

AN EXPLORATORY STUDY OF THE ETHICAL
PERCEPTIONS OF MIDDLE AND LOWER LEVEL
MANAGERS AND THE INFLUENCE OF NON-TECHNICAL
VARIABLES ON THEIR DECISIONS

Thesis for the Degree of Ph.D.
MICHIGAN STATE UNIVERSITY
RAYMOND JAMES SHUSTER
1971

THESIS



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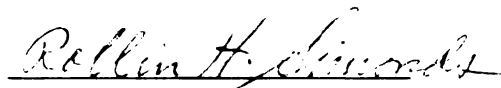
AN EXPLORATORY STUDY OF THE ETHICAL PERCEPTIONS OF
MIDDLE AND LOWER LEVEL MANAGERS AND THE INFLUENCE
OF NON-TECHNICAL VARIABLES ON THEIR DECISIONS

presented by

Raymond James Shuster

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Management


Major professor

Date Feb 9, 1971

AN EMPIRICAL STUDY
OF THE BEHAVIOR OF
MIDDLE AND LOWER
MANAGEMENT PERSONNEL
OF NON-TECHNICAL
ORGANIZATIONS

P

The purpose of this study is to determine the behavioral dimension of the behavior of middle and lower management personnel. It examines the ethical behavior of managers and the effect of various situational influences on their behavior. It also examines the effect of the manager's personal characteristics on his behavior.

The research objectives are to determine the diagnostic/predictive validity of the manager's behavior in making decisions. It also examines the manager's ability of problem solving and the decision-making process. It also examines the manager's personal characteristics and the four-part model of the manager's personal characteristics.

ABSTRACT

AN EXPLORATORY STUDY OF THE ETHICAL PERCEPTIONS OF MIDDLE AND LOWER LEVEL MANAGERS AND THE INFLUENCE OF NON-TECHNICAL VARIABLES ON THEIR DECISIONS

By

Raymond James Shuster

The purpose of this study is to investigate the ethical dimension of business problems and the attitudes and behavior of managers in dealing with such problems. It examines the ethical perceptions of middle and lower level managers and the effects of non-technical and non-economic influences on their decisions, and how such decisions are affected by the manager's organizational orientation--his perceptions of his role and relationships in the firm.

The research instrument is tested as a descriptive/diagnostic/predictive device for analyzing the ethical quality of the manager's decisions. A test is made of the feasibility of making logical analyses of the ethical content of problem solutions and of a rational means of comparing the decision choices of men holding various organizational positions in the same hypothetical problem situation. The four-part questionnaire provided data on the manager's personal characteristics; his rating of eighteen

influences categorized
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of his firm; and his
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The sample is
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The data yield
seven hypotheses:

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influences categorized as to authority/organization/self-orientation; his perception of his environment and status in his firm; and his action choices or opinions relative to six ethical problem situations. His perception of influences operative in these concrete problems are compared with those he had rated in the abstract.

The sample is comprised of one hundred and one management level personnel, seventy-three from firms in one industry, and twenty-eight from smaller business who have a strong religious orientation. They are further stratified into five functional areas and five organizational levels. Comparisons are made between the groups and among the areas and levels.

The data yielded support for the following five of seven hypotheses:

1. The individual manager will tend to view himself as more ethical than other managers.
2. Managers engaged in some business functions will, as a whole, have significantly different perceptions of the solution possibilities of ethical problems from managers in certain other functions.
4. Managers engaged in some business functions will, as a whole, reflect different proportions of prudence vs justice in their ethical problem solutions from managers in certain other functions.
5. Managers engaged in some business functions will, as a whole, have significantly different perceptions of the relative importance of non-technical influences which may affect their decisions in ethical problems from managers in certain other functions.

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6. The more religious manager will be more concerned about the interests of others and less concerned with self-interest than the less religious manager.

The evidence was inconclusive as to the following two hypotheses:

3. There will be significant differences in the perceptions of the solution possibilities of ethical problems between managers from one organizational level and those from certain other organizational levels--the higher the level, the more complete the solution.
7. The perceptions of organizational climate held by managers in one function will differ significantly from those held by managers in certain other functions.

Nevertheless, it is felt that these latter two hypotheses are important and warrant further exploration.

The personal, influential, and environmental characteristics of the managers were examined in order to identify variables which might help to explain differences in their ethical perceptions. Age, religious interests, and personal goals strongly differentiated the two groups, as did several of the influences--chiefly Own Religious Beliefs, Customer/Supplier Welfare, and Own Career Aspirations, and they had a different rank ordering of the influences identified with authority, organization, and self. These differences were considerably modified in the context of functional area and organizational level. Certain environmental variables were also distinctive. A number of correlation tests were attempted, but the results were inconclusive.

