AN INSTRUMENT FOR MEASURING STUDENT OPINIONS ON ECONOMIC ISSUES

by

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Dissertation submitted to the Graduate Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of
DOCTOR OF EDUCATION
in
Community College Education

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February, 1975

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DEDICATION

This work is dedicated to two people: Dale, my wife, and Michael, my son, for their never ending patience and encouragement.

ACKNOWLEDGEMENTS

Special acknowledgement is made to my major advisor, Dr. Charles Atwell, for genuine concern and his willingness to give unselfishly of his time, expert guidance, and assistance on my behalf.

The author also wishes to express his deepest appreciation to Dr. Robert Frary for his encouragement, assistance, and patience, concerning the statistical techniques. Special appreciation is owed to Dr. Marybelle Rockey, Dr. James Tucker, and Dr. Martin Schnitzer for their interest, encouragement and assistance with this writing.

A special gratitude is owed to the administration, faculty, and students of the cooperating community colleges which were involved in this study.

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Chapter I

INTRODUCTION

A primary goal throughout the history of education has been formulating the concept of liberal or general education. The goal of general education most frequently involved educating the individual to assume a worthwhile role in life.

One of the relatively newer entrants into the general education category of courses has been the introductory course in principles of economics. With the development of the classical school of economic thought, in the nineteenth century, economics became more analytical.

Concurrent with the evolution and development of general education has been the criticism of both its content and effectiveness. Moreover, the past several years, the discipline of economics has been severely criticized by both students and economists. The criticisms of economics and its teachings seem to fall basically into three interdependent categories: subject matter, methods of instruction, and its role as an opinion or attitude change agent.

This dissertation centers on the question of economics as an agent of change concerning opinions on economic issues.

JUSTIFICATION FOR THE STUDY

In recent years, an increasing amount of information concerning economics education in American community and junior colleges has been made available. According to a recent survey by Dawson (1970), some form of introductory or principles of economics course is taught in ninety-nine percent of all community and junior colleges.

Dawson also related that on the average, three economics courses are taught at each community or junior college. Many community and junior colleges require an economics course in the general education portion of each curriculum's program. In the Virginia Community College system, nearly every occupational-technical program (associate of applied science degree program) requires one quarter of introductory economics. Practically all transfer programs require at least one quarter of economics.

Since the acceptance of economics in general education, educators have been increasingly concerned about the impact of the introductory economics course on students. Much has been written recently concerning the merits and limitations of various methods of instruction. Also, with the recent advent of tests developed by the professional associations, economists have been able to determine to some degree the amount of knowledge actually learned as a result of exposure to an introductory or principles course in economics. (Saunders, 1970)

One area relating to the effectiveness of the introductory economics courses concerns the change in the attitudes or opinions of the students. Several writers have commented on the need to determine the change, if any, in student opinions concerning economic concepts or economics-based issues. However, few researchers have attempted to assess the impact of economics courses on student opinions. A basic reason for the lack of research in this area is that adequate instruments for ascertaining student opinions on economic issues do not exist.

STATEMENT OF THE PROBLEM

Introductory courses in economics constitute a portion of the general education program in most institutions of higher education. Introductory economics courses have two possible effects on a student: (1) Introductory economics courses lead to an increase in the student's understanding of the economic world in which he lives. To determine the effectiveness of these courses on a student's economic knowledge and understanding, there are many tests available. (2) Introductory economics courses have an effect on a student's opinions on economic issues and problems of the society in which he lives. The question is whether or not an introductory economics course may be expected to change a student's basis for

rejecting, confirming, or modifying his opinions on economic issues. If it is, the degree and direction of opinion change should be established.

In order to determine the extent to which an introductory economics course changes opinions, adequate instruments for ascertaining opinions are needed. No adequate instruments have been found to measure a student's opinions on economic issues.

PURPOSE

The purpose of this study was to design and validate an instrument suitable for ascertaining student opinions about various economic issues.

LIMITATIONS OF THE STUDY

The results and conclusions of this study are confined strictly to the colleges and students directly involved. The reader must be cautious not to infer the conclusions arrived at in this study are applicable to any other sample of students or colleges.

BACKGROUND

The early Greek and Roman societies have, through their institutions and practices, formed the basis for much of Western thought and education.

The medieval world recognized the importance of the ancients as they attempted to construct their societies and educative institutions. The result was the compartmentalization of the "seven liberal arts" which supposedly encompassed all man's knowledge.

The seven liberal arts formed the original basis for the American college curriculum. However, this concept of one education for every student began to disintegrate by the nineteenth century. This breakdown was largely the result of rapidly increasing knowledge, especially in the sciences.

One of the earliest deviations from the single education plan occurred when colleges began to experiment with offering several prescribed plans. Students could choose any of the various plans, but all courses in the plans were strictly prescribed. Harvard, and later Yale, experimented with "elective" courses. Yale's program, the major-minor system, assured that some elements of the rigid general education system would be included in all of the baccalaureate degree programs. The Yale plan became very popular in the United States and was adopted by most colleges and universities.

These evolutionary forces, along with the pressure of burgeoning science, promoted a great diversity of course offerings in American colleges and universities. It seemed that no two universities could agree on what their graduates should know.

Many educators, however, did not agree with this trend of course proliferation and curricula flexibility; the critics' objections were lost in the numbers of course offerings and curricula. Despite education's increasing specialization and compartmentalization, general education has continued to be considered so necessary that practically all curricula contain at least fragments of the program.

One segment of general education that has remained has been the introductory principles course in economics. The duration of the course has varied from one term to one year. The principles of economics course, for practically all students except economics and business administration majors, is designed for general education purposes and is usually taken in the sophomore year by students pursuing baccalaureate degrees. A principles of economics course is usually taken by community college students pursuing Associate of Arts or Science degree programs, so designed to prepare students for matriculation to a four-year college or university.

The principles course typically is wide in breadth and shallow in depth. The course usually provides for a review of a wide variety of economic laws, principles, and facts, as well as the economic description of various facets, problems, and issues of society. The course can usually be divided into a study of macroeconomics and microeconomics.

Macroeconomics is the study of the economy as a whole and involves such concepts as full employment, price stability, economic growth, monetary and fiscal policy measures. Microeconomics is the study of the various parts or subsystems of the total system. Microeconomics involves such concepts as supply and demand, competition, monopoly problems, economics of crime, agriculture, and labor union analysis. However, supply and demand analysis is often included early in any economics course, whether macro or micro, due to the fact that price analysis is considered a major cornerstone of economic theory.

Community college students pursuing associate of applied science degrees typically take a one term introductory course in their freshman year. This course is designed to encompass somewhat less breadth and depth than the full-year principles course. However, the introductory course employs a similar methodology as the principles course. The introductory course usually contains relatively more macroeconomics than microeconomics.

Students in associate of arts or science transfer programs sometimes take the introductory economics course in lieu of the principles course. There seems to be no overall consistency concerning transfer students' enrolling in the introductory course or one to three quarters of the transfer principles course. The primary reason for this

is the myriad policies concerning the acceptance of transfer credits by the four year institutions.

OVERVIEW

The need for the development of an instrument for measuring changes in opinions about economic issues has been described. A basic assumption was that an introductory course in economics would have some effect on student opinions toward various economic issues. This study was not designed to evaluate the effects of economics teaching nor was it designed to determine the patterns of student opinion change. Rather, the purpose was to develop a scale to ascertain opinions about economic issues and also to find out how sensitive the scale was in measuring opinion changes.

Development of such an instrument involves certain steps and procedures. One of the first steps is concerned with examining the efforts of prior researchers. Chapter II of this paper is concerned with the relevant research in the discipline of economics and also the efforts of writers in other areas. Also contained in Chapter II is a review of the research concerning the value and impact of college on students.

Chapter III involves a detailed description of the procedures used in developing the instrument. Briefly, the following steps were employed. An initial pool of one-hundred and sixty statements concerning various

economic issues were compiled from various sources. This pool was then reduced to seventy-five items. Development of the instrument was then initiated through a pilot study. The seventy-five item pool was submitted to a group of students with no prior formal exposure to economics and not currently enrolled in an economics class. A Likert type scale was used to measure the students' responses. The results were then factor analyzed. The result was a forty item instrument measuring five economic issues.

Next, this forty item survey was tested to determine if the instrument would ascertain changes in student opinions after the completion of an introductory economics course. The methodology employed was the use of two groups of students--control and treatment. Each group was administered a pretest and a posttest. The following were considered as independent variables:

(1) degree of dogmatism
(2) age of student
(3) parents' education
(4) sex of student
(5) college attended
(6) grade in course
(7) whether student was a transfer
(8) marital status

The objective of using these eight criteria as variables was to determine the relationship, if any, between each of the variables and change in opinion on economic issues as measured by the instrument.

Chapter IV contains the results and analysis of the data. The conclusions and implications of the study are discussed in Chapter V.

Chapter II

REVIEW OF RELATED LITERATURE AND RESEARCH

The literature is reviewed in six sections. They include: the value of general education, the impact of college on students, research relating opinion change to various individual change factors, and value and opinion change in the field of economics.

Additional research efforts to determine student opinion changes are then examined. This review crosses interdisciplinary boundaries to determine ways and methods other researchers have used in approaching student opinions. The last area of literature review is concerned with the methodology of determining opinion changes.

Perhaps a prerequisite to a discussion of liberal or general education is a definition of what general education is supposed to encompass. Definitions abound in the literature. Blanshards's (1960: 80) description is typical:

> For the aim of education is to secure a more worthwhile life, in the first instance for those who receive it, in the second for others affected by these, and a more worthwhile life is one that is richer in values...the aim of a liberal education is to qualify us directly to realize such values.

According to Ikenberry (1971: 175), the American Council of Education stated in 1944: "general education

refers to those phases of nonspecialized and nonvocational education that should be the common denominator, so to speak, of educated persons as individuals and citizens in a free society."

VALUE OF GENERAL EDUCATION

A number of scholars have prescribed views on the value of general education. Mayhew (1960) supported the idea that a general education educates for the nonvocational aspects of life. Stiles (1960: 159) referred to preparing for "intellectual endeavors, citizenship responsibility, personal adjustment, and the full enjoyment of life."

Snow (1966) stated that the distinguishing feature of liberal education is its focus on what is human, on matters with broad application to human affairs. Bell (1966) observed that the basic aims of general education programs were to: (1) achieve an ideological consensus; (2) preserve and extend the traditions of western citilization; (3) strike out against specialism and for a reinstatement of the humanities; and (4) strive for integration of knowledge for wholeness.

IMPACT OF COLLEGE ON STUDENTS

A discussion of the value of general education logically leads to an examination of the impact of college upon students. Phillip Jacob (1957: 3) concluded that

the values of American college students were "remarkably homogeneous." His research revealed that college leads to a greater homogeneity and consistency of values among the students. Jacob contended that college does not liberalize students; rather college socializes the individuals. He also concluded that the influence of the curriculum, be it liberal arts or professional, had little impact on value change in students. Moreover, instructor differences and methods of instruction had little effect on student values.

Jacob did state, however, that value change during college among some individual students was considerable. These dramatic value changes were not, however, due to the college educational process.

Since Jacob's classic work, many writers have intensified efforts to conduct further research upon student values. Feldman and Newcomb's (1969 a and b) findings were somewhat different from those of Jacob. Feldman and Newcomb concluded that students often exhibit changes in authoritarianism, dogmatism and prejudice. Students also tend to adopt less conservative attitudes toward public issues. Feldman and Newcomb concluded that a change in student values could be attributed to many factors; selection of a major, individual faculty members, extent of faculty-student contact on the personality and background of the student. Feldman and Newcomb found that students become more critical in their thinking.

In earlier research, Newcomb (1957) concluded that student attitude change between the freshman and senior years was from more conservative to less conservative and that attitude change was only slightly related to course of study in college. He also reached Jacob's conclusions that opinions and attitudes tend to become more homogeneous between the freshman and senior years.

Trent and Medsker (1965), in a longitudinal study, found that college students' values and opinions do change somewhat. Their findings support those of Feldman and Newcomb to some degree; that is, students become more critical in their thinking. They become, from freshman to senior year, more tolerant, more flexible, and autonomous in their thinking.

Nasatir (1966) tended to confirm Allport's (1961) conclusions. Both researchers concluded that college had virtually no effect on the political, economic and social opinions and values of students.

Katz (1967: 75) discovered that freshman students placed high importance on such future activities and interests as "relations and activities with family, love and affection, and developing a personal identity." Seniors held these goals even more deeply than did freshmen.

Rokeach (1960) stated that persons with "open" belief systems are often perceived as being more subject to change in opinions and values when compared with persons

having "closed" belief systems. Rokeach related the prevailing idea that changes in opinions and values are somehow more socially desirable while non-change is socially undesirable. He further stated that, oftentimes, social scientists view opinions and attitudes that resist change as rigid, closed, prejudiced, radical or dogmatic. Rokeach cautioned that these often prevailing views on opinion and value change are dangerous. He emphasized that social scientists should not associate the open mind with change and the closed mind with non-change. According to Rokeach, a better view is that persons with relatively closed belief systems may sometimes manifest change and sometimes "fixedness" for the same basic reasons. On the other hand, change and non-change in open belief systems may result from a correct appraisal of reality, from intellectual conviction rather than dogmatic conviction, and from independence rather than pressure to conform.

Withey (1971) concluded that the college experience is likely to make students more open minded, less materialistic, more rational and more consistent. Students also become more aware of themselves and of interpersonal relations.

In summary, college tends to socialize rather than revolutionize students. Some factors exist which may cause a change in student values. However, many researchers conclude that college leads to increased conformity, flexibility, and homogeneity.

INDIVIDUAL OPINION CHANGE FACTORS

The literature is more contradictory on the impact of a specific course on student opinions as compared with the college experience in general. Tanner (1968) found that, by introducing lectures with negative or positive comments, an instructor was able to exert considerable and significant influence on students' evaluations of the lesson. Moreover, with a student confidant, the instructor's influence, both positive and negative was enhanced. These same conclusions were also reached by Harris, Kiefert, and Darby (1969).

Hoover and Schutz (1968), in a study with seventy-five students in an introductory education course, concluded that a course could have the effect of a change agent on student opinions. Most of this change occurred as a result of a slight decrease in dogmatism.

