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The Effects of Personal Value Structures on Decision-Making: a Study of the Relationship Between Values and Decisions of University Business Administration Students.

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Louisiana State University and Agricultural & Mechanical College

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The Louisiana State University and Agricultural and Mechanical College, Ph.D., 1975
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THE EFFECTS OF PERSONAL VALUE STRUCTURES ON DECISION-MAKING: A STUDY OF THE RELATIONSHIP BETWEEN VALUES AND DECISIONS OF UNIVERSITY BUSINESS ADMINISTRATION STUDENTS

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirements for the degree of Doctor of Philosophy

in The Department of Management

by

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B.A., Ohio State University, 1969
M.B.A., Louisiana State University, 1973
December, 1975
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A study was conducted to determine the effects, if any, of the personal value structures of university business administration students on their decision-making processes. There were 120 respondents in the research, sixty undergraduates and sixty graduate students.

The personal value structures of the total sample were found to have significantly affected their decision-making processes. Four out of six personal values of the undergraduates were found to have significantly affected their decision-making. All six personal values of the graduate students were found to have affected their decision-making. Thus, the study supported the contention that personal values affect decision-making.

The personal value structures of the undergraduate students and the graduate students were found to be different as a result of divergencies in their age and their level of education. The hierarchies of preferred courses of action of the two classes were likewise found to be dissimilar as a result of age and education.

In summary, personal value structures were found to have affected the decision-making processes of business administration students. As a result of the level of education and
age differences, the personal value structures and the hierarchies of preferred courses of action of the undergraduates and graduate students were found to be dissimilar.
CHAPTER I

INTRODUCTION

The study of personal values has been undertaken by philosophers, theologians, sociologists, psychologists, and economists, among others. The universal attempt from these various disciplines has been to study the effect of personal values on the behavior of mankind.

Recently, the study of personal values has been undertaken by various scholars of business administration.¹ Since values do influence behavior, according to the theory on the subject, the area of business organization (as well as other types of organizations) can be understood better through empirical investigations of personal values. Various scholars have conducted studies to evaluate the effects of personal values on specific aspects of human behavior. In this research, the effects of personal values on one aspect of human behavior—decision-making—have been investigated.

It has been assumed in this study that goal-oriented behavior

includes the process of decision-making as a part of its scope. Because decision-making greatly affects all types of organizations, the further understanding of organizational behavior can take place with more information on the effects of personal values on decision-making.

PURPOSE OF THE STUDY

The purpose of this study has been to examine the relationship between personal values and the decision-making process. As already mentioned, substantial theory exists in the area of personal values and human behavior. Specifically, Shirley has argued that personal values influence men's determination of organizational objectives. Diggory has stated that personal values "steer" human behavior toward some goal or objective. Williams has analyzed the interrelationship of personal values and their potential effect on behavior toward an objective. Rokeach has specified that personal values determine the modes of conduct and end states of existence. Implicit in the statements of all these scholars


is the process of decision-making which serves as a means to reach pre-determined goals in ways compatible with personal values of the individuals involved.

SCOPE OF THE STUDY

This study has attempted to analyze the relationship between the personal value structures and the decisions made by the holders of these different value structures. Two groups of white, male American students at Louisiana State University were used for the empirical study. One group consisted of first year undergraduate business students. The other group was composed of second year Master of Business Administration students. The sample used in this study consisted of 120 students: 60 undergraduate students and 60 Master of Business Administration students.

JUSTIFICATION FOR THE STUDY

Since there has been evidence that the personal value structures of individuals do affect their decision-making processes, and since no empirical research has been done on the effects of personal value structures on the hierarchy of preferred choices of action of individuals, this study has served as another step in clarifying the relationship between values and action. Furthermore, the results of this study should provide directions for future research on the subject of personal values and their effect on decision-making in other types of organizations.
HYPOTHESES

Eight hypotheses were tested:

1. For both groups, there is a positive correlation between the relative position of the individuals' theoretical values (in relation to their other values) and their relative preference of the theoretical choices of action in relation to the other choices of action (those choices of action which are predominantly economic, political, social, aesthetic and religious).

2. For both groups, there is a positive correlation between the relative position of the individuals' economic values (in relation to their other values) and their relative preference of the economic choices of action in relation to the other choices of action (those choices of action which are predominantly theoretical, political, social, aesthetic and religious).

3. For both groups, there is a positive correlation between the relative position of the individuals' political values (in relation to their other values) and their relative preference of the political choices of action in relation to the other choices of action (those choices of action which are predominantly economic, theoretical, social, aesthetic and religious).

4. For both groups, there is a positive correlation between the relative position of the individuals' social values (in relation to their other values) and their relative
preference of the social choices of action in relation to the other choices of action (those choices of action which are predominantly theoretical, economic, political, aesthetic and religious).

5. For both groups, there is a positive correlation between the relative position of the individuals' aesthetic values (in relation to their other values) and their relative preference of the aesthetic choices of action in relation to the other choices of action (those choices of action which are predominantly theoretical, economic, political, social and religious).

6. For both groups, there is a positive correlation between the relative position of the individuals' religious values (in relation to their other values) and their relative preference of the religious choices of action in relation to the other choices of action (those choices of action which are predominantly theoretical, economic, political, social and aesthetic).

7. The value structures for the two groups are hypothesized to be different as a result of differences in education and age.

8. Because of differences in the value structures of the two groups, it is hypothesized that the two groups would indicate different hierarchies of preferences of choices of action.

LIMITATIONS OF THE STUDY

The study has several limitations. First, as a result of the limited number of individuals to be analyzed (120
students), the study may not have general validity. Second, there are a number of intervening variables that may have affected the study so as to provide false results. For instance, a portion of the undergraduate population may have been in business administration for lack of a definitive choice of curriculum. This may have manifested itself in the undergraduate group's lower rating of the economic value. Also, it would have been difficult to trace the reason for the learning of the value structures of the two groups. That is, one could only speculate as to which variable or set of variables in the life experiences of the two groups contributed to the hierarchy of value structures of the two groups. Did the family background of the two groups have the greatest influence on the shaping of the value structures of the two groups? Perhaps education had more influence than did the other variables. Although attempts were made to disallow undue influence from intervening variables, no one could have assured their absolute exclusion. Finally, the influence of value structures are contingent on the situation. That is, various situations may influence the individual to make a decision which might be counter to his value structures. For example, an individual may think that alcohol is not morally acceptable, although he may drink to be sociable.

PREVIEW

In Chapter II, the relevant literature to this investigation is reviewed. In Chapter III, the methodology, the
subjects, the questionnaires, and the procedure of data gathering of this study are described. The results of the research are delineated in Chapter IV. Lastly, in Chapter V, interpretations, conclusions, and suggestions for future research are made.
CHAPTER II

REVIEW OF LITERATURE

In this chapter, relevant publications that have explored the subjects of personal values and decision-making are discussed. Both theoretical and empirical investigations are presented. The first part of the chapter is focused on the subject of personal values, and the latter part of the chapter is concentrated on the subject of decision-making and the effects of personal value structures on decision-making.

PERSONAL VALUES

In this section the following steps are taken. First, the concepts of personal values and personal value structures are defined. Second, a classification of personal values is discussed. Third, an attempt is made to distinguish personal values from norms, attitudes, and beliefs. Finally, the effects of personal value structures on behavior is discussed.

Personal Values Defined.

Kluckhohn and Strodtbeck have stated that personal values "are complex, but definitely patterned (rank-ordered) principles, resulting from the transactional interplay of three analytically distinguishable elements of the evaluative
These elements are the cognitive, the affective, and the directive elements, "which give order and direction to the ever-flowing stream of human acts and thoughts as these relate to the solution of common human problems." The cognitive element refers to the belief and disbeliefs of an individual. The affective element refers to the individual's likes and dislikes. The directive element refers to an individual's readiness to respond. Rokeach, also, has argued that personal values have cognitive, affective and behavioral components. He has defined personal values as enduring beliefs that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence. The specific mode of conduct refers to instrumental values, while end-state of existence refers to terminal values. Kluckhohn has defined personal values as "conceptions, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable."
conception of the desirable influences the selection from available modes, means, and ends of action. The idea of instrumental and terminal values has been expressed by Kluckhohn as the "means and ends of action." Scheibe has referred to personal values as questions of what are good or preferable.

Numerous other definitions of personal values can be cited from the literature. However, the above definitions are reasonable representations of the most accepted definitions of personal values provided by the various scholars on the subject. The similar thesis that runs through the above definitions is that the concept of personal values refers to what individuals consider to be desirable in situations in which alternative courses of action are perceived.

**Personal Value Structures Defined.**

As mentioned above, Kluckhohn and Strodtbeck have viewed personal values as "complex but definitely patterned (rank-ordered) principles." Williams has defined personal value structures as those combinations of personal values which have differing degrees of intensities. Rokeach has defined personal value structures as a process of integration of individuals' various personal values into organized systems.

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wherein each personal value is ordered in priority with respect to other personal values. Essentially the above authors have approached the definition of personal value structures from the perspective that several personal values exist within the personality structures of men and that they are present in various hierarchies.

Systematic observation of human behavior could potentially define various personal value structures.

If we look for crucial situations of choice and systematically record typical modes of choosing, we can then characterize the dominant and subsidiary goals and, eventually, the standards of value by which selections are ordered in any given group or situation.

Numerous conceptual frameworks of personal value structures have been proposed. That is, various authors have proposed different classifications of personal values within personal value structures.

Classification of Personal Values.

Many theoretical classifications of personal values have been proposed throughout the years. Most of these

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17 Williams, *American Society*, p. 444.
18 Ibid.
classifications have never been operationalized for research purposes. However, the value categories chosen for this study have been both operationalized and standardized. The classification upon which this research is based is that of Spranger. His value structure consists of six personal values. They are theoretical, economic, political, social, aesthetic, and religious personal values. The theoretical personal value refers to an intellectual interest in an empirical and systematic approach to knowledge. The economic personal value refers to an orientation toward practical affairs of uses and creation of wealth as well as to production and consumption of goods and services. The political personal value refers to a desire for power, influence, and recognition. The social personal value refers to a dominant interest in social interaction and love of people. The aesthetic personal value refers to an overriding interest in form, symmetry and artistic tendencies. Finally, the religious personal value refers to a central orientation toward unity and a meaningful relationship to the universe.

Accordingly, individuals have the above six personal values in various hierarchies within their mental frameworks. That is, all men have theoretical, economic, political, social, aesthetic and religious values within their personalities. However, the intensity of each of these values relative to the other values differs from one personality to another.

The differing intensities of these values within each personality form a conceptual hierarchy. Allport, Vernon and Lindzey have provided an empirical design for the measurement of the intensities of these values within the conceptual hierarchies. More will be said on the measurement of men's personal value structures in the methodology chapter. In the following section an attempt will be made to distinguish personal values from other concepts.

PERSONAL VALUES DISTINGUISHED FROM OTHER CONCEPTS

In order to establish conceptual clarity, the term personal value will be distinguished from three other concepts—the concepts known as norms, attitudes and beliefs.

Norms and Personal Values.

Bertrand has explained that "norms provide standards for behavior as well as standards for judging behavior." Williams has defined norms as the prescription of "cultural goals and the approved means for reaching those goals." This author has argued that norms are closely related to personal values; however, norms are more specific, concrete,


and situation-bound. "Values are the criteria by which norms themselves may be and are judged." Rokeach has stated that norms differ from personal values in three ways. First, a norm refers only to a mode of behavior, while a personal value refers to general goal orientations. Second, a norm is a prescription to act in a certain way in a particular situation, while a personal value goes beyond a specific situation and is a prescription to act in a certain way across different situations. Third, a norm is found in the environment of man, while a personal value is an internal component of man's psychological make-up. Rokeach's three distinctions above serve as a comprehensive framework for differentiating between norms and personal values. Thus, personal values, "as standards (criteria) for establishing what should be regarded as desirable, provide the grounds for accepting or rejecting particular norms."

Attitude and Personal Value.

Sherwood and Wagner have defined attitude as "a predisposition to behave in a particular way toward a given object."

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25 Ibid.


27 Williams, "Values," p. 284.

Allport has defined attitude as "an idea charged with emotion which predisposes a class of actions to a particular class of social situations." Campbell has defined attitude as "consistency in response to social objects." These definitions of attitude have excluded the prescriptive process (prescribing what "ought to be") which is an integral part of personal value. For example, a person may like classical music and dislike jazz. As such, this individual would likely have negative attitudes toward each of the jazz selections that may be transmitted via a radio station. This person's dislike of jazz music connotes his low value for jazz music relative to classical music. What, then, are the ramifications of this individual's attitude toward and value for the type of music being played on the radio? His negative attitude may predispose him to avoid the radio station transmitting a jazz selection. This may be done by turning the radio off or leaving the room in which the radio is on, or he may follow another course of action. However, his low value for jazz music relative to his high value for classical music may predispose him not only to eliminate the jazz music, but to tune in classical music. This may be done by changing

31 C. Kluckhohn, p. 423.
radio stations or requesting that more classical music be played on that particular station. The distinction of predisposition to action between this person's attitude and his value is in the way these components of this personality affect his behavior. Whereas attitudes are toward specific objects and situations, values affect behavior across objects and situations.

Another way of conceptually distinguishing between attitude and value has been proposed by Rokeach. He has stated that while attitude refers to an organization of several beliefs around a specific object or situation, personal value refers to a single belief that guides actions across specific objects and situations. So, while attitude is an organization of descriptive and evaluative beliefs around specific objects and situations, personal value is a prescriptive belief that transcends across particular objects and situations.

Belief and Personal Value.

An individual's perception of reality constitutes his beliefs about the nature of reality. Each person perceives his world in a form different than it actually is. Thus,

32 Rokeach, Beliefs, Attitudes and Values, p. 112.
34 Scheibe, p. 23.
each man develops beliefs that are somewhat different from other men's beliefs. The concept of belief has been defined by Williams as an "existential reference." That is, "what the believer takes as reality" constitutes his belief system. Scheibe has stated that an individual's view of his environment constructs his beliefs about his environment.