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The major conclusion is that the organizational orientation of the managers does tend to influence their ethical decisions, chiefly due to: functional bias, differences in technical comprehension of the issues involved, variances in the relative proportions of prudence and justice they reflect in their decision choices, and differences in the relative significance they attribute to the influences they perceive to be operative in problem situations.

The major recommendation is that, since the approach taken in this study appears to have diagnostic and predictive possibilities, it could be refined for useful application on a practical basis within individual industrial organizations for the purpose of improving the ethical content and quality of their managerial decisions. The manager is seen as being sensitive to the ethical implications in problem situations, but he can be assisted by a practical framework of ethical criteria and by positive support from top management in maintaining the highest possible standard of ethics in his business decisions.

AN EXPLORATORY STUDY

MIDDLE AND LOWER

OF NON-TECHNICAL

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in partial fulfillment of the requirements for the
Master of Science degree

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MIDDLE AND LOWER LEVEL MANAGERS AND THE INFLUENCE
OF NON-TECHNICAL VARIABLES ON THEIR DECISIONS

By

Raymond James Shuster

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Management

1971

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Mark R. Bacon and

ACKNOWLEDGMENTS

This researcher's interest in the problems of business ethics developed during many years in industry. A simple criterion, "the right way is the best way," has been a dependable guide which came out of the counsel of his earliest mentor in the business world, Lester E. Elwood. Another who encouraged along the way is Dr. Bruce E. DeSpelder, of Wayne State University's School of Business.

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The capable assistance of Mr. John Teeter with the computer work, and Mrs. Carolyn Piersma in the typing and editing, is greatly appreciated, as was the counsel of Dr. Frank R. Bacon and Dr. James A. Stapleton on statistics.

Most of all
wife, Martha, for her
relatives, and many
others.

Most of all I thank my patient and hardworking wife, Martha, for her unfailing support, and my children, relatives, and many friends for their encouragement and prayers.

Letter

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CHAPTER I

INTRODUCTION AND HYPOTHESES

Purpose of the Research

The business man in our American free enterprise system is continually faced with the need to make decisions which require the exercise of moral or ethical judgment. The increasing volume of literature on the subject of business ethics is evidence of that, although a part of the increase in absolute terms may simply parallel the general information explosion in all areas of our knowledge. For example, an annotated bibliography of 103 pages (793 items) compiled by a team of researchers at South Dakota State University¹ shows the following: ten years 1930-39--32 items; ten years 1940-49--73 items; five years 1950-54--119 items; five years 1955-59--246 items; four years 1960-64--283 items.

In the foreword to Ethics in Business, by Raymond Baumhart, S. J., R. Joseph Monsen states, "Intelligent

¹Philip W. Van Vlack, Charles L. Sewrey, and Charles E. Nielsen, Economic Ethics Bibliography, Bulletin 524, Economics Department (S. Dak: South Dakota State University, December, 1964).

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discussion and illuminating teaching of business ethics has, up to now (April 1968) been unusually difficult and often highly unsatisfactory--primarily because we have so few facts to deal with, and because we have known so little about the businessman's feelings and attitudes on ethical issues involving business."²

This researcher's observations and experiences during thirty-four years of administrative management in various industries also have led him to believe that there is a growing need for research in this area.

The broad purpose of this research study, then, is to provide additional knowledge about, and insight into, the ethical dimension of business problems and of the attitudes and behavior of managers in dealing with problems of that nature, but more specifically within the managerial sector of large industry.

The General Problem

Many writers and a number of researchers have studied and discussed the ethical problems of business from a number of viewpoints and have offered to the business world the benefit of their insight, wisdom, and findings. For example, the Harvard Business Review offers a compilation of fifteen recent articles on the

²Raymond Baumhart, S. J., Ethics in Business (New York: Holt, Rinehart and Winston, 1968), Foreword, p. vii.

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³ Ethics
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⁴ Philosophy
review, Cambridge

problems of business ethics³ some of which also consider the roles of religion and Christianity, and the personal value systems of individuals. A companion series of sixteen articles⁴ delves into the related area of business philosophy. Such articles point up the increasing difficulties which men in all areas of business and at all levels of management face in attempting to satisfy the various claimants on the business--owners and stockholders, government units, employees, consumers, suppliers, and society in general.

Even more significant, many men below the top management level face heavy, often unreasonable, and sometimes unrealistic demands to meet stipulated performance goals. If higher level management's philosophy, policies, or guidelines are lacking, uncertain, ambivalent, or distorted by intervening levels, so that the apparent or implied desires of top management appear to be inconsistent with a sound value system or acceptable ethical practices--or legal restraints, the subordinate may become disoriented and behave irrationally. Fear of economic sanctions may also act to aggravate the situation.