Several writers have explored the possible relationship between changes in attitudes toward a course, or subject field, and grades. Howard and Warrington's (1959) findings revealed that student opinions toward a particular learning experience became progressively more closely related to achievement in the learning experience as the period of instruction progresses. It was also found that attitudes and opinions were significantly related to final course grades. However, another study

by Wofford and Willoughby (1968), using the Inventory of Beliefs, revealed that changes in attitudes were not found to be significantly related to grades.

A few researchers have investigated the relationship between student opinions and attitudes and student aptitude. Baggaley and Campbell (1967) demonstrated that aptitude and interest or opinion change variables discriminate well among students majoring in various academic fields. Further research by Baggaley, Isard and Sherwood (1970) confirmed these earlier findings.

In summary, the research is not conclusive regarding the relationship between selected opinion change factors and any change in student opinions.

ECONOMICS AS AN OPINION CHANGE AGENT

The impact of the field of economics upon students has concerned educators only recently. The formation of the Joint Council on Economic Education has possibly been the most important factor generating interest in student opinion changes. Practically all writing on this subject has appeared in the literature since 1969. The vast majority of literature in the area of economics education has centered on the effectiveness of various teaching methods and techniques in the beginning or principles of economics course. Studies have been aimed principally at determining how various teaching methods and student

characteristics are related to the learning of economic concepts, and the utilization of these concepts in problem understanding. However, in some of the writings on teaching and learning relationships, some efforts have attempted to discern changes in student opinions. In addition, a few researchers have attempted to explore changes in student opinions which may result from exposure to some beginning economics course.

Weidenaar and Dodson (1972: 5-8) conducted an experiment to "measure the effectiveness of economics instruction, identify factors influencing students' performances, and learn more about students' attitudes toward economics in the one-semester macroeconomics-oriented principles course." Weidenaar and Dodson found that an economics course tended to polarize student attitudes with more students becoming uninterested. Students also tended to downgrade the importance of economics.

A few researchers have delved more into the area of student opinions. One attempt at constructing an instrument to measure student opinions on economic concepts and issues has been reported by Dawson and Rockwell (1970: 4-6). According to these authors, a group of college economists developed an experimental Survey of Opinions on Economic Issues. This survey consisted of thirty-five statements relating to economic issues. Persons

taking the test were to check; strongly agree, agree, undecided, disagree, or strongly disagree. The survey was designed to answer two questions: "(1) Do business education majors differ from social science majors in their economic opinions?" and "(2) What changes in opinion, if any, occurred during the course?"

According to Dawson, the survey has not been subjected to proper statistical analysis. He related that one of the apparent problems with the survey is that some of the questions are purely opinion whereas others are purely factual. The survey, thus far, has been used only on a very limited basis and results have not been compiled.

Mann and Fusfeld (1970: 111-113) attempted to examine the instructor's behavior in the classroom and the personality and achievement characteristics of college students as possible variables to explain changes in attitude sophistication as "becoming worldly-wise in the ways of the accepted values of an academic discipline." A fourteen-item attitude scale was constructed and validated. Mann and Fusfeld concluded that course grade and attitude sophistication were clearly different measures of changes in the student. According to these investigations, the significant positive relationship between course grades and attitude sophistication was determined by a different set of variables. High grade correlated with high S.A.T. math scores. However greater attitude sophistication at the

end of the course, and larger increases in attitude sophistication during the course, were shown by students with a high degree of interest in social science. Mann and Fusfeld concluded there was a paradox: success-oriented students learned more and got better grades, but subject matter-oriented students developed greater attitude sophistication. The authors stated the ramifications of this conclusion were vast. These ramifications were:

(1) Studies which compare teaching methods, class sizes, types of educational programs and kinds of educational institutions should be reexamined using attitude sophistication as a measure.

(2) Instructors definitely made a difference in the classroom as related to attitude sophistication.

(3) The measurement of attitude sophistication is impractical because of the lack of measuring instruments.

An experiment by Meinkoth (1971) supported some of the conclusions of Mann and Fusfeld. Meinkoth's experiment was designed to compare the effects of six individual instructors with the test performance and attitudes of their students. The attitude survey used was: (1) To "rate" the teachers, (2) To indicate the degree of interest the student had in the principles of economics course, and (3) To determine whether or not a principles course stimulated the student. Meinkoth concluded that individual instructors

do not significantly influence the achievement of their students but do influence dramatically their attitudes, not only toward the instructor but also toward the subject matter of economics. Meinkoth further concluded that teachers might better concentrate on creating a favorable attitude toward the subject matter rather than putting the emphasis on the transmittal of content. This is particularly relevant since teachers seem to have little effect on the average test scores of their students.

This need for increased knowledge of student opinions was reiterated by Horton (1972: 118-123). He stated essentially the same conclusions as did Mann and Fusfeld; that is, values and knowledge are not independent of each other and adequate instrumentation is needed to assess opinions and attitudes properly. Also, he argued that opinions and values are just as important as content, especially in an economics course for general education. Horton concluded:

> If we do not help our students to understand why, if all economists were laid end to end, we would not reach a conclusion, they might well contend that, if we were all laid end to end, the world would be better off.

Scott and Rothman (1973a: 116-123) have recently addressed the question of the relationship between political opinions and economic literacy. These authors contended that a person's political opinions depend on his opinions

toward basic social goals and on his perception of reality. They further contended that the more economics one learns, the more likely one is to adopt a perception of reality consistent with economic theory. Thus, knowledge of economics may change opinions and attitudes. Therefore, according to Scott and Rothman, no measure of opinion can be independent of knowledge. However, they argued that it was possible to construct measures which reflect opinion more than knowledge, and vice-versa.

Scott and Rothman (1973a: 121-123) were critical of the approach used by Mann and Fusfeld. They stated that Mann and Fusfeld seemed to be insufficiently aware of the link between knowledge and opinions, thus "dangerously biasing their recommendations on good teaching practices." Scott and Rothman further attacked Mann and Fusfeld's concept of attitude sophistication, contending that the questionnaire was biased toward liberalism. They further asserted that "sophisticated responses" to the questionnaire relied more heavily on value judgements (and the alleged liberal bias), in some instances, than on economic knowledge.

Scott and Rothman devised a political opinion scale of forty-one items. The scale was administered to a large group of university undergraduate students at several schools.

The major conclusions were:

1. The economic attitude scale does measure something other than economic knowledge.

2. Among students with no training in economics, the level of economic knowledge and political conservatism was positively related.

3. There was no relationship between economic knowledge and political conservatism at the end of a one-semester economics course.

A recent followup study by Scott and Rothman (1973b), using the same opinion scale, revealed essentially the same results as their earlier study. However, there was a control group in this most recent study. This control group consisted of an introductory psychology class. The major new conclusion of Scott and Rothman's latest study was that, relative to the introductory psychology course, the introductory economics course tended to make students experience a less liberal change.

In addition to the above research on surveys of economic opinions, several additional unpublished and often anonymous, economic opinion surveys from George Dawson of the Joint Council on Economics Education have been reviewed. None of these surveys were subjected to statistical treatment. The majority of these surveys was not designed to ascertain college student opinions on economic issues. Rather, some of these surveys were directed

at high school students whereas other surveys were targeted at adults with no college. Another difference in these anonymous surveys was that they did not all seek opinions on the same basic issues. Some were oriented to liberal-conservative scales, whereas others sought to determine opinions more related to the home economics field.

In summary, research relating economics courses as a change agent concerning student opinions is very limited. The research does indicate, however, that instructors have little influence on the amount of economics learned but very definitely influence student attitude and opinion. Evidence of the relationship between student opinion change and economics is inconclusive due to the absence of adequate instruments.

OPINION CHANGE IN OTHER AREAS

Other researchers have attempted the development of instruments to measure opinion change in specific areas unrelated to economics. Parry and Burch (1968: 264-268) developed an instrument to measure the "need to work." Tuel and Shaw (1966) constructed a School Opinion Survey for the purpose of testing a rationale for guidance services. The result was a survey suitable for measuring and describing attitudinal changes among educational groups.

Cassel (1970) sought to develop a semantic differential for use in assessing attitude and attitude

characteristics among secondary school and college students. A comparison between pre- and post-college attitudes was made. The result was an instrument which could be used to ascertain attitude changes of secondary school and college students.

Halpern (1968) investigated possible effects of item arrangements in interest measures. He concluded that there was no evidence that item arrangement produced spurious inter-item correlations.

Duffy (1966) attempted to construct and validate an instrument to measure poetry writing performance of children. Statistical techniques were utilized to determine the validity and reliability of the instrument. The conclusion was that a valid and reliable instrument had been developed.

Barker (1966) reported on the development of a scale for measuring attitudes toward school guidance programs. The result was an instrument suitable for ascertaining parents' opinions concerning the effectiveness of a school's guidance program.

In summary, academicians of many disciplines thus far have exhibited only minimal interest in examining possible changes in student opinions. The statistical methodology employed in the few investigations is very similar to that employed in the studies on economic attitudes.

METHODOLOGY OF DETERMINING OPINION CHANGE

Before opinions or attitudes concerning any subject area can be ascertained, an instrument must first be developed. Various authors have noted problems and techniques involved in instrument construction.

Oppenheim (1966) stated that most surveys, regardless of the type, go through the same stages or cycles of development. Basically, the steps involve deciding the aims of the study, review of the literature, design of the study and methods, field work, and processing and analyzing the results.

Downie (1967) stressed that even before work is begun on surveying attitudes or opinions, the researcher must keep in mind that attitudes and opinions possess various dimensions. Remmers (1954) described these dimensions in four categories: First, an individual is usually for or against some object or issue. This is known as direction. Second, people may hold the same opinion but not to the same degree. Third, people do not like to discuss some issues in public whereas discussion of other opinions does not bother them. Fourth, opinions may be of a general nature such as "liberal." However, a person classed as a liberal may be conservative on a specific issue.

According to Edwards (1957), once the preliminary work has been completed, a most important step is the construction or compilation of items. Edwards stated a major assumption involved in the construction of attitude or opinion scales is that there will be a difference in the belief and disbelief system of the respondents. In other words, some individuals will believe or agree with a statement where other individuals will disbelieve or disagree with a statement. The central point of this discussion is that items must distinguish the believers from the disbelievers.

Cook and Selltiz (1964) asserted that major problems with opinion surveys can occur when the respondents know what the researcher is looking for. Often the result is that the respondents may answer the survey in a manner that they, the respondents, feel the researcher would like, would be impressed with, or to project a "favorable" image to the researcher. To avoid these problems Cook and Selltiz offered several suggestions:

First, include items not relevant to the additional object under study. This approach makes the test less obvious.

Second, assure the respondents of complete confidentiality of their response. Also, the researcher must emphasize the necessity for honest answers, that there are no "right" or "wrong" answers, and create the impression

that the questioner will not disapprove of whatever views are expressed.

Third, include items to which an unfavorable reply is likely to be considered as acceptable in order to break down a possible set to give uniformly favorable replies.

Cook and Selltiz offered ideas to solve the problem of the respondent's answering questions designed to create a favorable impression. The simplest approach to avoid this problem is to vary the wording of items in such a way that for half of the items agreement represents a favorable response and half an unfavorable response.

Another problem to correct is the tendency of extreme answers, or moderate answers. To solve this problem, Cook and Selltiz suggested using matched pairs of items, one referring to the attitudinal object, the other referring to some control object, and scoring in terms of the discrepancy between the two responses.

Oppenheim (1966) offered suggestions on the construction of items. He stated that the items are poorly constructed if many of the respondents start to quibble, want to change the items, when items are crossed out or skipped, when there are many "uncertain" or "don't know" responses.

He stated that since opinions are emotional, the researcher should try to avoid the stilted, rational approach in writing statements. Researchers should not

be afraid to use phrases relating to feelings and emotion, hopes and wishes, hates, fears and happiness. He also warned against the use of double-barreled statements, proverbs and well-known sayings.

In summary, the writers have offered suggestions for the composition and construction of items designed to elicit individuals' opinions. A researcher must realize that people, for a variety of reasons, will not automatically reveal their true opinions. Therefore, care must be exercised during the formulation of questionnaires.

Chapter III

PROCEDURES

The chronology and steps involved in the study are described in this chapter. First is a description of the procurement of items. Second, the scales of the instrument, the Survey of Opinions on Economic Issues are explained. Following this is a description of the student sample. Next, is a detailed description of the student characteristics or variables used in the study. The techniques of analysis used in this study are then described.

PROCUREMENT OF ITEMS

Appendix "A" contains an initial pool of one hundred and sixty items which was compiled to assess student opinions concerning various economic issues. The following were the issues involved:

1. Opinions concerning labor unions.
2. Opinions concerning economic organizations and power structures.
3. Opinions concerning socialism and social welfare.
4. Opinions concerning economic freedom.
5. Opinions concerning employment and inflation.

The initial pool of one-hundred and sixty items was compiled from several sources. Many of the items were taken

from the existing surveys obtained from the Joint Council on Economic Education. Oftentimes, these items required modification. In addition, some items (approximately twenty-five percent) were devised by this investigator. A four point, Likert-type scale (Agree, Tend to Agree, Tend to Disagree, Disagree) was used for scoring responses.

This one-hundred and sixty item pool was then reduced to seventy-five items. The procedure for reducing the pool to seventy-five items was as follows: the one-hundred and sixty items were submitted to eight faculty members at Wytheville Community College. Four of the instructors were very familiar with the field of economics, whereas the remaining four faculty were not. The unfamiliar instructors were English teachers who also edited the items in the questionnaire.

Each of these eight instructors submitted, in their opinion, the fifteen "best" questions pertaining to each of the five economic issues. The instructors were free to change the wording of items for clarification. The investigator was then able to utilize the eight opinions plus his own and develop an instrument consisting of approximately seventy-five items--fifteen items for each of the five economic issues. The purpose of this procedure was to attempt to establish face validity for the survey. These seventy-five items are denoted in Appendix A.

Next, this seventy-five item survey was administered to a sample of approximately one hundred students enrolled at Wytheville Community College. This pilot study was conducted during the winter quarter of 1974. The one hundred students represented a variety of programs and majors. Preteacher, liberal arts, and science majors represented the AS or transfer programs. Students pursuing AAS degrees in programs such as nursing, drafting and design, civil technology, environmental technology, secretarial science, and business management were also used. These one hundred students had not been exposed to a beginning economics course, nor were they currently enrolled in one.