According to Rokeach, there are three types of beliefs. First, there is existential belief. This type of belief can be judged to be true or false by moving down the level of abstraction and verifying whether the belief is an accurate representation of an aspect of reality or not. An example of existential belief is the statement: "This door has a knob." This statement can be verified by examining the door to see if, in fact, it does have a knob. Second, there is the evaluative belief. This concept refers to whether the object of belief is judged to be good or bad. An example of evaluative belief is the statement: "This door has a useless knob." Clearly, this is an evaluative statement. For others may view the door knob as useful. Finally, there is prescriptive belief. This concept refers to the desirability or the undesirability of an action. This type of belief is a personal value. An example of a prescriptive belief is the

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36 Williams, American Society, p. 443.
37 Scheibe, p. 23.
38 Rokeach, Beliefs, Attitudes and Values, pp. 1-21.
sentence: "The door knob on this door should be removed." Here, the door knob is judged to be undesirable and as such is prescribed to be removed. Hence, a personal value is a particular type of belief. In the following section, the effects of personal value structures on behavior will be discussed.

THE EFFECTS OF PERSONAL VALUE STRUCTURES ON BEHAVIOR

The previous section clarified the concept of personal values by distinguishing it from the concepts of norms, attitudes and beliefs. In this section, the effects of personal value structures on behavior are discussed. It should be remembered that personal value structures are made up of several personal values in differing hierarchial orders for various individuals.

According to Rokeach, whereas personal values act as "standards that guide ongoing activities", personal value structures act as "general plans employed to resolve conflicts and to make decisions." A That is, in a particular situation one value may influence behavior whereas in another situation a different value may dominate. However, over an elongated time period, the individual's personal value structure will influence his behavior in accordance with his hierarchy of personal values. Scheibe has argued that personal value

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40 Ibid., p. 12.
structures promote consistency in behavior. That is, personal value structures remain somewhat stable over a period of time and as such influence the individual to behave in a more or less consistent manner. From the previous discussion, it appears that numerous scholars have assumed that personal value structures affect human behavior to a large extent. However, Williams has stated:

Not all behavior shows forth values; psychological activities are not values, nor are sheer reflex acts. On the other hand, a disinterested moral judgment of a governmental policy is clearly an evaluative act. Between such widely separated cases lie numerous activities of appraisal, preference, and selection.

Thus, some behavior may be considered as personal value orientation and other behavior patterns may be considered as psychological acts or reflexes. For the purposes of this research, it is assumed that behavior that is goal-directed is affected by personal value structures. This assumption has empirical support. Two such empirical supports are provided by Peter A. Munch and Douglas W. Rae.

Munch, in his anthropological study of a utopian community, has concluded that because of the traditional personal values of its population, the ethos of technological progress was rejected by the community. Rae, in his study of

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41 Scheibe, p. 74.
42 Williams, American Society, p. 441.
political policy formulation, has analyzed the relationship between personal value structures and interest articulation. He has found that personal values do influence expressions of beliefs.

It was assumed above that goal-oriented behavior is affected by personal value structures. It is also assumed in this investigation, that goal-oriented behavior entails the process of decision-making. This assumption will appear plausible in the upcoming section on the definition of decision-making. In the following paragraphs, the topic of decision-making and the effects of personal value structures on decision-making will be discussed.

DECISION-MAKING

In this section, several steps are taken. First, the concept of decision-making is defined. Second, the process of decision-making is delineated. Third, the effects of personal value structures on decision-making are discussed.

Decision-Making Defined.

Sisk has defined decision-making as the "selection of one course of action from two or more alternate courses of action." Graham has defined decision-making as the making of


of a choice when individuals face two or more options.  
Generally speaking, various authors have defined decision-making as a goal-oriented process undertaken by one or more individuals when they perceive more than one alternative course of action in a situation. However, these definitions imply that there is only one step in decision-making—making a choice. But, decision-making is a process which consists of several steps. They will be discussed in the following section.


Similar approaches to the process of decision-making have been proposed by various scholars. The following framework proposed by McDonnell is a reasonable representation from the numerous publications on the subject.

According to McDonnell, there are four steps in decision-making. The first step is the recognition that a problem exists. The recognition of the problem is possible through the individual's perception of his organizational environment.

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That is, unless the individual perceives a problem within the organizational environment, he will not do anything to remedy it.\textsuperscript{49}

The second step is the processing of raw data into information. This involves the individual using the process of abstraction in order to choose between the data that should be processed into information and the data that should be ignored.\textsuperscript{50} That is, the individual faces an infinite number of data in his organizational environment. Since it would be physically and psychologically impossible for him to consider all the data to be processed into information, he would have to concentrate on some of the data at the expense of ignoring many other data.

The third step, the formulation of alternative proposals, entails the individual perceiving and formulating various feasible solution proposals in order to remedy the problem. In other words, in accordance with his within-receiver characteristics, the individual would construct several ways to potentially solve the problem. Within-receiver characteristics are those which are integral parts of the human organism. However, there are those factors which are outside of the human organism which also affect human communication.

The final step is that of choosing one of the alternative solutions. This step consists of the individual's recognition

\textsuperscript{49}For a discussion of perception through the filter of the mind, see Lesikar, pp. 48-59.

\textsuperscript{50}See Wendell Johnson, People in Quandaries, Harper and Row, New York, 1946, pp. 130-146.
that the alternative proposal which is chosen has the highest net value for the solution of the problem. The effects of personal value structures on the decision-making process will be dealt with in the next paragraphs.

The Effects of Personal Value Structures on Decision-Making.

As already mentioned, there are several steps in the decision-making process. Theoretical assertions have been made that personal value structures affect each of the steps involved in the process of decision-making. In the following paragraphs relevant empirical investigations that have dealt with the effects of personal value structures on decision-making will be discussed.

Pertinent empirical publications on the subject of personal value structures and its potential effects on the decision-making process as the means to actualize goal-oriented behavior have essentially taken two general approaches. One approach has been to analyze the effects of personal value structures on the perception of individuals and the interrelationship of the perception process (as influenced by the personal value structures) to decision-making and goal-oriented behavior. This approach has been eloquently stated by Sisk:

The personal value system of the individual manager has a strong influence on his perception of a situation and his consequent behavior in that situation. Decisions are often made where the reference point in determining the soundness of the decision is a personal value held by the decision-maker himself. Compromises almost always represent to some extent the compromise of a personal value. Consequently,
values and the extent to which an individual adheres to these values are a major determinant of his ability to compromise. Personal value systems also influence the way in which a person looks at other persons and groups of persons thereby influencing his interpersonal relationships. Also, one's concept of what is or is not ethical behavior is determined largely by his personal value system.51

Included in this approach has been empirical investigations which have compared attributed vs. actual personal value structures of various groups. That is, after various groups' personal value structures have been measured, these measurements are compared with what each group has assessed to be the personal value structures of another group.

A second approach has consisted of describing the expected behavior of various groups of individuals based on the measurement of their personal value structures. In other words, through measuring the personal value structures of various groups, a description of their potential goal orientations is made. Implicit in goal-oriented behavior is the process of decision-making, as already mentioned. This approach has also consisted of an empirical comparison of personal value structures of various groups. That is, several groups' personal value structures are measured and then compared to describe the difference in the expected behavior patterns of the groups. The following paragraphs will briefly discuss some of the empirical investigations that apply to both of these general approaches to the study of the effects of personal value structures on goal-oriented behavior and decision-making.

51 Sisk, p.78.

Several scholars have done empirical investigations on the effects of personal value structures on the selective perception of individuals. Accordingly, personal values influence which data are selectively perceived. Thus, "facts" can have different significance for people, since they would perceive them differently. March has found that not only do people have unique selective perception abilities, but also what they selectively perceive is further molded to enhance their overall self-interest. Senger, in his empirical investigation has concluded that personal value structures affect managers' perceptions of their subordinates' all-around competence. Furthermore, he has stated that supervisors tend to rate higher those subordinates who have similar personal value structures as their own. This author has also mentioned that the major source of personal rejection or favoritism appears to be the perceived similarities and

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conflicts in the personal values of managers and their subordinates.  

McMurray's thesis supports Senger's study. He has attributed what is commonly referred to as "seeing things eye to eye" to perceived similar personal value structures.

Finally, several authors have empirically compared attributed versus actual personal value structures among groups. Guth and Tagiuri, in their analysis of three groups (scientists, research managers and executives), have found that people frequently misjudge other persons' values. For example, the scientists attributed higher economic value orientations to the executives than was actually the case. Similarly, the executives attributed higher theoretical value orientations to the scientists than was actually the case.

Tagiuri has published similar results in comparing the attributed versus the actual personal value structures of two groups (managers and scientists). These scholars have had as their goal the improvement of the managerial functions. As Guth and Tagiuri have argued:

Understanding and taking one's own values into explicit account unfortunately is not always enough to arrive at a viable strategy. Where management operates as a team, understanding of the values

55Ibid., p. 415.


of the other members becomes important if a strategy is to be developed that will gain the genuine support of all concerned. . . Here articulate, explicit statements of strategies and their ramifications become especially important, for without them there is no good way for a member of the group to understand what the other members' values are and what they really have in mind.59

Hence, these empirical investigations support the assertions that selective perception, which affects all aspects of decision-making and goal-oriented behavior is heavily influenced by personal value structures.60

Relevant Empirical Investigations on Descriptions of Expected Behavior.

Essentially, the empirical investigations that have measured the personal value structures of various groups have attempted to describe expected behavior based on the results of the measurements of personal value structures of those groups. England has measured the personal value structures of a sample of American managers.61 He has also analyzed the relationship between the managers' expected behavior and their organizational goals.62 He has concluded that personal value structures affect goal-oriented behavior

59 Guth and Tagiuri, pp. 130-131.


and decision-making. England's conception of goal orientation refers to a set of goals rather than a singular goal. That is, England has argued that goal-directed behavior serves as means to reach a number of aims which an individual has set for himself. This conclusion has supported Simon's theoretical contention that managers' goal orientations (as affected by their personal value structures) have a set of goals rather than a unitary goal.63

Guth and Tagiuri have measured the personal value structures of another sample of American managers.64 They have reported that their sample of executives had strong orientations toward economic, theoretical, and political personal values.65 The same sample of executives had weak orientations toward religious, aesthetic, and social personal values.66 Thus, the ramification of this sample's predominant orientation toward economic, theoretical, and political values, is that these three values would have a great impact on their industrial strategy.

The results of the above empirical investigations on the expected influence of personal value structures on behavior raise a question. Do personal value structures

64Guth and Tagiuri, pp. 123-132.
65Ibid., p. 129.
66Ibid.
remain stable over a period of time? As already mentioned, theoretical proposals have been made that personal value structures maintain their stability. It will be recalled that human behavior remains relatively consistent over a space of time as a result of the stability of personal value structures. Lusk and Oliver have addressed themselves to the above question. They have conducted empirical investigations to determine the relative stability of a sample of American managers' personal value structures over a long duration. The results of their investigations lend support to the theoretical assertion that personal value structures are stable during an extensive time period.67

Some investigations have consisted of measuring the personal value structures of specific groups within organizations and the expected influence of their personal value structures on their goal-oriented behavior and decision-making. Sikula has studied the personal value structures of industrial personnel managers.68 His conclusion has been that the personnel managers put predominant emphasis on initiative and competence values rather than security values.

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In another research, Sikula has analyzed the personal value structures of personnel in the Federal Department of Health, Education and Welfare. The results of this study have shown that these government employees had strong orientations toward security and esteem values, and weak orientations toward aesthetic and social values.\(^69\) Hahn has conducted an empirical research on the personal value structures of purchasing managers.\(^70\) This sample displayed a predominant orientation toward security values.

The conclusions of the above empirical investigations conducted on specific groups within various types of organizations convey two messages. First, these results imply that personalities within various types of organizations have unique personal value structures.\(^71\) And second, these results imply that the personnel of different organizations may require divergent motivational programs. The judgment of the writer of this dissertation is that motivational programs that aim to satisfy the unique personal value structures of the personnel of the various firms would be more successful than those motivational programs that are


applied across the board regardless of the personal value structures of the employees.

Finally, several empirical investigations have analyzed and compared the personal value structures of various groups. These scholars have argued that one may expect different behavior patterns from these groups if their personal value structures are significantly different. England, Agarwal, and Trerise have measured and compared the personal value structures of union leaders and managers. They have measured and compared the personal value structures of union leaders and managers. Their conclusion has been that those two groups, as might have been expected, have significantly different personal value structures. The numerous conflicts between management and unions may partially be explained by the contrariety of their personal value structures. DeSalvia and Gemmill have compared the personal value structures of college students to managers. They, likewise, have found significant differentiation in the personal value structures of these groups. Recent publications about the emergence of a "generation gap" in industry may be partly explained by the emergence of different personal value structures of the young Americans versus their elder counterparts. Lastly, Peterson has analyzed and compared


the personal value structures of international chief executives with each other.\textsuperscript{74} Peterson has also concluded that his samples have had significantly different personal value structures and as such has argued against a common multinational strategy across various countries in which a firm operates.

\textbf{SUMMARY}

Personal values are what individuals conceive as the desirable in situations in which they perceive alternative courses of action. A number of personal values exist within the personalities of men. These personal values may be viewed conceptually as forming a hierarchial structure. A hierarchial structure or a personal value structure has six personal values, according to Spranger. They are theoretical, economic, political, social, aesthetic and religious personal values.

In order to establish conceptual clarity, personal values should be distinguished from the concepts norms, attitudes and beliefs. Whereas norms provide standards for behavior, as do personal values, norms are more specific, concrete, and situation-bound. Values are the criteria by which norms themselves may be judged.

An attitude is a predisposition to behave in a certain way toward a particular object. As such, it does not prescribe

\textsuperscript{74}Richard B. Peterson, "Across-Cultural Perspective of Supervisory Values," \textit{Academy of Management Journal}, Volume 15, Number 1 (March, 1972), pp. 105-117.
an outcome for its object. A personal value expresses what "ought to be" in regard to a particular object or across a number of different objects.