³Ethics for Executives Series, Harvard Business Review, Cambridge, 1968.

⁴Philosophy of Business Series, Harvard Business Review, Cambridge, 1966.

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Father Baumhart's survey elicited many examples of such pressures to get results, regardless of the means used.

Impossible demands, say our respondents, especially if accompanied by an implied "produce or get out" attitude can quickly result in unethical behavior. The lonely subordinate, faced with demands like these, occasionally dreams about a union for middle management, complete with seniority and grievance procedures. . . .

A common defense by top management is that it is only fair that pressure be kept on subordinates since stockholders and competitors keep the pressure on top management. . . . It is doubtful that widely disparate and anonymous stockholders exercise pressure on top management comparable to the pressure that executives bring to bear on their subordinates.⁵

Approaches to the problem have considered the nature of man, his perceptions and beliefs, and consideration of ethics on both philosophical and theological bases, as well as the currently accepted norms of various social environments. The field of inquiry is vast, and as old as the history of man. The rapidly accelerating pace of economic, technological, political, and social change this modern world is experiencing, especially in the United States, requires man to constantly re-adapt himself to new and continually changing environments, situations and forces, and to cope with mounting pressures and a complexity of variables for which he is often ill-prepared. He therefore needs and sometimes seeks guidance for his own actions and those of others for whom

⁵Baumhart, Ethics in Business, p. 83.

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he may be responsible. In the technological sphere he has managed to successfully bring to bear his knowledge of much new scientific discovery. For example, the concept of a "stable platform" in the electronic guidance systems of space vehicles, oriented to a fixed astral reference point, permits incredibly fine in-course navigational adjustments--on signal. While new discoveries are also increasingly true in the area of human behavior, there is much to be desired, particularly with respect to man's motivation and the influences to which he is subjected. Fortune, for instance, cites continuing research into conditioned learning by social scientists using techniques of operant conditioning and stimulus response.⁶ Can similar concepts be used to motivate and guide human behavior in the business and industrial context?

We appear to be pushing the frontiers in combining the findings of other scientific areas, but will this bring us to grips with some of the real problems of people in industry? For instance, there are internal factors such as: What do men believe--how strongly? How committed are they to such beliefs, and how effective are such beliefs, values, or ethical systems? Contrastingly, there are external factors such as: What influences are brought

⁶Lawrence Lessing, "Science Takes a Closer Look at Man," Fortune, January, 1970, pp. 113 ff.

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The Approach to the Study

This study is structured to build onto and extend the work of others, some of whom have included in their work consideration of the role and influences of religion and philosophical ethics in providing guidance for ethical problems in business. A number of such studies and their findings are discussed in later sections. Most have surveyed relatively generalized populations for attitudinal responses and value preferences. This research makes an extensive study of a selected group, drawn from the managerial sector of large industrial firms, using a survey instrument especially structured for this group. Because religion is generally considered to provide a strong foundation for ethical standards another special group of managers was included, the members of which profess a strong religious orientation, in order to explore the extent to which their common dependence upon religious (spiritual) guidance affects their managerial decision making. In addition to specific questions, hypothetical problem situations were designed to simulate some of the problems encountered by middle and lower level managers.

The specific problems, related questions, and specific hypotheses are set forth below, together with citations of related research. The major thrust

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of this study is the analysis of the ethical perceptions of managers in large firms and the effects of non-technical and non-economic influences on their decisions dealing with problems involving ethical considerations.

In brief, an attempt is made to determine the extent to which the organizational orientation of the middle and lower level manager in industry measureably influences his decision choices when ethical considerations are involved.

Organizational orientation in this context is the sum total of all perceptions the manager has as to his specific position, functions and relationships in the organizational hierarchy and structure. The specific hypotheses which follow consider various aspects of this orientation.

Specific Problems, Hypotheses, and Questions

Hypothesis 1

The individual manager will tend to view himself as more ethical than other managers.

Direct evidence of the existence of biased attitudes would aid in understanding the decision process and help to explain how managers perceive each other in their roles. A series of general questions were used by Baumhart⁷ to arrive at a similar conclusion. In this case three of six decision

⁷Baumhart, Ethics in Business, pp. 20 ff.

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problems are worded subjectively for half the respondents, and objectively for the other half to test this hypothesis.

Hypothesis 2

Managers engaged in some business functions will, as a whole, have significantly different perceptions of the solution possibilities of ethical problems from managers in certain other functions.

