

University of Montana

ScholarWorks at University of Montana

Graduate Student Theses, Dissertations, &
Professional Papers

Graduate School

1973

Protestant ethic effort and competitiveness

Christine Marian Wolff
The University of Montana

Follow this and additional works at: <https://scholarworks.umt.edu/etd>

Let us know how access to this document benefits you.

Recommended Citation

Wolff, Christine Marian, "Protestant ethic effort and competitiveness" (1973). *Graduate Student Theses, Dissertations, & Professional Papers*. 5600.
<https://scholarworks.umt.edu/etd/5600>

This Thesis is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

THE PROTESTANT ETHIC, EFFORT, AND COMPETITIVENESS

By

Christine M. Wolff

B.A., Bates College, 1971

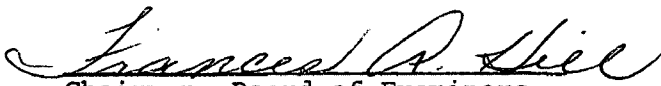
Presented in partial fulfillment of the requirements for the degree of

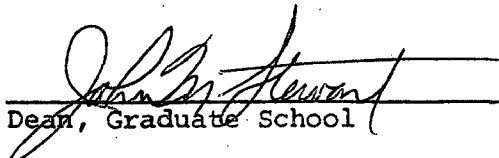
Master of Arts

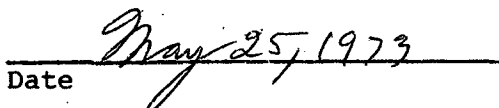
UNIVERSITY OF MONTANA

1973

Approved by:


Chairman, Board of Examiners


Dean, Graduate School


Date

UMI Number: EP41064

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI EP41064

Published by ProQuest LLC (2014). Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code



ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

5-29-73

ACKNOWLEDGEMENTS

I would like to extend my sincere thanks to Dr. Frances Hill whose guidance and encouragement were invaluable throughout the project.

I would also like to express appreciation to Dr. Arthur Beaman and to Keith Haugo, Kevin Flagler, Spencer Manlove, Michael Stevens, and Mark Gibbons for their help in the execution of the experiment.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
Chapter	
I. INTRODUCTION.	1
Problem.	10
Hypotheses	10
II. METHOD.	12
Subjects	12
Apparatus.	12
Procedure.	13
III. RESULTS	17
IV. DISCUSSION.	20
V. SUMMARY	23
REFERENCES	25
APPENDICES	28

CHAPTER I

INTRODUCTION

The trend of modern social scientists analyzing economic variables began shortly after the turn of the twentieth century when Max Weber associated the rise of capitalism with the emphasis which Protestants at the time of the Reformation placed upon hard work. Before the Protestant Reformation, the Christian Church had demanded obedience to religious observances, and charity, denying the importance of worldly possessions in living a "good" life. Weber considered these attitudes hardly conducive to the development of a modern capitalist economy, which required diligence, thrift, and reinvestment of surplus for the sake of more production (Wagner, 1964). Protestantism, especially Calvinism, stressed the importance of a person's calling; his primary responsibility being to do his best at whatever task God had assigned him in life rather than to withdraw from this world and devoutly worship God, as the Catholic ideal advocated. Though who would be saved was predetermined by God, the individual still had to discover whether he was one of the chosen, and the best way to assure his salvation was to strive to do good works like someone in the Bible who was obviously saved.

Thus the Calvinist . . . himself creates his own salvation, or, as would be more correct, the conviction of it . . . in a systematic self-control which at every moment stands before the inexorable alternative, chosen or damned (Weber, 1904, pp. 338-339).

The emphasis was on individual activity and self-discipline. Economic success indicated election to a state of grace, but wealth was regarded as a source of temptation to indulge in worldly pleasures; something to be reinvested in economic concerns. Another aspect of Reformation Protestantism was the direct relationship of the individual to God, minimizing the extent to which commitment was mediated by an institution, and encouraging initiative. These characteristics -- asceticism, industriousness, and individual responsibility -- Weber associated with the capitalistic economic development which was occurring in Western Europe.

Since its publication, Weber's thesis has been a continuous source of scientific controversy, and many have debated its validity. One of Weber's more well-known critics, Fanfani (1955), contends that Europe was acquainted with capitalism for at least a century before the Reformation, and that Protestantism could not have created a phenomenon that already existed, though it could well have exerted a positive influence on it. Most presentday sociologists agree that it is more appropriate to shift the emphasis from a search for a direct causal link between Protestantism and capitalism to an analysis of the place Protestantism held in the sociopolitical, cultural, and economic changes which were occurring in Europe from the end of the seventeenth century on (Eisenstadt, 1968).

The Protestant ethic and the spirit of capitalism represents neither a causal explanation of the "capitalistic" economic order nor the imposition of an unbridgeable gulf separating Protestants forever from Catholics. Both terms are ideal types referring to certain historically unique and temporal social-ethical constellations in Western society (Wagner, 1964, p. 34).

In Europe, Weber's thesis has been discussed recently only in regard to its historical significance, not as an idea with conceptual and predictive value in analyzing contemporary problems. However, after the European debate subsided, various American sociologists began utilizing the idea in making comparative studies of the socioeconomic statuses of Protestants and Catholics in the United States today (Wagner, 1964). Studies which emphasize the differences between Protestant and Catholic groups such as Lenski (1961) and Turner and Lawrence (1965) found some diversity in adherence to the "Protestant Ethic values" among the groups, but these results are complicated by such factors as differences in class, education, and rural vs. urban environment. Mack (1956) studied the relationship between religious affiliation, work-oriented plans for the future, and the seeking of upward mobility, and found no evidence that values of the Protestant Ethic are less characteristic of Catholics than of Protestants. McClelland (1961) made the area of work values accessible to systematic research through his cross-cultural investigation of achievement motivation. He asserts that the Protestant Ethic values have been diffused in society and become incorporated, along with the profit motive, into "n Achievement", a concept with which he explains the rapid economic development of Western society. Kaplan (1971) found that even the hard-core unemployed value work not only for the economic rewards gained by it, but also for intrinsic rewards such as self-actualization. He concludes that such work values are part of the dominant value system in this culture; a system to which most classes adhere to a certain extent. Whyte (1956), who asserts that the Protestant Ethic in American

society is gradually being replaced by the "social ethic" of the "Organization Man", agrees that many people still cling to work values.