A belief is an existential reference. An individual's perception of reality constitutes his beliefs about the nature of reality. There are three types of beliefs: existential, evaluative, and prescriptive. An existential belief is what the believer judges to be true or false. This type of belief can be verified by moving down the level of abstraction. An evaluative belief is a reference to whether the object of a belief is judged to be good or bad. Evaluative beliefs by several people may produce contrary judgments toward an object. A prescriptive belief refers to the desirability or undesirability of an object and/or a situation. This type of belief is a personal value. Thus, a personal value is a subsystem of an individual's belief system.

Personal value structures act as standards that guide goal-oriented behavior. It is assumed that goal-oriented behavior entails the process of decision-making. Decision-making is the making of a choice which individuals undertake when they perceive more than one alternative course of action in a situation. The process of decision-making consists of four steps. The steps are: 1) the recognition that a problem exists, 2) the processing of raw data into information, 3) the formulation of alternative proposals, and 4) the choosing of one of the alternative proposals. Personal values affect the decision-making process which is an aspect of human behavior.
Pertinent empirical investigations on the subject of personal value structures and their potential effects on the decision-making process as the means to actualize goal-directed behavior have taken two approaches. One approach has been to analyze the effects of personal value structures on the perception of individuals and the interrelationship of the perception process (as influenced by the personal value structures) to decision-making and goal-oriented behavior. A second approach has been to describe the expected behavior of men based on the results of measuring their personal value structures.

The empirical investigations have supported several theoretical contentions. First, the empirical studies have shown that personal value structures do affect the perception of individuals. Perception affects decision-making and goal-oriented behavior. Second, the empirical studies have shown that individuals have unique hierarchies of personal values. Also, these studies have implied that personalities within various types of organizations have particular personal value structures. As such, the personnel of different organizations may require divergent motivational programs. Third, these investigations have shown that personal value structures remain stable over an elongated time horizon. Hence, personal value structures influence behavior to be consistent over a period of time. Finally, these studies have shown that divergencies in expected behavior of various groups may be explained partially by their different personal value
structures. Thus, personal value structures help explain conflicts between individuals and conflicts between groups.
CHAPTER III

METHODOLOGY

This investigation was undertaken to study the relationship, if any, between personal values and the decision-making process. In this chapter, the methodology used in the research is delineated in several steps. First, the characteristics of the sample are stated. Second, the instruments used in the measurement of personal values and courses of action are discussed. Lastly, the procedure used in this investigation is explained.

THE SUBJECTS

Two groups of white, male American students at Louisiana State University were used as the sample for this study. One group consisted of first year undergraduate business administration students. The second group was comprised of second year graduate business students. The reason for choosing each of these nearly homogeneous groups was to compare their personal value structures and their preferred courses of action with respect to two independent variables, their age and their level of education. The occasion for the exclusion of international, minority, and female students has been to exclude cultural characteristic differences attributed to citizenship, race, and sex. As mentioned in Chapter II,
personal values are learned in part, at least, from one's culture. It is reasonable to assume that international students, members of minority races, and female students would have been subject to learning different value orientations than white, American males. It should be remembered that hypotheses one through six in Chapter I contend that there is positive correlation between the sample's personal value structures and preferred courses of action. By selecting and studying the relationship between the personal values of the white, American male students and their choices of action, undue cultural differences were eliminated from the results of the investigation. However, as already mentioned, the two groups comprising the sample do differ with respect to two variables: age and level of education. The mean of the variables age and education for the two groups are presented in Table 1 below. This table shows there is a mean difference of five years in the age variable and four years in the education variable among the two classes. It

| TABLE 1 |
|------------------|------------|-----------|
| Mean Number of Years for Age and Level of Education | Variable | Undergraduates | Graduates |
| Mean Age in Years | 19 | 24 |
| Mean Level of Education in Years | 14 | 18 |
should be remembered that hypothesis seven in Chapter I has contended that due to age and education differences, the two groups would have significantly different personal value structures. Also, it should be remembered that hypothesis eight in Chapter I has contended that because of different personal value structures the two groups would indicate different hierarchies of preferences of choices of action.

Table 2 shows the mean number of years of working experience, supervisory experience, and the mean number of population of the community from which the members of the sample came from. Because of the extreme diversity of the family background of the members of the sample, the author did not consider their classification as a meaningful refinement of the information available on the sample.

**TABLE 2**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Undergraduates</th>
<th>Graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Work Experience in Years—Part-time</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Mean Work Experience in Years—Full-time</td>
<td>.5</td>
<td>2</td>
</tr>
<tr>
<td>Mean Supervisory Experience in Years</td>
<td>.2</td>
<td>1</td>
</tr>
<tr>
<td>Mean Community Size in Number of People</td>
<td>65,000</td>
<td>60,000</td>
</tr>
</tbody>
</table>
The results of the effects of the age and education variables on the personal value structures and the decision-making of the two classes are presented in Chapter IV. These results have validity only for the students of business administration of the College of Business Administration of Louisiana State University. Validation for wider samples might be possible, but no attempt was made to enlarge the scope of coverage for this study.

THE QUESTIONNAIRES

The students who took part in this research were asked to complete two questionnaires. A copy of each of the questionnaires used is found in the Appendix of this dissertation. The first questionnaire (Questionnaire A in the Appendix) has been composed by the investigator of this study. This questionnaire was validated by a panel of three Louisiana State University professors. Two of these professors were in the Department of Sociology and the third professor was in the Department of Psychology.

A pilot test of this questionnaire was conducted with the assistance of 15 undergraduates and 15 graduate students. As a result of this pilot test, the format of the community size question (page 131 in the Appendix) was changed. In the original form, one blank was provided to answer this question. However, the final form presented the respondents with four categories of approximate community sizes from which to choose. No further changes were made, as the other questions seemed explicitly clear to the pilot sample.
The first and second pages of Questionnaire A contain requests for biographical data and information about the participants. This includes the individual's college (Business, other), classification (undergraduate, graduate), sex, race, citizenship, age, work experience, family background, and size of his community. Those questionnaires which were submitted by non-business majors, females, members of minority groups and international students were eliminated from the study. On top of the third page of this questionnaire a brief direction is provided on how to complete the questionnaire. On the remainder of page three and pages four through eight, various situations are presented. Each situation has six alternative courses of action associated with it. The respondents were asked to rank their preferences for each of the courses of action. The respondents were informed that their hierarchies of preferences should be expressed in terms of 1 as their most preferred course of action, 2 as their second most preferred course of action, 3 as their third preferred course of action, 4 as their fourth preferred course of action, 5 as their fifth preferred course of action, and 6 as their least preferred course of action. Each of the six courses of action under the situational descriptions has a predominant personal value associated with it. For example, in situation description number one, six courses of action are provided. These courses of action have predominantly theoretical, economic, political, aesthetic, religious and social personal values associated with them. Hence, the respondents' hierarchies of courses of action may have
suggested how their personal values were ordered within their personalities. That is, theoretically, as has been stated in Chapter II, the individuals' personal value structures should have influenced their ranking of their preferred courses of action.

The second questionnaire (Questionnaire B in the Appendix) used in this study, as already mentioned and cited, is Allport, Vernon and Lindzey's study of values. This questionnaire measures the personal values of individuals and ranks them by asking the respondents their preferences for various concepts and choices. Part one of the questionnaire presents a number of controversial statements or questions. Each of these questions and statements have two alternative answers which the respondent would rank according to his hierarchy of preferences. Part two of the questionnaire presents a number of situations or questions followed by four alternative answers. Again, the respondent would rank these alternatives according to his hierarchy of preferences. The scoring of this questionnaire is dealt with in the procedure section of this chapter. This questionnaire has been given to many samples including college students for many years. 75

THE PROCEDURE

In this section, two topics are discussed. The first topic is the procedure used to collect the data.

The second topic is the procedure used in scoring the questionnaires.

The respondents in this research were obtained with the cooperation of several instructors of the College of Business Administration of Louisiana State University where the author was an instructor at the time this investigation was conducted. A personal visit was made to the instructor whose students were to be asked to take part in the research. Upon getting each instructor's approval, the author made available to the educator the questionnaires that appear in the Appendix to be distributed to his pupils. Each instructor was asked to elicit the cooperation of his students in the fulfillment of the questionnaires. The students were informed by their teachers that their participation had been requested by one of the Doctoral candidates of the College of Business Administration for his dissertation research. The author requested that the educators have their students read the directions on the questionnaires and complete them accordingly, without asking questions from anyone. As the directions on the questionnaires were clearly written and as individual collaboration (with no influence from the instructor or other students) was needed, the author's opinion was that each student should complete the questionnaire with no feedback from others in his proximity. The completed questionnaires were then submitted to the researcher by each of the participating instructors.
The scoring of the first questionnaire (Questionnaire A in the Appendix) was done as follows. The subjects were instructed to rank each of the six alternatives under the situational descriptions in accordance with their hierarchy of preferences. Thus, their most preferred course of action was to be assigned number one, their second preferred course of action was to be assigned number two and other selections were made until their least preferred course of action was assigned the number six. As already mentioned, each of the six alternative courses of action under the situational descriptions have a predominant personal value associated with them. These personal values are written in parentheses to the left of each of the six alternatives under the situational descriptions (see Questionnaire A in the Appendix). The questionnaires that were actually distributed to the sample, of course, did not have the alternative courses of actions with the aforementioned personal values identified in parentheses to the side. In the scoring procedure of this questionnaire, three scores were derived from the sample for each of the six personal values. These scores are the mean for the undergraduate group, the mean for the graduate group, and the mean for the total sample. These results are recorded in Chapter IV of this dissertation. Before the statistical methodology used to analyze the interaction of the two questionnaires is discussed, the procedure used in scoring the second questionnaire (Questionnaire B in the Appendix) is described.
The scoring of the second questionnaire was done as follows. The vertical columns of scores of each page were added together and entered as subtotals on the score sheet which appears on the last page of the questionnaire. The subtotals under each of the theoretical, economic, aesthetic, social, political, and religious personal values were then added into final totals. For a more detailed description of the scoring see page 149 of the Appendix. The relative values of the final totals with respect to each other constituted each individual's hierarchy of personal values. Hence, the last sheet of the questionnaire (Questionnaire B in the Appendix) shows that the respondent's personal value structure has the following hierarchy: economic (58), theoretical (57), political (46), social (32), aesthetic (30) and religious (17), respectively. In the scoring procedure of this questionnaire, three scores were obtained from the sample for each of the six personal values. These scores, which appear in Chapter IV, are the mean scores for the undergraduate group, the graduate group, and the total sample.

Two tools of statistical analysis were utilized to analyze the data collected by the above two questionnaires for this research. They were correlation analysis and multivariate analysis of variance.

Specifically, correlation analysis was used to test hypotheses one through six in Chapter I. Correlation analysis would determine the relationship, if any, between the personal value structures of the sample and their hierarchies of
preferred choices of action. That is, the mean scores of the personal values of the undergraduate group (Questionnaire B in the Appendix) were correlated with the mean scores of their choices of action (Questionnaire A in the Appendix). The mean scores of the personal values of the graduate group (Questionnaire B in the Appendix) were correlated with the mean scores of their choices of action (Questionnaire A in the Appendix). Finally, the mean scores of the personal values of the total sample (Questionnaire B in the Appendix) were correlated with their mean scores of their choices of action (Questionnaire A in the Appendix).

Multivariate analysis of variance was used to test hypotheses seven and eight in Chapter I. That is, the variances of each of the six personal values of the two groups were simultaneously compared to determine if they were significantly different from each other. Also, the variances of each of the courses of action (each course of action predominant with a particular personal value) of the two groups were simultaneously compared to determine if they were significantly different from each other. These results and others are reported in the following chapter.
CHAPTER IV

RESULTS OF THE STUDY

In this chapter, the results of the statistical analysis are presented. Analyses and interpretations of the results are not attempted in this section, but are presented in Chapter V.

As already mentioned, two tools of statistical analysis were used in this study. They were correlation analysis and multivariate analysis of variance.\(^{76}\) Tables 4-6 show the results of the correlation analyses. Tables 7-8 show the results of the multivariate analyses of variance. Before the results for correlation analysis and multivariate analysis of variance are presented, the results of the means of each of the personal values and their courses of action are depicted in Tables 1-3.

RESULTS OF THE MEANS

The results of the means of each of the personal values (measured by Questionnaire B in the Appendix) and the means

of each of the courses of action (measured by Questionnaire A in the Appendix) for the whole sample (120) are presented in Table 1. The total sample consisted of 60 undergraduates and 60 graduate students.

**TABLE 1**

<table>
<thead>
<tr>
<th>Questionnaire B Personal Values</th>
<th>Mean Score</th>
<th>Questionnaire A Mean Score</th>
<th>Courses of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>45.54</td>
<td>2.41</td>
<td>Economic</td>
</tr>
<tr>
<td>Political</td>
<td>43.42</td>
<td>2.78</td>
<td>Theoretical</td>
</tr>
<tr>
<td>Theoretical</td>
<td>41.37</td>
<td>3.23</td>
<td>Social</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>38.08</td>
<td>3.50</td>
<td>Political</td>
</tr>
<tr>
<td>Social</td>
<td>37.04</td>
<td>4.48</td>
<td>Religious</td>
</tr>
<tr>
<td>Religious</td>
<td>34.35</td>
<td>4.62</td>
<td>Aesthetic</td>
</tr>
</tbody>
</table>

The average personal value structure for the total sample consisted of the following order: economic (45.54), political (43.42), theoretical (41.37), aesthetic (38.08), social (37.04), and religious (34.35) personal values, respectively. The intensities of the personal values, relative to each other, are denoted by their mean scores in the parentheses. The higher the mean score, the more intense the particular
personal value relative to all other personal values. The average preferences for the courses of action for the total sample consisted of the following order: economic (2.41), theoretical (2.78), social (3.23), political (3.50), religious (4.48), and aesthetic (4.62), respectively. The intensities of preferred courses of action, relative to each other, are denoted by their mean scores in the parentheses. The lower the mean score, the more intense the particular course of action relative to all other courses of action. The reason for the lower scores denoting higher intensities in this part is, as already mentioned, that the most preferred course of action was to be assigned the lowest value (1), while the least preferred course of action was to be assigned the highest value (6) by the respondents. Hence, the lowest average of these values represents the highest mean score, while the highest average of these values represents the lowest mean score for each of the courses of action.