Baumhart⁸ also found that people had a higher or lower opinion of the ethics of various professions and vocations, being more of critical selling and financial activities. The test in this study compares not only the kind of alternatives selected by the respondents but also how completely the various problems are solved by the decisions.

Hypothesis 3

There will be significant differences in the perceptions of the solution possibilities of ethical problems between managers from one organizational level and those from certain other organizational levels--the higher the level, the more complete the solution.

The same test procedures are used for this hypothesis as for the one above. Positive evidence of bias due to function and level would help to clarify the decision process and might indicate a need for greater specificity in company policies and procedures and in designating extent of responsibilities. Jennings⁹ indicates that self-confidence as to position and role affects managerial performance.

⁸Baumhart, pp. 96 ff.

⁹Eugene E. Jennings, The Executive in Crisis, MSU Business Studies (E. Lansing, Mich.: Michigan State University, 1965), p. 117 ff., p. 170 ff.

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Hypothesis 4

Managers engaged in some business functions will, as a whole, reflect different proportions of prudence vs justice in their ethical problem solutions from managers in certain other functions.

Prudence is defined as the individual manager's concern for self-interest internally to the company and company interest in relationships externally to the company. Justice is defined as concern with the interests of others as opposed to self-interest. Internally to the company this could be the interests of other individuals, or the interests of the company vs self-interest. Externally to the company this could be the interests of outside individuals or of other companies or groups vs the company's self-interest. The test is made by comparative analysis of the respondents' solutions to hypothetical problem situations as they reflect prudence and/or justice. Positive evidence of tendencies toward this kind of bias would also be an aid to understanding the decision process in problems involving ethical considerations, leading to more equitable treatment of the various claimants on the company.

Hypothesis 5

Managers engaged in some business functions will, as a whole, have significantly different perceptions of the relative importance of non-technical influences which may affect their decisions in ethical problems from managers in certain other functions.

Decision making could be better understood if more information were available relative to the various kinds of

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Hypothesis 6

The more religious manager will be more concerned about the interests of others and less concerned with self-interest than the less religious manager.

Inclusion of the religious test sample in the study provides an opportunity to compare their solutions to the hypothetical problems with those of the general group to seek positive evidence of this form of bias, which could assist in understanding the handling of ethical problems.

Hypothesis 7

The perceptions of organizational climate held by managers in one function will differ significantly from those held by managers in certain other functions.

Organizational climate for the purpose of this study includes interpersonal relationships, ethical attitudes of company and personnel, and the manager's view of his own status in the company. This could affect the degree of confidence he has in his decision making judgment. Similar notions are expressed by Jennings¹⁰ in his discussions of the executive's view of himself, his role, and his membership in the executive group.

¹⁰Jennings, pp. 85 ff., pp. 128 ff.

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Other Related Questions

In addition to the above hypotheses a number of questions will be considered which could increase understanding of the variables which affect decision making. These will consider whether significant relationships can be found between various personal, influential, and environmental variables and the manager's function and level in the organization, and whether any combination of these can be seen to affect his decisions in ethical problems. For example, it is commonly accepted that the older manager is more conservative and usually more experienced than the younger manager. Comparisons are made of the problem solutions selected by the older and younger managers to see if such evidence can be found. Other questions and correlation possibilities are discussed which became apparent as the response data were compiled and reviewed. Comparisons are also drawn with the findings of other recent research such as that of Baumhart,¹¹ Senger,¹² Van Vlack,¹³ and Schutte,¹⁴ as well as other citations.

¹¹Baumhart, Ethics in Business

¹²John D. Senger, "An Analysis of Executive Value Structures" (unpublished Ph.D. dissertation, University of Illinois, 1965).

¹³Philip W. Van Vlack, Management Ethics Guide, Bulletin 523 (rev. ed., Brookings, S. Dak.: South Dakota State University, December, 1965).

¹⁴Thomas F. Schutte, "An Exploratory Study of Executives' Perceptions Toward Business Ethics" (unpublished Ph.D. dissertation, University of Colorado, 1963).

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Problems of Definition and
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The Van Vlack bibliography has 793 individual citations which relate in one way or another to ethical behavior, with much emphasis on theological ethics in Western religions. A more limited number (about 60) relate to the general area of business, and fewer (about 30) to management in particular. Most items in these latter two groups deal with the relationship of ethics to external entities--the consumer, the public, society in general, competition, the government, labor, etc. Few deal directly and specifically with managerial problems involving intra-company ethical considerations, that is, with management below top level. However, a number of writers and researchers, such as Baumhart and Van Vlack, do include some examples, and related discussion, of internal problems. This researcher has thus far found little that resembles the approach being taken in this research program. Under the circumstances, references to other literature tends to be "extractive" and somewhat fragmentary.