These studies seem to indicate that if the Protestant Ethic is to be a viable construct in studies of modern economic behavior, it should be considered as a group of secular values which may or may not be part of the personality of anyone in the society, regardless of his religious background. It is also evident that work values are closely associated with other variables such as achievement motivation, desire for wealth, status, etc., and that all such variables must be considered in attempts to explain behavior in complex economic systems. The Protestant Ethic is a historical concept, and while some of the traits which compose it undoubtedly exist in modern society, any attempt to study it empirically must include a precise definition specifying which traits are included.

In most of the previously mentioned studies, simple questionnaires or interviews were used to determine subjects' adherence to the Protestant Ethic. Though assessments of work values have been constructed for use in industrial and vocational counseling, recently three attempts have been made to develop scales of work values based expressly on the concept of the Protestant Ethic, making it possible to study the meaning which an individual attaches to his work as a concrete personality variable. The first of these (Blood, 1969) was an eight item scale consisting of four items indicating accordance with the Protestant Ethic and four items contrary to it. Subjects responded with a number from one to six indicating varying degrees of agreement or disagreement.

The Survey of Work Values (Wollack, Goodale, Wijting & Smith, 1971) is based directly on the principle of the Protestant Ethic, or of

. . . work as its own reward. Work is to be valued because it represents the best use of a man's time, not merely because it is instrumental to the attainment of external rewards (Wollack et al., 1971, p: 332).

The test consists of items grouped into six subscales -- Activity Preference, Pride in Work, Job Involvement, Upward Striving, Social Status of Job, and Attitude towards Earning. These subscales cover both the intrinsic and extrinsic values of work. Strength of agreement is computed on a six-point Likert scale. SWV scores discriminate among five occupational groups ranging from unskilled employees through professionals, and correlate with background characteristics of employed and unemployed people.

A third attempt to measure the psychological meaning of the Protestant Ethic is the Protestant Ethic Scale (Mirels & Garrett, 1971). The response format of this test is also a six-point Likert scale. Scores on the Protestant Ethic Scale were positively related to the Mosher Scales for Sex Guilt and Morality Conscience Guilt, but unrelated to the Hostile Guilt Scale. Scores were also positively correlated with the F-Scale and the expectancy for internal control as measured by Rotter's Internal-External Scale. The nineteen items on this test are not grouped into subscales, but rather are thought to be representative of a generalized personality trait.

The two latter scales will be utilized in this study, and an attempt made to see how well they correlate. The SWV will be used as the basis

of prediction because it delineates precisely what the authors mean by the Protestant Ethic, and care was taken that the categories be relevant to the literature on the Protestant Ethic. The SWV has also been externally validated on different occupational groups, and the subscales have been shown discriminably different from each other, with relatively high internal consistencies.

The concept of the Protestant Ethic as a personality variable provides a tool for testing hypotheses about the role of work values in economic behavior; game theory supplies social scientists with a paradigm suitable for the direct observation and quantification of such behavior. Psychological research on paradigms inspired by game theory began with the publication of Theory of games and economic behavior (Von Neumann & Morgenstern, 1944), a book in which the authors proposed to find the mathematical principles defining "rational behavior" for the participants in a social economy and to derive from them general characteristics of that behavior. Their emphasis on the importance of studying the behavior of individuals makes the theory especially applicable to psychological research.

The problem must be formulated, solved, and understood for small numbers of participants before anything can be proved about the changes of its character in any limiting case of large numbers, such as free competition (Von Neumann & Morgenstern, 1944, p. 14).

The major contribution of game theory is the providing of insights in the analysis of conflicts -- in describing not how people ought to behave in conflicts, but rather, how they do. "Rational behavior" in a conflict situation means gaining as much as possible in terms of utilities. In game theory, utilities are treated as numerically measurable

quantities, so that differences in utilities are also measurable (Von Neumann & Morgenstern, 1944). In the category of games called non-zero-sum such as the Prisoner's Dilemma, a rational choice of strategy by each player leads to an outcome which is worse for both than if they had behaved irrationally (Rapoport & Chammah, 1965). This is because the sum of payments received by all players does not sum to zero.* In order for the paradox to be resolved, the notion of rationality must be divided into two categories -- individual and collective (Rapoport, 1966). Rational behavior which benefits the individual is commonly termed competitiveness; and collective rationality is called cooperation. Game theory contributes a method of precisely quantifying competitiveness and cooperativeness by defining them in terms of choices made between the numerical utilities in a game matrix.

An additional advantage of the use of games in psychological research is that game behavior is based on a dynamic concept of reality. It tests the person's ability to predict changes in the environment, to change hypotheses in accordance with acquired information, and by acting on hypotheses, to affect the environment, which in this case includes another person and his perceptions.

Thus, each type of unit in a social interaction responds to the other in terms of its information and views of the other; these may or may not correspond to the other's actualities. Moreover, characteristic distortions of the other tend to develop as a function of the type of interaction whether the interacting units be nations, groups, or individuals (Deutsch, 1969, p. 1091).

*The non-zero-sum game is especially appropriate in studying problems of social economy, where the production or destruction of goods is involved, or when the advantage of one group or person is not necessarily synonymous with the disadvantage of other persons or groups. There may exist opportunities for decisions to simultaneously benefit many sectors of a society.

