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Evaluation of Courses/Instructors: Book Cost Information and Commitment

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Table of Contents

List of Tables

List of Appendices

List of Figures

Abstract

The present study was designed to investigate the relationship between level of commitment to a college course, and information pertaining to the cost of book(s) for the course, and how such variables would interact to affect the subsequent evaluation of the course/instructor. It was expected that a state of cognitive dissonance would be present between the high commitment-higher than average cost group and the low commitment-higher than average cost group, which would manifest itself by less favorable evaluations of the course/instructor by the low commitment-higher than average group, than in the other five experimental groups. Results partially supported the prediction.

It was also found that a difference existed between the high commitment-lower than average cost group and the low commitment-lower than average cost group. Such a state of cognitive dissonance was apparently reduced by less favorable evaluations of the course/instructor by the high commitment-lower than average cost group, than by the low commitment-lower than average cost group.

The results were discussed in terms of cognitive dissonance theory and suggestions were made as to how and why subjects reduced any dissonance aroused. Suggestions for future research were provided.

The research described in this thesis utilized human subjects. The thesis prospectus was therefore examined by the Human Subjects Research Committee of the Psychology Department, Fort Hays State University, and found to comply with Title 45, Subtitle A - Department of Health, Education and Welfare, General Administration; Part 46 - Protection of Human Subjects.

May 5, 1987

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INTRODUCTION

As higher education proceeds into the 1980's, student attrition rates appear to be ever on the rise. Throughout the country, college administrators are perplexed in trying to find a solution to this problem, and in many places recruiting efforts have been substantially expanded. Likewise, the cost of a college education is on the increase. Such expenses may well play a role in students' perceived satisfaction with their education, and more specifically, with individual evaluations of instructors and/or college courses.

The present study will be concerned with the evaluation process and how information relating to the cost of books for college courses will affect students' evaluation of the course and the instructor. To assess the role cost information plays upon evaluations, students will be given different degrees of information concerning the costs of book(s) for a given college course, and evaluation scores will be looked at in light of the different levels of cost information.

Course and instructor evaluation

There has been a wide array of research in recent years concerned with how and why students evaluate courses and instructors in the manner they do, and with what particular aspects of a given course or instructor lead either to a positive or a negative evaluation. Most such research has dealt with evaluation of the instructor, rather than focusing specifically on the characteristics of the course. The present study is not specifically concerned with isolating course and instructor as separate components in the evaluation process, and will hence treat

them as one and the same. Otherwise stated, characteristics of the instructor, and characteristics of the course will be treated as one component, to be labeled evaluation. At least one study, Cohen (1973) has provided empirical justification for such a procedure. Cohen was interested in what particular aspects typically outside of an instructor's control, e.g., required or elective course, class size, time of day, etc., affect the evaluation of a course, and what individual characteristics of an instructor, e.g., open mindedness, availability for consultation, etc., affect the evaluation of the instructor. The results indicated a substantial positive correlation between students' ratings of the course and of the instructor. Cohen interpreted these findings as an inability on the part of the student to separate the individual course characteristics from those of the instructor when undertaking the evaluation process. In light of Cohen's work, and in relation to the nature of the present study, the literature dealing with course and/or instructor evaluation will be treated jointly, under the assumption that there are no discernible differences which will affect the hypotheses to be generated by the present study.

Evaluations: Empirical data

Peck (1977) was concerned with students' preconceived expectations of a course and its instructor, and how these expectations, treated independently from one another, relate to subsequent evaluation of the course. The results indicated no significant difference between course expectation and instructor expectation when evaluating the course, but that when course expectations and expectations of the instructor were grouped together as either high or low expectation, a high expectation

led to a significantly higher evaluation of the course than did a low expectation. Additional evidence that preconceived expectations on the part of the student have an affect on subsequent ratings has been provided by Tubb and Stenning (1975). Tubb and Stenning focused specifically on preconceived expectations of an ideal student-teacher learning situation, and disregarded specific course expectations. In Tubb and Stenning's study, instructor ratings served as the dependent variable, and an ideal student-teacher relationship was defined in terms of general teaching ability, outside assignments, examinations, and classroom discussion, and how the students preconceived their role in such activities. Evidence suggested that students' preconceived expectations of an ideal student-teacher learning situation had a profound affect upon the ratings of instructors, in that the more positive the expectation, the higher the evaluation, and the more negative the expectation, the lower the evaluation. In another study, Good and Good (1973) hypothesized that a positive correlation between assumed similarity and attraction on the part of the student to the instructor would lead to a higher evaluation of the instructor, than would a lesser degree of preconceived similarity. Good and Good's hypothesis was supported, which provides additional evidence that preconceptions on the part of the student will affect later evaluations, whether evaluation of a course, or evaluation of an instructor.

Other researchers have paid less attention to students' preconceptions, and have instead focused upon the grouping of instructor characteristics under a common heading, and determining the impact of such a given category on the evaluation process. Meredith (1975b)

established such a category, entitled, "instructor impact," which was defined in terms of good rapport with students, tolerance of differences, engagement in healthy confrontation of ideas and opinions with students, etc. Defined in the above manner, instructor impact, which was an attribute variable determined a priori and independently of the ratings of students involved in the evaluation process, appeared to have a significant affect upon the evaluation. The higher the instructor ranked in terms of impact, the higher the subsequent evaluation. However, in an earlier yet related study, in which instructor impact was identically defined as before, Meredith (1975a) produced another category, entitled "humanistic outcomes" which was concerned with aspects such as awareness of different philosophies, cultures and ways of life, tolerance and understanding of other people, social development, etc. Humanistic outcomes was likewise determined a priori and independently of the students involved in the actual evaluation, yet later accounted for 18% of the variance in course evaluation, whereas instructor impact accounted for 26%. It can thus be seen that instructor impact, and to a slightly lesser extent, humanistic outcomes, play a role in how students evaluate a college course.

Other researchers, Elmore and LaPointe (1975) produced results similar to those of Meredith (1975a; 1975b) in that a category of "teacher warmth," which was simply defined as interest in students, was found to be a primary variable in instructor evaluation. Similarily, Granzin and Painter (1973) categorized instructor characteristics in terms of warmth and personality, and found that the warmer and more friendly the instructor appeared to the student, the higher the rating

received. From their data, Granzin and Painter extrapolated the notion that instructors could improve their ratings by making a course seem important to the students, and that an enterprising instructor could apparently make several rather superficial changes in teaching procedures, and as a result receive an increase in student evaluation scores. Although defined along different dimensions, those studies concerned with the grouping of instructor characteristics under a common heading (Elmore & LaPointe 1975; Granzin & Painter 1973; Meredith 1975a; 1975b) have provided empirical support that instructor characteristics have an affect on students' evaluations of courses and instructors.

Factors affecting the evaluation process have not been limited to preconceptions or categories. Other researchers (Cohen, 1973; Gillmore, 1975) have been concerned with factors outside of an instructor's control, e.g. size of class, time of day class meets, and physical qualities of the classroom, and how these factors relate to instructor and course evaluation scores. Gillmore (1975) measured the affects of size of class, time of day class meets, location of class, and physical qualities of the classroom in an attempt to establish predictor variables in relation to subsequent instructor evaluation. No significant relationship was found, and it was concluded that such uncontrollable factors were not pertinent to evaluation scores. Cohen (1973) also measured factors outside the instructor's control, focusing on whether the course was required or elective, methods or non-methods, and the size of the class. However, unlike Gillmore, Cohen found that all factors of concern had significant affects on course ratings. Specifically, elective courses, non-methods classes, and large size classes all received more favorable ratings than their counterparts. Crittenden,

Nors, and LaBailly (1975) found a strikingly different relationship than did Cohen, in that the larger the class, the lower rating of the instructor, when other factors were held constant. Crittenden et al. concluded that a basic monotonic relationship between class size and instructor evaluation was in support of their data.

Other researchers have branched into more divergent aspects of the evaluation process. Frey (1976) was concerned with when the evaluations were administered, and also with what affect final exam performance had upon instructor ratings. Comparisons were made, and no significant differences were found between final exam performances of several different sections of an introductory calculus class and the evaluation scores of that class. Identical comparisons between the same classes were likewise made, varying the time the evaluation was administered, either during the last week of classes, or during the first week of the subsequent term. Once again, no significant differences were found. Linsky and Straus (1975) measured the relationship between instructor research activity pertinent to a given course, and subsequent course evaluation scores by students, and found no significant relationship. Abrami, Leventhal, Perry, and Breen (1976) dealt with evaluation scores in relation to whom actually administered the evaluation. It was found that students rated instructors more positively when it was believed that a faculty association was sponsoring the activity, than when informed a student association sponsored the evaluation.

It can readily be seen that the list of possible influential variables which affect the evaluation process is substantial. Factors ranging from the instructor's warmth, personality, and research activity, to the size of the class, and the administration of the

evaluation have all been discussed. Many other factors have not been mentioned, and at times the list of possible variables appears non-exhaustive. Suffice for the purposes of the present study that the reader have an understanding of the vast array of items which have been studied, and an appreciation of the magnitude of the problem when attempting to isolate variables of importance. In light of the available literature, no apparent research has been conducted which is concerned solely with the fluctuating and/or sometimes fixed costs of individual courses, e.g., cost of books, cost of additional materials, typing fees, etc. The present study will concern itself with how and if information relating to the cost of books will manifest itself in the subsequent evaluation process.