Ethics is an area of philosophical study about which much has been written. A comprehensive treatment of ethics, as such, is beyond the scope of this thesis. However, an analytical summation of salient points follows.

Van Vlack identifies certain key concepts in ethics which he defines in the following terms:

Ethics is often called "moral philosophy" as the philosophical study undertaken to improve actions.

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Ethics is the field of study, and morality is what is studied. As a discipline or branch of knowledge, ethics is sometimes divided into meta-ethics and ethics normative. Meta-ethics concerns logical and semantic problems of ethical or moral statements and arguments. Normative ethics or ethics proper, deals with the norms of human conduct, both with respect to their foundation in principle ("basic ethics") and with respect to their application in circumstances of actions ("applied ethics"). Some writers add "descriptive ethics" to denote social-scientific studies of morality.¹⁵

Ford and Kelly differentiate ethics and moral theology, terming them both sciences,

Ethics is the science of morality based on reason; it considers man in the natural order, possessed of a natural destiny. Moral theology includes ethics and goes beyond it--absorbs it, so to speak. Moral theology studies man in the supernatural order, possessed of a supernatural destiny; it is a science based not only on reason--nor principally on reason--but especially on revelation and on the teaching of the Church. Reason is the supreme argument in ethics; authority is the sovereign guide of the theologian.¹⁶

Another comparison is made by Garrett, who states, with respect to both ethics in general, and business ethics,

Ethics . . . is taken to be the study of moral rightness and wrongness of human activity insofar as these can be known by reason. Such a study must consider nearly all aspects of man and his activity, but in relation to the ultimate and true good of man, not merely to what men want, or do, or think. Ethics, then, is a human science, limited to a large extent

¹⁵Van Vlack, Ethics Guide, p. 122.

¹⁶John C. Ford, S.J. and Gerald Kelly, S.J., "Contemporary Moral Theology," in Morality in Business, ed. by Henry J. Wirttenberg, S.J. (Chicago: Loyola University Press, 1962), p. 7.

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Business ethics is . . . an attempt to develop and apply basic principles in the area of human economic relations. Because of the nature of the field business ethics has several particular qualities . . . involving relations to groups as well as individuals . . . dealing with relative or physical goods rather than directly with absolutes. . . . Business ethics are more than a type of commercial etiquette, or a code of accepted practices. . . . Our search is for principles and not merely for good business policy . . . (and) must go into questions of political and social philosophy as well as into matters of truthfulness, exchange justice, and fair treatment of employees.¹⁸

Yet another variation is given by Wheelwright in a simplified definition which does not term it a science,

Ethics is a branch of philosophy. It is a philosophy of moral conduct and of the standards by which moral conduct and its effects are to be judged. Ethics is therefore a more or less structuralized account of moral values--the degree of structuralization depending on the type of ethical theory in question.¹⁹

Roubiczek develops the definition somewhat more systematically, and with a different emphasis,

Ethics includes morality, but is wider in scope; as well as the foundations and implications of morality, it includes the question of how far we can know for certain and speak about an absolute value at all--That is, the epistemological problem of the limitation of knowledge. . . . The subject matter of ethics is traditionally circumscribed by the following three questions: 1. What ought we to do? 2. What is the

¹⁷Thomas M. Garrett, S.J., Ethics in Business (New York: Sheed and Ward, 1963), pp. 3-4.

¹⁸Ibid., p. 5.

¹⁹Philip Wheelwright, A Critical Introduction to Ethics (New York: Odyssey Press, 1935), pp. 40-41.

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meaning of 'good'? 3. Are we able to do what we ought to do? The first two questions are moral ones, but in their ethical sense they also lead to the investigation of how it may be possible to arrive at an answer, why an answer is valid, and if so, on what grounds we are under obligation to observe any rules or laws which we discover. The third question concerns the freedom of will which must be the basis of any such obligation, for commands would be senseless if we were unable to obey.²⁰

Baumhart had queried his respondents on their definitions of ethics, and having received a variety of opinions decided upon use of the following:

Ethical: conforming to principles or ideals of human conduct; according to common usage, the following terms are more or less synonymous with ethical: moral, good, right, just, honest.

Ethical standards: principles or ideals of human conduct.

Ethics: the study of the morality of human actions; hence, the standards for these actions.

Morality: the property of an action by means of which it conforms to a norm of human conduct.²¹

The foregoing citations, taken more or less at random, indicate a considerable diversity of concepts of ethics in the broad view. When limited to the area of business and industry the definitions tend to become narrower, with emphasis on the economic relationships, and with some attempts to codify behavior. However, many writers seem to agree that each situation must be analyzed for itself, and that such general prohibitions as those

²⁰Paul Roubiczek, Ethical Values in The Age of Science (London: Cambridge University Press, 1969), pp. 5-6.