Because the game situation presents no obvious "right" decision, behavior depends somewhat on the individual's own choice of values, his notion of what is rational, his perception of his opponent and the kind of relationship he wishes to have with him, and perhaps even on his view of himself and the world (Rapoport, 1966). Thus, in the choice between a competitive and a cooperative response, personality factors may emerge. The abstract nature of the situation makes presenting a front difficult because it is not apparent what is being tested for. Also, the necessity for a quick decision requires relatively spontaneous behavior which may reveal basic attitudes better than a policy which is well thought out (Rapoport & Chammah, 1965).

Though most studies of the Prisoner's Dilemma and other non-zero-sum games have centered on the effects of varying the game matrix, amount of reward, strategy of the opponent, etc., a number of studies have been done on personality correlates of cooperative and competitive behavior. Some of the variables which have been shown to be related to behavior in two-person games include trust (Deutsch, 1960; Tedeschi, Hiester & Gahagan, 1969); the needs for aggression, autonomy, abasement and deference (Marlowe, 1963); internationalism vs. isolationism (Lutzker, 1960; McClintock, Gallo & Harrison, 1965); Machiavellianism (Christie, Gergen & Marlowe, 1969); tolerance of ambiguity (Pilisuk et al., 1965); philosophies of human nature (Wrightsman, 1966); and even responses on the 16 PF (Gillis & Woods, 1971). A study by Crowne (1966) of family orientation, level of aspiration, and interpersonal bargaining indicates that subjects classified as coming from entrepreneurial families (those engaged in high-risk,

individuating occupations such as medicine, law, small businesses, farming) are more competitive than those from bureaucratic families (employed in large, complex organizations). Subjects from entrepreneurial families would probably score higher on the Protestant Ethic than would subjects from bureaucratic families. These results lead to the conclusion that personal values in general, and adherence to the Protestant Ethic in particular may have an effect in determining behavior in a competitive situation such as the Prisoner's Dilemma. It seems logical to associate the two variables because both have important roles in economic theory.

Adherence to the Protestant Ethic is hypothesized to have an effect on the competitiveness of a person's behavior. This should be especially true if in order to behave competitively the person must expend a great deal of effort. Theoretically, a person who values work is likely to behave individualistically, and to feel that in expending effort, he is doing something "good" and is therefore worthy of receiving greater rewards than his opponent. A person who does not value work highly is, according to the SWV definition of the Protestant Ethic, less industrious and individualistic, and thus might be more likely to see the benefit in cooperating with another person so that each expends less effort for a greater mutual reward.

Most studies have defined effort in terms of physical energy, mental hardship to the subject, obstacles in the pathway to a goal, etc. (see Lewis, 1965). In order to study effort in relation to the Protestant Ethic, it seems necessary to devise a task which, though necessarily abstract, is more related to the everyday work a person might perform. It

must include an investment of time and energy. The task should be neither strictly intellectual nor strictly physical, in order to minimize the influence of individual differences in abilities, and for the same reason it should also be relatively simple. The task must be easily quantifiable so that the amount of effort can be varied and so that rewards can be directly related to the amount of effort expended.

An untimed variation of the WAIS Digit Symbol satisfies these criteria. It is simple to perform, is classified as a performance rather than a verbal intelligence task, and some energy must be expended in filling in the squares. To expend more effort, a subject must spend more time on the task. It is easily quantifiable, and variation in the amount of effort can be achieved readily by requiring the subject to fill in a different number of symbols to earn a point in each effort condition.

Problem

With adherence to the Protestant Ethic operationally defined by a person's score on the SWV, effort defined as performance of a certain number of digit symbols, and competitiveness defined as behavior in the Prisoner's Dilemma paradigm, the problem was to determine whether or not subjects who valued work highly would be more competitive than those who did not, and whether or not the necessity of expending different amounts of effort in order to be competitive would affect this behavior.

Hypotheses

- 1) High SWV Ss would make more competitive responses than will low SWV Ss.

- 2) Effort involved in the competition paradigm would differentially affect Ss so that:
 - a) High SWV Ss would make more competitive responses when a greater amount of effort is involved than when a lesser amount is involved.
 - b) Low SWV Ss would make fewer competitive responses when a greater amount of effort is involved than when a lesser amount is involved.
- 3) PE and SWV scores would correlate highly.

CHAPTER II

METHOD

Subjects

The Ss were 48 male students from the introductory psychology class at the University of Montana. The SWV has been shown to discriminate among different occupational groups such as clerical vs. unskilled workers, and it may reflect attitudes learned in the performance of a particular job. For these reasons, and because they are readily available, it was assumed that students, who are not usually in any long-term occupation, would make adequate subjects. The Ss were divided at the median of their SWV scores into high and low Protestant Ethic groups, and further randomly divided into high and low effort conditions, resulting in the four groups of 12 which comprise the 2 x 2 factorial design.

		Effort		
		High	Low	
SWV Score	High	12	12	24
	Low	12	12	24
		24	24	48

Apparatus

The S and the stooge each sat in a booth constructed so that they were facing each other with a partition between them. The game matrix was prominently displayed on each side of the partition so that it could be easily referred to by both.

Procedure

During one of the first classes of the quarter, a composite of the SWV and PE scales was administered to all students present, with reassurances that scores would be kept confidential. The students were also asked to answer a few questions about their work histories and about the occupation of their parents. At a later date, a list of those eligible for the study (i.e., those males for whom PE and SWV scores were available) was posted, and volunteers were asked to sign up for hour or half-hour individual sessions, depending on to which effort condition they had been assigned. This procedure was to minimize subjects' making connections between the two events, thus reducing the tendency subjects might have to behave congruently with expressed attitudes. The experimenter was ignorant of subjects' test scores, and someone else randomly assigned them to high and low effort conditions.