Theoretical framework: Cognitive dissonance

Information concerning the cost of books, and what effect takes place in light of such cost information when evaluating a course or instructor can be explained by a variety of theoretical paradigms. One such paradigm is that of Festinger (1957), who first proposed a theory which attempts to delineate those factors which give rise to a psychological state known as cognitive dissonance. Cognitive dissonance is defined as a motivational state that impells the individual to attempt to reduce and eliminate it. How such a notion relates to course/instructor evaluations will become clear upon elaboration of Festinger's theory. Consider, for example, a situation in which an individual spends a sizable sum of money on books for a college course. The same individual later finds that the course does not live up to personal expectations because there is possibly a dislike of the instructor, the material is uninteresting, the course is not challenging,

or a multitude of other conceivable reasons. The cognition that a large amount of money was invested is inconsistent with the cognition that the course does not live up to expectations. Thus, a state of cognitive dissonance is produced. It follows from Festinger's definition that the individual will attempt to reduce or eliminate the dissonant state, in order to bring internal cognitions into a state of consistency. There are several ways in which consistency can be accomplished, all of which will be discussed later. The reader should take note of the previous example, hereafter to be referred to as Case I, since it will reappear throughout the present paper in an attempt to clarify the rather cumbersome nature of dissonance theory, and also to help specify how dissonance relates to the evaluation process.

According to Festinger (1957), the terms dissonance and consonance refer to relations which exist between pairs of elements, which in turn refer to cognitions, or the things known about personal attributes, personal behavior, and/or the environment. For the most part these elements correspond with what the person actually does or feels, or with what actually exists in the environment. However, this does not mean that the existing elements will always correspond. There are, in fact, three possible relations which can exist between pairs of elements: (a) irrelevance; (b) consonance; and (c) dissonance. Irrelevance is defined as two elements having nothing to do with one another, and such a state occurs under circumstances where one element implies nothing at all concerning some other element, e.g., the cognition that one spends a large sum of money on books for class A, has nothing to do with one's attitude or cognition towards whether or not it will

rain on a given day. Consonance is a state in which, if given two elements, one follows from the other, or if X, Y follows, when the two elements are considered alone, e.g., the cognition that a class is satisfying follows from the cognition that one invested a sizable amount of time in the class. The state of dissonance occurs when the obverse of one element follows from another element, or if X, not Y follows. For example, consider Case I, in which the student is dissatisfied with a course after having invested a large sum of money. The cognition that a large sum of money was invested is dissonant with the cognition that the course is dissatisfying.

However, when considered as part of a more general scheme, and not treated in isolation, all dissonant relations are not of equal magnitude. The magnitude of dissonance is an important variable in determining the pressure to reduce the dissonance. Therefore, if two elements are dissonant with one another, the magnitude of the dissonance will be a function of the importance of the two elements, and the strength of the pressure to reduce the dissonance is in turn a function of that magnitude.

Assuming the magnitude of dissonance between two elements is great enough to induce its reduction, the dissonance can be eliminated by changing one of the two elements. However, it is important to note that among other aspects governing the motivation to reduce dissonance, Aronson (1969) proposed that individuals differ in their ability to tolerate dissonance, in preferred mode of dissonance reduction, and in that what is dissonant for one individual may be consonant for another, which, Aronson contends, is a major difficulty in Festinger's (1957)

theoretical statement, i.e., dissonance is defined as psychological inconsistency rather than logical inconsistency, which makes it difficult to define the actual limits of when dissonance reduction will insue.

Once again, the reduction of dissonance can be accomplished by changing one of the two elements, either the behavioral element, or the cognitive element, or by changing the environment. That is, the individual can change the behavior dissonant with the attitude; the environment in which the dissonance occurs can be changed, only if the individual can manifest sufficient control over the environment, e.g., a person who is habitually violent may incorporate a clique of violent people, thus inducing a consonant relation, or the individual can change the cognitive element. New cognitive elements can be added, or the proportion of dissonant as compared with consonant relations involving the element in question can be altered. Consider Case I, in which an individual spent a large sum of money on books for a college course, and later found out the course did not meet personal expectations. Assuming that the magnitude of dissonance is great enough to induce change, how may the individual reduce this psychological inconsistency and attempt to achieve a state of psychological consonance? (a) The behavior dissonant with the attitude can be changed. The class can be dropped and the books sold back. (b) The environment in which the behavior occurs can be changed. This would probably involve convincing the instructor and the class that there are things wrong with the class which require immediate attention and change. (c) The individual can change the cognitive element, in which case self convictions about the class would have to be altered to the extent that displeasure with the course would be construed

as somehow misguided, and that the course was really worthwhile. Such action would probably involve the necessity of social approval in order to manifest a new opinion. (d) New cognitive elements can be added. This avenue is a reconciliation in which previously unconsidered items enter into the picture, e.g., the individual may view the course as worthwhile because friends also attend it, that there is nothing better to do anyway, or that the books may later provide good reference material. (e) The individual can reduce the proportion of dissonant as compared with consonant relations involving the elements in question. The course can be justified in that it will fulfill partial degree requirements, that the books can later be sold, or that the material learned in class may be somehow beneficial. Any or all of the above modes of dissonance reduction may or may not be successful, depending on the resistance to change of the elements of concern. Dissonance theory does not assert that a person will be successful in reducing dissonance, but rather that the existence of dissonance will motivate the individual to attempt to reduce it (Wicklund & Brehm, 1976), or as more generally stated, dissonance theory suggests that man is a rationalizing animal, that he attempts to appear rational (Aronson, 1969).

Given that the strength of the pressures to reduce a dissonant relationship is a function of the magnitude of the dissonance, it therefore follows that the resistance to the reduction of dissonance is determined, at least in part, by the magnitude of the resistance to change which the element possess. Behavioral elements typically offer a large amount of resistance to change, e.g., one's cognition that a newly acquired car is a lemon is resistant to a behavioral change in that the likelihood of selling a lemon without incurring a sizable loss on one's

investment is minimal. The problem of changing a behavioral cognitive element therefore becomes the problem of changing the behavior established by the element. It can thus be seen that the resistance to change of a cognitive element directly corresponds with the resistance to change of the behavior reflected by the element. Although many aspects of behavior have little actual resistance to change, change may present a problem in that (a) it may be painful or involve a loss, (b) present behavior may be otherwise satisfying, or (c) making a change may simply not be possible.

Environmental cognitive elements perhaps offer the greatest resistance to change. The major source of resistance lies in the responsiveness of these elements to reality. According to Wicklund and Brehm (1976), there are two distinguishable sources governing such resistance: (a) the clarity of the reality offered by the cognition, and (b) the difficulty of changing the event which is cognisized. It can readily be seen that one's cognition that the sky is red is typically dissonant with the fact that the sky is blue. The cognition does not correspond to reality. It can also readily be seen that the color of the sky is highly resistant to change, since one does not exert the environmental control necessary to alter it. Environmental elements are therefore more difficult to change than behavioral elements when there is a clear and unequivocal reality corresponding to some cognitive element. Concerning Case I, there is a very clear reality corresponding to the individual's cognitive elements. The class is something which the individual is confronted with on a regular basis, yet has little control over. As suggested before, in order to change the environment to produce a consonant relation, the individual would probably have to convince the instructor to change the

format of the class. Clearly there are more easily attainable methods of dissonance reduction, e.g., addition of new cognitive elements, or the reduction of dissonant as compared to consonant elements.

The major overall source of resistance to change, however, lies in the fact that an element is in some type of relationship with a number of other elements. To the extent that the element is consonant with a large number of other elements, and to the extent that changing it would replace these consonant relations by dissonant ones, the element will be resistant to change. Otherwise stated, the resistance to change of a cognitive element derives from the extent to which such change would produce new dissonance, and from some joint function of the responsiveness of the cognition to reality (Brehm & Cohen, 1962). Therefore, the maximum dissonance that can possibly exist between any two elements is equal to the total resistance to change of the less resistant element. The magnitude of dissonance can not exceed such an amount, because at the point of maximum possible dissonance, the less resistive element will change, thus eliminating the dissonance.

In summary, cognitive dissonance has been defined by Festinger (1957) as a motivational state that impells the individual to attempt to reduce or eliminate it. Dissonance and consonance refer to relations which exist between pairs of elements, which in turn refer to cognitions, or the things known about personal attributes, personal behavior, and/or the environment. There are three relations which can exist between pairs of elements: (a) irrelevance, (b) consonance, and (c) dissonance. When two elements are dissonant with one another, the magnitude of the dissonance will be a function of the importance of the two elements, and the strength of the pressures to reduce the dissonance will in turn be a

function of that magnitude. Dissonance can be reduced by changing one of the two elements, or by changing the environment in which the dissonance occurs. The behavior dissonant with the attitude can be changed, the environment in which the dissonance occurs can be changed, or the cognitive element can be changed. Most elements possess some degree of resistance to change, which determines, at least in part, the pressure to reduce the dissonance. Of the possible elements, the greatest resistance to change is typically offered by environmental cognitive elements, the resistance being governed by the clarity of the reality offered by the cognition, and/or the difficulty of changing the event which is cognisized. However, to the extent that every element manifests some sort of relationship with a number of other elements, the maximum dissonance which can possibly exist between any two elements is equal to the total resistance to change of that element which has the least resistance to change, in as much as the resistance to change stems from the extent to which such change may produce new dissonance. Therefore, at the point of maximum possible dissonance, the less resistive element will change, thus reducing the dissonant relationship.