²¹Baumhart, Ethics in Business, p. 15.

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against lying, cheating, stealing cannot be arbitrarily applied. Thus, the lack of certainty--the "circumstances alter cases" attitude--may contribute greatly to the unenthusiastic reactions of many businessmen to the attempts of "outsiders" to clarify and help solve their apparent ethical problems. Walter Koch, President, Rocky Mountain States Telephone Company, stated at a conference on business ethics at Valparaiso University in 1965 stated,

As I see it, the great moral dilemma of the American businessman today is not to be ethical or to be unethical. . . . The businessman's problem stems out of the confusion which permeates the American ethical system. The fact is that while we often talk of ethics as being a simple matter of good over evil, it seldom works out quite that way. Even lying and stealing are not always black and white matters, but these basic moral ideas are not my principal references at the moment . . . (but rather) . . . those . . . associated with fair treatment of free men and the progress of a free society. Many generally accepted ethical concepts of this kind are in conflict with one another, . . . the dictum to treat all men as equals . . . (yet) . . . that merit in a man deserves special . . . reward; . . . we believe the individual should . . . exercise his free choice . . . (but) . . . invoke the rule of the greatest good for the greatest number. We exhort a man to stand up for his beliefs . . . yet we honor the doctrine of mutual compromise . . . between beliefs. Given these and many more paradoxes in our ethical standards . . . the businessman can act in a given situation in a way that is ethical to some of his judges and unethical to others.²²

(It is) my claim that the businessman's dilemma in ethics is how and when and which--seldom whether. Our American concepts do not make a neat, consistent

²²Walter F. Koch, "The Paradoxical Ethical," in The Christian in Business, ed. by Andrew J. Buehner (St. Louis: Bethany Press, 1966), pp. 36-37.

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It seems obvious that ordinary definitions of ethics mean little to the average businessman--or to anyone else. A more systematic approach, similar to that of systematic theology, is necessary--one which dissects and explains ethical concepts, principles, and values and provides a basis for understanding "how and when" to apply them.

C. I. Lewis (a proponent of ethical naturalism coupled with ethical rationalism) recognizes the problem as he brings into view a set of criteria for ethical evaluation,

Ethics is a most complex subject, and any attempt to reduce it to simple terms would be ill-judged and doomed to failure. Good or bad identifies with the consequences or results, whereas right or wrong identify with the means or the act itself and with the intention. A pertinent distinction is between expected and actual consequences. Objective rightness of an act is judged on the basis of whether the consequences are right to bring about. This is contrasted with subjective rightness of an act, which is one which the doer thinks will result in consequences which are right to bring about. These distinctions are not confined to moral judgment of acts, but extend to those which may be prudentially or technically right as well as to their character as just or unjust to others. The distinction of right and wrong extends to every topic of reflection and to all that human self-determination of act or attitude may affect. Prudence has to do with one's own interests; justice with the interests of others. Technical rightness has to do with how to achieve some species of common purpose. A mental decision resulting from deliberation can become a commitment to act, and if morality and justice dictate, should become an act, any overt

²³Ibid., p. 44.

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expression, which is that which can be criticized. The criticism can turn on nothing but the consequences, actual or expected. The primary concern of ethics is with the moral integrity of the doer and his final responsibility; this can be termed right-mindedness. Solution of the central problem of ethics requires determining what character of the consequences of action it is by reference to which one act will be right and another wrong. Strictly there is no such thing as moral goodness or badness: moral distinctions apply only to doers, who are right-minded or the opposite, and to their deeds or intentions, which are right or wrong. The rightness of an action is determined by a rule or directive of right doing and a judgment of goodness to be found in the consequences of the act in question. Imperatives include seeing oneself in others, objectivity, compassion, moral equality, equality before the moral law.²⁴

Returning to Roubiczek (who favors the subjective method of ethical inquiry) we find that he brings into consideration the question of values,

There are three absolute values; truth, goodness, and beauty, which are ends in themselves and require embodiment to become real. There are a host of relative values such as health, happiness, compassion, trust, humility, some of which are virtues. Four other significant values border on, but are not absolute values: nobility, justice, love, holiness. Nobility is subjective; justice must not be influenced by anything outside itself, not even by love. Love is not truly a value, but transcends all values because it must not be based on a judgement--it must be unconditional. Holiness transcends the sphere of values and presupposes faith. Holiness can be accepted only after the absolute has been experienced as transcending all human evaluations. There are only three absolute values, and this indicates that there are only three major operations of thinking which make us accessible to the impact of the absolute. To grasp truth we must break through the surface of reality and try to get hold of its innermost nature, and this is characteristic of the objective method by

²⁴Charles I. Lewis, The Ground and Nature of the Right (New York: Columbia University Press, 1958).