When they reported for the individual session, the subject and a stooge were asked to take seats in the booths provided, and the following instructions were read (modifications for the high effort condition are in parentheses):

The purpose of this experiment is to study decision-making, where each person's decision has an effect on another person as well as on himself. The two of you are going to make a series of decisions which you will then act upon. The choices you make will determine how many points you earn. Now, look at the display on the wall and at the two piles of work sheets in front of you on the table. The choices 8 and 5 in the display represent different amounts of work on the exercise before you; that is, if you choose 8 on the display, you must take the work sheet titled "choice 8" and fill in 8 (rows of) squares with the appropriate symbol for each numeral, and if you choose 5 on the display, you must take the work sheet titled "choice 5" and fill in 5 (rows of) squares. The points you earn on each trial are determined by two things: the

number of (rows of) squares you decide to complete and the number of (rows of) squares your partner decides to complete. Now look at the display again. Since your earnings depend on your partner's decisions as well as on your own, you can see, for example, that if you choose 8 (rows of) squares, you may earn 8 points or 2 points; if you choose 5 (rows of) squares, you may earn 5 points or 1 point, depending on what your partner does. If you both choose to complete 5 (rows of) squares, you will each earn 5 points. If you both choose 8, you will each earn 2 points. If one chooses 8 while the other chooses 5, the one who chooses 8 will earn 8 points and the one who chooses 5 will earn 1 point. For each of the 10 trials, then, you will first examine the display and decide which choice you wish to make, then take the corresponding work sheet, and fill in each square with the correct symbol. After a few minutes, I will ask for your work sheets. I will then announce how many points each of you has earned on that trial. You should write these numbers on your score sheet so you will have a record of both your and your partner's scores. Please notice that the symbol-number combination changes on each work sheet, so this is not a memorization task. Are there any questions?

The matrix chosen for this study conforms to the specifications of the Prisoner's Dilemma paradigm; that is:

	5	8
5	5	1
8	1	2

	X_1	X_3
X_1	X_1	X_2
X_3	X_2	X_4

$X_3 > X_1$, $X_3 > X_2$, $X_4 > X_2$, and $2X_1 > X_2 + X_3$, $2X_4$. The numbers 8 and 5 were used because they satisfy the above conditions, yet allow for more difference in effort expended than do many matrices used in Prisoner's Dilemma studies (X_1 and X_3 often differ by only one unit).

Though the effect which rewarding with points instead of with real money has on game behavior is still the subject of controversy, several

studies (Scinto, Sistrunk & Clement, 1972 and Oskampe & Kleinke, 1970) indicate that average amounts of cooperation and competition are not greatly changed by variation in the amount of reward, though variance may be affected. Since paying the ss in this experiment would present difficulties, it was decided that points would provide an adequate index of reward.

The game continued for 10 trials because the digit symbol task would become tiresome after many trials. Also, Rapoport and Chammah (1965) have suggested that when the Prisoner's Dilemma is played many times, the effect of a personality variable on performance may well be masked by an interaction effect or response set which develops between the players. The effects of variation in the other's strategy in non-zero-sum games have been observed to have a small effect on the behavior of a player (Becker & McClintock, 1967). The stooge played a programmed strategy of 70% cooperation with competitive responses on the third, seventh and eighth trials. This strategy should have no systematic effect on the S's cooperation, while allowing for some variation in the amount of cooperation exhibited (Oskampe, 1971). Three minutes were allowed for each trial in the high effort condition; 45 seconds for each trial in the low effort condition.

At the end of each individual session, the subject was asked to complete a questionnaire about his thoughts and perceptions during the experiment. One question was a rating of the amount of effort involved in completing the task on, a continuum ranging from "very little" to "a great deal". The purpose of this was to determine whether the experimental

manipulation of effort actually produced two different conditions from the subjects' viewpoint.

Two questions were adjective checklists concerned with a subject's perceptions of his own behavior as he chose the higher or the lower number. A recent study (Baranowski & Summers, 1972) showed that in a Prisoner's Dilemma game, more than a third of the subjects perceived the alternatives in a manner that differed from the usual cooperative-competitive dichotomy, and that perceptions of the response alternatives were related to responses. They found that subjects who perceived the choice as being between cooperativeness and competitiveness made significantly more cooperative responses than did those who did not perceive the choice in this way. The adjective checklists were included in this study in order to determine whether or not subjective perceptions of the response alternatives would vary, and if these perceptions would influence the results, as they did in the above study.

A few questions were also asked in order to determine whether or not the subject knew that the other player was a stooge. Subjects who guessed that their partner was a stooge were not included in the analysis, with the exception of those who mentioned the cooperative strategy of their partner as the reason for their suspicion. Subjects who responded in this way were generally the more competitive players, and it was felt that not counting those who did not believe that another person would play cooperatively would bias the results.

CHAPTER III

RESULTS

Three of the 51 subjects run were not included in the analysis because they were suspicious that the other player was a stooge. A two-way analysis of variance was performed on the data from the remaining 48 subjects in order to assess the differences among the four experimental groups in the number of competitive responses made. The hypothesis that the main effect of SWV score would be significant, with the high SWV groups more competitive than the low SWV groups, was not supported ($F = 2.16$, $df = 1/44$, $p < .20$). The second hypothesis, that effort would differentially affect the two SWV categories, predicted a significant interaction between SWV score and effort, but this was not supported by the data ($F < 1$). Pairwise comparisons made using the Neuman-Keuls method yielded no significant differences between groups.

A Pearson product-moment correlation made to test the hypothesis that SWV and PE Scale scores would correlate yielded an r of .373. Based on an N of 273, this is highly significant ($t = 6.597$, $p < .001$), but means that only about 14% of the variance is accounted for.

In order to determine whether or not the subjects perceived the two effort manipulations as requiring different amounts of work, each response alternative on the post-experimental questionnaire regarding amount of effort involved in the task was given a numerical weight from one to four with one representing very little effort and four representing a great

deal of effort, and the mean response was computed for each of the two effort conditions. These were 1.25 for the low and 1.66 for the high effort condition. The difference in how the two conditions were perceived was significant ($t = 2.16$, $df = 46$, $p < .05$) in the expected direction.

