) Write them up and learn them. _____
b) Write the answers in blue books prior to the exam and

make a switch when the exam is over.

c) Write one up, learn it, and hope you picked the correct one.

d) Write them on a small piece of paper and refer to it during the exam.

8. You are given an exam on the honor system without any proctors:

SHOULD YOU: WOULD YOU:

a) Prepare a crib sheet so you can refer to it.

b) Take the exam on your honor.

c) Ask someone for answers you don't know.

d) Cover your paper so someone else can't see it.

9. While taking an exam you notice someone trying to see your paper:

SHOULD YOU: WOULD YOU:

a) Cover your answers.

b) Leave your answers uncovered.

c) Tell the person what the answer is.

d) Move to another seat.

10. You are good friends with your professor's secretary who types his exams:

SHOULD YOU: WOULD YOU:

a) Obtain a copy from her.

b) Ask her what is on the exam.

c) Take the exam on your own merits.

d) Tell her to keep it a secret that she types his exams.

11. You have an appointment to see your professor before the exam; he isn't there, but his office is open and on his desk is a pile of unnumbered tests:

SHOULD YOU: WOULD YOU:

a) Leave and close the door.

b) Take a copy of the test.

c) Copy the questions from the

test.

d) Tell another professor to guard the exams or lock the door.

12. You know your professor gives the same tests to all of his classes and your class has the test after others have had it:

SHOULD YOU: WOULD YOU:

____ a) Have someone take an extra copy for you. ____

____ b) Ask the others for the questions. ____

____ c) Inform the professor of this. ____

____ d) Take the exam without prior knowledge. ____

13. You have physics or math problems to do for the next day's class, and you don't feel like doing them or you don't have enough time:

SHOULD YOU: WOULD YOU:

____ a) Go to class without the answers. ____

____ b) Make time, get to work and do the problems. ____

____ c) Copy the answers from someone else. ____

____ d) Have someone else do them for you. ____

14. You are in a very large class in which the professor does not know many of the students. You are not prepared to take the final, but a friend of yours had the course last year:

SHOULD YOU: WOULD YOU:

____ a) Take the test and accept the grade given to you. ____

____ b) Pay your friend to take it for you. ____

____ c) Take a crib sheet along with you. ____

____ d) Ask for an extension of time and take the exam late. ____

15. If your school were on the honor system and you saw someone cheating on an exam:

SHOULD YOU:		WOULD YOU:
_____	a) Tell him to stop.	_____
_____	b) Report him to the authorities.	_____
_____	c) Do or say nothing.	_____
_____	d) Take out your crib sheet and do likewise.	_____

16. You have a book report due next week and you don't have much time in which to do it:

SHOULD YOU:		WOULD YOU:
_____	a) Read the book and write the report.	_____
_____	b) Take one from the fraternity or sorority files.	_____
_____	c) Read a review on the book and copy that.	_____
_____	d) Get late permission even though it means a lowered grade.	_____

APPROVAL SHEET

The thesis submitted by Walter P. Knake, Jr. has been read and approved by three members of the Department of Psychology.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the Degree of Master of Arts.

Jun. 17, 1966
Date

[illegible]
Signature of Adviser