Commitment

It has been stated in the present study, that if two elements are dissonant with one another, the magnitude of the dissonance will be a function of the importance of the two elements, and that the strength of the pressures to reduce the dissonance is in turn a function of that magnitude. Importance thus becomes a key concept when determining if and when dissonance reduction will be attempted. Importance can and has been defined in terms of commitment to a course of action (Wicklund & Brehm, 1976). Wicklund and Brehm viewed commitment as the process

which provides the condition necessary for inconsistent information to arouse dissonance. Such a notion will become clear by examining Case I. If the individual was dissatisfied with the college course, but perhaps delayed buying the necessary books for one reason or another, the monetary commitment would be relatively low, and therefore, the incidence of any subsequent dissonance would likewise be low. Clearly, the individual has placed little or no monetary importance or commitment on the class. If, on the other hand, the monetary commitment was high, so would be the arousal of dissonance associated with class dissatisfaction. Wicklund and Brehm went on to state that, when a person is exposed to information inconsistent with a judgment, and when that individual is committed prior to the exposure of the information, dissonance may lead the individual to minimize the significance of the inconsistent information. In Case I, the individual made a commitment to a college course, by, among other things, investing money in books, with a full expectation of a quality education. The greater the level of commitment, or the more importance placed upon the course, the less likely the individual would be to belittle unfavorable aspects of the course. The previous statement is not to say that dissonance will fail to occur, but rather, the level of commitment will more than likely lead to dissonance reduction by a change of attitude towards the course, that particular element being less resistant to change, due to the level of commitment of the other element.

Brehm and Cohen (1962) likewise theorized that commitment increases the resistance to change of an element, and thereby affects the kinds of attempts to reduce any dissonance which may occur. Further, once

commitment occurs, an individual must accommodate the cognitions to that commitment. The individual finds it difficult to process discrepant information and make some compromise judgment. This difficulty is such because the dissonance aroused is between the inconsistency of the committed behavior and the initial attitude, and not the inconsistency between any discrepant communication and the initial attitude.

Commitment: Empirical data

Research in the area of commitment and subsequent dissonance arousal has been extensive. Two studies (Cohen, Brehm, & Latane, 1959; Kiesler, Pallak, & Kanouse, 1968) manipulated level of commitment along a public versus private dimension. In both studies, subjects were induced to act in a fashion dissonant with a premeasured attitude, in which case the dissonance aroused was significantly higher in conditions of public commitment to a position, than under private commitment to the same position. However, Carter (1972) found contrary results in that subjects publicly committed to write a counterattitudinal essay on the pros of a college tuition increase did not significantly differ from those in a private commitment condition. Carter proposed that the reason for the lack of difference was due to alternate modes of dissonance reduction, in which subjects could slant the direction of the essays to the extent that they became more neutral than counterattitudinal. Simonson (1977) was interested in whether commitment to an unliked college course could cause improvement in students' level of achievement in that course. Simonson attempted to influence students' level of achievement by inducing public commitment to make positive statements about the course. It was found that attitudes towards the course were improved to a greater extent in a public rather than private commitment

condition, but that subsequent improvement in actual achievement was not manifested.

Cohen (1959) defined commitment in terms of effort expended. Cohen hypothesized that, under increasing degrees of expended effort, increasing the discrepancy between a person's initial position and new information counter to that opinion would give rise to increasing dissonance and consequent attitude change. A significant interaction between degree of discrepancy and level of commitment was found, indicating that under lower degrees of commitment, a greater level of discrepancy was necessary to produce dissonance than under higher degrees of commitment, in which a lesser degree of discrepancy would suffice to produce dissonance. A significant main effect was also found for level of commitment, or the higher the commitment, the greater the dissonance. Aronson (1961) likewise defined commitment as effort expended. Aronson's contention was that if a person continuously expended effort to attain a goal, and was unsuccessful, the stimuli associated with the experience would become more attractive as a function of the effort expended. Aronson's hypothesis was supported, in that subjects under conditions of low effort manifested significantly less dissonance than those in a high effort condition, when working towards an unattainable goal. Thomas (1978) was concerned with whether or not vocational commitment, defined as investment of time, energy, and financial resources would act as an antecedent of dissonance arousal. Thomas's results indicated that subjects in a low commitment group displayed less dissonance than those in a high commitment group, when dissatisfaction with career choice was induced. Thomas interpreted the above findings to mean that

the higher the level of commitment to a career choice, the greater the level of dissonance, and need for subsequent dissonance reduction, when counterattitudinal information concerning career choice was induced, as opposed to a lesser amount of dissonance arousal commensurate with a smaller level of commitment.

Other researchers (Aronson & Mills, 1959; Gerard & Mathewson, 1966) have dealt with commitment in terms of initiation to a group. The former study contended that individuals who go through a severe initiation to gain admission to a club or organization would tend to think more highly of that organization than those who did not go through an initiation in order to gain admission, even when the organization later turns out to be very dull and uninteresting. Aronson's hypothesis was substantiated, as was that of Gerard and Mathewson's study which was a replication of Aronson's work. Although neither of the two previous studies defined conditions in terms of commitment per se, initiation can easily be defined as such because it presupposes a commitment to an action, and thus, the greater the severity, the greater the level of commitment.

Houston, Bloom, Burish, and Cummings (1978) hypothesized that subjects would attempt to reduce the negativity of a stressful situation by positively evaluating the experience. The contention was that the more negative the situation, the more positive would be the evaluation of the experience, commensurate to the subject's degree of commitment to undergo subsequent stress. Level of arousal, used to assess degree of stress, was measured by pulse rate and skin resistance. Houston et al. found that subjects in a high stress condition did not report liking the

stress more than did subjects in a low stress condition, stress being manipulated as a function of shock intensity, but that the high stress condition subjects more positively evaluated the overall experience. Commitment was manipulated by whether the subjects expected to receive more intense shock later, or whether no additional shock was expected. A significant difference was reported in dissonance arousal between high and low levels of commitment, under both high and low stress conditions. Houston et al. explained their findings in terms of dissonance arousal, with level of commitment being a prime indicator of whether dissonance reduction, and hence the more positive evaluations of high commitment group, would ensue.

Brehm (1960) found that subjects who were induced to perform a disliked behavior increased their liking for the behavior as a joint function of the amount of behavior committed, and the presence of further supporting or nonsupporting information about the behavior. School children in a high behavioral commitment condition, in which eating of a disliked vegetable would immediately take place, in addition to being required in the future, tended to believe supporting information about the merits of the vegetable, more so than did children in a low commitment condition in which no future consumption of the disliked vegetable was required. Brehm concluded that, given a dislike for a behavior, and with the inducing force held constant, the magnitude of dissonance increases in proportion to the amount of behavioral commitment. Another study (Kiesler, Zanna, & DeSalvo, 1966) found that when individuals were committed to future interaction with a group to which they had little attraction, these individuals manifested greater opinion change than

did individuals not committed to future group interaction. Such an opinion change was explained as a form of dissonance reduction by Kiesler et al.

Brock (1965) determined that subjects who were committed to a behavior, e.g., smoking, sought out consonant information regarding that behavior more so than did subjects not committed to the behavior. Specifically, when smokers expected to expose themselves to various communications, information denying the link between smoking and cancer was much preferred in comparison to information asserting a smoking-cancer link. However, Brock found no differential preference for cancer-link and no link messages when the subjects did not expect to expose themselves to communications concerning smoking. Cialdini, Cacioppo, Bassett, and Miller (1978) hypothesized that an active decision to behave in a certain way would tend to endure, even when the behavior became more costly to execute. Otherwise stated, an individual who had already decided to perform a target behavior should experience a greater sense of cognitive commitment to proceed than would an otherwise uncommitted individual. Should the target behavior become more difficult to perform than initially expected, e.g., more physical work involved, the committed individual would be more likely to proceed with the behavior than would the noncommitted person. The postdecisional dissonance resulting from the initial decision to perform the behavior, and the subsequent realization that more work is involved than what was expected, would be expected to cause the individual to become more favorable towards the chosen action, which would then work to increase the chance that the action would be performed. On the other hand, those individuals not cognitively or otherwise committed to an active decision to behave in a certain fashion, should experience

little or no dissonance from the cognition that the behavior is more difficult to perform than expected, and hence be less likely to proceed with the behavior. The hypothesis was supported, and Cialdini et al. concluded that a major function of commitment is to impart resistance to change, or to the extent that one is committed to a decision, that decision will be less changeable.

From the foregoing discussion the reader can see that empirical research has substantiated the notion that commitment is an important variable in the area of dissonance arousal. Researchers have defined commitment along a public versus private dimension (Carter, 1972; Cohen et al., 1959; Kiesler et al., 1968), as with whether commitment could improve achievement in a college course (Simonson, 1977), as in terms of expended effort (Aronson, 1961; Cohen, 1959; Thomas, 1978), as initiation (Aronson & Mills, 1959; Gerard & Mathewson, 1966), as in dealing with stressful situations (Houston et al., 1978) as in terms of behavior and the relation to future interaction with a group (Kiesler et al., 1966), as the affect of commitment on supporting information (Brehm, 1960; Brock, 1965), and with whether commitment to behave in a certain fashion would lead an individual to do so in spite of unexpected difficulties in the execution of said behavior (Cialdini et al., 1978). Given that dissonance is aroused, and that the level of commitment is high, the crucial question then becomes, how does an individual go about reducing or eliminating cognitive dissonance?