To elucidate the relationship between the subject's perception of each response alternative (5 or 8), subjects were divided into two groups: those who checked both cooperative for response 5 and competitive for response 8 on the adjective checklist, regardless of what else they checked; and a group consisting of all the other subjects. Then a comparison was made on the overall level of competitive responses in each group to determine whether those who perceived the cooperative-competitive distinction would make fewer competitive responses, as the Baranowski and Summers (1972) study suggested they would. There was no significant difference between the groups ($t = .121$, $df = 46$, $p < .10$). It is interesting to note that 30 of the 48 subjects failed to perceive this distinction, since most Prisoner's Dilemma studies are based on the assumption that the experimenter and the subjects view the choices similarly. These figures add support to Baranowski and Summers' assertion that this may be an unwise assumption to make.

Although the original analysis of variance on the number of competitive responses yielded no significant differences among groups when adherence to the Protestant Ethic was operationally defined as the overall score a subject received on the SWV, it seemed appropriate to re-group the subjects according to their scores on the Extrinsic subscales of the SWV (Upward Striving, Social Status of Job, and Attitude towards Earning) alone, because placing a high value on these aspects of work would

logically be related to valuing an extrinsic reward such as points earned in the game situation. Subjects who scored above the median on the Extrinsic subscales were assigned to the high PE group; those who scored below the median, to the low PE group. A significant main effect of competitiveness ($F = 5.96$, $df = 1/44$, $p < .025$) was obtained when subjects were divided on the basis of scores on these subscales of the SWV. Those scoring above the median were significantly more competitive than those who scored below, suggesting that competitiveness can be predicted better on the basis of this half of the SWV than by scores on the whole test.

In order to be certain that assignment to groups on the basis of the other half of the test, the Intrinsic subscales (Activity Preference, Pride in Work, and Job Involvement) would not predict competitiveness equally well, an analysis was also done with subjects assigned to groups according to scores on these subscales. No significant effects were found ($F < 1$). An additional analysis was done with subjects assigned to groups on the basis of their PE Scale scores, and this also failed to yield significant results.

CHAPTER IV

DISCUSSION

The results of this study do not indicate that subjects who value work highly are more competitive than those who do not. In fact, they suggest that at least under the conditions of this study, adherence to the Protestant Ethic has no effect on competitiveness. The results are theoretically inconsistent with the Crowne (1966) study which showed that subjects who came from entrepreneurial families were more competitive in a Prisoner's Dilemma game than were those who did not.

Effort did not affect the competitiveness of the subjects, and there is no evidence that effort (as defined in this study) affects the performance of high SWV subjects any differently than low SWV subjects. This is somewhat surprising, since theoretically, high SWV subjects should be more competitive when they must expend greater effort for their rewards.

The only analysis yielding significant results was based on the dichotomization of subjects according to their scores on the Extrinsic subscales of the SWV alone, indicating that those who value the extrinsic rewards of work are more competitive in working for points than those who do not; and, as the latter was a post hoc internal analysis, these results must be interpreted with caution. Those who have theorized about and attempted to operationalize the concept of the Protestant Ethic, from Weber on, generally assume that its intrinsic and extrinsic aspects are fundamentally related; therefore, these results were not anticipated. Perhaps the assumption that they are related is one that should not necessarily be made.

That two scales, the SWV and the PE Scale, both of which were based on the historical concept of the Protestant Ethic and designed to measure the value an individual places on work, yield a correlation of only .373 indicates that the scales have much unexplained variability. Since the theoretical concept of the Protestant Ethic, historically and operationally, is comprised both of attitudes toward work itself and of attitudes toward the rewards which result from work and achievement, one direction which future research in the area might take would be to make the distinction between extrinsic and intrinsic components of work values and study each separately, using the appropriate subscales of the SWV or some other measure.

In future studies, a more precise definition of adherence to the Protestant Ethic needs to be combined with an operationalization of effort more closely identified with this definition. The problem of choice of the experimental task possibly serves a partial explanation of why a significant interaction of the two independent variables was not found. If a task had been used which the subjects could have perceived as meaningful work, it might have been more clearly related to work values. Another factor which may have contributed to the failure of the effort manipulation to influence the results was the small difference between the high and low effort conditions. Though subjects' perceptions of them as being different was statistically significant, both were perceived in almost all cases as requiring either very little or a little effort. In further research, the difference between conditions should probably be made greater.

The question of the relation of "game" behavior to actual work behavior also deserves comment. Better results might have been achieved if the

situation were not one which was likely to be interpreted by the subjects as a game to be won, rather than as a task to be taken seriously. Contributing to this artificiality was the use of deception. Informal conversation with the subjects revealed that many of them were wary about what would happen, merely because it was a psychological experiment and then did not know what to expect. An air of secrecy about the purpose of the experiment was maintained throughout the session, and then the subject was informed that his partner was a stooge. Perhaps there is an inherent contradiction in deceiving a subject as to the procedures and purposes of an experiment while at the same time hoping that he will behave in a trusting and cooperative way toward his partner. Many Prisoner's Dilemma studies involve use of deception; perhaps this is one reason why the level of competitiveness displayed by the subjects has been so consistently high.

It appears likely that the lack of significant findings in this study can be attributed to a combination of the imprecision of the definition and measurement of the Protestant Ethic variable, the inadequate differentiation of effort conditions, the somewhat deceptive and artificial nature of the experimental task, and its dissimilarity to a real work situation. These are issues which future researchers in the area will have to confront before questions about the role of work values in competitive behavior can be more adequately explored.