The student responses were then factor analyzed into five groupings or scales. Each scale was comprised of statements designed to measure opinions toward the five economic issues mentioned earlier. Thirty-five items were discarded as they would not correlate into the scales. The results of this factor analysis are contained in Appendix B. The end product of the pilot study was the Survey of Opinions on Economic Issues. The Survey was composed of the five scales with a total of forty items. Each scale was found to measure one of the economic issues previously mentioned. The forty items were scrambled to avoid a halo effect in responses.

DESCRIPTION OF THE SCALES

Scale 1 items measured opinions concerning labor unions. These scale 1 items are listed below.

1. American labor unions of today are too strong.
2. Labor unions are largely responsible for inflation; therefore, wages should be controlled because higher wages cause higher prices.
3. Labor unions should become stronger and have more influence.
4. If the teamsters union (truck drivers) went on strike, then the President should call up the National Guard to drive the trucks.
5. The best means of setting prices is to let buyers and sellers seek their own interests in a market free from government interference and control.
6. When a strike occurs, the federal government ought to step in and settle the dispute between management and labor.

Student responses to the items of the five scales were measured on a continuum from 1 (representing agreement) to 4 (representing disagreement). Some of the items of each scale were positively worded whereas other items were negatively worded. For example, if a student was in agreement (i.e., scored low) with items 1, 2, 4 and 6 of scale 1, the student was likely to disagree (i.e., score high) with the negatively worded items 3 and 5. In order to compensate for the changes in phraseology, all items were scored in the same direction. In order to accomplish this, the computer program was designed to reverse the scaling of all negative items. For example, if a student disagreed with the

negatively worded item 3 (i.e., scored 4) the computer actually scored the response as a "1"; thus a "3" (tend to disagree) was recorded as a "2" (tend to agree). Therefore the minimum score for scale 1 was 6 with a maximum score of 24. Since the answer "1" indicated agreement and "4" indicated disagreement, lower scores indicated increasing agreement whereas higher scores indicated increasing disagreement. Simply stated, lower scores on scale 1 meant increasing opposition to labor unions in comparison to higher scores on scale 1.

Those items comprising scale 2 are listed below:

1. Unions sometimes can cause unemployment of workers.
2. When collective bargaining has failed, labor must be able to strike.
3. If gasoline is in short supply, it is better to let the government ration the gas than to let the price keep going up.
4. Federal aid is needed to provide quality of educational opportunity throughout the United States.
5. The primary purpose of taxes is to furnish revenue to the government.
6. The federal government should assist the cities with such social problems as lack of low cost housing, inadequate transportation to and from work, and ghetto welfare.
7. The government should try to prevent unemployment.
8. A person should be required to join a union or otherwise lose his job.
9. Making profits is essential to our kind of economic system.

This scale measured opinions concerning economic organizations and power structures. Since scale 2 was comprised of 9 items, the range of possible scores was from 9 to 36. However, items 1, 2, 3, 4, 5, 6, 7 and 9 were all reverse scaled. Lower scores on this scale actually indicated increasing suspicion and cynicism concerning the economic organizations and power structures in society today; conversely, higher scores actually indicated a more positive attitude toward economic organizations and power structures.

Scale 3, listed below, contained ten statements designed to ascertain opinions toward socialism and social welfare:

1. The federal government could easily control inflation if it would simply freeze prices on all goods and services.
2. In some industries in America, there is too much competition.
3. Automobiles could just as well be produced in small shops and plants.
4. The beef shortages during the summer of 1973 were the result of cattle producers and middlemen "getting back" at the housewives who refused to buy beef.
5. The President ought to be given the power to raise or lower taxes within a certain range in order to keep both inflation and recession under control.
6. Automation has been a major cause of mass unemployment.
7. It is up to the government to make sure that everyone has a secure job and a good standard of living.

8. The government should guarantee a decent standard of living for those who can't find work.

9. All education costs of students, grade 1 through college, should be paid for by the government.

10. It would be a good thing for America if some method could be devised to make the distribution of income more nearly equal.

The range of possible scores for scale 3 was from 10 to 40. All items were positively written and thus none were reverse scaled. Therefore, a lowering of scores on scale 3 indicated increasing agreement with these items. Positive opinions concerning socialism and social welfare were evidenced by lower scores on this scale.

The seven items of scale 4 measured opinions toward economic freedom:

1. The President of General Motors makes $800,000 a year; no man should receive a salary that high.

2. Government should keep its hands off private business operation.

3. If you own a house then you should have the right to charge as high a rent as you wish so long as someone is willing to pay you.

4. No one should be allowed to earn more than $50,000 a year.

5. People who go on strike against their employers should be fired from their jobs.

6. Employers should hire and fire as they desire.

7. If a corporation's profits are too high then the government should tax away those excessive profits.

The range of possible scores on scale 4 was from 7 to 28. Items 2, 3, 5 and 6 were positively written while items 1, 4 and 7 were negatively phrased. Hence, a lowering of scores indicated increasingly favorable opinions concerning economic freedom whereas higher scores indicated adverse opinions toward increases in economic freedom.

The last scale listed below was comprised of eight items which were designed to identify opinions concerning employment and inflation:

1. In general, full economic security is harmful; most men wouldn't work if they didn't need the money for eating and living.
2. A successful campaign to "buy American" would, in the long run, harm our economic well being.
3. Automobile plant workers earn high wages because their union, the United Auto Workers is very powerful.
4. There would be very little unemployment in America if people would just get out and look for a job.
5. Some unemployment beyond the generally accepted full employment level is desirable because it makes people more worried about jobs and hence more diligent workers.
6. Generally, the American public buys what it wants, without any regard to the amount of intensity of advertising.
7. If our economy is to keep growing, we have got to expect some inflation.
8. Too much spending by the federal government is the primary cause of inflation.

All of scale 5 items were negatively written, emotional in nature, and reverse scaled. This means, as

students became seemingly less emotional concerning employment and inflation, their scale 5 scores would decrease.

DESCRIPTION OF THE STUDENT SAMPLE

As stated earlier, the forty items of the Survey of Opinions on Economic Issues were scrambled, along with the dogmatism items, in order to try to avoid the students answering questions in such a manner as to attempt to please the researcher. A sample of the completed Survey of Opinions on Economic Issues, including the Rokeach items, is contained in Appendix C. This instrument was then administered on a pretest-posttest basis to a group of four hundred and forty-nine students. The pretests were administered at the beginning of the 1974 Spring Quarter; whereas, the posttests were administered at the end of the Spring Quarter. Identification numbers were used to match pretests and posttests.

The students of the study were enrolled in various colleges throughout the Virginia Community College System. In order to secure a cross section of students through the Virginia system, the following colleges were utilized:

(1) Wytheville Community College, Wytheville, Virginia

(2) New River Community College, Dublin, Virginia

(3) Virginia Western Community College, Roanoke, Virginia

(4) Northern Virginia Community College, Annandale, Virginia

Wytheville and New River Community Colleges represented students indigeneous to rural and small towns. Virginia Western represented students in medium-sized cities; whereas, students of the Annandale Campus of the Northern Virginia Community College were primarily from the Washington, D. C. suburban area.

Approximately one-half of the students were enrolled in a beginning economics course during the spring quarter. The course itself was considered the treatment and those students enrolled in the course were considered as the experimental group. The remaining half of the students comprised the control group and were not enrolled in an economics course, nor previously enrolled in one. The treatment and control groups were composed of both freshman and sophomore students representing a variety of curriculums in Associate of Science and Associate in Applied Science programs.

A control group was utilized in order to ascertain if changes between pre and post tests were due in fact to the treatment--economics class. The control group

minimizes such internal threats to validity such as history and maturation. By using the pretest as the covariate scores and the posttest as the criteria scores, a researcher can assume that all students "start equal" if the correlation between the two scores is found to be statistically significant.

Table I summarizes the school characteristics of the students who participated in this study.

TABLE I

STUDENT PARTICIPANTS

Colleges	Econ.	Non-Econ.	Total
Wytheville C. C.	42	42	84
New River C. C.	51	27	78
Virginia Western C. C.	92	46	138
Northern Virginia C. C.	64	85	149
	249	200	449

DESCRIPTION OF THE STUDENT CHARACTERISTICS

Student characteristics were ascertained by the use of a questionnaire which was administered with the posttest; or in the case of "dogmatism" derived from the instrument itself. Appendix C also contains a copy of the questionnaire concerning student characteristics. These characteristics were considered as independent variables

and were used for the purpose of determining their relationships, if any, to economics. The following characteristics were utilized in the study.

Dogmatism

The degree of dogmatism was determined by using Rokeach's (1960) shortened twenty-item dogmatism scale. As stated earlier, the dogmatism items were interspersed within the forty-item economics opinion survey. The scoring of the dogmatism scale was inverted due to the nature of the Likert scale. The scoring on both the dogmatism scale and the economic opinion survey was as follows: 1=agree, 2=tend to agree, 3=tend to disagree, and 4=disagree. Therefore, subjects who were highly dogmatic (i.e., agreeing with the dogmatism items) would necessarily score low. The dogmatism scores were grouped into three levels; high medium, and low. A score of 20 to 42 was designated as high, 43 to 49 was medium, whereas 50 to 80 was determined to be low. These score ranges were used to differentiate students as scoring high, medium, or low on the dogmatism scale because one-third of all students scored between 20 and 42, one-third between 43 and 49, and the remaining one-third scored between 50 and 80.

Age

Students were grouped into two levels for age; less than 20 and 20 or more.

Socio-economic Status

This factor was determined by the students' indication of the highest level of education attained by either parent. Educational levels were grouped according to the following categories:

8th grade or below
high school diploma
two year college degree
four year college degree
masters or doctorate degree

Sex

Since the opinion survey used identification numbers instead of names, students had to indicate their sex on the questionnaire.

College Attended

Each participant's posttest answer sheet was coded to indicate the community college in which he was currently enrolled.

Grade

The final grade of each student participating in this study was submitted by their instructors. Grades utilized in this study were: A, B, C, D, F or W.

Transfer vs Non-transfer

Students indicated on the questionnaire whether or not they intended to transfer to a four-year college or university.

Marital Status

The students indicated their marital status on the questionnaire.

TECHNIQUES OF ANALYSIS

The computer program MANOVA (Clyde: 1969) was used in analyzing these data. The criterion and covariates utilized were the five posttest and five pretest economics attitude scores respectively. Eight multivariate analyses of covariance comparing two factors simultaneously were performed. In each analysis, one of the factors, economics treatment scores, was crossed with a second factor. These second factors represented the eight student characteristic variables described earlier. For example, the analysis utilizing dogmatism was contrasted with the economics treatment scores. The Survey of Opinions on Economic Issues was comprised of five separate scales. Therefore, each analysis actually crossed economics and a student characteristic with respect to scale 1, then scale 2, etc. This process was repeated for each of the eight student characteristics resulting in forty separate analyses.

The purpose of the analyses was threefold with respect to attitude in general and each scale:

1. To determine whether enrollment in an economics course affected opinions toward economic issues.

2. To determine whether opinions toward the five economic issues varied according to personal characteristics of the students.

3. To determine whether there was an interaction between student characteristics and the effect of treatment. For example: Might it be the case that enrollment in an economics course affected the opinions of high-dogmatic students but not those of low-dogmatic students?

SUMMARY

The purpose of this study was the construction and validation of a Survey of Opinions of Economic Issues. The survey was constructed to measure opinions concerning five economic issues. In order to construct the survey, a large pool of items was first reduced to seventy-five with the aid of eight community college faculty opinions. Next this seventy-five item survey was reduced to forty items by factor analysis. These remaining forty items comprised the survey and consisted of five separate scales with each scale measuring an opinion on a specific economic issue.

By using a sample of community college students in Virginia, the survey was then tested for validity using eight multivariate analyses of covariance.

Chapter IV

RESULTS

The purpose of this study was to construct and validate scales for measuring economic opinions held by students in a sample of community colleges in Virginia.

In order to accomplish this purpose, the following analyses were performed:

(1) Score differences between a pretest and posttest for control and experimental students were compared in order to determine whether enrollment in an economics course affected opinions toward economic issues.

(2) Scores on each of the five scales of the Survey of Opinions on Economic Issues were compared with eight selected student characteristics. This was done in order to determine whether opinions varied according to these characteristics.

(3) Economics treatment scores were compared with each of the eight student characteristics to ascertain whether or not there was an interaction between the student characteristics and the treatment. For example: Did enrollment in an economics class appear to affect the opinions of transfer students but not affect non-transfer students?

The format of this chapter will basically follow the above three sections. The remainder of this chapter will

contain the answers to the following three questions:

1. Did the economics course have an effect on the students' opinions toward certain selected economic issues? If so, then what effects occurred?

2. Did the opinion differences, if any, vary according to the personal characteristics of the students? If so, which characteristics were related, and in what direction, to opinion differences?

3. Were there any interactions between student characteristics and the treatment effect? If so, what were the relationships between student characteristics and enrollment in an economics class?

THE EFFECT OF ECONOMICS ON OPINIONS

As stated in the previous chapter, a control group was utilized in order to determine if an economics course acted as an influence concerning opinions on economic issues. The pretest economics opinion scores (covariate scores) were correlated with the posttest economic opinion scores (criterion scores), and these correlations were found to be significant in all analyses at the .001 level. Therefore, the use of the pretests for adjustment for initial levels was justified. As a result, all students "started equal" and changes in pretest and posttest scores can be explained in terms of the treatment. Table II shows the results of the test and of the main effect, enrollment in an economics class, in each of the eight analyses described earlier. The first column gives the probability associated

with the multivariate test of significance over all five scales. The other columns list the probabilities associated with the univariate tests on each scale.

As reported in Table II, the test of economics was done eight times. This test was necessarily repeated in order to test for possible interactions between the treatment and the student characteristics.

Table III is an all-inclusive presentation of the pretest and posttest means and standard deviations of each of the five scales for all eight student characteristics.

A condition for proper analysis of variance and covariance is that the standard deviations of the cells in Table III should not greatly fluctuate. A study of the standard deviations in Table III indicates that such fluctuation was not a problem in the analysis.