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which we try to achieve a more fundamental knowledge, beyond objects and events to the laws which determine them. . . . Beauty . . . means complete concord between form and content. This corresponds to the . . . subjective method in that internal reality, to become real, must be embodied. Goodness is the third such absolute. To understand man we must start from freedom, awareness of which transcends the scope of the objective method; but freedom itself, as distinct from awareness of it, transcends the subjective method, too, because it must be freedom to act. Thus a third way to the acquisition of a fuller knowledge is opened. The two methods . . . enable us to understand either external or internal reality. But our actions include both; inner motives produce external events. . . . Goodness corresponds to this way from freedom through action to understanding.²⁵

There is yet another requirement for a more complete apprehension of ethics and the application of ethics, which Roubiczek discusses,

. . . a conscious effort of thinking . . . can account neither for the absolute nor for essential knowledge, yet by our experience we cannot deny their existence. There is no solution but to make the leap of acceptance, even though we cannot prove the existence of the absolute nor derive essential knowledge from any other knowledge. Ethics then becomes what it should be--self evident and a matter of course. . . . As soon as we accept the absolute as the source and basis of ethics and are thus enabled to accept ethics without hesitation, no longer questioning its foundation and justification, we experience a liberation. We know morality better than anything we can know by the objective method, because we know it by inner experience. What Kierkegaard calls the ethical self, and its potentialities will, whenever touched upon, come into the open, enabling us to accept moral commandments, principles, love of one's neighbor--the essential knowledge which impresses itself upon us as absolute. . . . Faith demands a clear conception of the absolute--not the abstract idea of something which is absolute or transcendental, but God and thereby a definitive statement about all existence. Ethics demands essential knowledge which springs from the absolute, is immediately applied in action and leads back to our own world; . . .²⁶

²⁵ Roubiczek, Values in Age of Science, pp. 268-274.

²⁶ Ibid., pp. 307-14.

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One more point of view rounds out this analytical sub-structure, that of Tillich, the philosopher-theologian, in his discussion of the principles of moral decision,

Every decision is necessarily a cutting through something and a cutting off of other possibilities, but this means that a decision can be willful, made arbitrarily without a guiding norm. Therefore we ask: Are there guiding principles by which we can distinguish genuine decisions from the compulsions of willfulness? If there are, they must be absolute on one side, relative on the other. An absolute principle for moral decisions has to be both . . . absolute, to save us from drowning in the chaos of relativism . . . relative, to enter into our relative situation, the ethical contents. Our search for such principles can start with the absolute . . . the unconditional imperative to acknowledge every person as a person. If we ask the contents given by this absolute, we find, first, . . . the command not to treat a person as a thing. This seems little, but it is much. It is the core of the principle of justice. . . . This . . . could lead us into problems of social ethics--whether the absolutes that appear in personal moral decisions are analogous to decisions of social groups . . . such an analogy is limited by the fact that a group is not centered in the way an individual is . . . (and) is not a person, and this changes the whole ethical situation. . . . Agape love is the absolute moral principle, the ethical absolute . . . and it has the basic principle of justice within itself. . . . (Also) needed . . . is listening to and looking at the concrete situation, which includes the deepest motives of the other person. . . . ²⁷

Yet another link is needed to arrive at a concept of Christian ethics. Roubiczek and Tillich both talk of God. Roubiczek states that "God known is no God--so that it would be blasphemy to make our belief in God dependent on any test conducted by our limited knowledge."²⁸

²⁷Paul Tillich, My Search for Absolutes, (New York: Simon and Schuster, 1969), pp. 105-09.

²⁸Roubiczek, p. 311.