Dissonance reduction: Empirical data

Walster, Berscheid, & Barclay (1967) hypothesized that in selecting a technique of dissonance reduction, people are particularly sensitive to the extent that each possible solution will be a stable one, and

that given a choice between modes of reduction, an individual will search not only for that mode which is not challenged by present events and information, but also for that mode which is least likely to come under reality attack in the future. Walster et al. found support for their hypothesis as results indicated that young boys tended to degrade an unchosen toy, and that chosen toys were overvalued when information about an unchosen toy was expected. Mills, Aronson, & Robinson (1959) likewise found that, following a decision, persons tend to seek out information that favors the chosen alternative. However, contrary to Walster et al., no evidence was produced which would indicate an avoidance of information that favors the rejected alternative. Neither Mills et al. nor Walster et al. offer an explanation for such a difference. Other studies (Brehm, 1956; Ehrilch, Guttman, Schonbach, & Mills, 1957) likewise found that following a decision, persons tend to avoid dissonance increasing information, and that concomitantly they tend to seek out dissonance reducing information. Adams (1961) produced evidence that persons under a state of dissonance are more likely to seek authoritative information concerning the subject matter than are those under a state of consonance, but unlike Mills et al. or Erlich et al., found no support for the contention that subjects high in dissonance would seek support from sources perceived to agree with them.

A study by Davis and Jones (1961) was concerned with whether changes in interpersonal perception would serve as a means of reducing cognitive dissonance. It was hypothesized that subjects with an awareness that there would be no disabusing interaction with a stimulus person to whom an unjustified punitive and obnoxious evaluation would

be read, would manifest a greater amount of dissonance than similar subjects with an opportunity to explain the occurance of a negative evaluation to the stimulus person. The hypothesis was supported. Results indicated that when subjects thought they could retract their behavior by an anticipated meeting with the stimulus person following the experiment, little dissonance was produced. David and Jones interpreted the above findings as a mode of dissonance reduction via the knowledge that the negative evaluation of the stimulus person, who was unacquainted with any of the subjects, could be later withdrawn or explained. The subjects who could anticipate a future meeting with the stimulus person could thus justify the evaluation, and hence reduce any dissonance aroused through the cognition that the evaluation was unfair. Brock (1968) was likewise concerned with whether justification acted as a means of dissonance reduction. Brock found that the more reasons subjects were given for performing a boring task, the less dissonance was manifested. In fact, it was determined that 93% of the variance involved in reducing dissonance under conditions of low volition was due to justification. However, the increase in justification did not lead to a decrease in reported enjoyment of the same boring task under moderate and high levels of volition. Brock explained the differences between the high and low volition conditions, as subjects feeling compelled to undertake the boring task under conditions of low volition, and hence with no choice, adequate reason was provided for performing the task, thus negating the need to further justify the task by attempting to enjoy it.

Lastly, Allen (1965) hypothesized that cognitive activity is necessary in order to reduce dissonance, and that dissonance reduction should be minimal when a person is kept occupied by an extraneous cognitive activity during the immediate postdecision period. Allen's hypothesis was supported in that subjects forced to engage in an irrelevant task immediately following a dissonance arousing decision, manifested significantly greater amounts of dissonance than did those subjects not so engaged.

In summary, it can be seen that the reduction of cognitive dissonance takes on many characteristics; that in reducing dissonance, people are sensitive to the stability of the solution (Walster et al., 1967), and that persons tend to seek out information which favors a chosen alternative (Brehm, 1956; Ehrilch et al., 1957; Mills et al., 1959). Other researchers have been concerned with interpersonal perception as a mode of dissonance reduction (Davis & Jones, 1961), with justification (Brock, 1968), and with extraneous cognitive activity (Allen, 1965). Overall, it has been shown that dissonance reduction is rather variable, depending on the individual and the specific nature of the dissonance arousing cognitions.

Statement of the problem

A wide array of research in the area of cognitive dissonance has been concerned with level of commitment, and how it relates to the ultimate arousal of dissonance, and subsequent reduction of the dissonance. The present proposed study will concern itself with the role dissonance plays in the evaluation process of a college course/instructor. The core hypothesis of the present study is that varying levels of commitment, coupled with knowledge about incidental costs of course

materials, will produce varying amounts of dissonance. More explicitly stated, as level of commitment to a specific college course increases, an interaction effect between commitment and course costs will develop. Specifically, all subjects under any of the three conditions of book cost information should evaluate the course/instructor in a more favorable manner when under the condition of high commitment. This evaluation will be due to a state of cognitive consistency which exists between the cognitions of below average, average, or higher than average cost information, and the behavioral cognition of high commitment to the course. On the other hand, those subjects in the low commitment condition should have more favorable evaluations of the course/instructor under conditions of low or average cost information, but have significantly less favorable course/instructor evaluations under the condition of higher than average cost, which is a dissonant state, i.e. the behavioral cognition of low commitment to the course is dissonant with the cognition that the book(s) for the course cost more than other similar courses.

A significant main effect between levels of commitment should also be present. Those subjects in the high commitment condition should evaluate the course/instructor significantly more highly than those subjects in the low commitment condition.

METHOD

Design

A 2X3 factorial design was employed. The first factor, commitment to the course, had two levels: (a) high commitment, and (b) low commitment. Commitment was an attribute variable defined in the following manner: (a) if a course grade, abstracted as a percentage of total points from the course and then multiplied by 4.0 (e.g., total of class points = 500, actual points earned = 400, then 400/500 = .80(4.0) = 3.2) was above the student's cumulative grade point average (GPA), then commitment to the course was considered high, (b) if a student's course grade fell below his/her cumulative GPA, commitment to the course was considered low. Cumulative GPA was assessed by asking each student to report it on an informed consent form. By this process, commitment to the course was better measured than by looking either at cumulative GPA alone, or by looking at the course grade alone. GPA alone gives a measure only of overall commitment to college, whereas the course grade alone may be an index of the easiness or difficulty of the course, rather than a measure of course commitment.

The second factor, information concerning price of books for the course, had three levels, and was actively manipulated. The levels were: (a) higher than average costs, (b) average costs, and (c) lower than average costs. The average cost conditions served as a control factor.

Total scores from a modified form of the standard Fort Hays State University course/instructor evaluation form served as the dependent variable. The evaluation form was constructed as a 5-point rating scale.

Subjects

A total of 135 students from three separate sections of general psychology courses at Fort Hays State University were administered the experimental manipulations. Of these, three subjects were dropped from the study because they failed to report their GPA on the informed consent form, leaving a total of 132 subjects for the analyses of the experimental hypotheses. All subjects received extra credit for particpation in the present study, regardless of whether or not his/her score was used in the analyses. This extra credit was applied to each subject's overall general psychology grade.

Materials

Each subject received the following items stapled together in the order listed: (a) a subject informed consent form with provisions for listing name, age, sex, course, and cumulative GPA (See Appendix B for an example of the informed consent form), (b) an instruction sheet containing information about the study, some specific instructions about completing the form, and the manipulation of the cost information variable (See Appendix C for an example of the instruction sheet). The instruction sheets differed from one another only along the dimension of whether the cost of the book(s) for the course was typical (cost of book(s) was average), or unusual (cost of book(s) was considerably above/below average), (c) a modified form of the standard Fort Hays State University course/instructor evaluation form (See Appendix D for an example of the evaluation form), and (d) a final sheet inquiring about demographic information such as college major, class rank, and information relating to the actual purchase of class textbook(s) for the course in question (See Appendix E for an example of the demographic information

sheet). Each subject also received a separate debriefing form (See Appendix G for an example of the debriefing form).

An additional informed consent form, which was designed to protect the privacy of the information obtained in the evaluations was given to each instructor of the general psychology classes visited. Such a form was designed to insure the instructors that the obtained information would be held confidential and used only for the expressed purposes of the present study. The form was presented to the appropriate instructors prior to the administration of the evaluation packets to the students. The instructors' signatures on the informed consent form also granted the experimenter permission to enter the general psychology courses for the purposes as described and prescribed by the present study (See Appendix F for the instructor's informed consent form).

Procedure

On each informed consent form of the evaluation packet, a code number was written on the back side in an inconspicuous location. This code number matched identically with a code number written on the back side of the evaluation form. These code numbers were later used to reunite the informed consent form and the evaluation form, so that students' GPA's and final grades could be compared to determine level of commitment.

The evaluation packets were randomized so that each subject had an equal opportunity to receive any one level of the book cost information variable. Approximately equal numbers of packets for each level of the instruction sheet (considerably above average, average, and considerably below average) were set aside, commensurate with the number of students for each separate section of the general psychology courses. Thus, three

separate piles of evaluation packets were created, with an approximately equal distribution of the three levels of book cost information for each pile. Each pile was individually placed face down on the floor and shuffled about for 2 minutes, after which the forms, still face down, were once again stacked. The same procedure was followed for each separate pile, the effect being to independently randomize treatment levels for each section of the general psychology courses.

After obtaining the instructors' permission to enter their general psychology course(s), the experimenter visited three separate general psychology sections at Fort Hays State University during the last week of regular class meetings, which was immediately prior to final examination week. The experimenter introduced himself and provided verbal instructions concerning what was desired from the students (See Appendix A for introduction and verbal instructions).

The evaluation packets were then passed out by the experimenter. Each student received one packet, which was taken off of the top of the appropriate pile for his/her general psychology section. Upon completion of the evaluation packet, and before handing the packet to the experimenter, each student tore off the informed consent form, as asked to do in the instruction sheet, and placed it in a box adjacent to the experimenter. Each student then presented his/her completed packet to the experimenter, was verbally thanked for his/her participation in the study, and was free to leave.