CHAPTER V

SUMMARY

The study explores the relationship between work values (adherence to the Protestant Ethic) and competitiveness when different amounts of effort must be expended by the subject in order to make a competitive response. Subjects were divided into high and low Protestant Ethic groups on the basis of their scores on the Scale of Work Values, and another measure of work values, the Protestant Ethic Scale, was also administered. Subjects were randomly assigned to the high and low effort conditions, which consisted of different amounts of a digit-symbol task. Competitiveness, the dependent variable, was defined by the number of competitive responses a subject made in a variation of the Prisoner's Dilemma paradigm which required performing the digit-symbol task.

Hypotheses were that high SWV subjects would make more competitive responses than would low SWV subjects; that effort would differentially affect subjects so that high SWV subjects would make more competitive responses when a greater amount of effort was involved, with the reverse true for low SWV subjects; and that scores on the two measures of adherence to the Protestant Ethic, the PE Scale and the SWV, would correlate highly.

A 2 x 2 analysis of variance performed on the results yielded no support for the hypotheses relating adherence to the Protestant Ethic and competitiveness. A significant but low correlation was found between

scores on the PE Scale and the SWV. A post hoc analysis of the data made with subjects assigned to high and low Protestant Ethic groups on the basis of their scores on only the Extrinsic subscales of the SWV did yield significant results, suggesting that in future research on the Protestant Ethic perhaps the distinction between its extrinsic and its intrinsic components should be made. Problems involved in the definition, measurement, and operationalization of the variables were discussed.

REFERENCES

- Baranowski, T. A. & Summers, D. A. Perception of response alternatives in a Prisoner's Dilemma game. Journal of Personality and Social Psychology, 1972, 21, 35-40.
- Becker, G. M. & McClintock, C. G. Value: Behavioral decision theory. In P. R. Farnsworth (Ed.), Annual Review of Psychology, Vol. 18. Palo Alto, Calif.: Annual Reviews, Inc., 1967, Pp. 239-264.
- Blood, M. R. Work values and job satisfaction. Journal of Applied Psychology, 1969, 53, 456-459.
- Christie, R., Gergen, K. J., & Marlowe, D. The penny-dollar caper. In R. Christie & F. Geis (Eds.), Studies in Machiavellianism. New York: Academic Press, 1969.
- Crowne, D. P. Family orientation, level of aspiration and interpersonal bargaining. Journal of Personality and Social Psychology, 1966, 3, 641-645.
- Deutsch, M. Trust, trustworthiness, and the F scale. Journal of Abnormal and Social Psychology, 1960, 61, 138-140.
- Deutsch, M. Socially relevant science: Reflections on some studies of interpersonal conflict. American Psychologist, 1969, 24, 1076-1092.
- Eisenstadt, S. N. The Protestant ethic thesis in an analytical and comparative framework. In S. N. Eisenstadt (Ed.), The Protestant Ethic and Modernization. New York: Basic Books, Inc., 1968.
- Fanfani, A. Catholicism, Protestantism, and capitalism. New York: Sheed & Ward, 1955.
- Gillis, J. S. & Woods, G. T. The 16 PF as an indicator of performance in the Prisoner's Dilemma game. Journal of Conflict Resolution, 1971, 15, 393-402.
- Kaplan, H. R. The meaning of work among the hard-core unemployed. Unpublished doctoral dissertation, University of Massachusetts, 1971. (Abstract)
- Lenski, G. The Religious Factor. New York: Doubleday, 1961.
- Lewis, M. Psychological effect of effort. Psychological Bulletin, 1965, 64, 183-190.
- Lutzker, D. R. Internationalism as a predictor of cooperative game behavior. Journal of Conflict Resolution, 1960, 4, 426-435.

- McClelland, D. The Achieving Society. Princeton: D. Van Nostrand Co., 1961.
- McClintock, C. G., Gallo, P. S., & Harrison, A. Some effects of variation in other strategy upon game behavior. Journal of Personality and Social Psychology, 1965, 1, 319-325.
- Mack, R. W., Murphy, R. J., & Yellin, S. The Protestant ethic, level of aspiration, and social mobility: An empirical test. American Sociological Review, 1956, 21, 295-300.
- Marlowe, D. Psychological needs and cooperation: Competition in a two-person game. Psychological Reports, 1963, 13, 364.
- Mirels, M. L., & Garrett, J. B. The Protestant ethic as a personality variable. Journal of Consulting and Clinical Psychology, 1971, 36, 40-44.
- Oskampe, S. Effects of programmed strategies on cooperation in the Prisoner's Dilemma and other mixed-motive games. Journal of Conflict Resolution, 1971, 15, 225-259.
- Oskampe, S. & Kleinke, C. Amount of reward as a variable in the Prisoner's Dilemma game. Journal of Personality and Social Psychology, 1970, 16, 133-140.
- Pilisuk, M., et al. War hawks and peace doves: Alternate resolutions of experimental conflicts. Journal of Conflict Resolution, 1965, 9, 491-508.
- Rapoport, A. Two-person Game Theory. Ann Arbor, Mich.: University of Michigan Press, 1966.
- Rapoport, A. & Chammah, A. M. Prisoner's Dilemma: A study of conflict and cooperation. Ann Arbor, Mich.: University of Michigan Press, 1965.
- Scinto, D. L., Sistrunk, F. & Clement, D. E. Effect of the magnitude of reward upon cooperative game behavior. Journal of Social Psychology, 1972, 86, 155-156.
- Tedeschi, J. T., Hiester, D. S., & Gahagan, J. P. Trust and the Prisoner's Dilemma game. Journal of Social Psychology, 1969, 79, 43-50.
- Turner, A. N. & Lawrence, P. R. Industrial jobs and the worker: An investigation of response to task attributes. Boston, Mass.: Harvard University, 1965.
- Von Neumann, J. & Morgenstern, O. Theory of games and economic behavior. Princeton: Princeton University Press, 1944.