The results of the means of the personal values (measured by Questionnaire B in the Appendix) and the means of each of the courses of action (measured by Questionnaire A in the Appendix) for each of the groups (undergraduate and graduate students) are presented in Tables 2 and 3. The results of Tables 2 and 3 are evidence that the mean scores of the personal values and the preferred courses of action of both groups are very close to each other. Although the hierarchy of personal values is somewhat different for the undergraduates and the graduate students, according to their scores
## TABLE 2

Mean Scores for Personal Values and Courses of Action for the Undergraduates (n = 60)

<table>
<thead>
<tr>
<th>Questionnaire B Personal Values</th>
<th>Mean Score</th>
<th>Questionnaire A Mean Score</th>
<th>Courses of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>45.72</td>
<td>2.49</td>
<td>Economic</td>
</tr>
<tr>
<td>Political</td>
<td>44.83</td>
<td>2.81</td>
<td>Theoretical</td>
</tr>
<tr>
<td>Theoretical</td>
<td>41.85</td>
<td>3.16</td>
<td>Social</td>
</tr>
<tr>
<td>Social</td>
<td>37.57</td>
<td>3.46</td>
<td>Political</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>36.78</td>
<td>4.50</td>
<td>Religious</td>
</tr>
<tr>
<td>Religious</td>
<td>33.42</td>
<td>4.57</td>
<td>Aesthetic</td>
</tr>
</tbody>
</table>
# TABLE 3

Mean Scores for Personal Values and Courses of Action for the Graduate Students (n = 60)

<table>
<thead>
<tr>
<th>Questionnaire B Personal Values</th>
<th>Mean Score</th>
<th>Questionnaire A Mean Score</th>
<th>Courses of Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>45.35</td>
<td>2.32</td>
<td>Economic</td>
</tr>
<tr>
<td>Political</td>
<td>42.00</td>
<td>2.72</td>
<td>Theoretical</td>
</tr>
<tr>
<td>Theoretical</td>
<td>40.88</td>
<td>3.30</td>
<td>Social</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>39.37</td>
<td>3.53</td>
<td>Political</td>
</tr>
<tr>
<td>Social</td>
<td>36.50</td>
<td>4.45</td>
<td>Religious</td>
</tr>
<tr>
<td>Religious</td>
<td>35.27</td>
<td>4.67</td>
<td>Aesthetic</td>
</tr>
</tbody>
</table>
on the Allport, Vernon and Lindzey study, their order of preferred courses of action are exactly alike. While the hierarchy of personal values of the undergraduates is somewhat different than the total sample, the hierarchy of the personal values of the graduate students is exactly the same as the total sample. Since, the order of preferred courses of action are the same for each of the classes, it follows that the total sample also shows the same order of mean scores for the preferred courses of action.

In summary, the results of the means of the personal values and the means of their courses of action of each class within the sample show a great deal of similarity to each other. That is, these results indicate that, on the average, the personalities of the two groups resemble each other.\textsuperscript{77}

THE RESULTS OF CORRELATION ANALYSIS

The results of the correlation of the personal values and the preferred courses of action for the total sample are presented in Table 4. These results show that the mean scores of the six personal values are positively correlated with their courses of action scores (the diagonal coefficients underlined). All of these six correlation coefficients are

\textsuperscript{77}It should be noted that even though the averages of the personal values and their courses of action are similar for the undergraduate and the graduate students, significant variations exist within and across the two classes. This subject is dealt with under the multivariate analysis of variance topic.
TABLE 4

Correlation Analysis for the Total Sample
Undergraduate and Graduate Students Combined (n = 120)

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>.24**</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.23**</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>.25**</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.21*</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.25**</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.18*</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>-.23**</td>
<td>N.S.</td>
<td>.28**</td>
<td>-.15^App.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>.15^App.</td>
<td>.15^App.</td>
<td>N.S.</td>
<td>.31**</td>
<td>-.19*</td>
</tr>
<tr>
<td>Religious</td>
<td>-.16^App.</td>
<td>-.15^App.</td>
<td>.15^App.</td>
<td>-.14^App.</td>
<td>-.14^App.</td>
<td>.55**</td>
</tr>
</tbody>
</table>

* Level of Significance = .05

** Level of Significance = .01

^App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
significant at .01 level of significance. The correlation between the related value scores and courses of action scores are higher than any of the correlations between the unrelated value scores and courses of action scores. This indicates that all the personal values had stronger relationships with their own courses of action than with other courses of action. For instance, the economic personal value had a higher correlation coefficient with the economic course of action than with the theoretical, the aesthetic, the social, the political, and the religious courses of action.

The results of the correlation of the personal values and the preferred courses of action for the undergraduate group are presented in Table 5. The mean scores of the economic and aesthetic personal values of this group are positively correlated with the mean scores of their courses of action (the diagonal coefficients underlined) and are significant at .05 level of significance. The mean scores of the political and religious personal values of this group are positively correlated with the mean scores of their courses of action (also underlined) and are significant at .01 level of significance. However, the theoretical and social correlation coefficients of this group are not significant at either .01 or .05 levels of significance.

The results of the correlation of personal values and the preferred courses of action for the graduate group are presented in Table 6. The mean scores of the personal values are positively correlated with the mean scores of their courses
<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.26*</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>.27*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.19 App.</td>
<td>-.25 App.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.30*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>-.21 App.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>.24 App.</td>
<td>-.20 App.</td>
<td>N.S.</td>
<td>.33**</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>-.26*</td>
<td>-.21 App.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.61**</td>
</tr>
</tbody>
</table>

* Level of Significance = .05
** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 6

Correlation Analysis for Graduate Students (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>.38**</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.21 App</td>
</tr>
<tr>
<td>Economic</td>
<td>-.33**</td>
<td>.25*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.23 App</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.20 App</td>
</tr>
<tr>
<td>Social</td>
<td>-.22 App</td>
<td>-.25*</td>
<td>N.S.</td>
<td>.34**</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.27*</td>
<td>-.21 App</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.24 App</td>
<td>N.S.</td>
<td>.47**</td>
</tr>
</tbody>
</table>

* Level of Significance = .05
** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
of action (the diagonal coefficients underlined). The theoretical, social, and religious correlation coefficients are significant at .01 level of significance. The economic and political correlation coefficients are significant at .05 level of significance. The aesthetic correlation coefficient is significant at .10 level of significance. The results of the correlation of personal values and the preferred courses of action for each of the questions (Questionnaire A in the Appendix) are presented in Tables 9-36 at the end of this chapter.

In summary, the results of correlation analysis indicate a positive correlation between the personal values and their courses of action for the total sample as well as the graduate class. These results also indicate a positive correlation between the economic, aesthetic, political, and religious personal values and their courses of action for the undergraduate class. However, no significant correlation was found between the theoretical and social personal values and their courses of action for the undergraduates. The results of multivariate analysis of variance are presented in the following section.

RESULTS OF MULTIVARIATE ANALYSIS OF VARIANCE

In this section, the results of multivariate analysis of variance are presented for the undergraduate and the graduate students' personal values and their courses of action. The results of the personal values of the two classes are
presented in Table 7 and the results of their courses of action are presented in Table 8. The outcome of multivariate analysis of variance for the personal values (Table 7) shows that the personal value structures of the undergraduates are significantly different from the graduate students (Wilk's lambda of .8948 is significant at .05 level of significance). The outcome of multivariate analysis of variance for the courses of action (Table 8) shows that the hierarchies of preferred courses of action of the undergraduates are significantly different from the graduate students (Wilk's lambda of .9879 is significant at .01 level of significance).

Each of the personal values and their courses of action have also been subject to analysis of variance. These results are presented at the end of this section in this Chapter (Tables 39-50). The outcome of the analysis of variance of the theoretical, the economic, the aesthetic, the social, and the religious personal values for the two classes show no significance. That is, these five personal values of the two groups show similarities when they are viewed independently. However, when these personal values are viewed as a system, or as personal value structures, they do not show similarities (as was mentioned above with the results of multivariate analysis of variance). The outcome of the analysis of variance of the political personal value for the two classes shows significance at .01 level of significance. This indicates that the political personal values of the two groups are not similar when viewed independently.
<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Sums-of-Squares Matrices for Class</th>
<th>Wilk's Lambda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>1</td>
<td>Class*</td>
<td>.8948*</td>
</tr>
<tr>
<td>Error</td>
<td>118</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Explicit values for the sums-of-squares matrices are given in Table 37 at the end of this chapter.

* Level of Significance = .05
### TABLE 8

**Multivariate Analysis of Variance for Courses of Action**

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Sums-of-Squares Matrices for Class</th>
<th>Wilk's Lambda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
<td>1</td>
<td>Class*</td>
<td>.9879**</td>
</tr>
<tr>
<td>ID (Class)</td>
<td>118</td>
<td>ID</td>
<td>.3774**</td>
</tr>
<tr>
<td>Question</td>
<td>13</td>
<td>Question</td>
<td>.2331**</td>
</tr>
<tr>
<td>Class and Question</td>
<td>13</td>
<td>Class and Question</td>
<td>.8672**</td>
</tr>
<tr>
<td>Error</td>
<td>1534</td>
<td>Error</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1679</td>
<td>Total</td>
<td></td>
</tr>
</tbody>
</table>

* Explicit values for the sums-of-squares matrices are given in Table 38 at the end of this chapter.

** Level of Significance = .01
The outcome of the analysis of variance of the courses of action for the two groups show no significance. This suggests that the preferred courses of action for the two classes are similar when analyzed independently. Nevertheless, when the courses of action are viewed in totality, or as hierarchies of preferred courses of action, they do not show similarities (as mentioned above with the results of multivariate analysis of variance).

In summary, the results of multivariate analysis of variance for the personal value structures and the hierarchies of preferred courses of action for the undergraduate and the graduate students show differences between the classes. Specifically, these results show that the personal value structures of the two groups are divergent. Furthermore, these results demonstrate that the hierarchies of preferred courses of action between the two groups are dissimilar.
### TABLE 9

**Correlation Analysis, Question #1, Undergraduates (n = 60)**

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>.29*</td>
<td>.31**</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.22&lt;sup&gt;App&lt;/sup&gt;</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>-.21&lt;sup&gt;App&lt;/sup&gt;</td>
<td>-.32**</td>
<td>N.S.</td>
<td>.27*</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

* Level of Significance = .05

** Level of Significance = .01

<sup>App.</sup> = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
### Table 10

Correlation Analysis, Question #1, Graduate Students (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>.29*</td>
<td>.31**</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.22&lt;sup&gt;App.&lt;/sup&gt;</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>-.21&lt;sup&gt;App.&lt;/sup&gt;</td>
<td>-.32**</td>
<td>N.S.</td>
<td>.27*</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

* Level of Significance = .05  
** Level of Significance = .01  
App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)  
N.S. = Not Significant
TABLE 11
Correlation Analysis, Question #2, Undergraduates (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>-.31*</td>
<td>N.S.</td>
<td>.24*</td>
<td>.24^App</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.24^App</td>
<td>N.S.</td>
<td>.22^App</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.48**</td>
</tr>
</tbody>
</table>

* Level of Significance = .05
** Level of Significance = .01

^App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>.28*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
**TABLE 13**

Correlation Analysis, Question #3, Undergraduates (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>-.31*</td>
<td>N.S.</td>
<td>.24*</td>
<td>.24&lt;sup&gt;App&lt;/sup&gt;</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.24&lt;sup&gt;App&lt;/sup&gt;</td>
<td>N.S.</td>
<td>.22&lt;sup&gt;App&lt;/sup&gt;</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.48**</td>
</tr>
</tbody>
</table>

* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 14
Correlation Analysis, Question #3, Graduate Students (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>.27*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.51**</td>
</tr>
<tr>
<td>Economic</td>
<td>.33**</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>-.23 App.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

* Level of Significance = .05
** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.29*</td>
<td>N.S.</td>
<td>-.22\text{App.}</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.21\text{App.}</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.24\text{App.}</td>
<td>N.S.</td>
<td>.19\text{App.}</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 16

Correlation Analysis, Question #4, Graduate Students (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>.23^App.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
</tbody>
</table>

* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 17

Correlation Analysis, Question #5, Undergraduates (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>.22\textsuperscript{Ap}</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.27\textsuperscript{*}</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.23\textsuperscript{Ap}</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>-.26\textsuperscript{*}</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.24\textsuperscript{Ap}</td>
</tr>
</tbody>
</table>

\textsuperscript{*} Level of Significance = .05
\textsuperscript{**} Level of Significance = .01

\textsuperscript{Ap.} = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 18
Correlation Analysis, Question #5, Graduate Students (n = 60)

<table>
<thead>
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<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>.24&lt;sup&gt;App.&lt;/sup&gt;</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
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<td>.32&lt;sup&gt;**&lt;/sup&gt;</td>
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<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>.22&lt;sup&gt;App.&lt;/sup&gt;</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.25&lt;sup&gt;*&lt;/sup&gt;</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.28&lt;sup&gt;+&lt;/sup&gt;</td>
</tr>
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* Level of Significance = .05
** Level of Significance = .01

<sup>App.</sup> = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 19

Correlation Analysis, Question #6, Undergraduates (n = 60)

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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
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</thead>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>-.26*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.22^App.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.31*</td>
</tr>
</tbody>
</table>

* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 20
Correlation Analysis, Question #6, Graduate Students (n = 60)

<table>
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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
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</thead>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.26*</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.28*</td>
<td>N.S.</td>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
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<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.30*</td>
<td>N.S.</td>
<td>.33**</td>
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* Level of Significance = .05

** Level of Significance = .01

^App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 21
Correlation Analysis, Question #7, Undergraduates (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.30*</td>
</tr>
<tr>
<td>Aesthetic</td>
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<td>N.S.</td>
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<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>.37**</td>
<td>-.23App.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.21App.</td>
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<tr>
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<td>N.S.</td>
<td>-.29*</td>
<td>N.S.</td>
<td>-.24App.</td>
<td>.58**</td>
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</table>