Each student was invited to attend an oral debriefing session at which the nature of the study was to be clarified, and all questions were to be answered. The invitation took place via instructions on the

instruction sheet (See Appendix C for the invitation to the debriefing session). Students were also debriefed via a written statement, which was given to the instructor of each general psychology section, to be picked up by the students during the final examination period. The oral debriefing was of the same nature as the written debriefing.

After collecting the completed evaluation packets from all three sections of the general psychology courses, the experimenter regrouped the informed consent forms containing the students' names with the completed evaluation forms by matching up the code numbers on the reverse sides of both forms. This step was necessary in order to obtain students' names so that their final grades could be obtained, and at the same time insure the student that his/her anonymity was protected from the instructor.

The experimenter later met with the instructor of each psychology section to obtain the students' final grades. Final grades were then compared against the students' reported GPA's to determine each student's level of commitment to the course, whether high or low. The level of commitment was then marked by indicating either HC for high commitment, or LC for low commitment on each evaluation sheet.

Upon determining level of commitment, the individual piles from each general psychology section were once again grouped into one pile, and the student informed consent forms, containing the students' names were once again separated from the evaluation packets. Through such a step the data became identifiable only by number, and dependent variable scores could be entered into one of the six appropriate cells in the analysis, either: (a) high commitment-higher than average cost, (b) high commitment-lower than average cost, (c) high commitment-average cost,

(d) low commitment-higher than average cost, (e) low commitment-lower than average cost, or (f) low commitment-average cost. The dependent variable scores were assessed by summing all scores (5 points for strongly agree to 1 point for strongly disagree) assigned to each particular item on the evaluation form, in order to obtain one total score for each evaluation sheet. The scores could range from a possible high of 90 points to a possible low of 18 points.

RESULTS

A 2X3 factorial analysis of variance with level of commitment (high commitment, low commitment) and book cost information (higher than average costs, average costs, lower than average costs) as the independent variables was used. Total scores from a modified form of the standard Fort Hays State University course/instructor evaluation form served as the dependent variable. Demographic information such as college major, class rank, and information relating to the purchase of textbook(s) was also obtained. Since level of commitment was an attribute variable which was arbitrarily defined, analyses of two sets of total scores were conducted: (a) commitment defined to include extra credit earned in the course, and (b) commitment defined excluding earned extra credit. By using two separate analyses, some subjects who met requirements for placement in a specific experimental group in the first analysis, out of necessity were placed into a different experimental group in the second analysis.

The hypothesis was that as level of commitment to a specific college course increased, an interaction effect between commitment and course costs would emerge. Specifically, those subjects in the high commitment condition should have relatively high, yet relatively equal course/instructor evaluations under all three book cost conditions. In contrast, those subjects in the low commitment-low or average book cost conditions should have significantly higher course/instructor evaluations than the subjects in the above average book cost information condition. Therefore, the majority of the interaction effect should be accounted for in the higher than average book cost condition (across high and low commitment

levels) and in the low commitment-higher than average book cost condition versus the low commitment-low or average book cost condition.

Commitment: With extra credit

The analysis of variance failed to support the hypothesis. No significant interaction between level of commitment and book cost information was found, $F(2,126) = 2.457$, $p < .09$ (See Table 1 for summary table). No significant main effects were found, either for level of commitment, $F(1,126) = .003$, or for book cost information, $F(2,126) = .328$. Although the interaction was not significant at the conventional .05 level, a trend in the direction of the prediction was evident (See Figure 1 for a graphic presentation of the analysis with extra credit), and a one-tailed t-test for differences among means was thus conducted. The t-test supported the prediction indicating the low commitment-higher than average condition had significantly lower course/instructor evaluation scores than the high commitment-higher than average condition, $t(126) = 3.48$, $p < .05$. An additional t-test indicated that the high commitment-lower than average condition had significantly lower course/instructor evaluation scores than the low commitment-lower than average condition, $t(126) = 4.18$, $p < .05$ (See Table 2 for means and standard deviations of the total scores of the course/instructor evaluation forms by each condition).

Commitment: Without extra credit

The analysis of variance failed to support the hypothesis, $F(2,126) = .357$, indicating no significant interaction between level of commitment and book cost information. No significant main effects were present, either for level of commitment, $F(1,126) = .008$, or for book cost

information, $F(2,126) = .319$. Although the interaction was not significant, a similar directional trend appeared as in the analysis without extra credit, but was not analyzed by specific comparison tests.

Demographic information

Table 3 contains the demographic information in tabular form. Basically, the majority of the subjects were freshmen or sophomores, business and general majors. The majority of textbooks were purchased used, had instructional value, and would be resold.

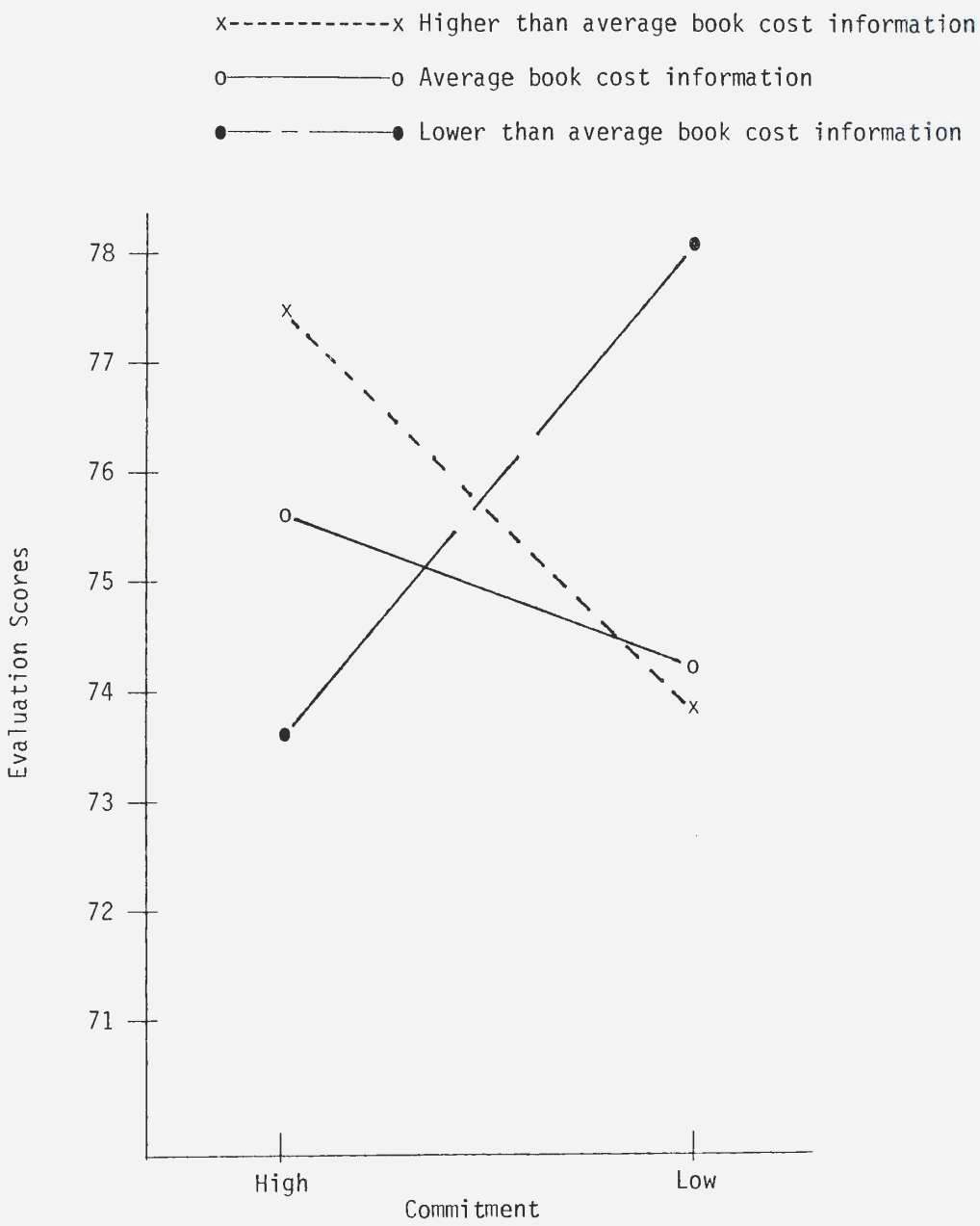

Figure 1. Evaluation scores defining commitment as including earned extra credit.