- Wagner, H. The Protestant ethic: A mid-twentieth century view. Sociological Analysis, 1964, 25, 34-41.
- Weber, M. The Protestant ethic and the spirit of capitalism. 1904. Trans. by Talcott Parsons. New York: Scribner, 1930.
- Whyte, W. H., Jr. The organization man. New York: Simon and Schuster, 1956.
- Wollack, S., Goodale, J. G., Wijting, J. P., & Smith, P. C. Development of the Survey of Work Values. Journal of Applied Psychology, 1971, 55, 331-338.
- Wrightsman, L. S. Personality and attitudinal correlates of trusting and trustworthy behaviors in a two-person game. Journal of Personality and Social Psychology, 1966, 4, 328-332.

APPENDIX A
REWARD MATRIX

REWARD MATRIX

		Partner's Choice	
		5	8
My Choice	5	I earn 5 points Partner earns 5 points	I earn 1 point Partner earns 8 points
	8	I earn 8 points Partner earns 1 points	I earn 2 points Partner earns 2 points

APPENDIX B

SAMPLE WORK SHEET - HIGH EFFORT

APPENDIX C

SAMPLE WORK SHEET - LOW EFFORT



1.

1

5.

4

2.

6

6.

2

3.

5

7.

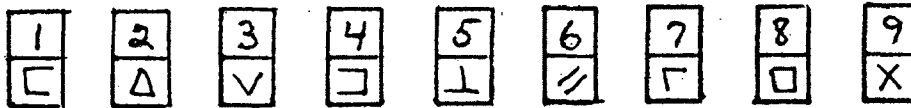
3

4.

8

8.

9



1.

5

5.

6

2.

3

3.

1

4.

9

APPENDIX D
SAMPLE SCORE SHEET

SAMPLE SCORE SHEET

TRIAL	My Score	Partner's Score
1		
total		
2		
total		
3		
total		
4		
total		
5		
total		
6		
total		
7		
total		
8		
total		
9		
total		
10		
total		

APPENDIX E

POST-EXPERIMENTAL QUESTIONNAIRE

POST-EXPERIMENTAL QUESTIONNAIRE

The experiment proper is now over. In order to determine what the results of the experiment really mean, it is very important to find out what your thoughts were during the experiment. There are no right or wrong answers. I am just interested in what you actually thought and felt during the experiment and before this questionnaire was introduced.

1. What, in general, did you think the study was about?
2. What did you think I was specifically trying to prove?
3. How much effort was involved in the task of filling in the squares?
Very little _____ A little _____ Considerable _____ A great deal _____
4. How did you go about deciding which number to pick?
5. When you chose the larger number (8), how did you perceive yourself?
Check the adjectives that apply.

_____ trusting	_____ rewarding	_____ compliant
_____ cautious	_____ independent	_____ competitive
_____ irrational	_____ suspicious	_____ punishing
_____ cooperative	_____ rash	_____ rational
6. When you chose the smaller number (5), how did you perceive yourself?
Check the adjectives that apply.

_____ trusting	_____ rewarding	_____ compliant
_____ cautious	_____ independent	_____ competitive
_____ irrational	_____ suspicious	_____ punishing
_____ cooperative	_____ rash	_____ rational
7. How did you feel toward your partner during the experiment?
8. Have you seen him before in your Psychology 110 class?
9. Did you think he was doing the same things you were during the experiment?
10. Often subjects feel that their partner was not a real subject, but was an accomplice of the experimenter? Did you feel that your partner was an accomplice of the experimenter today?

11. If so, when did you become suspicious?

12. If so, what made you suspicious?

APPENDIX F
PROTESTANT ETHIC SCALE

PROTESTANT ETHIC SCALE

Name _____

This is a questionnaire concerning how certain events in our society affect individuals. Please read the statement, then indicate how much you agree or disagree with the statement by circling the appropriate number. For example, if you strongly disagree, circle "-3" and if you strongly agree with the statement you should circle "+3". You may, of course, circle any of the numbers between -3 and +3 depending on how much you agree or disagree with the statement. It is important that you answer how you really think and feel about each item.

	I strongly disagree			I strongly agree		
1. Most people spend too much time in unprofitable amusements.	-3	-2	-1	+1	+2	+3
2. Our society would have fewer problems if people had less leisure time.	-3	-2	-1	+1	+2	+3
3. Money acquired easily (e.g., through gambling or speculation) is usually spent unwisely.	-3	-2	-1	+1	+2	+3
4. There are few satisfactions equal to the realization that one has done his best at a job.	-3	-2	-1	+1	+2	+3
5. The most difficult college courses usually turn out to be the most rewarding.	-3	-2	-1	+1	+2	+3
6. Most people who don't succeed in life are just plain lazy.	-3	-2	-1	+1	+2	+3
7. The self-made man is likely to be more ethical than the man born to wealth.	-3	-2	-1	+1	+2	+3
8. I often feel I would be more successful if I sacrificed certain pleasures.	-3	-2	-1	+1	+2	+3
9. People should have more leisure time to spend in relaxation.	-3	-2	-1	+1	+2	+3

10.	Any man who is able and willing to work hard has a good chance of succeeding.	-3	-2	-1	+1	+2	+3
11.	People who fail at a job have usually not tried hard enough.	-3	-2	-1	+1	+2	+3
12.	Life would have very little meaning if we never had to suffer.	-3	-2	-1	+1	+2	+3
13.	Hard work offers little guarantee of success.	-3	-2	-1	+1	+2	+3
14.	The credit card is a ticket to careless spending.	-3	-2	-1	+1	+2	+3
15.	Life would be more meaningful if we had more leisure time.	-3	-2	-1	+1	+2	+3
16.	The man who can approach an unpleasant task with enthusiasm is the man who gets ahead.	-3	-2	-1	+1	+2	+3
17.	If one works hard enough he is likely to make a good life for himself.	-3	-2	-1	+1	+2	+3
18.	I feel uneasy when there is little work for me to do.	-3	-2	-1	+1	+2	+3
19.	A distaste for hard work usually reflects a weakness of character.	-3	-2	-1	+1	+2	+3