* Level of Significance = .05  
** Level of Significance = .01  
App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)  
N.S. = Not Significant
<table>
<thead>
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<th>Personal Value</th>
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<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
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<td>N.S. N.S.</td>
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</tr>
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<td>N.S. N.S.</td>
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<tr>
<td>Social</td>
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<td>N.S. N.S.</td>
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<td>N.S. N.S.</td>
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<td>N.S. N.S.</td>
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</tr>
<tr>
<td>Religious</td>
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<td>N.S. N.S.</td>
<td>.50** N.S.</td>
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* Level of Significance = .05
** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
## TABLE 23
Correlation Analysis, Question #8, Undergraduates (n = 60)

<table>
<thead>
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<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
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<td>N.S.</td>
<td>N.S.</td>
<td>-.30*</td>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>-.24&lt;sup&gt;App.&lt;/sup&gt;</td>
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<td>N.S.</td>
<td>N.S.</td>
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<tr>
<td>Social</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.21&lt;sup&gt;App.&lt;/sup&gt;</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.26*</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>-.25&lt;sup&gt;App.&lt;/sup&gt;</td>
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<td>N.S.</td>
<td>.71**</td>
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* Level of Significance = .05  
** Level of Significance = .01  

<sup>App.</sup> = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)  
N.S. = Not Significant
TABLE 24
Correlation Analysis, Question #8, Graduate Students (n = 60)

<table>
<thead>
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<th>Personal Value</th>
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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
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</thead>
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<td>-.26*</td>
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<tr>
<td>Economic</td>
<td>N.S.</td>
<td>.30*</td>
<td>-.31*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
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<td>N.S.</td>
<td>-.25&lt;sup&gt;App&lt;/sup&gt;</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>- .25&lt;sup&gt;App&lt;/sup&gt;</td>
<td>.52**</td>
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* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
<table>
<thead>
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<th>Personal Value</th>
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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.29**</td>
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* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
### TABLE 26

Correlation Analysis, Question #9, Graduate Students (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
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<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
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<tr>
<td>Theoretical</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>- .35**</td>
<td>N.S.</td>
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<tr>
<td>Political</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>-.38**</td>
<td>N.S.</td>
<td>.37**</td>
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</tbody>
</table>

* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
### TABLE 27
Correlation Analysis, Question #10, Undergraduates (n = 60)

<table>
<thead>
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<th>Personal Value</th>
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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>.28*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
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<td>N.S.</td>
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<td>N.S.</td>
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</table>

* Level of Significance = .05
** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
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<td>N.S.</td>
<td>N.S.</td>
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<td>-.31*</td>
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<td>N.S.</td>
</tr>
<tr>
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</tr>
<tr>
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<td>N.S.</td>
</tr>
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<td>N.S.</td>
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<td>N.S.</td>
<td>.20&lt;sup&gt;App.&lt;/sup&gt;</td>
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<td>N.S.</td>
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</table>

* Level of Significance = .05
** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
<table>
<thead>
<tr>
<th>Personal Value</th>
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<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
<td>N.S.</td>
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<td>.29*</td>
<td>-.21&lt;sup&gt;App&lt;/sup&gt;</td>
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<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>-.22&lt;sup&gt;App&lt;/sup&gt;</td>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.27*</td>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>-.25*</td>
<td>N.S.</td>
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<td>.39**</td>
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* Level of Significance = .05
** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 30
Correlation Analysis, Question #11, Graduate Students (n = 60)

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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Economic</td>
<td>.25*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>-.33**</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.27*</td>
<td>N.S.</td>
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<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
<td>N.S.</td>
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* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
### TABLE 31

Correlation Analysis, Question #12, Undergraduates (n = 60)

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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
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<td>N.S.</td>
<td>.21&lt;sup&gt;App.&lt;/sup&gt;</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
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<td>-.25&lt;sup&gt;App.&lt;/sup&gt;</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>.29*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.27*</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Religious</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<td>.27*</td>
<td>N.S.</td>
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* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 32
Correlation Analysis, Question #12, Graduate Students (n = 60)

<table>
<thead>
<tr>
<th>Personal Value</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
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<td>N.S.</td>
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</tr>
<tr>
<td>Economic</td>
<td>N.S.</td>
<td>.29*</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>.29*</td>
<td>N.S.</td>
<td>-.24 App</td>
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<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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* Level of Significance = .05
** Level of Significance = .01
App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)
N.S. = Not Significant
TABLE 33

Correlation Analysis, Question #13, Undergraduates (n = 60)

<table>
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<th>Personal Value</th>
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<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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</tr>
<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Aesthetic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
</tr>
<tr>
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<td>N.S.</td>
<td>N.S.</td>
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</tr>
<tr>
<td>Religious</td>
<td>-.24^App.</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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</table>

* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
TABLE 34
Correlation Analysis, Question #13, Graduate Students (n = 60)

<table>
<thead>
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<th>Personal Value</th>
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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
</thead>
<tbody>
<tr>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<tr>
<td>Economic</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>.39**</td>
<td>-.27*</td>
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* Level of Significance = .05

** Level of Significance = .01

App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
**TABLE 35**

Correlation Analysis, Question #14, Undergraduates (n = 60)

<table>
<thead>
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<th>Personal Value Action</th>
<th>Theoretical</th>
<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
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<tbody>
<tr>
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<td>N.S.</td>
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<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>-.29*</td>
</tr>
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<td>N.S.</td>
<td>N.S.</td>
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<tr>
<td>Social</td>
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<td>N.S.</td>
<td>N.S.</td>
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<tr>
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<td>N.S.</td>
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<td>N.S.</td>
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<tr>
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<td>.27*</td>
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<td>.34**</td>
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* Level of Significance = .05  
** Level of Significance = .01  

<sup>App.</sup> = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)  

N.S. = Not Significant
TABLE 36
Correlation Analysis, Question #14, Graduate Students (n = 60)

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<th>Personal Value</th>
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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
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<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
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<tr>
<td>Social</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
<td>N.S.</td>
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<td>N.S.</td>
</tr>
<tr>
<td>Political</td>
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* Level of Significance = .05
** Level of Significance = .01

^App. = Approaching Rejection Level (i.e., between .05 and .10 Level of Significance)

N.S. = Not Significant
## TABLE 37

### SUMS-OF-SQUARES MATRICES FOR PERSONAL VALUES

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<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
</tr>
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<td>30.93</td>
<td>82.16</td>
<td>-53.65</td>
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<tr>
<td>Economic</td>
<td>10.63</td>
<td>4.03</td>
<td>-28.41</td>
<td>11.73</td>
<td>31.16</td>
<td>-20.35</td>
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<td>-28.41</td>
<td>200.20</td>
<td>-82.66</td>
<td>-219.58</td>
<td>143.37</td>
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<td>34.13</td>
<td>90.66</td>
<td>-59.20</td>
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<td>90.66</td>
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<td>-157.25</td>
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</tbody>
</table>
TABLE 38

SUMS-OF-SQUARES MATRICES FOR COURSES OF ACTION

<table>
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<th>Economic</th>
<th>Aesthetic</th>
<th>Social</th>
<th>Political</th>
<th>Religious</th>
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<td>6.16</td>
<td>3.41</td>
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<tr>
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<td>-9.98</td>
<td>6.16</td>
<td>8.42</td>
<td>4.67</td>
<td>-2.90</td>
</tr>
<tr>
<td>Political</td>
<td>-2.86</td>
<td>-5.53</td>
<td>3.41</td>
<td>4.67</td>
<td>2.59</td>
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</tr>
<tr>
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</table>
### Table 39

**Analysis of Variance, Theoretical Personal Value**

<table>
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<th>Source</th>
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<th>Sums-of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
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</tbody>
</table>

### Table 40

**Analysis of Variance, Economic Personal Value**

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Sums-of Squares</th>
<th>Mean Square</th>
<th>F-Ratio</th>
</tr>
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<tr>
<td>Class</td>
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<td>4.0333</td>
<td>4.0333</td>
<td>.0621</td>
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<tr>
<td>Error</td>
<td>118</td>
<td>7669.8333</td>
<td>64.9985</td>
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<tr>
<td>Total</td>
<td>119</td>
<td>7673.8666</td>
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</table>
### TABLE 41

ANALYSIS OF VARIANCE, SOCIAL PERSONAL VALUE

<table>
<thead>
<tr>
<th>Source</th>
<th>Degrees of Freedom</th>
<th>Sums-of-Squares</th>
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<th>F-Ratio</th>
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<tr>
<td>Class</td>
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<td>34.1333</td>
<td>34.1333</td>
<td>.5832</td>
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<tr>
<td>Error</td>
<td>118</td>
<td>6905.7333</td>
<td>58.5231</td>
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<td>Total</td>
<td>119</td>
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### TABLE 42

ANALYSIS OF VARIANCE, AESTHETIC PERSONAL VALUE

<table>
<thead>
<tr>
<th>Source</th>
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</thead>
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<tr>
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<td>200.2083</td>
<td>200.2083</td>
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<td>Error</td>
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<td>9816.1166</td>
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<td>Total</td>
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</table>
TABLE 43

ANALYSIS OF VARIANCE, POLITICAL PERSONAL VALUE

<table>
<thead>
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<th>Source</th>
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<th>F-Ratio</th>
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<tr>
<td>Class</td>
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<td>240.8333</td>
<td>240.8333</td>
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<td>Error</td>
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<td>5474.3333</td>
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<td>Total</td>
<td>119</td>
<td>5715.1667</td>
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</table>

* Level of Significance = .05

TABLE 44

ANALYSIS OF VARIANCE, RELIGIOUS PERSONAL VALUE

<table>
<thead>
<tr>
<th>Source</th>
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<th>Sums-of-Squares</th>
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<th>F-Ratio</th>
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<td>102.6750</td>
<td>102.6750</td>
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<td>Error</td>
<td>118</td>
<td>11292.3167</td>
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<td>Total</td>
<td>119</td>
<td>11394.99167</td>
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### TABLE 45

**ANALYSIS OF VARIANCE, THEORETICAL ACTION**

<table>
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<th>Source</th>
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<th>Mean Square</th>
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</tr>
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<td>3.1720</td>
<td>3.1720</td>
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<td>Error</td>
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<td>2379.6750</td>
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<td>Total</td>
<td>1535</td>
<td>3613.0660</td>
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</table>

### TABLE 46

**ANALYSIS OF VARIANCE, ECONOMIC ACTION**

<table>
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<th>F-Ratio</th>
</tr>
</thead>
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<td>11.8339</td>
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<td>Error</td>
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<td>2086.8654</td>
<td>1.3604</td>
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<td>Total</td>
<td>1535</td>
<td>3379.7944</td>
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TABLE 47

ANALYSIS OF VARIANCE, AESTHETIC ACTION

<table>
<thead>
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<th>Source</th>
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<th>F-Ratio</th>
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<td>4.5053</td>
<td>1.4755</td>
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<td>Error</td>
<td>1534</td>
<td>2256.6035</td>
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<td>Total</td>
<td>1535</td>
<td>3470.4277</td>
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</tr>
</tbody>
</table>

TABLE 48

ANALYSIS OF VARIANCE, SOCIAL ACTION

<table>
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<th>F-Ratio</th>
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<td>8.4291</td>
<td>8.4291</td>
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<tr>
<td>Error</td>
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<td>2538.3083</td>
<td>1.6546</td>
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<td>Total</td>
<td>1535</td>
<td>3611.8516</td>
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</tr>
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</table>
### TABLE 49

**ANALYSIS OF VARIANCE, POLITICAL ACTION**

<table>
<thead>
<tr>
<th>Source</th>
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</tr>
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<tbody>
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<td>2.5928</td>
<td>2.5928</td>
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<td>Error</td>
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<td>2594.5833</td>
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<td>Total</td>
<td>1535</td>
<td>4611.9616</td>
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</table>

### TABLE 50

**ANALYSIS OF VARIANCE, RELIGIOUS ACTION**

<table>
<thead>
<tr>
<th>Source</th>
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<td>1.0005</td>
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<tr>
<td>Error</td>
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<td>2386.9607</td>
<td>1.5560</td>
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</tr>
<tr>
<td>Total</td>
<td>1535</td>
<td>3928.9992</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SUMMARY OF RESULTS BY HYPOTHESES

Hypothesis 1: There was a positive correlation between the theoretical personal value and its course of action for the graduate students. There was no significant correlation between the theoretical personal value and its course of action for the undergraduate students.

Hypothesis 2: There was a positive correlation between the economic personal value and its course of action for both groups of students.

Hypothesis 3: There was a positive correlation between the political personal value and its course of action for both groups of students.

Hypothesis 4: There was a positive correlation between the social personal value and its course of action for the graduate students. There was no significant correlation between the social personal value and its course of action for the undergraduate students.

Hypothesis 5: There was a positive correlation between the aesthetic personal value and its course of action for both groups of students.

Hypothesis 6: There was a positive correlation between the religious personal value and its course of action for both groups of students.

Hypothesis 7: There were significant differences between the personal value structures of the two groups.
Hypothesis 8: There were significant differences between the hierarchies of preferred choices of action of the two groups.
CHAPTER V

INTERPRETATIONS, CONCLUSIONS, AND SUGGESTIONS FOR FUTURE RESEARCH

In this chapter, the results of the investigation reported in Chapter IV are interpreted and discussed. First, the results of the means of each of the personal values and the means of each of the courses of action for the undergraduate and graduate students are examined. Second, the results of correlation analysis for the groups are analyzed. Third, the results of multivariate analysis of variance for the two classes are interpreted. Finally, suggestions for future research based on the results of this study are made.

THE RELATIONSHIP BETWEEN THE PERSONAL VALUES AND COURSES OF ACTION OF THE UNDERGRADUATE AND THE GRADUATE STUDENTS

In this section, the results of the mean scores of each of the personal values and the mean scores of each of the courses of action for the undergraduate and the graduate students are examined. The results of the mean scores of the personal values and the mean scores of their courses of action for the undergraduate and the graduate students (Tables 2 and 3, Chapter IV) show distinct resemblances. These results
demonstrate that the differences in the intensities of the averages between the two groups' personal values were negligible. There was less than one point difference between the economic and the theoretical personal values of the two groups. There was less than two points difference between the social and religious personal values of the groups. Furthermore, there was less than three points difference between the political and aesthetic personal values of the classes.