As stated earlier, Table II is concerned with information relating the effect of enrollment in an economics class on students' opinions on economic issues. Economics was significant at the .001 level for all independent variables in a multivariate sense. These levels of significance imply that there was a "global" or overall effect on the Survey of Opinions on Economic Issues. In other words, the multivariate levels of significance reveal strong evidence that students' opinions toward economic issues are affected as a result of enrollment in a basic economics class.

TABLE II

Tests of F Ratios from Multivariate Analysis of Variance--Test of Economics

		Univariate levels of significance				
Independent Variables	Multivariate levels of Significance*	Scale 1 Labor Unions	Scale 2 Power Structures	Scale 3 Social Welfare	Scale 4 Economic Freedom	Scale 5 Employment & Inflation
Dogmatism	.001	.04	.08	.002	.001	.67
Sex	.001	.04	.05	.003	.001	.65
Parents' Education	.001	.04	.08	.002	.001	.68
College Attended	.001	.03	.08	.002	.001	.65
Grade in Course	.001	.03	.07	.003	.001	.63
Transfer	.001	.04	.08	.002	.001	.65
Marital Status	.001	.04	.08	.002	.001	.66
Age	.001	.05	.09	.003	.001	.61

*The multivariate tests were generated from the Wilks Lambda Criterion followed by the use of Rao's approximation to obtain F ratios. (Clyde: 1969)

TABLE III

Pretest and Posttest Score Means

(Standard Deviations)

		Scale 1			
		Opinions Concerning Labor Unions			
		Pretest		Posttest	
Independent Variable		Econ.	Non-Econ.	Econ.	Non-Econ.
Grand Mean		15.0 (2.6)	15.0 (2.9)	15.3 (2.6)	14.9 (3.0)
Dogmatism	High	15.5 (2.4)	15.7 (2.4)	15.6 (2.2)	15.5 (2.8)
	Medium	15.2 (2.6)	14.5 (3.1)	15.2 (2.8)	14.6 (2.9)
	Low	14.2 (2.3)	14.6 (3.2)	15.0 (2.5)	14.4 (3.1)
Sex	Male	14.9 (2.6)	14.8 (3.4)	15.0 (2.6)	14.8 (3.1)
	Female	15.2 (2.4)	15.2 (2.4)	15.6 (2.5)	14.9 (2.8)
Parents' Education	8th Grade or below	14.9 (2.8)	15.3 (2.9)	15.2 (2.7)	14.9 (2.9)
	H.S. Diploma	15.0 (2.3)	15.1 (3.0)	15.2 (2.6)	14.9 (3.1)
	2 Year Degree	15.4 (2.0)	15.1 (1.9)	15.9 (2.1)	14.1 (2.1)
	4 Year Degree	15.1 (2.5)	14.9 (3.4)	14.9 (2.7)	14.7 (3.1)
	Master or Doctorate	14.4 (2.7)	14.2 (2.5)	15.6 (2.1)	15.1 (2.7)
College Attended	WCC	15.1 (2.4)	14.2 (3.6)	15.5 (3.3)	14.5 (3.4)
	NRCC	15.0 (2.6)	15.1 (3.0)	15.1 (3.4)	15.2 (2.7)
	VWCC	15.2 (2.7)	15.0 (2.3)	15.3 (2.4)	14.4 (2.9)
	NVCC	15.0 (2.4)	15.2 (2.9)	15.6 (2.4)	15.1 (2.9)

TABLE III (continued)

Scale 1					
		Opinions Concerning Labor Unions			
		Pretest		Posttest	
Independent Variable		Econ.	Non-Econ.	Econ.	Non-Econ.
Grade in Course	A	14.9 (2.4)	16.0 (2.9)	15.7 (2.6)	15.3 (3.1)
	B	15.3 (2.5)	15.0 (2.5)	15.4 (2.2)	14.6 (2.9)
	C	15.2 (2.4)	14.6 (3.6)	14.8 (2.8)	15.2 (3.3)
	D	14.5 (2.9)	14.3 (3.4)	15.0 (2.6)	14.3 (2.3)
	F or W	15.9 (3.3)	15.1 (2.0)	17.4 (2.6)	14.1 (2.0)
Transfer		14.6 (2.6)	15.0 (2.9)	15.2 (2.8)	15.0 (2.8)
Non-transfer		15.3 (2.4)	15.0 (3.0)	15.4 (2.4)	14.7 (3.1)
Marital Status	Single	15.0 (2.4)	14.8 (2.7)	15.2 (2.4)	14.8 (2.9)
	Married	15.1 (2.7)	15.3 (3.0)	15.5 (2.8)	15.1 (3.1)
Age	Less than 20	15.0 (2.4)	14.7 (3.1)	15.0 (2.8)	14.7 (3.2)
	20 or more	15.1 (2.6)	15.4 (2.7)	15.5 (2.3)	15.1 (2.9)

TABLE III (continued)

Independent Variable		Scale 2 Opinions Concerning Econ. Organizations Pretest Econ.	Pretest Non-Econ.	Posttest Econ.	Posttest Non-Econ.
Grand Mean		29.3 (2.9)	29.8 (3.1)	28.3 (3.7)	29.2 (3.3)
Dogmatism	High	29.4 (3.3)	29.6 (3.3)	28.4 (3.8)	29.0 (3.4)
	Medium	29.1 (2.9)	29.6 (3.1)	28.2 (3.7)	29.4 (3.5)
	Low	29.4 (2.5)	30.4 (3.0)	28.4 (3.6)	29.1 (3.3)
Sex	Male	29.2 (3.1)	29.5 (3.2)	28.1 (3.8)	28.9 (3.4)
	Female	29.4 (2.8)	30.2 (3.0)	28.5 (3.6)	29.5 (3.3)
Parents' Education	8th Grade or below	29.3 (3.0)	29.7 (3.4)	27.9 (3.5)	28.9 (3.6)
	H.S. Diploma	29.4 (2.8)	30.2 (3.3)	28.6 (3.2)	29.1 (3.7)
	2 Year Degree	29.5 (3.1)	30.0 (3.3)	28.4 (4.0)	30.5 (2.9)
	4 Year Degree	29.6 (3.0)	29.6 (2.6)	28.4 (4.0)	28.7 (3.0)
	Master or Doctorate	28.0 (3.3)	29.3 (3.0)	26.9 (4.5)	29.5 (2.1)
College Attended	WCC	29.5 (2.7)	30.3 (3.1)	29.6 (3.1)	29.3 (3.2)
	NRCC	29.4 (3.1)	28.9 (3.4)	27.7 (4.2)	27.7 (3.5)
	VWCC	29.5 (2.9)	30.5 (3.0)	28.4 (3.3)	29.7 (3.9)
	NVCC	29.0 (3.1)	29.6 (3.0)	27.8 (4.1)	29.3 (3.0)

TABLE III (continued)

Independent Variable		Scale 2: Opinions Concerning Econ. Organizations — Pretest Econ.	Pretest Non-Econ.	Posttest Econ.	Posttest Non-Econ.
Grade in Course	A	29.1 (3.3)	30.1 (2.7)	28.1 (3.8)	29.8 (3.0)
	B	29.6 (2.7)	30.4 (3.3)	27.9 (4.1)	29.5 (3.3)
	C	29.5 (2.9)	29.1 (3.0)	28.6 (3.5)	28.4 (3.6)
	D	28.5 (2.9)	30.6 (3.0)	29.4 (3.4)	29.6 (3.3)
	F or W	29.4 (1.9)	28.7 (3.9)	28.4 (1.7)	27.9 (4.5)
Transfer		29.7 (3.0)	29.8 (3.1)	28.5 (3.7)	28.7 (3.5)
Non-transfer		29.1 (2.9)	30.0 (3.2)	28.2 (3.7)	29.5 (3.3)
Marital Status	Single	28.2 (2.9)	29.9 (3.2)	28.5 (3.7)	29.2 (3.4)
	Married	29.6 (2.9)	29.6 (3.2)	29.0 (3.7)	29.0 (3.2)
Age	Less than 20	29.0 (2.8)	30.0 (3.1)	28.1 (3.2)	29.4 (3.1)
	20 or more	29.5 (3.0)	29.7 (3.2)	28.5 (4.0)	28.9 (3.7)

TABLE III (continued)

Scale 3					
Opinions Concerning Socialism and Social Welfare					
		Pretest		Posttest	
Independent Variable		Econ.	Non-Econ.	Econ.	Non-Econ.
Grand Mean		27.3 (4.7)	27.3 (4.8)	28.1 (4.8)	26.9 (4.9)
Dogmatism	High	29.4 (4.3)	29.3 (4.2)	29.8 (4.3)	28.5 (4.5)
	Medium	27.2 (4.1)	27.7 (4.2)	27.7 (4.5)	27.1 (4.3)
	Low	25.2 (4.6)	25.2 (4.5)	26.6 (5.2)	25.3 (5.1)
Sex	Male	28.3 (4.6)	28.4 (4.4)	28.9 (4.8)	27.8 (4.7)
	Female	26.4 (4.5)	26.3 (4.6)	27.2 (4.6)	26.1 (4.6)
Parents' Education	8th Grade or below	26.7 (4.6)	27.1 (3.8)	27.6 (4.5)	26.2 (4.2)
	H.S. Diploma	27.3 (4.8)	28.2 (5.1)	28.2 (5.1)	26.4 (5.4)
	2 Year Degree	28.8 (4.4)	28.2 (5.1)	28.9 (4.5)	27.3 (3.7)
	4 Year Degree	27.6 (3.9)	28.0 (4.6)	27.9 (4.0)	28.4 (4.6)
	Master or Doctorate	27.0 (5.4)	27.0 (2.8)	27.4 (6.0)	27.5 (3.6)
College Attended	WCC	26.9 (4.7)	26.7 (3.8)	27.2 (5.0)	27.5 (3.8)
	NRCC	26.3 (4.3)	28.2 (4.4)	26.0 (4.3)	27.2 (5.0)
	VWCC	27.2 (4.6)	26.1 (5.4)	28.9 (4.8)	26.5 (5.1)
	NVCC	28.9 (4.7)	27.9 (4.6)	29.5 (4.6)	26.9 (5.0)

TABLE III (continued)

Independent Variable		Scale 3 Opinions Concerning Socialism and Social Welfare			
		Pretest		Posttest	
		Econ.	Non-Econ.	Econ.	Non-Econ.
Grade in Course	A	28.0 (4.9)	27.3 (4.3)	29.1 (4.7)	28.3 (4.2)
	B	27.3 (3.8)	27.8 (4.7)	28.3 (4.3)	27.3 (4.0)
	C	27.5 (4.7)	27.4 (4.5)	27.6 (4.8)	26.6 (5.7)
	D	26.3 (4.5)	25.2 (5.2)	27.1 (5.4)	24.8 (4.9)
	F or W	24.5 (7.2)	28.7 (5.3)	24.8 (7.2)	27.9 (3.4)
Transfer		28.0 (4.6)	27.6 (4.8)	28.9 (5.0)	27.5 (4.6)
Non-transfer		27.0 (4.6)	27.2 (4.6)	27.6 (4.7)	26.6 (4.9)
Marital Status	Single	26.9 (4.4)	27.0 (4.4)	27.5 (4.6)	26.5 (4.5)
	Married	28.4 (4.9)	28.3 (5.2)	29.4 (4.9)	28.4 (5.3)
Age	Less than 20	26.9 (4.6)	26.8 (4.5)	27.3 (4.4)	26.6 (4.7)
	20 or more	27.8 (4.8)	28.0 (4.8)	28.7 (5.0)	27.4 (4.9)

TABLE III (continued)

Scale 4					
		Opinions Concerning Economic Freedom			
		Pretest		Posttest	
Independent Variable		Econ.	Non-Econ.	Econ.	Non-Econ.
Grand Mean		17.2 (3.0)	17.2 (3.2)	16.6 (3.1)	17.5 (3.1)
Dogmatism	High	17.3 (3.1)	17.5 (3.7)	16.4 (3.3)	17.8 (3.2)
	Medium	17.2 (2.8)	17.3 (2.9)	16.8 (2.9)	17.7 (2.9)
	Low	17.1 (3.2)	17.0 (3.1)	16.6 (3.1)	17.1 (3.3)
Sex	Male	17.3 (3.1)	17.5 (3.1)	16.8 (3.1)	17.7 (3.1)
	Female	17.1 (2.9)	16.9 (3.4)	16.4 (3.1)	17.3 (3.1)
Parents' Education	8th Grade or below	17.9 (3.0)	17.5 (2.7)	17.4 (3.2)	17.7 (3.1)
	H.S. Diploma	17.1 (3.0)	17.9 (3.1)	16.5 (2.9)	17.7 (3.2)
	2 Year Degree	17.4 (2.9)	16.3 (2.7)	17.0 (3.2)	17.1 (2.8)
	4 Year Degree	16.3 (3.0)	16.2 (3.8)	15.6 (3.2)	17.0 (3.1)
	Masters or Doctorate	16.6 (3.5)	16.6 (4.1)	16.2 (2.8)	18.0 (3.6)
College Attended	WCC	17.1 (2.7)	17.2 (3.1)	16.2 (2.9)	17.1 (3.6)
	NRCC	17.2 (2.9)	17.6 (3.5)	17.4 (2.7)	17.8 (2.8)
	VWCC	17.4 (3.2)	16.8 (3.6)	16.3 (3.3)	17.0 (3.3)
	NVCC	17.1 (3.0)	17.4 (3.2)	16.7 (3.2)	17.0 (2.9)

TABLE III (continued)