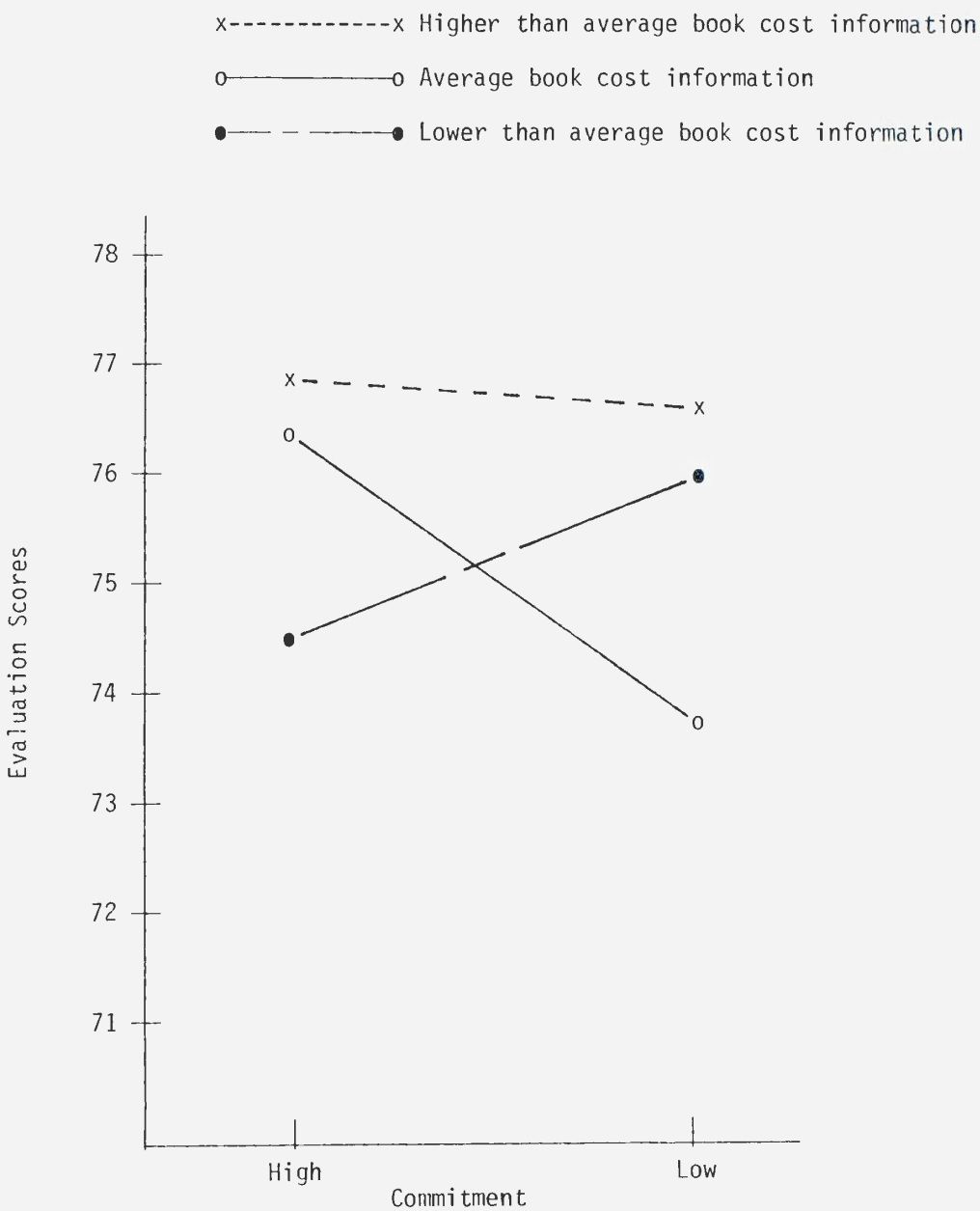

Figure 2. Evaluation scores defining commitment as not including earned extra credit.

Table 1

ANOVA table for analysis defining commitment as including extra credit

Source	DF	MS	F
Between commitment	1	.167	.003
Between cost information	2	20.592	.328
Interaction	2	154.397	2.457
Within groups	126	62.848	
Total	131	63.121	

Table 2

Means and standard deviations defining commitment as including extra credit

High commitment	N	Mean	Standard Deviation
Higher than average costs	34	77.4118	7.0156
Average costs	28	75.7857	7.6949
Lower than average costs	27	73.9259	7.3114

Low commitment	N	Mean	Standard Deviation
Higher than average costs	11	74.0000	8.6833
Average costs	14	74.2143	10.6133
Lower than average costs	18	78.1111	7.9992

Table 3

Demographic information

Class Rank	N	%
Freshman	72	54.9
Sophomore	48	36.6
Junior	5	3.8
Senior	5	3.8
Purchased Book	**N**	**%**
Used	109	91.6
New	10	8.4
Will keep book	20	16.8
Will sell book	99	83.2
Book had instructional value	**N**	**%**
Yes	115	87.1
No	17	12.8
Purchased workbook	**N**	**%**
Yes	87	65.9
No	42	31.8
College major	**N**	**%**
Business	17	12.9
General	15	11.7
Nursing	7	5.3
Elementary education	7	5.3
Other	86	65.1

DISCUSSION

The present study was designed to investigate the relationship between level of commitment to a college course and information pertaining to costs of textbook(s) for the course, and how such variables interacted to affect the subsequent evaluation of the course/instructor. Evaluation scores were obtained from six experimental conditions: (a) high commitment-higher than average costs, (b) high commitment-average costs, (c) high commitment-lower than average costs, (d) low commitment-higher than average costs, (e) low commitment-average costs, and (f) low commitment-lower than average costs.

The hypothesis predicted an interaction effect between the commitment and cost information conditions. Specifically, all subjects under any of the three conditions of book cost information should evaluate the course/instructor in a more favorable manner when under the condition of high commitment, whereas in the low commitment condition, those subjects under the condition of higher than average costs should display less favorable evaluations than those subjects under the conditions of low commitment-average costs or low commitment-lower than average costs.

In order to test these predictions, two separate analyses were conducted. The first analysis tested the prediction with commitment defined to include extra credit earned in the course. A second analysis was conducted defining commitment as excluding earned exrra credit.

A 2X3 factorial analysis of variance, conducted with commitment defined to include earned extra credit, failed to support the hypothesis. However, a trend in the direction of the prediction was evident and a *t*-test for multiple means was conducted to test the a priori predictions.

The t-test partially supported the prediction, indicating that when level of commitment was defined as being low, and under the condition of higher than average book costs, evaluation scores were likewise low. Such a finding is consistent with dissonance research. A dissonant state is created under the condition of low commitment to the course in that the behavioral cognition of low commitment is dissonant with the cognition that the book(s) for the course cost more than other similar courses, whereas the behavioral cognition of high commitment to the course is consonant with the cognition that the book(s) cost more than the book(s) for a similar course. The fact that a dissonant state was evident under such conditions is supportive of Wicklund and Brehm (1976) who viewed commitment as the process whereby the condition necessary for inconsistent information to arouse dissonance is provided.

In his original formulation, Festinger (1957) defined cognitive dissonance as a motivational state which impells the individual to attempt to reduce the dissonant state. In the present case, those subjects in the dissonant state (low commitment-higher than average costs) were able to reduce the dissonance by evaluating the course/instructor in a less favorable manner than otherwise possible. Alternative methods of dissonance reduction were possible: (a) the book(s) could have been sold back, or additional emphasis could be placed upon their value, (b) the class could have been dropped, or increased efforts could have been made to succeed in the class, or (c) cognitive convictions about the course could be altered to make it seem more positive. Any such methods of dissonance reduction could possibly result in a reduction of the dissonant state. However, the fact that dissonance was reduced by a

lower evaluation of the course/instructor is consistent with Brehm and Cohen (1962), who theorized that once commitment occurs, the individual must accommodate his/her cognitions to that commitment. Since, in the present case, the level of commitment in the dissonant group was defined as being low, the individuals in the group may have found it necessary to accommodate such a cognition, and evaluations may have thus served as the most easily accessible route to a state of cognitive consonance.

Although the previously purposed methods of dissonance reduction could serve to reduce the dissonance, for the most part such methods fail to accommodate the appropriate cognitions to the established level of low commitment. Even though selling the book(s) back may accommodate the low level of commitment, it would probably not be adequate action to effectively reduce the dissonance. The monetary loss an individual might typically encounter when selling back his/her textbook(s) could serve to maintain the dissonant state. Such a loss on one's investment is somewhat similar to the higher than average costs components of the dissonant state, in that both involve a loss on one's investment. Part of the original investment could be recovered by selling the book(s), whereas none of the investment would be recovered by not selling them. However even if selling the textbook(s) proved effective in reducing a part of the dissonance, the added element of unrecoverable tuition costs would probably maintain the dissonant state. The individual may be able to recover a minor part of his/her investment by selling the textbook(s), but the overall monetary loss would not be recovered to the point where the dissonance would be eliminated. Conversely, placing additional

emphasis on the value of the book(s) may be sufficient action to reduce the dissonance, but such an action fails to accommodate the low commitment level, and could thus reduce dissonance only by a change in the level of commitment to the course. Accommodations of cognitions to level of commitment notwithstanding, a change in level of commitment to the course itself seems highly improbable, because of the time at which the measures were obtained. Data was collected during the week immediately prior to the administration of final examinations. It seems unlikely that commitment to the course could change enough to reduce the dissonance under such a condition. Likewise, increased efforts to succeed in the class would probably amount to too little too late, and would also fail to accommodate the level of low commitment. Dropping the course would probably accommodate the level of commitment, but under the circumstances of when the data was collected, such an action would seem unlikely. At such a late stage of the semester, dropping the course would probably result in an unsatisfactory grade for the individual, which in turn would probably create a dissonant state more resistive to change than the one already existing. Altering cognitive convictions to make the course seem more positive could possibly reduce the dissonance, but fails to accommodate the low level of commitment. Also, such a change seems unlikely so late in the semester, considering commitment is somewhat the result of an ongoing practice which is established throughout the semester.