The results of the mean scores of the preferred courses of action for the undergraduate and graduate students also showed resemblances (Tables 2 and 3, Chapter IV). These results demonstrated that the differences in the intensities of the averages of the two groups' courses of action were negligible. There was less than one-tenth of a point difference between the theoretical, political, and religious courses of action for the two groups. And, there was less than one-fifth of a point difference between the economic, social, and aesthetic courses of action.

Note should be taken that, in this section, the mean intensities of the theoretical, the economic, the aesthetic, the social, the political, and the religious personal values and the mean scores of their courses of action of the undergraduates were compared with those of the graduate students, independently. For instance, the mean score of the theoretical personal values of the undergraduates were compared with the mean score of the theoretical personal values of the graduate
students; the mean score of the theoretical courses of action of the undergraduates were compared with the mean score of the theoretical courses of action of the graduate students, and likewise with the other five personal values and their courses of action. Hence, these results signify that the components of the personal value structures and the hierarchies of preferred courses of action of the two classes were alike. Comparisons of the total system of the personal values and their courses of action of the two groups were not attempted here, but are dealt with in the section of multivariate analysis of variance.

In summation, the averages of the components of the personal value structures of the undergraduate and the graduate students showed distinct similarities. Also, the averages of the components of the hierarchy of preferred courses of action for the two classes showed many resemblances.

EFFECTS OF PERSONAL VALUES ON DECISION-MAKING

As mentioned before, correlation analysis was used to analyze the effects of personal values of the sample on their decision-making. In this part, the results of correlation analysis are examined for each class. The results of Table 5 in Chapter IV do not indicate significant correlations between the theoretical and the social personal values and their courses of action for the undergraduates. However, these results do indicate positive correlations between the
economic, the aesthetic, the political, and the religious personal values and their courses of action for the same group. The coefficients of correlation for this class ranged from .27 for the economic coefficient to .61 for the religious coefficient.

The results of Table 6 in Chapter IV indicate positive correlations between the graduate students' personal values and their preferred courses of action. The coefficients of correlation for this class ranged from .23 for the aesthetic coefficient to .47 for the religious coefficient.

The results of Table 4 in Chapter IV indicate positive correlations between personal values and their hierarchy of preferred courses of action for the total sample. The coefficients of correlation for the sample ranged from .24 for the theoretical coefficient to .55 for the religious coefficient. But what is the interpretation of the various correlation coefficients? Is a coefficient of .23 small, while a coefficient of .61 large?

According to Guilford, interpretation and analyses of correlation coefficients are a matter of relativity. What may be a large correlation for one purpose may be considered as a small one for another purpose. However, this author has argued that a coefficient correlation of .20 or more represents a definite relationship between two variables.

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78 Guilford, p. 145.
79 Ibid.
Furthermore, Guilford has stated that "when one is investigat­
gating a purely theoretical problem, even very small cor­
relations, if statistically significant (undoubtedly not
zero), are often very indicative of a psychological law." 

Based on Guilford's theoretical framework, the following
interpretations are proposed. First, interpretations are
made from the results of the undergraduates; second, inter­
pretations are made from results of the graduate students.

Interpretations from the Results of the Undergraduates.

It should be remembered that the results of the cor­
relation analysis indicated two non-significant coefficients
and four significant coefficients for the undergraduates.
In this section, the non-significant coefficients are
discussed initially. Examination of the significant coef­
ficients takes place in the latter part of this section.

As already mentioned, there was no significant corre­
lation between the theoretical and the social personal values
and their courses of action for the undergraduates. This
does not necessarily mean that these personal values would
not influence the decision-making of the undergraduates. Two
different interpretations are provided below for the lack of
significance between the theoretical and the social personal
values and their courses of action.

First, it is possible that those courses of action with
predominant theoretical and social personal values were not

---

80Ibid., p. 147.
easily understood by this class. For example, a first year business administration student may not have understood well the first alternative in question number one, Questionnaire A in the Appendix. This predominantly theoretical course of action proposed "a ten-year scientific research program for discovering the truth about some hypotheses that may in the distant future increase the profit margin of the X Corporation." It is entirely possible for the undergraduates to have misunderstood this alternative, although the same course of action may have been very clear to the graduate business students. As another example of a course of action which might have been difficult to understand by the first year business administration students, let us consider the third alternative in question number thirteen, Questionnaire A in the Appendix. The social-oriented alternative reads "division on the basis of your corporation's personnel needs." The question asks, "As an executive, what order of preference would you assign to the following concepts in departmentation in X Corporation?" Again, although this question may have been clear to a graduate business student, it may not have been so to a beginning business student.

A second interpretation for the lack of significant correlations between the theoretical and the social personal values and their courses of action may be that the undergraduates found these two alternatives as irrelevant to the ongoing activities of a corporation. That is, the theoretical and social courses of action may not have appeared to the
undergraduates as making a great deal of difference to the short-run functioning of a firm. The graduate students may have detected long-run potentials for these alternatives for the corporation. Other reasons, unknown to the author, may also have influenced the investigation so as to have provided a lack of significant correlation for the theoretical and social personal values and their courses of action for the undergraduates. The above interpretations for a lack of significant correlation for these two personal values and their courses of action are, in the judgment of the researcher, as plausible as other potential interpretations. The significant correlation coefficients for the other four personal values and their courses of action for the undergraduate class are discussed in the following paragraphs. The following discussion also interrelates the mean scores of the four personal values and the mean scores of their courses of action with their correlation coefficients.

As mentioned before, the economic, the aesthetic, the political and the religious personal values and their courses of action for the undergraduates did produce significant correlation coefficients. These significant coefficients, along with their mean scores, are discussed in order, from the highest correlation coefficient to the lowest.

The religious correlation coefficient for the undergraduates was the highest at .61, while the correlation coefficients of the other three personal values and their courses of action were all lower and very close in range (.27 through
A cross reference of the religious coefficient (.61) with the mean scores for the religious personal values and the mean scores of their courses of action (Table 2, Chapter IV) suggests the following. Because of the relatively low religious personal values of the undergraduates, this group has consistently given their lowest priorities to the religiously-oriented courses of action. The reason for this analysis is threefold. First, the correlation coefficient of .61 is high. However, this high coefficient does not suggest that the personal values and their courses of action have a high or a low priority. The correlation coefficient of .61 merely implies that there is a definite and consistent relationship between the personal values and their courses of action. Second, the mean score for the religious personal values is the lowest (Table 2, Chapter IV). This denotes that the religious personal values have the lowest average intensities relative to the other personal values for this class. Third, the mean score for the religious courses of action is second to the lowest score (Table 2, Chapter IV). This denotes that the religiously-oriented courses of action have the second lowest average priorities among the alternative courses of action for the undergraduates. In summation, the high correlation coefficient suggests a definite relationship between the religious personal values and their courses of action. Collaterally, the relatively low mean scores for the religious personal values and the low mean scores for their courses of action suggest that the
undergraduates' low religious orientations have affected their decisions so as to have given low preferences for the religiously-oriented courses of action.

The political correlation coefficient is the second highest at .33. This suggests that there is a determinate consociation between the political personal values and their courses of action for this class. Nevertheless, a coefficient of .33 does allow for divergencies between the personal values and their courses of action. The undergraduates' political personal values have the second highest mean score, while this group's political courses of action have the fourth highest mean score. It is quite possible that the situations presented to this sample did not allow their political personal values to influence their choices of action to the extent that they might have under other situations. It should be noted, however, that if the non-significant theoretical and social coefficients were left out of the analysis along with the mean score of their personal values and the mean score of their courses of action, then the mean score for the political courses of action would be the second highest mean which would correspond exactly to the mean score of its personal values.

The aesthetic correlation coefficient is the third highest at .30. The correlation coefficient of .30 indicates that there is a distinct relationship between the aesthetic personal values and their courses of action. However, even though a coefficient of .30 implies a distinct relationship,
it also denotes that the relationship does not hold at all times. The undergraduates' aesthetic personal values had the second lowest mean score. As such, on the average, the relatively low intensities of the aesthetic personal values of this class had affected their decision-making so that they had given low preferences to the aesthetic courses of action. But, the aesthetic personal values had the second lowest mean score while their courses of action had the lowest mean score. Why might this be the case? It should be noted that the correlation coefficient of the political personal values and the aesthetic courses of action was -.20. This refers to a negative relationship between the political personal values and the aesthetic courses of action. Since the political personal values had high intensities, their effect on the aesthetic courses of action was to interject lower values to them than their aesthetic personal values would have allowed. Thus, on the average, the aesthetic courses of action had received lower preferences than the aesthetic personal values of this group warranted.

The undergraduates' economic correlation coefficient is the fourth highest at .27. This suggests that there is a definite relationship between the economic personal values and their courses of action. But, a coefficient of .27 also suggests that the relationship does not hold in every situation. This group's economic personal value had the highest average intensities relative to their other personal values (Table 5, Chapter IV). As such, on the average, the high
intensities of the economic personal values of the undergraduates had affected their decision-making so that they had given their highest preferences to the economic courses of action. However, even though on the average this group's economic personal values influenced their most preferred courses of action to be the economic alternatives, there were exceptions to this average tendency, because of the economic correlation coefficient of .27. That is, in particular situations, this group had displayed preferences for alternative courses of action which were not predominantly economic.

In summary, the results of the correlation analysis for the undergraduates showed no significant correlations between the theoretical and social personal values and their courses of action. This suggests that with the situations presented to the undergraduate students, their theoretical and social personal values did not affect their decision-making to any significant degree. On the other hand, these same results demonstrated significant correlations between the economic, the aesthetic, the political, and the religious personal values and their courses of action for the class. The implication of this is that given the situations presented to the undergraduates, their economic, aesthetic, political, and religious personal values significantly influenced their decision-making process.
Interpretations from the Results of the Graduate Students.

In this section, the results of correlation analysis for the graduate class are analyzed. As mentioned, the results of correlation analysis (Table 6, Chapter IV) for the graduate students showed significant correlation coefficients for all the six personal values and their courses of action. These results along with their mean scores are discussed in order, from the highest correlation coefficient to the lowest.

As with the undergraduates, the religious correlation coefficient (.47) was the highest for the graduate students. This suggests that there is a consistent interdependence between the religious personal values and their courses of action. The mean score for the religious personal values of this class was the lowest, while the mean score for the religious courses of action of this group was the second lowest. Because of the high religious correlation coefficient and the very low mean score for the religious personal values and the low mean score of their courses of action, the following contentions are made. The graduate students, on the average, had religious personal values of very low intensity. This influenced their decision-making so as to have given very low preferences for the religious courses of action. The reason for the religious courses of action not getting as low preferences as their personal values called for may be because of the negative relationship between the aesthetic personal values and the religious courses of action. The
The correlation coefficient for this relationship was -.20. As the aesthetic personal values had below average intensities relative to the other personal values, their influence on the religious courses of action was to have given them higher preferences than the religious values warranted.

The graduate students' theoretical correlation coefficient was the second highest at .38. The coefficient of .38 indicates that there is a definite relationship between the theoretical personal values and their courses of action. However, a correlation of .38 allows for deviations in the relationship between the personal values and their courses of action. As a result of these deviations, the graduate students' theoretical personal values had the third highest mean score while this group's theoretical courses of action had the second highest mean score. A potential reason for these deviations may be due to the interrelationship of the social personal value and the theoretical course of action. The correlation coefficient of -.22 suggests that the social personal value and the theoretical course of action were negatively correlated. Thus, the low intensities of the social personal value influenced the theoretical courses of action to get higher priorities than the theoretical personal values warranted.

The graduate students' social correlation coefficient is the third highest at .34. The correlation coefficient of .34 is a sign of a distinct relationship between this group's social personal values and their courses of action. The
coefficient of .34 also implies that the relationship between the personal values and their courses of action is somewhat inconsistent from one situation to another. As such, this group's social personal values had the second lowest mean score while their courses of action had the third highest mean score. A potential reason for this inconsistency may be that this group's religious personal values had a -.24 correlation coefficient with the social courses of action. Hence, the graduate students' low religious personal value intensities had influenced them to have given relatively high preferences for the social courses of action. Thus, on the average, the social courses of action received higher preferences than the intensity of their social personal values justify.

The graduate students' political correlation coefficient was the fourth highest at .27. The correlation coefficient of .27 denotes a distinct interdependence between the political personal values and their courses of action. The coefficient of .27 also implies that there are exceptions to the interdependence of the political personal values and their courses of action. As a result, the graduate class' political personal values had the second highest mean score while the group's political courses of action had the fourth highest mean scores. Two possible reasons for the political courses of action not getting as high a preference as this group's political personal values call for are the relationship between the social personal values and the theoretical
courses of action as well as the relationship between the religious personal values and the social courses of action. First, the correlation coefficient of the social personal values and the theoretical courses of action was -.22. This indicates a negative relationship between the social personal values and the theoretical courses of action. Since the social personal values had low intensities, relative to the other personal values, their effect on the theoretical courses of action was to interject higher preferences to them than the theoretical personal values justified. Thus, on the average, the theoretical courses of action received higher preferences than the theoretical intensities of this group's personal values permitted. Second, the correlation coefficient of the religious personal value and the social course of action was -.24. This points out a negative relationship between the religious personal value and the social course of action. Because the religious personal values had low intensities, their effect on the social courses of action was to interject higher preferences to them than the social personal values allowed. The combined effects of the above two outcomes increased the mean scores of the theoretical and social courses of actions to be greater than the political courses of action.

The graduate students' economic correlation coefficient is the fifth highest at .25. The economic correlation coefficient of .25 indicates that there is a distinct relationship between the economic personal values and their courses
of action. However, a coefficient of .25 suggests that the relationship between the personal values and their courses of action is not consistent in every situation. The graduate students' economic personal values had the highest intensity relative to their other personal values. Their economic courses of action, also, had the highest mean scores. Hence, these results indicate the following. Although under some situations the economic personal values did not strongly affect this group's economic choices of action, on the average, the high intensity of their economic personal values influenced them to have given their highest preferences for the economic courses of action.