Independent Variable		Scale 4 Opinions Concerning Economic Freedom			
		Pretest		Posttest	
		Econ.	Non-Econ.	Econ.	Non-Econ.
Grade in Course	A	17.3 (3.3)	16.6 (3.6)	16.6 (3.0)	17.6 (2.5)
	B	17.3 (3.1)	17.1 (3.4)	17.1 (3.3)	17.4 (3.5)
	C	16.9 (2.9)	17.5 (3.3)	16.2 (2.9)	17.6 (2.8)
	D	17.8 (2.2)	18.0 (2.9)	16.2 (3.2)	17.6 (4.2)
	F or W	18.0 (2.9)	18.0 (1.1)	17.1 (3.4)	18.4 (1.1)
Transfer		17.2 (3.2)	17.2 (3.5)	16.4 (3.1)	17.3 (3.3)
Non-transfer		17.2 (2.9)	17.3 (3.1)	16.7 (3.1)	17.8 (3.0)
Marital Status	Single	17.0 (3.1)	16.5 (3.1)	16.6 (3.2)	17.3 (3.1)
	Married	17.6 (2.9)	18.7 (3.3)	16.6 (3.0)	18.3 (3.2)
Age	Less than 20	16.6 (2.6)	16.8 (3.0)	16.3 (2.9)	17.3 (3.1)
	20 or more	17.7 (3.2)	17.8 (3.5)	16.8 (3.2)	17.8 (3.2)

TABLE III (continued)

Scale 5					
Opinions Concerning Employment and Inflation					
		Pretest		Posttest	
Independent Variable		Econ.	Non-Econ.	Econ.	Non-Econ.
Grand Mean		21.2 (3.2)	21.1 (3.2)	21.2 (3.6)	21.1 (3.5)
Dogmatism	High	19.2 (2.6)	19.4 (2.8)	19.9 (3.6)	19.4 (3.4)
	Medium	21.6 (2.7)	21.2 (3.1)	20.9 (2.9)	20.9 (3.2)
	Low	23.2 (2.9)	22.8 (2.8)	22.9 (3.0)	22.5 (3.2)
Sex	Male	21.5 (2.9)	21.2 (3.1)	21.1 (3.3)	20.7 (3.5)
	Female	21.0 (3.4)	21.2 (3.4)	21.2 (3.4)	21.3 (3.5)
Parents' Education	8th Grade or below	22.5 (3.1)	20.8 (3.3)	21.5 (3.2)	20.2 (3.6)
	H.S. Diploma	21.4 (3.0)	21.4 (3.4)	21.4 (3.5)	21.6 (3.6)
	2 Year Degree	19.3 (2.9)	19.9 (3.1)	20.4 (3.4)	19.3 (2.9)
	4 Year Degree	20.6 (3.2)	21.3 (2.5)	20.4 (3.5)	21.2 (3.7)
	Masters or Doctorate	21.2 (3.2)	21.5 (3.5)	21.2 (3.4)	20.6 (3.2)
College Attended	WCC	22.4 (2.8)	22.1 (2.9)	22.5 (2.8)	21.8 (3.1)
	NRCC	21.9 (3.2)	20.1 (3.5)	22.4 (3.1)	19.9 (4.3)
	VWCC	21.2 (3.3)	21.2 (3.2)	20.8 (3.3)	21.5 (3.0)
	NVCC	19.8 (2.8)	21.0 (3.3)	19.7 (3.6)	20.6 (3.6)

TABLE III (continued)

Scale 5					
Opinions Concerning Employment and Inflation					
		Pretest		Posttest	
Independent Variable		Econ.	Non-Econ.	Econ.	Non-Econ.
Grade in Course	A	20.5 (3.2)	21.6 (2.6)	20.3 (3.3)	21.7 (3.4)
	B	21.6 (3.0)	21.1 (3.4)	21.3 (3.7)	20.1 (3.6)
	C	21.4 (3.0)	21.0 (3.2)	21.5 (3.1)	21.3 (3.4)
	D	21.6 (3.9)	21.2 (4.1)	22.4 (2.8)	21.1 (4.0)
	F or W	21.5 (3.7)	21.3 (2.6)	21.5 (3.9)	19.0 (2.9)
Transfer		21.0 (3.2)	20.8 (3.4)	20.5 (3.5)	20.4 (3.6)
Non-transfer		21.4 (3.2)	20.4 (3.1)	21.5 (3.3)	21.4 (3.5)
Marital Status	Single	21.3 (3.1)	21.2 (3.2)	21.4 (3.0)	21.1 (3.5)
	Married	21.1 (3.4)	21.2 (3.3)	20.6 (4.1)	20.8 (3.6)
Age	Less than 20	21.6 (3.1)	21.4 (3.2)	21.5 (3.2)	21.2 (3.5)
	20 or more	21.0 (3.2)	20.9 (3.3)	20.9 (3.6)	20.7 (3.6)

The univariate levels of significance for each of the five scales are also reported in Table II. These univariate levels of significance provide information as to the economic issues with which students undergo an opinion change as a result of enrollment in an introductory economics class. The treatment, economics, was significant on the scales which measured opinions toward labor unions, economic organizations and power structures, socialism and social welfare and economic freedom. The economics treatment, however, was not significant on a univariate basis for scale 5, which measured changes in opinion toward employment and inflation. Students changed their opinions concerning labor unions, power structures, social welfare, and economic freedom.

The specific direction of changes in opinion for the students enrolled in a basic economics course were as follows:

1. Students became more favorably disposed toward labor unions as a result of the economics course.

A study of the portion of Table III for scale 1 substantiates this fact. The top row of numbers for the grand mean can be used to illustrate the increase in opinions favorable to labor unions. A study of changes in mean scores for the control and treatment groups can be done with any particular row. However, the grand mean scores will be used throughout this section for

illustrative purposes. For example, the grand mean score in Table III, scale 1 for economics students was 15.0 on the pretest while the similar control students averaged 15.0. The corresponding posttest scores were 15.3 and 14.9 for the treatment and control students, respectively.

Those students who were enrolled in an economics class scored significantly higher on the posttest than did those students not exposed to economics. As stated in the prior chapter, an increase in scale 1 scores indicated increasing disagreement with the items. Also, items 1, 2, 4, and 6 of scale 1 were anti-union whereas items 3 and 5 were pro-union. This means that a person sympathetic with labor unions would likely disagree with items 1, 2, 4, and 6 and would likely agree with items 3 and 5. Therefore an increase in disagreement on scale 1 indicated opinions favorable to labor unions had increased as a result of the treatment.

This shift in opinion is plausible and logical. A popular belief is that the nation's inflation woes are directly caused by the wage demands of such powerful unions as the teamsters, auto workers, and steelworkers. The introductory economics classes attempt to discuss the forces which commonly lead to inflationary conditions in the economy-deficit government spending and the excessive printing of the money supply. Also, students may become more knowledgeable concerning the fact that powerful

unions comprise only a small fraction of the labor force and thus the overall impact of the union's wage demands are minimal. The above statements may cause students to believe that unions have often been used as inflation scapegoats and thus the economics course may favorably increase students' opinions concerning unions.

2. Students became more opposed (or at least tended to question more) economic organizations and power structures.

A study of the portion of Table III (for scale 2) verifies this fact. Specifically, treatment students scored 29.3 on the pretest while their posttest mean score decreased to 28.3. The similar control students scored 29.8 on the pretest and 29.2 on the posttest. Disagreement with scale 2 items increased as a result of exposure to the economics class. Items 1, 2, 3, 4, 6, 7, and 9 were negatively phrased and were reverse scored. Therefore, increased disagreement, or lower scores, indicated increasing opposition or suspicion toward economic organizations and power structures.

Apparently an introductory course in economics made students less satisfied with the role of economic organizations and power structures in society. This outcome may be expected. Traditional objectives of general education have been to make students more aware and questioning of the forces that affect their lives and environment. Increases in education have been cited

as a possible factor contributing to increased student suspicion and cynicism concerning the structures of their society.

3. Students became less in agreement with socialism and social welfare.

An inspection of the grand mean scores in scale 3 of Table III confirms this fact. The pretest mean score for the treatment students was 27.3. This score increased significantly to 28.1 on the posttest. Yet the control students' scores changed from 27.3 on the pretest to 26.9 on the posttest.

As stated in Chapter III, a decline in posttest scores for scale 3 indicated increasing agreement with the items. Conversely an increase in posttest scores indicated increasing disagreement with the scale 3 items. The increase in posttest scores for scale 3 indicated that students had developed less favorable attitudes toward socialism and social welfare.

These changes in mean scores are understandable. A goal of economics is to increase students' awareness concerning the realities of what societies are capable of doing. Students are usually taught that everything has a cost. The costs of social welfare are paid by taxing the citizenry. Possibly, students who are exposed to instruction in basic economics come to believe that the benefits of social welfare are less than the benefits that

society could have enjoyed had the money been spent in the private sector of the economy. Perhaps students conclude that increases in social welfare will cost each of them more than they will gain. This realization could definitely alter opinions concerning social welfare spending.

4. Students who were enrolled in a basic economics course became more in favor of economic freedom.

Changes in the grand mean scores on Table III (for scale 4) provide evidence of the effect of economics on scale 4. Students who were enrolled in an economics class scored 17.2 and 16.6 on the pretest and posttest, respectively. The importance of this is to note that the posttest scores of students enrolled in economics were significantly lower than the scores of their counterparts in the control classes.

As stated in Chapter 3, lower scores on scale 4 indicated more favorable attitudes toward economic freedom. This increase in attitudes favorable to economic freedom is plausible. Most economists in free societies do favor increases in economic freedom. The ideas of consumer choice and sovereignty are usually introduced early in introductory economics classes. A basic purpose of a beginning economics course is to try to convey to the student that decisions and choices must be made. These choices include: What to produce? How to produce? Where and when to produce? and,

How much to produce? These questions are either answered by individual consumers and businessmen or they are answered by government. Apparently students, after realizing the alternatives, believe that these economic questions can best be answered in a free market environment.

Students involved in this study did not change their opinions concerning inflation and employment. As stated earlier, the economics treatment was not significant on a univariate basis for scale 5. The grand mean scores of Table III, scale 5, also demonstrate this absence of opinion change. The pretest and posttest scores for the economics treated students were 21.2 and 21.2, respectively. The corresponding pretest and posttest mean scores were 21.1 and 21.1 for the control students. These scores simply indicate that no change occurred in opinions concerning the scale 5 emotional statements pertaining to employment and inflation.

Summary

Three questions were posed at the beginning of this chapter. The first question was: Did the economics course have an effect on the students' opinions toward certain selected economic issues? If so, then what effects occurred?

This question can be answered as follows: The treatment, economics, definitely had an effect on students'

opinions concerning economic issues. These effects of economics were:

1. Students became more favorably disposed toward labor unions.
2. Students tended to have more opposition or at least more questions concerning economic organizations and power structures.
3. Socialism and social welfare became less acceptable to students.
4. Students became more in favor of economic freedom.

ECONOMICS AND STUDENT CHARACTERISTICS

This section concerns the relationship of student characteristics to the scales. The questions asked were: Do responses to the scales vary according to student characteristics, and if so then what relationship exists? This section has nothing to do with the treatment, however. Only information concerning possible relationships between student responses on the scales and selected student characteristics is discussed in this section.

Table IV is a presentation of the levels of significance concerning the relationship of student characteristics to opinion differentials on economic issues.

Two of the eight student characteristics were significant in a multivariate sense at a probability level of less than .05. The variables, "college attended," and "transfer" had multivariate levels of significance of .001 and .047, respectively. These levels

TABLE IV

Tests of F Ratios from Multivariate Analysis of Variance--
Test of Each Independent Variable Crossed with Economics

		Univariate Levels of Significance				
Independent Variable	Multivariate levels of Significance*	Scale 1 Labor Unions	Scale 2 Power Structures	Scale 3 Social Welfare	Scale 4 Economic Freedom	Scale 5 Employment & Inflation
Dogmatism	.133	.85	.70	.41	.50	.004
Sex	.463	.65	.33	.15	.45	.25
Parents' Education	.757	.36	.87	.86	.52	.29
College Attended	.001	.40	.04	.02	.01	.08
Grade in Course	.217	.51	.51	.08	.38	.18
Transfer	.047	.35	.19	.08	.13	.009
Marital Status	.075	.67	.23	.006	.42	.26
Age	.743	.27	.84	.17	.71	.62

*The multivariate tests were generated from the Wilks Lambda Criterion followed by the use of Rao's approximation to obtain F ratios. (Clyde: 1969)

of significance imply that the Survey of Opinions on Economic Issues was sensitive to colleges attended and transfer versus non-transfer students.

The univariate levels of significance and the corresponding adjusted mean scores for each of the eight independent variables are also reported in Table IV. Each of these univariate levels of significance provide information as to the relationship between the various scales and the student characteristics.

The univariate level of significance on scale 5 for dogmatism was .004. This means that scale 5 was highly sensitive to dogmatism. The items of scale 5 were concerned with employment and inflation and were emotionally loaded. Due to the reversal of the scaling, lower scores indicate greater disagreement with the items. As seen in Table III, a study of the dogmatism mean scores for scale 5 indicates that the lower the level of dogmatism, the higher the score was on scale 5. Highly dogmatic students disagreed more with scale 5 items than other students.

These trends in mean scores may be plausible. The emotional items of scale 5 were slanted such that a person who is highly dogmatic with regard to leftist ideals would probably disagree more with scale 5 items. Thus, in this paper, a leftist is one who scored low on scale 5 while a rightist scored high. A possible

explanation for the scale 5 results is that young college groups contain few rightists. Hence, almost all disagreeing dogmatic individuals in this sample were leftist.

As stated earlier, the variable, college attended, has a multivariate level of significance of .001. This level of significance seems to arise from the univariate levels of significance of .04, .02, and .01, for scales 2, 3, and 4, respectively. This multivariate level of significance means that scales 2, 3, and 4 were sensitive to the college attended.

Scale 2 measured opinions toward economic organizations and power structures. As stated previously, lower scores indicated increasing suspicion and cynicism concerning the economic organizations and power structures of today's society. An inspection of the mean scores for college attended in Table III, scale 2 indicate that Wytheville and Virginia Western students expressed more favorable attitudes concerning economic organizations and power structures than did students at New River and Northern Virginia. WCC treatment and control students scored 29.6 and 29.3, respectively, on the posttest. The corresponding posttest scores for the VWCC students were 28.4 and 29.7. NRCC control and treatment students scored 27.7 on the posttest. The corresponding posttest scores

for the NVCC students were 27.8 and 29.3. The differences in opinion, on scale 2, between students at WCC and NRCC were most distinct. The mean scores for the four schools indicated that WCC and VWCC students tended to score higher on scale 2 when compared to the NRCC and NVCC students. These differences in scores had nothing whatsoever to do with the treatment. In particular, Wytheville Community College students appeared to be slightly more satisfied with society's economic organizations and power structures than did the New River students. Apparently the WCC students were more conservative on this issue than were the NRCC students.