The results of the t-tests when defining commitment to include extra credit also indicated a significant difference in course/instructor evaluation scores between the high commitment-lower than average cost group and the low commitment-lower than average cost group. When under the

condition of lower than average cost information, those subjects in the high commitment group provided less favorable evaluation scores than did those subjects in the low commitment group. Although such a finding was not specifically predicted, it can readily be explained by cognitive dissonance. The condition of low commitment-lower than average cost is a consonant cognitive state which is manifested by more favorable evaluation scores than those that occur under the condition of high commitment-lower than average cost, which is a dissonant state. Those individuals in the high commitment group apparently felt that book(s) costing less than for other similar courses did not provide the necessary ingredient for adequate intellectual achievement. In essence they could be saying, "Here I am. I am highly committed to this course and I want to get the most out of it but the required book(s) belittle my intellectual possibilities." As in the other dissonant state (low commitment-higher than average costs), the individuals in the presently listed dissonant state (high commitment-lower than average costs) could choose from a wide array of possible modes of dissonance reduction. The fact that dissonance was once again reduced by less favorable evaluation scores, as was the case in the dissonant state of low commitment-higher than average costs, is supportive of Wicklund and Brehm (1976) who viewed commitment as the process which provides the condition necessary for inconsistent information to arouse dissonance, and of Brehm and Cohen (1962) who theorized that commitment increases the resistance to change of an element, and thereby affects the kinds of attempts to reduce the dissonance.

Since level of commitment was an attribute variable arbitrarily defined by the author, it was decided to conduct an additional analysis

excluding earned extra credit in order to account for some of the variance across different sections of general psychology. Specifically, there was a wide discrepancy between the potential to earn extra credit points for the different general psychology courses.

A 2X3 factorial analysis of variance of the final scores excluding extra credit failed to support the hypothesis. Neither a main effect for the commitment variable nor an interaction between a commitment and cost were present. However, although not significant, a somewhat similar trend in the direction of the prediction appeared as in the analysis with extra credit, as can be seen by a comparison of figures 1 and 2.

The differences between the findings for the two analyses (commitment with extra credit/commitment without extra credit) lend support to the manner in which commitment was defined. Apparently, working to earn extra credit for a course is in the students' interest as much as are the other aspects of success in a college course, e.g. study time, class attendance. A student who is highly committed will strive to achieve his/her academic goal by whatever means are deemed appropriate. Such a point is evidenced by a drop in the number of individuals who met the criterion for the high commitment group when extra credit was not counted. When extra credit was counted 89 subjects or 67.4% met the criterion for placement in the high commitment group. When extra credit was excluded, only 47 subjects or 35.6% met the same criterion. However, it is interesting to note that those individuals in the high commitment conditions did not evaluate the course/instructor significantly higher than did those individuals in the low commitment conditions, neither when including extra credit in the definition of commitment, nor when excluding earned extra credit. Such a finding could mean that the effort a student

is willing to expend to earn a grade plays little or no role in how he/she perceives the abilities of the instructor or the value of the class. Otherwise stated, commitment, when viewed in isolation, may play an irrelevant role in how the student subsequently evaluates the course/instructor.

The findings of the present study have several implications for future research, which is needed to better understand the relationship between level of commitment and book costs when evaluating a college course/instructor. Commitment should be redefined in several ways, e.g., in monetary terms alone, or in terms of class attendance, as it has been evidenced by the present study that the arbitrary manner in which commitment was defined produced differing results under only slight variations in the definition. Results from such purposed research could then be compared against one another to better understand what constitutes the best definition of commitment. Once commitment is more adequately defined, the role it assumes within cognitive dissonance theory could be assessed in terms of the present study.

Studies focusing on a replication of the present study with some modifications could also prove useful. The discrepancy between availability of extra points could be eliminated by acquiring data from only one class. Such a step would lessen error variance due to individual teaching characteristics. Using this procedure, the results obtained from one class could be compared to the results from the same class, taught by the same instructor in the following semester. In this manner a pretest-posttest comparison could also be conducted, wherein a measure is obtained immediately following the time when the textbook(s) are generally purchased, which could then be compared against a measure

obtained at the end of the semester. Such a pretest measure would be more behaviorally oriented than the subtle manipulation used in the present study, and thus be more likely to create a dissonant state. A pretest-posttest comparison could provide a measure of whether the behavioral action of actually buying a book that cost considerably above average is capable of creating more dissonance than simple information stating that the book(s) cost considerably above average. The comparison could also provide some indication of whether the price of the book(s) is remembered by the purchaser over the course of the semester.

Additional such research could be conducted using students enrolled primarily in upper division courses, as opposed to the present sample which was predominantly freshman and sophomores. Upper division students should be more familiar with buying textbook(s) and pricing of the same, of which such knowledge could be fundamental as to whether or not a state of dissonance is aroused. Valuable information might also be obtained by looking across several different majors. In the present study students were primarily business majors or were uncommitted to a major.

In spite of the difficulties mentioned, the present study provides valuable information into the evaluation process. If the manner in which students evaluate college course/instructors is to be adequately understood, it is necessary that all of those components which play a role in the evaluation process be investigated. The results of this study suggest that cognitive dissonance affects the manner of evaluation, in that commitment alone, nor book cost information alone, significantly affect the evaluation of the course/instructor. However, when combined to create a dissonant state, such components have a tendency to change evaluation scores.

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Appendix A

Verbal Instructions

Hi, my name is Jerry Stremel. I'm a graduate student in psychology here at Fort Hays State. I would like for you to complete some forms for me which I will pass out in a minute, but first I want you to understand that you are not required to participate in this study. However, all of those who complete the form as instructed, will receive extra credit for this course. The entire procedure should not take more than five to ten minutes and all of your answers will be dealt with in the strictest confidence.

The forms I am about to pass out concern the process in which students evaluate faculty members. Basically I am interested in finding out why students evaluate college instructors in the manner in which they do. This procedure is not intended to serve as an actual evaluation of the instructor of this class, but rather, an instrument by which comparisons with other evaluation procedures can be made. Are there any questions about the basic purpose of the study?

There are four pages to the form. The first page is no more than a statement that you understand the nature and importance of confidentiality in conducting research, and that you wish to participate in this study. Please read the first page carefully, and then print your name, your age, your sex, the name of this course, and your cumulative grade point average in the spaces provided. If you do not know your cumulative GPA, estimate it to the best of your ability. Afterwards, please sign your name in the space provided which will signify your consent to participate. This first page will also serve as the means by which those students who participated

can be identified and given the appropriate extra credit. Page two contains information relating to this study which you should read carefully before proceeding to page three. Page three is an evaluation form of this course and instructor which you are to complete. Page four asks for some general information concerning this particular course.

After you have completed all four pages, please tear off page 1, and place it in the box setting at the front of the room. In this way, your answers are assured of confidentiality, and at the same time, I will be able to determine who participated so that they will receive extra credit. After you have placed page 1 in the box, please hand the rest of the form to me, at which time you will be free to leave.

If you now decide to participate, but at some point you may not to continue, you will be free to leave.

Thank you for your help. I will now pass out the forms and you may begin.

Appendix B

Informed Consent Form

When you act as a subject, you are undertaking a responsibility that is important for the successful continuance and productivity of psychological research. Most important is that you agree not to discuss with anyone the aims and methods of any experiment in which you may participate until the work is complete. It is well established that disclosure of the details and procedures of an experiment to a prospective subject may greatly affect his/her performance in the experiment and so produce erroneous and misleading results. As soon as the experiment that you served in is completed, you will be invited to a meeting at which the experiment will be fully described, and the results presented to you.

At the same time in accepting you as a subject in his/her experiment, the experimenter acknowledges a responsibility towards you. In particular he/she undertakes not to disclose your own performance in the experiment, nor to carry out any procedures that might be detrimental to you psychologically or physically. When the experiment has been completed, the data acquired are not identified by your name, but only by a number. This step insures that all subjects will remain anonymous. In this way your rights and liberties as an individual are protected.

NAME_____ AGE____ SEX____ COURSE_____

COLLEGE MAJOR_____ CUMULATIVE GPA_____

I have read the foregoing carefully and agree to act as a subject in this experiment.

SIGNED_____

Appendix C

Written Instructions

As higher education proceeds into the 1980's student attrition rates appear to ever on the rise, and in many places enrollment in colleges is considerably wer than in past years. Throughout the country, college administrators are per-exed for a solution to this problem, and as the struggle between colleges mounts an effort to attract an increasing number of students, recruiting efforts have many cases been increased. Likewise, the cost of a college education is on the se. In addition to tuition, enrollment fees, and textbooks, students are also quired to invest money on incidental fees such as typing, and the price of photo-pying various materials. In general, Fort Hays State is no exception and although rollment rates are not down at the present time, the campus office of Institutional search has projected a substantial decline in enrollment in the near future. The st of an education at Fort Hays State, is however, much more in line with the rest the country, in that it is currently on the rise. Attempted legislation to increase ition rates is presently being considered in the State House in Topeka. Likewise, flation has driven up the costs of incidental fees as well as that of textbooks. e price of textbooks alone has risen over 50% in the last five years. This parti-lar class is rather typical/unusual in that figures provided by the campus bookstore dicate that the cost of books for this course is average/considerably above erage/considerably below average, to prices of books for similar courses.

In light of declining enrollment rates, and the increased cost of a college ucation, students are justifiably being provided a greater voice in the structure their education. Student government organizations and student lobbying groups e being given more attention, as are faculty evaluations by the students. However, search has indicated that administrators do not always interpret student evaluations faculty effectively. If the students are to have an adequate voice in their ucation, it is imperative that various evaluation procedures be viewed in rela-onship to one another, so that the best overall evaluation procedure can be found, order that appropriate action on the part of the administration may be taken in ch decisions as pay raises and tenure for deserving faculty members, and that non serving faculty members be brought to the attention of the administration. In as ch as the students are the ones ultimately responsible for their education, and in much as they are in frequent exposure to faculty members, they are in the instrumental sition to evaluate faculty members.