The graduate students' aesthetic correlation coefficient is the lowest at .23. The correlation coefficient of .23 suggests that there is a definite relationship between the aesthetic personal values and their courses of action. But a coefficient of .23 also suggests that the relationship between the personal values and their courses of action does not hold at all times. The graduate class' aesthetic personal values had the third lowest mean score while their courses of action had the lowest mean score. These results suggest that the graduate students' below average aesthetic personal values had affected their decision-making so that they had given their lowest preferences to the aesthetic courses of action. However, it should be noted that the aesthetic personal values had a -.20 correlation coefficient with the religious courses of action. This means that there was a
negative relationship between the aesthetic personal values and the religious courses of action. The negative correlation coefficient between the aesthetic personal values and the religious courses of action helps to explain the very low preferences of this class for the aesthetic courses of action. That is, the below average intensities of this group's aesthetic personal values influenced them to assign higher priorities to the religious courses of action. Hence, the mean score of the religious courses of action was greater than the mean score of the religious personal values warranted.

In summary, the results of the correlation analysis for the graduate students indicate significant correlations between the six personal values and their courses of action. That is, these results show that the graduate students' personal values significantly affected their decision-making processes.

EFFECTS OF AGE AND LEVEL OF EDUCATION ON THE PERSONAL VALUE STRUCTURES AND THE HIERARCHIES OF PREFERRED COURSES OF ACTION

As mentioned in Chapter III, the sample used in this investigation was comprised of two relatively homogeneous classes (American, white, male undergraduate and graduate business students) with the exception of their age and their level of education. In this part, the results of multivariate analysis of variance for the two classes are examined to determine the effects of age and level of education on
their personal value structures and on their hierarchies of preferred courses of action.

The results of multivariate analysis of variance in Chapter IV show that the personal value structures and the hierarchies of preferred courses of action were significantly different for the undergraduate and graduate business students. It may be contended that the different personality profiles of the groups and their different predispositions to action stemmed partly from their differences in age and level of education. Moreover, it may be contended that the differences in the two classes were partly a result of their various work experience and the community size in which they were born and resided (Table 2, Chapter III). However, in the judgment of this researcher, no further elaboration can take place on the basis of the results of multivariate analysis of variance. The reason for this writer's hesitancy of further elaboration is that there are so many variables that may have influenced the two classes that it would be impossible to identify all of them. In fact, even if their identification were possible, it would be extremely complex to attempt to evaluate their relative influence on the two groups. In summary, the results of multivariate analysis of variance demonstrated that the undergraduate students had significantly different personal value structures and hierarchies of preferred courses of action than the graduate students.
IMPLICATIONS FOR MANAGEMENT

As was contended by the hypotheses of this research, personal value structures affect the decision-making process. However, the personal value structures of various groups may be different and as such their hierarchies of preferred courses of action may be different. What, then, are the implications of these for managers of organizations?

Organizational personnel are rarely aware of their own and others' personal value structures. As decision-making is a prerequisite component of any organization, and as decision-making is affected by personnel's values, it is essential for managers to explicitly take into account their own as well as other employees' personal value structures. This becomes more crucial as managers move up the hierarchies of their organizations. Whereas most organizational decisions that take place at lower levels are programmed and require little judgment, most of the higher level organizational decisions need much personal judgment. The reason is that the top echelons of organizations are primarily concerned with the formulation of strategy which takes into account the future. Since strategy is the process of defining the long-range organizational objectives in the uncertain future, the effects of personal value structures in decision-making become extremely important. Remembering that personal values are conceptions of the desirable, and that their influence on organizational decision-making is paramount, what should
the organizational executives do? They should explicitly take into account their own personal value structures through self-analysis. Why do they decide and behave as they do in certain situations? How do their decisions and behavior in those situations differ from others? The responses to these questions may not be obvious, but their intensive and continuous examination would lead to answers. Furthermore, as organizations' executives must function as teams, the managers must take into account the personal value structures and the hierarchies of preferred courses of action of others. The key point here is for the managers to realize that while the personal value structures and the hierarchies of preferred courses of action of others may be different than their own, they are not necessarily better or worse. Hence, the executives should be open to other personnel's ideas and decisions. This would improve the organizational climate within which personnel could operate effectively. In summation, the managers' explicit accounting of their own as well as others' personal value structures and hierarchies of preferred courses of action may enhance their managerial capabilities.

SUMMARY

The objective of this empirically-based investigation was to determine the effects, if any, of personal value structures on hierarchies of preferred courses of action for two groups of relatively homogeneous (with the exception of their age, and level of education) undergraduate and
graduate business students. For this objective, the hypotheses outlined in Chapter I were formulated, and in Chapter IV, the results of this investigation concerning the testing of the hypotheses were presented.


The results of the investigation on the effects of personal value structures on decision-making support hypotheses 2, 3, 5 and 6. These hypotheses suggest that the undergraduate and the graduate students' economic, political, aesthetic, and religious personal values affect their decision-making. These results also support hypotheses 1 and 4 for the graduate students. Hypotheses 1 and 4 suggest that the theoretical and social personal values affect the decision-making process. However, the results do not support hypotheses 1 and 4 for the undergraduates. Apparently, given the situations presented to the undergraduates, their theoretical and social personal values did not influence their decision-making. The outcome of the study for the total sample supports hypotheses 1, 2, 3, 4, 5 and 6.

The implication of the above for the executives of organizations is that personal value structures (based on the samples of this study) affect the decision-making process. As decision-making is an essential set of activities of organizations, and as decision-making is influenced by personnel's values, it is necessary for the managers to
actively account for their own as well as other employees' personal value structures.

The Effects of Age and Level of Education on the Personal Value Structures and Hierarchies of Preferred Courses of Action.

The results of multivariate analysis of variance for the undergraduate and the graduate students' personal value structures and their hierarchies of preferred courses of action support hypotheses 7 and 8. These hypotheses suggest that due to differences in age and the level of education, the two groups would have significantly different personal value structures and hierarchies of preferred courses of action. It should be noted that based on the results of this study, it is neither possible to determine all the other variables that may have affected the two classes to be different, nor to determine what the relative weight of some of these variables may have been.

The implication of the above for the managers of organizations is that as a result of the various backgrounds of employees, their personal value structures will be different. Therefore, the executives' decision-making processes may be divergent from each other. It should be realized that while the personal value structures and the hierarchies of preferred courses of action of other personnel may be different than their own, the different predispositions of others are not necessarily better or worse. Thus, managers should be open to other personnel's ideas. This would improve the
organizational climate within which the personnel could operate effectively.

SUGGESTIONS FOR FUTURE RESEARCH

As noted previously, the results of this study and their interpretations are only tentative. Therefore, further research on the effects of personal value structures on the decision-making process is needed to substantiate or correct the findings. Although much has been written about personal value structures, the present investigation is the only known empirically-based research on their influence on the decision-making process.

Additional studies in other types of organizations are needed. This investigation was limited to an academic organization and research in other types of organizations may provide different results.

As already noted, the undergraduates' theoretical and social correlation coefficients were not significant. Specifically, however, why were they not significant? Furthermore, from the findings of this research, there was neither a way of determining what all the variables may have been which influenced the two groups to have different personal value structures and hierarchies of preferred courses of action, nor what their relative weights might have been. Future studies could explore further some of the above questions in order to provide some of the answers. Finally, only fourteen decision-making situations were used in this study.
Future research could explore many other decision-making situations in order to provide clearer guidelines to the organization managers.
BIBLIOGRAPHY

Books


Periodicals


Miscellaneous Publications


APPENDIX
QUESTIONNAIRE A
Please give the following information about yourself by checking the appropriate blank for each category of data.

<table>
<thead>
<tr>
<th>College</th>
<th>Classification</th>
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<tr>
<td>___ Female</td>
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<td>___ Other</td>
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If Undergraduate, check appropriate age category:

| ___ Less than 18 |
| ___ 18-24 |
| ___ 24 or over |

If Graduate, check appropriate age category:

| ___ 20 or less | ___ 31-35 |
| ___ 21-25 | ___ 36 or over |
| ___ 26-30 |

Work Experience (exclude military service):

Presently working: ___ Part-time

| ___ Full-time |
| ___ Not working |

Number of years working: ___ Part-time

| ___ Full-time |

Supervisory experience: ___ None

| ___ 1-5 yrs. |
| ___ Less than 1 yr. | ___ Over 5 yrs. |
Family Background:

Occupation of Father ________________________________

Occupation of Mother ________________________________

Education level of Father ________________________________

Education level of Mother ________________________________

Community Size:

In which size community did you spend most of the time from birth to 18 years of age?

_____ Below 10,000

_____ 10,000--50,000

_____ 50,000--200,000

_____ Over 200,000
As an executive of the X Corporation, you will be faced with several decision situations. You are asked to rank your order of preference for each of six alternative courses of action in each of the decision situations. Your hierarchy of preference should be expressed in terms of #1 as your most preferred course of action, #2 as the 2nd preferred course of action, #3 as the 3rd preferred course of action, #4 as the 4th preferred course of action, #5 as the 5th preferred course of action, and #6 as the least preferred course of action.

1. As an executive of the X Corporation, you are faced with setting a 10-year general planning policy for your research and development department. Which order of personal preference would you assign to the following courses of action?

T a) 10-year scientific research program for discovering the truth about some hypotheses that may in the distant future increase the profit margin of X Corporation.

E b) 10-year product development program that would assure the economic production of a useful product which would help the profit margin of X Corporation.

P c) 10-year research program that would provide X Corporation with a very effective public relations technology that could influence a substantial percentage of the public to have a strong regard toward the firm.

A d) 10-year research program that would insure a very attractive image for the firm through its stylistic products.

R e) 10-year research program that would result in producing those goods and services which would contribute to the high ideals of mankind.

S f) 10-year research program that would result in improved interaction between the firm and its community.

2. As an executive of the X Corporation, you are asked to recommend one of six of your subordinates to a better position in the firm. How would you rank your personal preference for the following subordinates if all of them have the same level of performance on the job, but their hobbies are

P a) Executive A belongs to a local political party and does volunteer work for them.

E b) Executive B belongs to a local business club and analyzes the activities of the stock market on a weekly basis.
T c) Executive C regularly does research in the community's library to further his knowledge.

S d) Executive D sponsors local youth clubs in order to promote better human relations in the community.

R e) Executive E belongs to the local church and is an active member of its board.

A f) Executive F is a member of an ecology group whose objective is the beautification of the community's parks.

3. On behalf of X Corporation, you have authority to grant a certain sum of money to a segment of your community's environment. Which segment would your rank of personal preference indicate as appropriate for the grant?

T a) Give the grant to the local university for research.

E b) Give the grant to the local university in return for which the senior business students of the university would consult the smaller businesses of the community at no cost. (The small businesses present no competitive threat to your company.) The grant would cover the expenses of student consultations.

P c) Give the grant to the school's political youth groups. (Such as the Young Republicans, Democrats, etc.)

A d) Give the grant to the school's union for the purchase of a sound system for the students' listening pleasure.

R e) Give the grant to the various campus chapels for the purposes of bringing guest religious personalities on campus to lecture the students.

S f) Give the grant to the student body for the purpose of providing a club on campus for informal student gatherings and discussions.

4. In order for the X Corporation in general to be better managed, what type of management team would you recruit?

P a) A dominant management team.

E b) An efficient management team.

T c) An analytic management team.

S d) A congenial management team.
5. In order for the X Corporation to be well managed, which order of priorities would you assign to the following areas?

T ______ a) Concentrate on research.
E ______ b) Concentrate on profitability.
P ______ c) Concentrate on dominating the competition.
A ______ d) Concentrate on product elegance.
R ______ e) Concentrate so as to serve its customers, employees, and society in a Godly manner.
S ______ f) Concentrate on being devoted to the well-being of its employees and customers through meeting their various personal needs.

6. You have a choice as to the location of your corporation. Which order of preference would you give to the following?

P ______ a) To be located near the state governmental buildings.
E ______ b) To be located near the local Chamber of Commerce.
T ______ c) To be located near the state's university campus.
S ______ d) To be located near the entertainment and social centers of the community.
R ______ e) To be located near the several churches of the community.
A ______ f) To be located in the most scenic part of the community.

7. You have six products to choose to produce which are assured of the same amount of profit. Which order of preference would you give to producing the following?

R ______ a) Religious books.
S ______ b) Sports literature for families and groups of friends.
P ______ c) Political campaign literature.
8. You are asked by your secretary of your preference for the following journal subscriptions. Which order of preference would you assign to subscriptions to the following?

S   c) Psychology Today.
T   d) The Scientific American.
R   e) A religious magazine.
A   f) Art Today.

9. What would be your order of preference in regard to your future with the X Corporation?

P   a) To increase your authority and control.
E   b) To increase your salary, fringe benefits, and bonuses.
S   c) To increase your popularity and esteem with your peers and subordinates.
T   d) To increase your level of expertise in your present and future tasks.
A   e) To increase your capabilities of producing elegant product designs in your department.
R   f) To increase your sense of morality so as to influence your activities of your department in the same manner.

10. Which order of preference would you assign to the following characteristics when you reorganize your organizational chart?

T   a) A logical organizational chart.
E   b) An efficient organizational chart.
A   c) A symmetrical organizational chart.
S d) An organizational chart helpful in developing interpersonal relationships.

P e) A clear-cut chain of command organizational chart.

R f) A chart that employs ethical standards in organization.

11. What would be your order of preference for putting the picture of the following on one line of your products?

P a) Lion.

S b) Dove.

T c) Owl.

E d) Fox.

A e) Peacock.

R f) Fish.

12. What order of preference would you assign to the inputs from the following people in decision-making?

P a) Inputs from your boss.

T b) Inputs from your staff specialist.

S c) Inputs from your peers and subordinates.

E d) Inputs from your comptroller.

A e) Inputs from your company designer.

R f) Inputs from your church's personnel.

13. As an executive, what order of preference would you assign to the following concepts in departmentation in X Corporation?

P a) Division on the basis of corporate authority.

T b) Division on the basis of specialized knowledge.

S c) Division on the basis of your corporation's personnel needs.