The posttest mean scores in Table III, scale 3, for NRCC (econ. = 26.0; control = 27.2) and NVCC (econ. = 29.5; control = 26.9) suggest that students from these two schools were somewhat more in agreement with the scale 3 items than were students from WCC (econ. = 27.2; control = 27.5) and VWCC (econ. = 28.9; control = 26.5). These mean scores tend to indicate that students from NVCC and NRCC were slightly more in agreement with socialism or social welfare than were the students from WCC and VWCC.

Scale 4 measured attitudes toward economic freedom with lower scores indicating increased agreement with economic freedom. As the mean scores of Table III, scale 4 reveal, the WCC (econ. = 16.2; control = 17.1) and VWCC (econ. = 16.3; control = 17.0) students scored lower

than did students from NRCC (econ. = 17.4; control = 17.8) and NVCC (econ. = 16.7; control = 17.0). Lower scores on scale 4 indicated opinions more favorable toward economic freedom. Therefore students from WCC and VWCC were more in favor of economic freedom that were their counterparts at NRCC and NVCC.

The students at New River Community College and Northern Virginia Community College (Annandale) appeared to answer scales 2, 3, and 4 in very similar ways. Students at both schools exhibited opinions which were slightly more suspicious of economic organizations and power structures. Both groups of students tended to be slightly more favorable toward increased socialism and social welfare. Students at the two schools also demonstrated a decrease in opinions favorable to economic freedom. The exact opposite effect was noted for students at Wytheville Community College and Virginia Western Community College. Students of those schools had very positive attitudes toward economic organizations and power structures. These students disagreed with scale 3 items concerning socialism and social welfare. Also, WCC and VWCC students favored increased economic freedom.

These results are plausible even though the Wytheville and New River Colleges are located in Southwest Virginia. New River is located in an environment which is undergoing major increases in economic growth. Also,

New River is located in close proximity to two of Virginia's major colleges and universities. These two factors have resulted in a more broadly based and heterogeneous population. Also, most of the increases in population have resulted from an influx of people who are not indigenous to the Southwest Virginia area. In contrast, the Wytheville area has undergone little economic and sociological change. Roanoke, Virginia, has not sustained the rapid growth rate and the resulting population changes. Thus, VWCC students may manifest opinion more in agreement with WCC students.

The variable, transfer, had a multivariate level of significance of .047 as revealed in Table IV. This level of significance seems to arise from the univariate level of significance of .009 for scale 5. Additional information is revealed in Table III, scale 5, for the independent variable, transfer. The average score for all transfer students (pretest, posttest, control and treatment) was 20.7 whereas the average score for non-transfer students was 21.1. As previously mentioned, the lower mean scores on scale 5 meant that disagreement with those items had increased. Therefore, it appeared that transfer students were less emotional concerning scale 5 items than were the non-transfer students. These differences in score value were not, however, related to the treatment economics.

The fact that transfer students scored lower than non-transfer students on scale 5 seems plausible. Transfer students are oftentimes more liberal than their counterparts in occupational-technical programs. As stated earlier, the scale 5 items were written with a "rightist" bias. Also, the scoring was reversed. Conservative individuals are more likely to agree with the items and thus score higher. Conversely, individuals who are more liberal are likely to disagree more and therefore score lower. Since transfer students are usually more liberal, lower scores (i.e., more disagreement) could be expected.

Another factor which could explain why occupational-technical students scored higher on scale 5 (i.e., agree more with the statements) is because those students, in comparison to transfer students are more likely to be married with families, and employed. These occupational-technical students may actually believe that anyone who wanted to work, could.

As revealed in Table IV, the independent variable, marital status, was significant, in a univariate sense, on scale 3. An inspection of the means in Table 3, scale 3, for marital status confirms the above statements. Married students averaged 28.6 on the pretests and posttest, whereas the single students averaged 26.9. Single students were more in agreement with the scale 3 items than were the

married students. Lower scores on scale 3 items indicate increasing agreement with socialism and social welfare. Thus single students were more in favor of socialism and social welfare than were married students.

This outcome could perhaps be expected. Often, single students are more in favor of socialism and increases in the social welfare than are their married counterparts. Single community college students are likely to be younger than married students, and since community colleges in Virginia are non-residential, living with their parents. Married students are more likely to be employed, older, and self-supporting. In other words, married students may be less in favor of socialism and social welfare measures simply because they realize that wage earners will have to pay for the measures through increased taxation.

Summary

The second of the three questions which were posed at the beginning of this chapter was: Did the opinion differences, if any, vary according to the personal characteristics of the students? If so, which characteristics were related, and in what direction, to opinion differences?

Some student characteristics were related to opinion differences. Specifically they are:

1. The level of dogmatism was inversely related to the scores on scale 5. Highly dogmatic students achieved

the lowest scores on scale 5 while low dogmatism students scored the highest.

2. The variable, college attended, was significant in a multivariate sense and in a univariate sense on scales 2, 3, and 4. Specifically:

(a) On scale 2, students at NRCC and NVCC displayed less favorable opinions concerning economic organizations and power structures than did their counterparts at WCC and VWCC.

(b) On scale 3, students at NRCC and NVCC became more in favor of socialism and social welfare when compared to students at WCC and NRCC.

(c) On scale 4, WCC and VWCC students exhibited more positive attitudes concerning economic freedom than did students at NRCC and NVCC.

3. The variable, transfer, was significant in a multivariate sense. This level of significance seems to arise primarily from scale 5 which was significant in a univariate sense. Transfer students scored lower on scale 5 than did non-transfer students.

4. The variable, marital status, was significant in a univariate sense for scale 3. Specifically, single students were more in favor of socialism and social welfare than were married students.

INTERACTIONS OF ECONOMICS AND STUDENT CHARACTERISTICS

Table V is a presentation of the levels of significance concerning the relationship between the

TABLE V

Tests of F Ratios from Multivariate Analysis of Variance--
Test of Interaction with Economics

		Univariate Levels of Significance				
Independent Variable	Multivariate levels of Significance*	Scale 1 Labor Unions	Scale 2 Power Structures	Scale 3 Social Welfare	Scale 4 Economic Freedom	Scale 5 Employment & Inflation
Dogmatism	.781	.42	.48	.95	.60	.52
Sex	.910	.27	.92	.80	.82	.73
Parents' Education	.222	.45	.38	.27	.68	.30
College Attended	.281	.79	.09	.09	.71	.09
Grade in Course	.031	.008	.18	.74	.62	.25
Transfer	.943	.92	.31	.98	.75	.83
Marital Status	.785	.74	.21	.75	.72	.53
Age	.817	.35	.57	.35	1.00	1.00

*The multivariate tests were generated from the Wilks Lambda Criterion followed by the use of Rao's approximation to obtain F ratios. (Clyde: 1969)

treatment, economics, with the student characteristics. The independent variable, grade in course, had a multivariate level of significance of .031. This means that enrollment in a basic course in economics affected students' opinion toward economic issues and that these opinion changes were related to the grade received in the course.

This multivariate level of significance seems to arise chiefly from scale 1 which measured opinions toward labor unions. The univariate level of significance for scale 1 was .008.

A study of the mean scores in Table III, scale 1, for grade reveals the nature of the relationship between the grade received in the course and the opinion changes. "A" students who were enrolled in an economics class averaged 14.9 on the pretest. The similar "A" students of the control group scored 16.0 on the pretest. As a result of the economics class, the posttest measure for the "A" students increased to 15.7 while the posttest mean score for the corresponding control students decreased to 15.3. These changes in mean scores indicate that while the control "A" students became more opposed to labor unions during the spring quarter of 1974, the treatment "A" students adopted opinions more favorable to labor unions.

This same basic trend followed with the "B", "D", and "F" students. The "B" treatment and control subjects scored, respectively, 15.3 and 15.0 on the pretest. The

"B" treatment students slightly increased their posttest mean score to 15.4. Yet, the corresponding control group's pretest mean score declined to 14.6.

The "D" treatment students increased their mean score from 14.5 on the pretest to 15.0 on the posttest. The comparable control group, however, did not realize a change between the pretest and posttest.

Those treatment students who failed the economics course also realized increases on their posttest scores (15.9 on the pretest and 17.4 on the posttest). This is in contrast to those students in the non-economics control group who failed that particular class. These "F" control group students decreased their scores from 15.1 in the pretest to 14.1 on the posttest. However, control group students who failed a course that happened to be involved in this study (for example, introductory sociology, psychology, nursing, or history) would not necessarily have failed an introductory economics class, had they been taking one. This statement would also apply to students who received an "A", "B", "C", or "D" in a control class. Those students may not have received a similar grade in an economics class.

As described above, "A", "B", "D", and "F" treatment students adopted more favorable opinions toward labor unions. This shift in opinions favorable to labor unions was related to the treatment.

The "C" students, however, became more opposed to labor unions as a result of a basic economics course. The "C" treatment students' pretest mean was 15.2. This mean score declined to 14.8 on the posttest. The "C" students in the control group, however, realized an increase in mean scores from 14.6 on the pretest to 15.2 on the posttest.

In summary, students who received a grade of "A", "B", "D", or "F" in an economics course became more favorable in their opinions toward labor unions. Students who received a "C" grade in an economics course adopted opinions less favorable to labor unions. The interaction occurred as a result of higher posttest scores for "A", "B", "D", and "F" students and lower posttest scores for "C" students.

There may be some plausible reasons for these changes in opinions toward labor unions, but these reasons are not obvious.

Summary

The last of the three questions which were posed at the beginning of this chapter was: Were there any interactions between student characteristics and the treatment effect? If so, what were the relationships between the student characteristics and enrollment in an economics class.

The student characteristic, grade in class, was significant in a multivariate sense. Thus, there was an interaction between the grade received in the course and the treatment, economics. Specifically, an increase in economic knowledge caused "A", "B", "D", and "F" students to adopt opinions more favorable toward labor unions. However, the "C" students' opinions became more opposed to labor unions.

Chapter V

CONCLUSIONS AND RECOMMENDATIONS

Many colleges today require students to take an introductory course in economics. This course normally constitutes a portion of the general education program in these institutions of higher learning. Economics courses may raise the level of economic literacy of college students. Also, an introductory economics course may have an effect on a student's opinions on economic issues and problems of society. A major problem in evaluating introductory economics courses' impact on opinions has been the lack of adequate instruments. The purpose of this study was to design and validate an instrument suitable for ascertaining student opinions about various economic issues.

The methodology involved in the development of the instrument was basically as follows: An initial large pool of items was compiled from various sources. Eight community college faculty participated in the selection of seventy-five items from this pool. A pilot study was then initiated with the seventy-five item instrument being submitted to approximately one-hundred students with no formal education in economics. The responses were then factor analyzed with the items being grouped into five

scales designed to measure opinions on the following economic issues:

1. Labor unions
2. Economic organizations and power structures
3. Socialism and social welfare
4. Economic freedom
5. Employment and inflation

The result of the pilot project was a forty-item instrument designed to measure opinions on each of the above five scales. These forty items comprised the Survey of Opinions on Economic Issues.

In order to provide validation, the instrument was then administered on a pretest-posttest basis to four hundred and forty-nine students in a sample of community colleges in Virginia. Two hundred and forty-nine of these students were enrolled in an introductory economics course and thus served as the treatment group. The remaining two hundred students served as a control group and were not currently or previously enrolled in an economics class.

Eight student characteristics were utilized in order to determine possible relationships between opinions on the five economic issues and the personal characteristics of students. These student characteristics were:

(A) degree of dogmatism
(B) age of student
(C) parents' education
(D) sex of student
(E) college attended
(F) grade in course
(G) whether student was a transfer
(H) marital status

The student characteristic, degree of dogmatism, was obtained by using Rokeach's (1960) twenty-item scale. These items were interspersed throughout the Survey of Opinions on Economic Issues.

The computer program MANOVA (Clyde: 1969) was used in analyzing these data. The five posttest and pretest economic opinion scores served as the criterion and covariates, respectively. Eight multivariate analyses of covariance comparing two factors simultaneously were performed. In each analysis, one of the factors, economics treatment scores, was crossed with a second factor. These second factors represented the eight student characteristics.

The purpose of these analyses was threefold:

(A) To determine whether enrollment in an economics course affected opinions toward economic issues.
(B) To determine whether opinions toward the five economic issues varied according to personal characteristics of the students.
(C) To determine whether there was an interaction between student characteristics and the effect of the economics course.

CONCLUSIONS

1. The five scales of the Survey of Opinions on Economic Issues were sensitive to detecting changes in students' opinions concerning economic issues.

As related in Chapter II, very few researchers have concerned themselves with the design of an instrument for determining the effect of an economics course on

students' opinions. Weidenaar and Dodson were concerned with student interest in the economics class. Their research was not concerned with opinions on economic issues. Mann and Fusfeld (1970: 111-113) were concerned with the effects of teaching methods, class size, and types of instructional programs rather than changes in student opinions on various economic issues. Meinkoth (1971) conducted experiments comparing the effects of different teaching methods. Scott and Rothman (1973 a & b) addressed the question of the relationship between political opinions and economic literacy.

2. The following four changes in students' opinions resulted from the economics class and were measured by the Survey:

(a) An increase in opinions favorable towards labor unions
(b) Students became more suspicious and cynical concerning economic organizations and power structures
(c) Agreement with socialism and social welfare decreased as a result of exposure to the economics class
(d) Students' opinions became more favorable toward economic freedom

3. Opinions concerning employment and inflation were unaltered because no significant changes in students' opinions were observed.

4. The above four changes in opinions on economic issues were minimal. The actual mean score differences were usually less than 1.0 even though there were significant differences between treatment and control scores. These

small changes in opinions could disappear altogether within a short period of time. Attiyeh, Bach, and Lumsden, (1967: 67-79) concluded that gains in economic knowledge resulting from an introductory economics course were dissipated within three years.

The marginal effect of an introductory economics course on opinions should not, however, be surprising. Earlier researchers such as Jacob (1957), Feldman and Newcomb (1969 a and b), and Nasatir (1966) found that the entire college experience did not radically alter the values of students.