Please complete the following form, which will not be used as an evaluation of e instructor of the class, but rather will serve as an instrument from which compari-ns with other evaluation techniques can be assessed. All answers will be held in e strictest confidence, and the instructor will not be allowed to look at any of the valuation forms. After you have completed the form, please tear off the front page, e one on which you signed your name, and place it in the box at the front of the room, fter which, please turn in the rest of the form to the person standing at the front the room. Once again, this form will be used to make comparisons with other evalu-ion procedures, and will not be used as an actual evaluation of the instructor.

This study will be discussed in detail, and any questions will be answered at a eeting to be held at 10:30 a.m., May 12, in room 200 at Wiest Hall. In the course this meeting, the evaluation procedure will be discussed and findings from the resent study will be elaborated upon. You are not required to attend but your support ould be appreciated.

At this time please proceed to the following page, and complete the evaluation rm as honestly as possible.

Appendix D

Evaluation Form

INSTRUCTOR EVALUATION

Circle the letter for each item which best indicates your degree of agreement or disagreement.
A--Strongly agree B--Agree C--Uncertain D--Disagree E--Strongly disagree

A B C D E 1. The objectives of the course are stated clearly.

A B C D E 2. Subject matter is presented clearly.

A B C D E 3. Questions are adequately answered.

A B C D E 4. The instructor is prepared for each class.

A B C D E 5. The instructor is tolerant of other points of view.

A B C D E 6. The instructor is enthusiastic about the subject.

A B C D E 7. Recent developments in this field are discussed.

A B C D E 8. I would recommend this instructor to other students.

A B C D E 9. I feel free to ask questions.

A B C D E 10. The instructor is available for consultation.

A B C D E 11. Exams cover the assigned material.

A B C D E 12. Exams, papers or projects have instructional value.

A B C D E 13. Tests are returned promptly.

A B C D E 14. It is clear how students are graded.

A B C D E 15. The amount of work required is reasonable.

A B C D E 16. I would take classes from this instructor again.

A B C D E 17. Dealings with students are fair.

A B C D E 18. The instructor has increased my understanding of the subject.

Appendix E

Demographic Information

College Major_____

Credit Hours Completed_____

Class Rank: Fr.__ So.__ Jr.__ Sr.__

Did you purchase the required textbook(s) for this course?

Yes___ No___

Did you borrow the required textbook(s) for this course?

Yes___ No___

Did you purchase the optional workbook for this course?

Yes___ No___ No workbook available for this course __

Did you find the textbook(s) for this course to be of instructional value? Yes___ No___

If you purchased textbook(s) for this course, did you buy them new or used? New___ Used___

Do you plan on keeping the textbook(s) for this course or will you sell them back? Keep them___ Sell them back___

Appendix F

Instructor's Informed Consent Form

As part of the degree requirements for successful completion of the MS in psychology at Fort Hays State University, degree candidates must complete a mandatory thesis. As part of the thesis project proposed by the author of this paper, it will be necessary to ask your students from your general psychology classes to evaluate you as an instructor. These evaluations will be dealt with in the strictest confidence, and the data acquired will ultimately be identifiable by number only. The evaluation forms will be grouped together with similar evaluation forms from other classes, so that information pertinent to your particular classes will be inseparable from those evaluations from other courses. The information obtained from the evaluation forms will not be used to assess you as an instructor, but rather to assess the affect of varying levels of an independent variable to be manipulated as part of an instruction sheet which will be presented to the students of your general psychology classes, as well as to students in other general psychology courses.

Your signature on the space provided will indicate your understanding of the issue of confidentiality concerning the evaluation forms and this particular study, and at the same time will grant the author of this paper permission to proceed with the administration of the evaluation forms to your class.

Signed_____

Appendix G

Debriefing

There is a little more to this study than what has been presented up to this point. Additional information about the study will be presented shortly, but first it is important that you understand why, when conducting psychological research, it is sometimes necessary to conceal the complete nature of the study from those who participate. In some cases, if the complete nature of a study were told to the people participating before they were allowed to respond, and they were thus aware of exactly what was being looked at in the study, the participants could try to help the person conducting the study by responding in the way they believed the person conducting the study wanted. If the participants acted in such a fashion, then the results of the study would not be accurate, because the results would not be a reflection of how the participants would normally respond, but rather an indication of how well the person conducting the study could get people to respond in a desirable manner. Conversely, the opposite could also happen. Some participants could feel that the researcher has no business trying to predict how other people will respond, and thus go out of their way to try and foul up the study by providing typically unpredictable responses. Either way, if the participants tried to help the person conducting the study, or if they tried to deliberately respond in an unusual fashion, the results of the study are invalid, because the responses are thus not an indication of how the participants would respond in everyday life.

If the reader understands why partial concealment in psychological research is sometimes necessary, he/she should be able to see why some aspects of the present study were not revealed before the participants

were asked to respond. What was really of interest in this study is how information relating to the cost of books for a college course would affect the manner in which students evaluate the instructor of that course. It was believed by the author of the present study that if the participants were told that books for a college course cost considerably above the average cost of books for similar courses, those individuals rating the instructor would act differently than people who were told that the cost of books was average, or considerably below average, depending on each individual's level of commitment to the course in question. Each individual's commitment to the course was assessed by asking him/her to report his/her cumulative grade point average (GPA) on the first page of the evaluation booklet. Individual GPAs were then compared to each individual's final grade for the course. If the individual's final grade for the course fell below his/her reported GPA, then his/her commitment to the course was considered to be low. If an individual's final grade for the course was above his/her reported GPA, then his/her commitment to the course was considered to be high. The author believed that those people who had a high commitment to a course would overall tend to rate the instructor higher than those people with a low commitment to the course. However, the author also believed that, for those people with a low commitment to the course, the evaluation of the instructor would be lower if the people were told that the books cost considerably above average, than if told the cost of the books was average, or below average. To assess each individual's level of commitment to the course, it was necessary to have each participant report his/her name, so that his/her reported cumulative GPA could be compared against the appropriate final grade. However, in so doing, it was necessary to ensure each individual

that his/her responses would remain anonymous, because should an individual feel the instructor of the course would have access to the evaluation, he/she may inadvertently, or perhaps intentionally have rated the instructor in a different fashion, than if it was believed the instructor would not see the evaluations. To ensure each individual's anonymity, and still obtain his/her name, participants were instructed to report their names in order that appropriate extra credit could be administered. Participants were then instructed to tear off the page on which their name was reported, and turn it in independently of the evaluation form. However, on the back side of each page on which a name was reported, there was a code number which corresponded exactly to a code number on the back side of each individual evaluation form. The name page and the evaluation page were later reunited on the basis of these code numbers, and in such a way it was possible to assess each individual's level of commitment to the course by comparing his/her cumulative GPA to his/her final grade. At the same time, anonymity was protected, because the instructor had no actual access to the evaluation forms, and appropriate extra credit could still be given. Thus, after determining each student's level of commitment, those scores could be grouped into appropriate categories, either high commitment with varying levels of cost of books information, or with low commitment, and varying levels of cost of books information, and the author of the study could begin to test the predictions.

To assess the differences in evaluation scores of the instructor under different levels of cost of books information, participants in the present study were given three separate levels of information pertaining to the cost of books. Approximately 33% of the participants were told

that the cost of books for the course was typical, in that figures provided by the college book store indicated that the cost was average with the cost of books for similar courses. Approximately 33% were told that the cost of the books for the course was unusual in that the cost was considerably above average, and approximately 33% were told that the cost of books was unusual in that the cost was considerably below average. Actually, the author of the study has no idea of the correctness of these statements as to whether or not the cost was average, above average, or below average for the particular courses of concern. Factual representation of such information was not important in that, the present study was interested in how information pertaining to the cost of books affects evaluations, and not necessarily with presenting the participants an accurate assessment of book store endeavors. The question of importance was with perceived cost of books, as opposed to actual cost of books. Participants in the study were also told that the price of textbooks had risen over 50% in recent years, and that the campus Office of Institutional Research had predicted a substantial decline in enrollment in the near future. Once again, the correctness of such statements is uncertain. Although such statements may or may not be factual, the author did not verify them. Such information was necessary in order that the participants accepted the nature of the study, e.g. students should have more impact on the nature of their education, as being logical and believable, and hence feel no outside pressure to respond in any expected way.

In conducting the present study, the author was not interested in the responses of any one individual, but rather, groups of individuals who had something in common. For this reason, all individual responses were grouped into categories in which common aspects pertinent to an

individual were also found in the other individuals in the group. One group consisted of individuals with a high commitment to the course, who received information stating that the cost of books was average. Another group consisted of individuals with a high commitment, who received information stating that the cost of books was considerably above average. A similar group received information stating the cost of books was considerably below average. Likewise for the groups in which the commitment to the course was considered to be low. One group of individuals, considered to have low commitment to the course, received information that the cost of books was average, another group that the cost of books was considerably above average, and a final group of low commitment individuals in which the information stated that the cost of books was considerably below average. By placing individuals into such groups, individual scores would not have to be considered, but rather an overall mean of each group was used for comparison purposes. Hence, there were no right or wrong answers and no single score from any one participant was treated independently from a group, to which confidentiality of individual evaluation scores was assured.

At this point, the results of the study have not been completely tabulated, and therefore are not available at this time. Anyone interested in receiving the results may do so at a later date by contacting the author, Jerry Stremel, through the psychology department at Fort Hays State University.

The author wishes to express his sincere appreciation for your cooperation in participating in this study.