E d) Division on the basis of cost and profit centers.

A e) Division on the basis of symmetrical considerations.

R f) Division on the basis of ethical considerations.
14. All else equal, what order of preference would you assign to the following courses of action?

P ______ a) Increase the size of X Corporation.
E ______ b) Increase the profitability of X Corporation.
S ______ c) Increase the social responsibility of X Corporation.
T ______ d) Increase the budget for research and development in X Corporation.
R ______ e) Increase the ethical standards of the goals and objectives of X Corporation.
A ______ f) Increase the aesthetic quality of the products of X Corporation.
QUESTIONNAIRE B
October 28, 1975

Dr. Changiz Pezeshkpur
Department of Management
Louisiana State University
Baton Rouge, LA 70803

Dear Dr. Pezeshkpur:

Reference is made from a phone call I received October 14, 1975, from Theresa Townsend, concerning permission to include a printed copy of the Study of Values in your bond copy of your dissertation.

Permission is hereby granted.

Sincerely yours,

Edward C. Drahozal, Ph.D.
Editor-in-Chief, Tests
Department of Measurement
And Guidance
Part I

DIRECTIONS: A number of controversial statements or questions with two alternative answers are given below. Indicate your personal preferences by writing appropriate figures in the boxes to the right of each question. Some of the alternatives may appear equally attractive or unattractive to you. Nevertheless, please attempt to choose the alternative that is relatively more acceptable to you. For each question you have three points that you may distribute in any of the following combinations.

1. If you agree with alternative (a) and disagree with (b), write 3 in the first box and 0 in the second box, thus

2. If you agree with (b); disagree with (a), write

3. If you have a slight preference for (a) over (b), write

4. If you have a slight preference for (b) over (a), write

Do not write any combination of numbers except one of these four. There is no time limit, but do not linger over any one question or statement, and do not leave out any of the questions unless you find it really impossible to make a decision.
1. The main object of scientific research should be the discovery of truth rather than its practical applications. (a) Yes; (b) No.

2. Taking the Bible as a whole, one should regard it from the point of view of its beautiful mythology and literary style rather than as a spiritual revelation. (a) Yes; (b) No.

3. Which of the following men do you think should be judged as contributing more to the progress of mankind? (a) Aristotle, (b) Abraham Lincoln.

4. Assuming that you have sufficient ability, would you prefer to be: (a) a banker; (b) a politician?

5. Do you think it is justifiable for great artists, such as Beethoven, Wagner and Byron to be selfish and negligent of the feelings of others? (a) Yes; (b) No.

6. Which of the following branches of study do you expect ultimately will prove more important for mankind? (a) mathematics; (b) theology.

7. Which would you consider the more important function of modern leaders? (a) to bring about the accomplishment of practical goals; (b) to encourage followers to take a greater interest in the rights of others.

8. When witnessing a gorgeous ceremony (ecclesiastical or academic, induction into office, etc.), are you more impressed: (a) by the color and pageantry of the occasion itself; (b) by the influence and strength of the group?

Total
9. Which of these character traits do you consider the more desirable? (a) high ideals and reverence, (b) unselfishness and sympathy.

10. If you were a university professor and had the necessary ability, would you prefer to teach: (a) poetry, (b) chemistry and physics?

11. If you should see the following news items with headlines of equal size in your morning paper, which would you read more attentively? (a) Protestant leaders to consult on reconciliation; (b) Great improvements in market conditions.

12. Under circumstances similar to those of Question 11? (a) Supreme court renders decision, (b) New scientific theory announced.

13. When you visit a cathedral are you more impressed by a pervading sense of reverence and worship than by the architectural features and stained glass? (a) Yes, (b) No.

14. Assuming that you have sufficient leisure time, would you prefer to use it: (a) developing your mastery of a favorite skill; (b) doing volunteer social or public service work?

15. At an exposition, do you chiefly like to go to the buildings where you can see: (a) new manufactured products; (b) scientific (e.g., chemical) apparatus?

16. If you had the opportunity, and if nothing of the kind existed in the community where you live, would you prefer to found: (a) a debating society or forum, (b) a classical orchestra?
17. The aim of the churches at the present time should be: (a) to bring out altruistic and charitable tendencies; (b) to encourage spiritual worship and a sense of communion with the highest.

18. If you had some time to spend in a waiting room and there were only two magazines to choose from, would you prefer: (a) SCIENTIFIC AGE; (b) ARTS AND DECORATIONS?

19. Would you prefer to hear a series of lectures on: (a) the comparative merits of the forms of government in Britain and in the United States; (b) the comparative development of the great religious faiths?

20. Which of the following would you consider the more important function of education? (a) its preparation for practical achievement and financial reward, (b) its preparation for participation in community activities and aiding less fortunate persons.

21. Are you more interested in reading accounts of the lives and works of men such as: (a) Alexander, Julius Caesar, and Charlemagne; (b) Aristotle, Socrates, and Kant?

22. Are our modern industrial and scientific developments signs of a greater degree of civilization than those attained by any previous society, the Greeks, for example? (a) Yes; (b) No.

23. If you were engaged in an industrial organization (and assuming salaries to be equal), would you prefer to work: (a) as a counselor for employees; (b) in an administrative position?
24. Given your choice between two books to read, are you more likely to select: (a) THE STORY OF RELIGION IN AMERICA; (b) THE STORY OF INDUSTRY IN AMERICA?

25. Would modern society benefit more from: (a) more concern for the rights and welfare of citizens; (b) greater knowledge of the fundamental laws of human behavior?

26. Suppose you were in a position to help raise standards of living, or to mould public opinion. Would you prefer to influence: (a) standards of living; (b) public opinion?

27. Would you prefer to hear a series of popular lectures on: (a) the progress of social service work in your part of the country; (b) contemporary painters?

28. All the evidence that has been impartially accumulated goes to show that the universe has evolved to its present state in accordance with natural principles, so that there is no necessity to assume a first cause, cosmic purpose, or God behind it. (a) I agree with this statement; (b) I disagree.

29. In a paper, such as the New York Sunday Times, are you more likely to read: (a) the real estate sections and the account of the stock market; (b) the section on picture galleries and exhibitions?

30. Would you consider it more important for your child to secure training in: (a) religion; (b) athletics?
Part II

Directions: Each of the following situations or questions is followed by four possible attitudes or answers. Arrange these answers in the order of your personal preference by writing, in the appropriate box at the right, a score of 4, 3, 2, or 1. To the statement you prefer most give 4, to the statement that is second most attractive 3, and so on.

Example: If this were a question and the following statements were alternative choices you would place:

4 in the box if this statement appeals to you most.

3 in the box if this statement appeals to you second best.

2 in the box if this statement appeals to you third best.

1 in the box if this statement represents your interest or preference least of all.

You may think of answers which would be preferable from your point of view to any of those listed. It is necessary, however, that you make your selection from the alternatives presented, and arrange all four in order of their desirability, guessing when your preferences are not distinct. If you find it really impossible to state your preference, you may omit the question. Be sure not to assign more than one 4, one 3, etc., for each question.
1. Do you think that a good government should aim chiefly at—(Remember to give your first choice 4, etc.)
   a. more aid for the poor, sick and old
   b. the development of manufacturing and trade
   c. introducing highest ethical principles into its policies and diplomacy
   d. establishing a position of prestige and respect among nations

2. In your opinion, can a man who works in business all the week best spend Sunday in—
   a. trying to educate himself by reading serious books
   b. trying to win at golf, or racing
   c. going to an orchestral concert
   d. hearing a really good sermon

3. If you could influence the educational policies of the public schools of some city, would you undertake—
   a. to promote the study and participation in music and fine arts
   b. to stimulate the study of social problems
   c. to provide additional laboratory facilities
   d. to increase the practical value of courses

4. Do you prefer a friend (of your own sex) who—
   a. is efficient, industrious and of a practical turn of mind
   b. is seriously interested in thinking out his attitude toward life as a whole
   c. possesses qualities of leadership and organizing ability
   d. shows artistic and emotional sensitivity

5. If you lived in a small town and had more than enough income for your needs, would you prefer to—
   a. apply it productively to assist commercial and industrial development
   b. help to advance the activities of local religious groups
   c. give it for the development of scientific research in your locality
   d. give it to The Family Welfare Society

6. When you go to the theater, do you, as a rule, enjoy most—
   a. plays that treat the lives of great men
   b. ballet or similar imaginative performances
   c. plays that have a theme of human suffering and love
   d. problem plays that argue consistently for some point of view
7. Assuming that you are a man with the necessary ability, and that the salary for each of the following occupations is the same, would you prefer to be a —
   a. mathematician
   b. sales manager
   c. clergyman
   d. politician

8. If you had sufficient leisure and money, would you prefer to —
   a. make a collection of fine sculptures or paintings
   b. establish a center for the care and training of the feeble-minded
   c. aim at a senatorship, or a seat in the Cabinet
   d. establish a business or financial enterprise of your own

9. At an evening discussion with intimate friends of your own sex, are you more interested when you talk about —
   a. the meaning of life
   b. developments in science
   c. literature
   d. socialism and social amelioration

10. Which of the following would you prefer to do during part of your next summer vacation (if your ability and other conditions would permit) —
    a. write and publish an original biological essay or article
    b. stay in some secluded part of the country where you can appreciate fine scenery
    c. enter a local tennis or other athletic tournament
    d. get experience in some new line of business

11. Do great exploits and adventures of discovery such as Columbus's, Magellan's, Byrd's and Amundsen's seem to you significant because —
    a. they represent conquests by man over the difficult forces of nature
    b. they add to our knowledge of geography, meteorology, oceanography, etc.
    c. they weld human interests and international feelings throughout the world
    d. they contribute each in a small way to an ultimate understanding of the universe
12. Should one guide one's conduct according to, or develop one's chief loyalties toward —
   a. one's religious faith
   b. ideals of beauty
   c. one's occupational organization and associates
   d. ideals of charity

13. To what extent do the following famous persons interest you —
   a. Florence Nightingale
   b. Napoleon
   c. Henry Ford
   d. Galileo

14. In choosing a wife would you prefer a woman who — (Women answer the alternative form below)
   a. can achieve social prestige, commanding admiration from others
   b. likes to help people
   c. is fundamentally spiritual in her attitudes toward life
   d. is gifted along artistic lines

(For women) Would you prefer a husband who —
   a. is successful in his profession, commanding admiration from others
   b. likes to help people
   c. is fundamentally spiritual in his attitudes toward life
   d. is gifted along artistic lines

   a. as expressing the highest spiritual aspirations and emotions
   b. as one of the most priceless and irreplaceable pictures ever painted
   c. in relation to Leonardo's versatility and its place in history
   d. the quintessence of harmony and design
**SCORE SHEET FOR THE STUDY OF VALUES**

**Directions:**

1. First make sure that every question has been answered.

   *Note:* If you have found it impossible to answer all the questions, you may give equal scores to the alternative answers under each question that has been omitted; thus,

   Part I. 1½ for each alternative. The sum of the scores for (a) and (b) must always equal 3.

   Part II. 2½ for each alternative. The sum of the scores for the four alternatives under each question must always equal 10.

2. Add the vertical columns of scores on each page and enter the total in the boxes at the bottom of the page.

3. Transcribe the totals from each of the foregoing pages to the columns below. For each page enter the total for each column (R, S, T, etc.) in the space that is labeled with the same letter. Note that the order in which the letters are inserted in the columns below differs for the various pages.

4. Add the totals for the six columns. Add or subtract the correction figures as indicated.

5. Check your work by making sure that the total score for all six columns equals 240.

   (Use the margins for your additions, if you wish.)

6. Plot the scores by marking points on the vertical lines in the graph on the next page.

   Draw lines to connect these six points.

*In the 1951 Edition these figures were: Theoretical +3, Social -3. These new correction figures have been employed in determining the norms in the 1960 manual.*

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PROFILE OF VALUES

INTERPRETATION

The profile can be best interpreted if the scores obtained are compared with the following ranges. (Detailed norms for college students and for certain occupations will be found in the Manual of Directions.)

**Men**

High and low scores. A score on one of the values may be considered definitely high or low if it falls outside the following limits. Such scores exceed the range of 50% of all male scores on that value.

- **Theoretical**: 39-49
- **Economic**: 37-48
- **Aesthetic**: 29-41

Outstandingly high and low scores. A score on one of the values may be considered very distinctive if it is higher or lower than the following limits. Such scores fall outside the range of 82% of all male scores for that value.

- **Theoretical**: 34-54
- **Economic**: 32-53
- **Aesthetic**: 24-47

**Women**

High and low scores. A score on one of the values may be considered definitely high or low if it falls outside the following limits. Such scores exceed the range of 50% of all female scores on that value.

- **Theoretical**: 31-41
- **Economic**: 33-43
- **Aesthetic**: 37-48

Outstandingly high and low scores. A score on one of the values may be considered very distinctive if it is higher or lower than the following limits. Such scores fall outside the range of 82% of all female scores for that value.

- **Theoretical**: 26-45
- **Economic**: 28-48
- **Aesthetic**: 31-54
VITA

Changiz Pezeshkpur was born in Tehran, Iran, on July 27, 1945. He attended junior high school in Tehran, Iran. He attended senior high school in Lima, Peru (South America); Torrance, California; Bethesda, Maryland; and Warrensville, Ohio. He received a Bachelor of Arts degree in Political Science from Ohio State University in 1969, and a Master of Business Administration degree from Louisiana State University in 1973.

Changiz Pezeshkpur was a teaching assistant in the Department of Management in the College of Business Administration at Louisiana State University from 1972 to 1974. He was a full-time instructor in the same Department during the Spring, Summer and Fall Semesters of 1975. He served as an assistant professor in the Department of Management during the Spring Semester of 1976.
EXAMINATION AND THESIS REPORT

Candidate: Changiz Pezeshkpur

Major Field: Management

Title of Thesis: The Effects of Personal Value Structures on Decision-Making: A Study of the Relationship Between Values and Decisions of University Business Administration Students

Approved:

Major Professor and Chairman

Dean of the Graduate School

EXAMINING COMMITTEE:

Date of Examination:

October 9, 1975