5. The following significant relationships between the student characteristics and opinion changes were observed:

(1) Highly dogmatic students supported leftist positions on scale 5.
(2) (a) On scale 2, students at NRCC and NVCC displayed less favorable opinions concerning economic organizations and power structures than did students at WCC and VWCC.
    (b) On scale 3, students at NRCC and NVCC became more favorable towards socialism and social welfare when compared to students at WCC and VWCC.
    (c) On scale 4, students at WCC and VWCC exhibited more positive attitudes concerning economic freedom than did students at NRCC and NVCC.
(3) Single students were more in favor of socialism and social welfare than were married students; this is revealed on scale 3.
(4) Specifically, transfer students were less emotional concerning the "rightist" scale 5 than were students who did not plan to transfer to a senior college.

6. There was an interaction between student grade in the course and opinion changes on the economic issues. Specifically, "A", "B", "D", AND "F" students adopted more favorable opinions toward labor unions whereas "C" students adopted less favorable opinions.

Scott and Rothman (1973 a and b) concluded that economic opinions could be measured somewhat independently of economic knowledge.

The fact that "A", "B", "D", and "F" students all became more favorably disposed toward labor unions indicates some agreement with the above statement.

RECOMMENDATIONS FOR FURTHER STUDY

The economic problems of the world today along with the very recent concern for research in this area, emphasize the need for additional study. The following recommendations could lead to an increase in knowledge concerning economic opinions:

1. The instrument should be utilized to help enable instructors to determine their students' opinions on these five economic issues. Economists such as Attiyeh, Bach, and Lumsden (1967 and 1969), Bach (1969), and Saunders (1970), have found that an introductory economics class yields almost no lasting increases in economic literacy.

However, Meinkoth (1971), along with Attiyeh, Bach, and Lumsden (1969), both concluded that individual instructors could influence, either favorably or unfavorably, student opinions concerning the subject matter of economics. Therefore, since the literacy level appears to be almost unalterable, an instructor could utilize opinion change as a gauge of his classroom impact on students. Also, the ability to identify student interests could provide instructors with information as to how best to serve the inquisitive needs of their students. The Survey of Opinions on Economic Issues could be utilized for these purposes.

2. The Survey of Opinions on Economic Issues should be utilized in comparing, on a pretest and posttest basis, student opinions with regard to class size, textbooks, methods of instruction, course material, and classroom environmental factors. Student opinions may respond to a change in any of these factors. Knowledge of student opinions is an important consideration for textbook selection, utilization of instructional aids and materials and teaching techniques. The Survey of Opinions on Economic Issues perhaps can aid in supplying economics instructors with this needed information.

3. The instrument should not be utilized as a justification for eliminating introductory economics courses from the curriculum. Introductory economics courses are usually part of the general education program and should not

be discarded even if the Survey yields no longlasting opinion changes. Exposure to a beginning economics class may yield benefits which are not discernible with this instrument.

4. It is recommended that the study be replicated and extended to include a larger sample and sample area. Included would be community college students in other states along with students attending four year colleges and universities. Studies should also be lengthened to ascertain opinion changes over a longer period of time. The instrument should be administered not only at the end of the course but also perhaps a month later and then a year later. The purpose would be to ascertain any long run changes in opinions on economic issues.

5. Similar studies should be conducted to obtain data which could be used to refine instruments for ascertaining changes in opinion on other economic issues.

6. Additional studies should be conducted to determine which economic issues are most important to students and the public. This could be most helpful in fulfilling the goal of increasing the economic understanding of the public. If economics educators possessed knowledge of student needs, then perhaps student interest could be enhanced and the result could possibly be an increase in literacy.

7. A similar effort should be made to explore the impact of the instructor's opinions on these scales. The instructor's opinions could be considered as another variable.

APPENDIX A

160 ITEM POOL

(1)* 1. Labor unions should become stronger and have more influence, generally.

2. Monopolies can supply some products to the consumer cheaper than where competition exists.

(2) 3. If a corporation's profits are too high, then the government should tax away those excessive profits.

4. Anti-trust laws are designed to protect competition and prevent monopoly.

(3) 5. Laws restricting Sunday sales are a good thing because they assure workers at least one day of rest.

(4) 6. In general, full economic security is harmful; most men wouldn't work if they didn't need the money for eating and living.

7. Competition in the toothpaste industry is useless and merely confuses the consumer with the many brands.

8. When collective bargaining has failed for them, nurses, police, teachers, and other public employees must be allowed to strike.

(5) 9. Government spending must be severely limited or inflation is inevitable.

10. Increases in the national debt are bad because increases in the national debt promote inflation, threaten national bankruptcy and burden future generations.

11. "Everyday" men and women are entitled to the highest wage they can get.

12. The expense of a college education ought to be a private matter and the student and/or his family should meet this cost.

(6) 13. If the teamsters union (truck drivers) went on strike, then the President should call up the National Guard to drive the trucks.

(7) 14. Most workers in the U. S. are paid just about the amount they deserve.

15. Many small farmers are unable to earn a satisfactory income.

16. High profits are essential for the survival of the American economic system.

17. The best way to solve social problems is to stick close to the middle of the road, to move slowly and to avoid extremes.

18. The market mechanism, if left alone by government, would always result in the most equitable distribution of income.

19. Our treatment of criminals is too harsh; we should try to cure them, not punish them.

(8) 20. Employers should hire and fire as they desire.

21. The national debt threatens us with bankruptcy.

22. The government should bear the burden of all educational costs for students from first grade through college.

(9) 23. Government spending is likely to increase because of the demands of the people for more services.

24. A market economy works to the disadvantage of the farming industry and indeed has singled out farmers as a group for mistreatment.

25. With the tax situation in the U. S. the way it is, it is almost impossible to save money or accumulate wealth.

26. Government controls on wages and prices are a sure fire way to control inflation.

(10) 27. Too much spending by the Federal Government is the primary cause of inflation.

(11) 28. Employers are often forced out of business because of excessive union demands.

(12) 29. "Everyday" men and women are entitled to the highest wage they can get.

30. People should plan for their old age and other possible situations of financial need rather than having the government do it for them.

31. Coal miners desperately needed a strong union because of the dangerous work in the mines.

32. It would be a good thing for America if some method could be devised to make the distribution of income more nearly equal.

33. Automation will cause mass unemployment.

(13) 34. General Motors, Ford, and Chrysler really don't compete at all.

(14) 35. There would be very little unemployment in America if people would just get out and look for a job.

(15) 36. Businesses like recessions because they are able to pay off old debts with cheap dollars.

37. It is the responsibility of the entire society, through its government, to guarantee everyone adequate housing, income and leisure.

38. Every working man or woman should have the right to join or not to join a union.

39. The tax system in the U. S. today is unfair to the wealthy.

40. Government spending must be severely limited.

(16) 41. People who go on strike against their employers should be fired from their jobs.

(17) 42. The purpose of any business is (and ought to be) the making of profits.

(18) 43. In some industries in America, there is too much competition.

(19) 44. Poverty could be almost entirely done away with if we made certain basic changes in our social and economic system.

(20) 45. Federal taxes ought to be increased as a means of controlling inflation, whenever inflation threatens or appears.

(21) 46. If you owned and operated your own business, then you should have the right to refuse to bargain with (or listen to) your employees' union.

47. If the government would only maintain a "hands-off" policy, the American economy would be a true free enterprise system.

48. Most poor people are shiftless and unemployable.

(22) 49. Government should regulate the use of natural resources to provide for their fair development.

50. The expenses involved in college education are a private matter and it is the duty of the family and student to meet these costs.

(23) 51. Anti-trust laws are effective in protecting competition and preventing monopoly.

52. During a recessionary period, individuals should increase their rate of saving, in order to help bring the economy out of the recession.

53. The profit motive has been responsible for most of the evils in our economic system.

(24) 54. Federal aid is needed to provide equality of educational opportunity throughout the U. S.

(25) 55. Government should use its spending, debt, and tax policies to maintain a stable economy.

(26) 56. Unions are primarily responsible for the high standard of living for the American worker.

57. Businesses are fine but they should never be allowed to get as big as General Motors.

58. A company should never be granted a monopoly by government.

59. Most unemployed persons are simply too lazy to work.

(27) 60. The Federal Government could easily control inflation if it would simply freeze prices on all goods and services.

(28) 61. Automobiles could just as well be produced in small shops and plants.

(29) 62. If poor people cannot afford to pay for hospital care, then the government should pay their hospital and doctor bills.

(30) 63. If our economy is to keep growing, we have got to expect some inflation.

64. Although the U. S. has pockets of poverty, the number of poor people is small and most are shiftless, ne're-do-wells.

65. Additional laws should be enacted to limit or deny labor unions the right to strike.

(31) 66. When a strike occurs, the federal government ought to step in and settle the dispute between management and labor.

67. If business is largely responsible for inflation, prices should be controlled because higher prices mean excess profits.

68. Private enterprise operating in a democratic political structure has been historically proven to be the most efficient economic and governmental system.

(32) 69. If gasoline is in short supply, it is better to let the government ration the gas than to let the price keep going up.

(33) 70. The government should regulate big business.

(34) 71. No one should be allowed to earn more than $50,000 a year.

72. Ultimately, private property should be abolished and complete socialism introduced.

73. Capitalism is bad because it exploits the worker by failing to give him full value for his productive labor.

(35) 74. The government should try to prevent unemployment.

(36) 75. A business in New York should not be allowed to move to Alabama just to get away from the New York union.

(37) 76. The best means of setting prices is to let buyers and sellers seek their own interests in a market free from government interference and control.

(38) 77. A successful campaign to "Buy American" could, in the long run, harm our economic well being.

78. Laws should be enacted to deny the right to strike.

79. High wages for labor are the cause of inflation.

80. The substitution of machines for human muscle reduces the number of jobs and will therefore, reduce the total amount of wages paid in the economy.

(39) 81. All education costs of students, grade 1 through college, should be paid for by the government.

82. The government should take over the operation of the bankrupt railroads in America.

(40) 83. Some unemployment beyond the generally accepted full employment level is desirable because it makes people more worried about jobs and hence more diligent workers.

84. Full employment programs of government are undesirable interventions in the economy.

(41) 85. A person should be required to join a union or otherwise lose his job.

(42) 86. The beef shortages during the summer of 1973 were the result of cattle producers and middlemen "getting back" at the housewives who refused to buy beef.

87. Wall Street speculators are the main reason for economic depressions.

(43) 88. Somehow, the government should attempt to keep small retail businesses from going broke trying to compete with large discount stores.

89. Since the government can create money, government goods and services have no real costs.

(44) 90. The tax system in the U. S. today is unfair to the poor.

(45) 91. The President ought to be given the power to raise or lower taxes within a certain range in order to keep both inflation and recession under control.

92. Private enterprise, based on private property and operating within a democratic government, has been historically proven to be the most efficient economic and political system.

93. The value of money should be determined by its gold and silver backing.

94. Citizens, through government, determine society's goals and tax to pay for those programs designed by government.

95. Profits are an unearned sum of money and an unnecessary "grab" on the consumer's purse.

(46) 96. American labor unions of today are too strong.

97. The U. S. ought to have public policies to assure full employment even if one result of these policies is inflation.

(47) 98. The President of General Motors makes $800,000 a year. No man should receive a salary that high.

99. Our most important industries ought to be owned and/or controlled by society as a whole, for the good of all the people, rather than by private business seeking profits.

(48) 100. The government should own and operate all public utilities (transportation, gas and electric, railroads, etc.).

101. Federal aid is needed to provide equality of educational opportunity throughout the U. S.

102 Every person should have the chance to try for a college education, even if the government has to pay for this education.

(49) 103. Social Security should be voluntary, for the government has no right to tax people for this kind of insurance if they do not want it.

(50) 104. Inflation hurts the "working men" the hardest. Rich people are almost unaffected by inflation.

(51) 105. When collective bargaining has failed, labor must be able to strike.

(52) 106. Making profits is essential to our kind of economic system.

(53) 107. Automation has been a major cause of mass unemployment.

(54) 108. It is up to the government to make sure that everyone has a secure job and a good standard of living.

(55) 109. Severe economic depressions such as the U. S. experienced in the 1930's can be good because they make Americans appreciate more the things they have.

110. It is a fundamental American tradition that the individual must remain free of government interference, free to make money and spend it as he likes.

111. Most poor people are shiftless.

(56) 112. Labor unions are largely responsible for inflation; therefore, wages should be controlled because higher wages cause higher prices.

113. Laws should be enacted to severely limit or deny the right to strike.

(57) 114. Since consumers can refuse to buy a product that is of poor quality or harmful, there is no need to have laws to protect the consumer.

(58) 115. Competition among all businesses is good for the general public.

116. What's bad for General Motors is good for the people.

117. Increases in the national debt are generally undesirable.

(59) 118. A great deal can be done to improve the shameful and wasteful poverty situation in America.

119. Economic progress in the U. S. is explained largely by the free enterprise system we have.

(60) 120. It is better to have inflation than unemployment.

(61) 121. Automobile plant workers earn high wages because their union (the United Auto Workers) is very powerful.

122. The nationalization of the great industries is likely to lead to inefficiency, bureaucracy and stagnation.

123. Over the forseeable future, government spending is likely to increase because of the demands by people for more services.

124. Although the U. S. has pockets of poverty, the number of impoverished people is small.

(62) 125. If you own a house, then you should have the right to charge as high a rent as you wish so long as someone is willing to pay you.

126. The burden of the national debt can be passed on to future generations.

127. Basically the best way to increase employment is to increase wages.

128. The value of the dollar should be determined by gold backing.

129 Profits are an essential part of our economic system, guiding the use of resources and providing the base for increase in the standard of living.

130. Labor unions are the main cause of inflation in the U. S.

(63) 131. Government should keep its hands off private business operation.

132. The use of deficit budgets by state, local or federal governments will actually hurt the American economy because of the higher taxes required to finance the deficit.

133. The government should own and operate all big businesses in the U. S.

(64) 134. It would be a good thing for America if some method could be devised to make the distribution of income more nearly equal.

(65) 135. It is not necessary for the Federal Government to balance its budget.

136. Monopolies can supply some products to the consumer cheaper than where competition exists.

(66) 137. Unions sometimes can cause unemployment of workers.