APPENDIX G
SURVEY OF WORK VALUES

SURVEY OF WORKERS' ATTITUDES

Name _____ Sex ____ Presently employed - Yes ____ No ____

Full time _____ Part time _____ Job title _____

Mother's occupation _____ Father's occupation _____

This is a questionnaire concerning the way people feel about work. It is a measure of your opinions. There are no right or wrong answers. Read each statement carefully and indicate the degree to which you agree or disagree with the statement. On this scoring sheet, there are six different statements with numbers corresponding to them. Please write the number of the statement which best describes your agreement or disagreement in the space provided. For example, if after reading statement 4, you decide that you strongly disagree with it, you would write the number 1 on the line for statement 4 on this scoring sheet. If you mildly disagree with the statement you would write in the number 3, and so on. Please be sure to give only one answer to each of the 54 statements in the booklet. Make no other marks on this scoring sheet.

6 - Strongly Agree

5 - Agree

4 - Mildly Agree

3 - Mildly Disagree

2 - Disagree

1 - Strongly Disagree

1. _____	15. _____	29. _____	43. _____
2. _____	16. _____	30. _____	44. _____
3. _____	17. _____	31. _____	45. _____
4. _____	18. _____	32. _____	46. _____
5. _____	19. _____	33. _____	47. _____
6. _____	20. _____	34. _____	48. _____
7. _____	21. _____	35. _____	49. _____
8. _____	22. _____	36. _____	50. _____
9. _____	23. _____	37. _____	51. _____
10. _____	24. _____	38. _____	52. _____
11. _____	25. _____	39. _____	53. _____
12. _____	26. _____	40. _____	54. _____
13. _____	27. _____	41. _____	
14. _____	28. _____	42. _____	

1. One of the reasons that I work is to make my family respect me.
2. A man does not deserve respect just because he has a good job.
3. A job with prestige is not necessarily a better job than one which does not have prestige.
4. My friends would not think much of me if I did not have a good job.
5. A job which requires the employee to be busy during the day is better than a job which allows a lot of loafing.
6. Most companies have suggestion boxes for their workers, but I doubt that the companies take these suggestions seriously.
7. A good worker cares about finding ways to improve his job, and when he has an idea, he should pass it on to his supervisor.
8. Even if a man has a good job, he should always be looking for a better job.
9. If the person can get away with it, he should try to work just a little slower than the boss expects him to.
10. A man should hold a second job to bring in extra money if he can get it.
11. In choosing a job, a man ought to consider his chances for advancement as well as other factors.
12. A worker who does a sloppy job should feel a little ashamed of himself.
13. A worker should feel some responsibility to do a decent job whether or not his supervisor is around.
14. A worker who has an idea about how to improve his job should drop a note in the company suggestion box.
15. A man should choose the job which pays the most.
16. There is nothing wrong with doing a poor job at work if a man can get away with it.
17. A good worker is interested in helping a new worker learn his job.
18. Prestige should not be a factor in choosing a job.
19. A man should always be thinking about pulling himself up in the world and should work hard with the hope of being promoted to a higher-level job.

20. The best job that a worker can get is one which permits him to do almost nothing during the work day.
21. If I were paid by the hour, I would probably turn down most offers to make extra money by working overtime.
22. If a man likes his job, he should be satisfied with it and should not push for a promotion to another job.
23. A man should take the job which offers the most overtime if the regular pay on the jobs is about the same.
24. If a worker has a choice between going to the company picnic or staying home, he would probably be better off at home.
25. Even if a worker has a very low-level job in a company, it is still possible for him to make suggestions which will affect company policy.
26. The man who holds down a good job is the most respected man in the neighborhood.
27. When he can get away with it, an employee should take it easy.
28. The trouble with too many people is that when they find a job in which they are interested, they don't try to get a better job.
29. A worker who takes long rest pauses is probably a poor worker.
30. A man should choose one job over another mostly because of the higher wages.
31. A worker who turns down a promotion is probably making a mistake.
32. There is nothing as satisfying as doing the best job possible.
33. Once a week, after the work day is over, a company may have their workers get together in groups for the purpose of discussing possible job changes. A good worker should remain after quitting time to participate in these discussions.
34. The only good part of most jobs is the paycheck.
35. A promotion to a higher-level job usually means more worries and should be avoided for that reason.
36. A man who feels no sense of pride in his work is probably unhappy.
37. If something is wrong with a job, a smart worker will mind his own business and let somebody else complain about it.

38. Having a good job makes a person more worthy of praise from his friends and family.
39. A person would soon grow tired of loafing on a job and would probably be happier if he worked hard.
40. A well paying job that offers little opportunity for advancement is not a good job for me.
41. When a man is looking for a job, money should not be the most important consideration.
42. A worker is better off if he is satisfied with his job and is not concerned about being promoted to another job.
43. Only a fool worries about doing his job well, since it is important only that you do your job well enough not to get fired.
44. A worker should do his job and forget about such things as company meetings or company activities.
45. As far as my friends are concerned, it could not make any difference if I worked regularly or only once in a while.
46. If a person is given a choice between jobs which pay the same money, he should choose the one which allows him to do as little work as possible.
47. A good job is a well paying job.
48. A man should feel a sense of pride in his work.
49. Even though they make the same amount of money, the person who works in an office has a more impressive job than does the person working as a sales clerk.
50. A person should try to stay busy all day rather than try to find ways to get out of doing work.
51. A man should take a job that pays more than some other job he could get even if he cannot stand the people he works with.
52. The most important thing a man should feel about his job is that he enjoys working at it.
53. Doing a good job should mean as much to a worker as a good paycheck.
54. If a worker keeps himself busy on his job, the working day passes more quickly than if he were loafing.