(67) 138. Generally, the American public buys what it wants, without regard to the amount or intensity of advertising.

(68) 139. I would rather shop at a locally owned store than at a large chain store.

140. Sound finance requires the Federal Government to balance its budget over a business cycle.

141. Income taxes are unfair to high income people.

142. An appropriate function of government is to try to prevent unemployment.

143. Recessions which increase unemployment can be good because the recession will rid the economy of its 'fat'.

144. The TVA and similar government-owned enterprises should be turned over to private industry.

145. Social Security is a hand-out, or dole, from the government and the taxpayer.

(69) 146. The Federal Government should assist the cities with such social problems as lack of low cost housing, in adequate transportation to and from work, and ghetto welfare.

147. Every person should have a good house even if the government has to build it.

148. High wages for labor are the major cause of inflation.

149. Big city banks usually desire a lot of inflation.

150. Rich businessmen like recessions because recessions give them the chance to lay off or fire unnecessary employees.

151. Sound finance requires the Federal Government to balance its budget anually.

152. Most unemployed people are simply too lazy to work.

(70) 153. The primary purpose of taxes is to furnish revenue to the government.

154. The amount of profit made by business ought to be regulated by government to protect the public from the overpricing of goods and services.

(71) 155. Public school teachers, firemen, and policemen should not be allowed to go on strike.

(72) 156. People should be free to borrow as much as they wish as long as someone is willing to lend them the money and as long as they are willing to pay the interest charges.

157. Economic depressions are like occasional headaches and stomachaches; it's natural--for even the healthiest society has them once in a while.

(73) 158. No business (except necessities such as gas stations, motels, etc.) should be allowed to operate on holidays such as Thanksgiving and Christmas.

(74) 159. The government should guarantee a decent standard of living to those who can't find work.

(75) 160. The government does not have to pay its debts just as everyone else; it need not live within its means as a private citizen must.

*Indicates numbered items as utilized in the seventy-five item instrument.

APPENDIX B

RESULTS OF FACTOR ANALYSIS

ROTATED FACTOR MATRIX

Item	Economic Issue				
	Scale 1 Labor Unions	Scale 2 Economic Organizations	Scale 3 Social-ism	Scale 4 Economic Freedom	Scale 5 Employment & Inflation
1	-.54*	-.13	.17	-.13	.09
2	.07	.12	.16	-.39*	.04
3	-.05	-.05	.25	.02	-.15
4	-.00	-.09	.13	.09	-.49*
5	.02	-.06	.06	-.01	-.30
6	.48*	.03	.13	-.01	-.19
7	.33	.26	-.36	.02	-.24
8	.00	.04	.13	.41*	-.13
9	.18	-.14	.14	-.08	-.13
10	-.23	-.00	.36	.18	-.43*
11	.16	.01	.36	.34	-.37
12	-.38	-.06	.33	-.04	.02
13	.34	.16	-.04	-.02	.15
14	-.01	.10	-.04	.38	-.39*
15	-.09	-.20	.34	.11	-.20
16	.34	.33	.19	.50*	-.08
17	.01	.04	-.31	.20	-.37
18	.03	-.04	.49*	.06	-.12
19	.24	.21	.34	.09	-.07
20	-.25	.30	.22	-.18	-.23
21	.05	.37	.12	.17	-.32
22	.41	-.19	-.03	-.27	-.04
23	-.01	-.02	.02	.18	-.11
24	-.04	-.54*	.08	-.17	-.02
25	.20	-.26	-.11	-.00	-.36
26	.00	-.38	-.10	.01	.10
27	.09	-.01	.41*	.32	-.17
28	.17	.17	.46*	.06	.26
29	.29	-.19	.26	-.19	-.02
30	.06	.04	.03	-.16	-.43*
31	.37*	.19	.23	-.00	-.07
32	.26	-.55*	.04	-.12	-.05
33	.05	-.00	.05	-.23	-.07
34	.07	.38	.23	-.42*	-.20
35	.00	-.50*	.21	-.18	-.18
36	-.14	.28	.35	-.23	-.07
37	-.38*	.15	.27	.18	-.22
38	.11	-.06	.09	-.13	-.50*
39	-.01	-.14	.38*	.01	.10
40	-.09	.15	.24	.22	-.45*
41	.01	.54*	-.23	-.06	-.01

ROTATED FACTOR MATRIX

(continued)

Item	Economic Issue				
	Scale 1 Labor Unions	Scale 2 Economic Organizations	Scale 3 Social-ism	Scale 4 Economic Freedom	Scale 5 Employment & Inflation
42	.00	-.06	.50*	.06	.08
43	-.15	-.25	.24	.06	-.15
44	-.16	-.10	.09	-.29	-.26
45	-.06	.08	.41*	-.17	-.22
46	.55*	-.06	.22	-.09	-.23
47	.00	.19	.26	-.51*	-.20
48	.14	-.10	.06	-.08	.16
49	.08	-.07	.20	.22	-.03
50	.10	-.34	.33	.02	-.06
51	-.18	-.40*	.21	-.01	.01
52	-.14	-.53*	-.00	.10	-.16
53	-.02	-.15	.48*	-.08	-.25
54	.15	-.10	.41*	-.13	.16
55	.00	-.01	.30	-.03	-.39
56	.51*	-.20	.15	.20	-.31
57	-.26	.27	.18	.17	-.12
58	.09	-.38	-.14	.06	-.19
59	-.02	-.05	.01	-.40	-.40
60	-.04	-.16	.06	-.09	-.34
61	.08	-.19	-.14	-.19	-.47*
62	.04	.02	.11	.52*	-.05
63	-.21	.30	.38	.43*	.02
64	.05	.00	.48*	-.06	-.09
65	-.42	.01	-.02	-.01	-.29
66	.26	-.42*	-.03	.10	-.36
67	.13	.15	-.07	.28	-.48*
68	.08	.04	.25	.01	.14
69	.00	-.40*	.14	-.26	-.16
70	.18	-.53*	.06	.03	.02
71	.20	.25	-.18	.13	-.27
72	-.16	.14	.15	.33	-.13
73	-.22	.07	.33	.02	-.20
74	.16	-.01	.45*	-.30	-.12
75	.32	-.12	.26	.12	.02

*Indicates item was utilized in Survey of Opinions on Economic Issues.

APPENDIX C

SURVEY OF OPINIONS ON ECONOMIC ISSUES

INSTRUCTIONS

1. Fill in your answers with a #2 pencil on the enclosed IBM answer sheet. Please provide all information requested.

2. Print your name, today's date, and the course number at the top of the answer sheet in the identified space.

3. Write out and blacken in your social security number in the box marked "identification number."

4. Now find the area labeled "Test Form." Do you plan to transfer to a four-year college or university? If your answer is yes, then darken in "A" in the "Test Form" area. If your answer is no, then darken in "B" in the "Test Form" area.

5. Now find the area labeled "Seat Number." You will find this area has three rows with "0" through "9" for each row.

   For Row 1: Darken in the "0" if you are male or darken in the "1" if you are female.

   For Row 2: Darken in the "0" if you are less than 20 years old or darken in the "1" if you are 20 years or older.

   For Row 3: Darken in the appropriate blank corresponding to the highest level of education of your father/mother/guardian. If you are uncertain of this, then put down your best estimate.

8th grade (or below)	"0"
high school diploma	"1"
2-year college degree	"2"
4-year college degree	"3"
masters or doctorate degree	"4"

6. Now find the area labeled "Group Number." Indicate your marital status in the following manner:

   Darken in "0" if you are single.
   Darken in "1" if you are married.
   Darken in "2" if you are separated, divorced, or widowed.

The following sixty statements were written to get your honest and frank opinions. There are no right or wrong answers to any of these statements. You are not being graded in any way at all so put down your honest opinion to each statement.

Use a #2 pencil and answer every statement. Do not use an inkpen. Mark your answers on the IBM answer sheet provided in the answer blanks marked 1-60.

Please notice that the questions on the answer sheet run from left to right like this:

1. 1 2 3 4 5 2. 1 2 3 4 5

Answer each statement by darkening in the appropriate blank in the following manner:

1--if you agree with the statement

2--if you tend to agree with the statement

3--if you tend to disagree with the statement

4--if you disagree with the statement

Please mark only one answer to each statement.

1. agree
2. tend to agree
3. tend to disagree
4. disagree

1. American labor unions of today are too strong.

2. The President of General Motors makes $800,000 a year. No man should receive a salary that high.

*3. The United States and Russia have just about nothing in common.

4. In general, full economic security is harmful; most men wouldn't work if they didn't need the money for eating and living.

5. The Federal Government could easily control inflation if it would simply freeze prices on all goods and services.

6. Unions sometimes can cause unemployment of workers.

*7. Most people just don't know what's good for them.

8. Labor unions are largely responsible for inflation; therefore, wages should be controlled because higher wages cause higher prices.

9. Government should keep its hands off private business operation.

*10. In a discussion I often find it necessary to repeat myself several times to make sure I am being understood.

11. A successful campaign to "Buy American" would, in the long run, harm our economic well being.

*12. While I don't like to admit this even to myself, my secret ambition is to become a great man, like Einstein, or Beethoven, or Shakespeare.

*13. To compromise with our political opponents is dangerous because it usually leads to the betrayal of our own side.

14. In some industries in America, there is too much competition.

*15. Of all the different philosophies which exist in this world, there is probably only one which is correct.

1. agree
2. tend to agree
3. tend to disagree
4. disagree

16. When collective bargaining has failed, labor must be able to strike.

17. Automobiles could just as well be produced in small shops and plants.

*18. My blood boils whenever a person stubbornly refuses to admit he's wrong.

19. Automobile plant workers earn high wages because their union (the United Auto Workers) is very powerful.

*20. In this complicated world of ours the only way we can know what's going on is to rely on leaders or experts who can be trusted.

21. If you own a house then you should have the right to charge as high a rent as you wish so long as someone is willing to pay you.

*22. The main thing in life is for a person to want to do something important.

23. The beef shortages during the summer of 1973 were the result of cattle producers and middlemen "getting back" at the housewives who refused to buy beef.

*24. There are two kinds of people in this world; those who are for the truth and those who are against the truth.

25. The President ought to be given the power to raise or lower taxes within a certain range in order to keep both inflation and recession under control.

*26. The highest form of government is a democracy and the highest form of democracy is a government run by those who are most intelligent.

27. Labor unions should become stronger and have more influence generally.

*28. I'd like it if I could find someone who would tell me how to solve my personal problems.

1. agree
2. tend to agree
3. tend to disagree
4. disagree

*29. It is often desirable to reserve judgment about what's going on until one has had a chance to hear the opinions of those one respects.

30. No one should be allowed to earn more than $50,000 a year.

31. Automation has been a major cause of mass unemployment.

*32. It is better to be a dead hero than a live coward.

33. If gasoline is in short supply, it is better to let the government ration the gas than to let the price keep going up.

34. It is up to the government to make sure that everyone has a secure job and a good standard of living.

*35. The present is all too often full of unhappiness. It is only the future that counts.

36. If the teamsters union (truck drivers) went on strike, then the President should call up the National Guard to drive the trucks.

37. Federal aid is needed to provide equality of educational opportunity throughout the United States.

38. There would be very little unemployment in America if people would just get out and look for a job.

*39. Most of the ideas which get printed nowadays aren't worth the paper they are printed on.

40. The primary purpose of taxes is to furnish revenue to the government.

41. The government should guarantee a decent standard of living to those who can't find work.

*42. Man on his own is a helpless and miserable creature.

43. Some unemployment beyond the generally accepted full employment level is desirable because it makes people more worried about their jobs and hence more diligent workers.

1. agree
2. tend to agree
3. tend to disagree
4. disagree

44. People who go on strike against their employers should be fired from their jobs.

45. The best means of setting prices is to let buyers and sellers seek their own interests in a market free from government interference and control.

*46. It is only when a person devotes himself to an ideal or cause that life becomes meaningful.

47. Generally, the American public buys what it wants, without regard to the amount or intensity of advertising.

48. When a strike occurs. the Federal Government ought to step in and settle the dispute between management and labor.

49. The Federal Government should assist the cities with such social problems as lack of low cost housing, inadequate transportation to and from work, and ghetto welfare.

50. All education costs of students, grade 1 through college, should be paid for by the government.

51. If our economy is to keep growing, we have got to expect some inflation.

52. Employers should hire and fire as they desire.

*53. Most people just don't give a "damn" for others.

54. It would be a good thing for America if some method could be devised to make the distribution of income more nearly equal.

55. The government should try to prevent unemployment.

56. Too much spending by the Federal Government is the primary cause of inflation.

57. A person should be required to join a union or otherwise lose his job.

1. agree
2. tend to agree
3. tend to disagree
4. disagree

*58. Even though freedom of speech for all groups is a worthwhile goal, it is unfortunately necessary to restrict the freedom of certain political groups.

59. Making profits is essential to our kind of economic system.

60. If a corporation's profits are too high, then the government should tax away those excessive profits.

*Denotes the twenty items of Rokeach's (1960: 7-9) shortened dogmatism scale.

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Terry Riddle

AN INSTRUMENT FOR MEASURING STUDENT OPINIONS ON ECONOMIC ISSUES

by

Terry Riddle

(ABSTRACT)

The purpose of this study was to design and validate an instrument suitable for ascertaining student opinions about various economic issues.

An initial pool of statements concerning various economic issues was compiled from several sources. This pool was then reduced to seventy-five items. Development of the instrument was then initiated through a pilot study. The seventy-five item pool was submitted to a group of students with no prior formal exposure to economics and not currently enrolled in an economics class. The results were then factor analyzed. The result was a forty item instrument measuring opinions concerning five economic issues.

Next, this forty item survey was tested to determine if the instrument would ascertain changes in student opinions after the completion of an introductory economics course. The methodology employed was the use of two groups of students--control and treatment. Each group was administered a pretest and a posttest. Eight student characteristics were considered as independent variables.

As a result of the treatment, students changed their opinions slightly concerning selected economic issues. The instrument was sensitive in detecting these small changes in opinions.

The instrument also revealed that these opinion changes were related to the following student characteristics: (1) degree of dogmatism; (2) marital status; (3) college attended; and (4) whether or not a student intended to transfer to a senior college.