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Bonhoeffer states that the root and ground of Christian ethics is the reality of God as revealed in Jesus Christ,

Only he who knows God knows what love is; it is not the other way around; it is not that we first of all by nature know what love is and therefore know what God is. No one knows God unless God reveals Himself to him. And no one knows what love is except in the self-revelation of God. Love, then, is the revelation of God. And the revelation of God is Jesus Christ. . . . God's revelation of His love precedes all our love towards Him. Love has its origin not in us but in God. Love is not an attitude of men but of God. . . . The New Testament . . . choice of the concept of 'love', agape, . . . acquires an entirely new connotation in the New Testament message, yet it is not entirely without connexion with what we understand by 'love' in our own language. . . . Love is the reconciliation of man with God in Jesus Christ. . . . Love, therefore, is the name for what God does to man in overcoming the disunion in which man lives. . . . The love with which man loves God and his neighbor is the love of God. . . . It is as whole men, as men who think and who act, that we are loved by God and reconciled with God in Christ. And it is as whole men, who think and who act, that we love God and our brothers.²⁹

How the individual Christian can follow the guidance of Christ is explained by William O. Smith, in an analysis of Bonhoeffer's work,

The life style of the Christian is determined as he searches after his real form of Christ in each context. Once he has discovered who Christ is for man in each situation, he seeks to conform to this image of Christ. The Christian does not come into the circumstance with a number of principles to apply--he comes with a process for discerning Christ. Christian ethics becomes a living response and relation to Christ who is present in each situation. Christ is concrete in each life experience and ethics are contextual in relation

²⁹ Dietrich Bonhoeffer, Ethics, ed. by Eberhard Bethge (New York: The MacMillan Co., 1965), pp. 50-54.

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to the form which Christ assumes. Bonhoeffer has brought the convergence of theology and ethics.³⁰

This researcher has deliberately confined his comments with respect to the above series of citations to primarily connective and introductory statements, in order not to dilute the effects of the transition from rather simple but vague definitions, through the more complex but clearer concepts of the essence of ethics. The various criteria thus established are referred to in later discussions and analyses of the survey findings. For later convenience in determining the ethical content and quality of the solutions selected by the respondents to the problem situations, many of the key concepts and phrases in the above citations have been incorporated into a "schematic" representation of ethical criteria. Included are primarily those which appear to be appropriate in the industrial and business context.

To sum up: we have, in the above representative citations, a picture of ethical possibilities ranging from an extreme of no ethics on the one end, to self-sacrifice on the other end. The position any one decision maker takes may well depend on the degree of conscious personal commitment he has to any position along the continuum and the extent to which he is sensitive to the proddings of

³⁰William O. Smith, Th.D., "Christ and Ethics in Dietrich Bonhoeffer" (unpublished Th.D. dissertation, Pacific School of Religion, 1968).

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his conscience. Whether he is willing or able to act in consonance with such a commitment may be entirely dependent on the over-riding effects of other constraints on his behavior in the industrial context. What kinds of constraints these are and how strong they are will be considered in the analysis of personal, influential, and environmental variables in later chapters. Certainly situations arise in which other individuals or groups are involved whose attitudes that "this is the way the game is played" preclude the introduction, at such times, of ethical considerations by anyone not of the same mind.

The comments of Harvard Business Review readers about recent articles such as the pair on the "Crisis in Conscience at Quasar"^{31,32} dealing with falsifying reports to higher management, and the pair on "Is Business Bluffing Ethical"^{33,34} are clear evidence that opinions and attitudes are divided. Thus, the fear of losing ground or of being taken advantage of unless one acts first, together

³¹John J. Fendrock, "Crisis in Conscience at Quasar," Harvard Business Review, March-April, 1968, pp. 112 ff.

³²John J. Fendrock, "Sequel to Quasar Stellar," Harvard Business Review, Sept.-Oct., 1968, pp. 14 ff.

³³Albert Z. Carr, "Is Business Bluffing Ethical?," Harvard Business Review, Jan.-Feb., 1968, pp. 143 ff.

³⁴Timothy B. Blodgett, "Showdown on Business Bluffing," Harvard Business Review, May-June, 1968, pp. 162 ff.

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with the rationalizations of expediency and the effects of pressure for results, appear to foster a climate in industry in which a high level of ethical conduct for managers at middle and lower levels may often seem to be a hindrance. This could especially be the case when relationships are impersonal, as between groups, or between individuals who may never have met--when each other may be only a name or a voice.

The more religious manager who attempts to order his life in accordance with the authoritative guidance of his God--for the Christian this may be expressed in the Bible--may find himself in conflict with the human authorities in his work place. Powell³⁵ has examined this problem in considerable depth.

Review of Related Research and Literature

In addition to the usual library research and review of abstracts in the pertinent areas, the DATRIX department of University Microfilms, Inc., of Ann Arbor, Michigan was requested to make a search on the basis of key words associated with the area of interest. Their findings were small, and failed to turn up two theses titles which this researcher had found in footnotes in

³⁵ Reed M. Powell, Race, Religion, and the Promotion of the American Executive (Columbus, Ohio: Ohio State University, 1969).

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other publications and had already ordered from them. They supplied sixteen listings, of which only one had reasonable relationship to the present research, and three or four others were in areas somewhat related, namely, decision-making and management. The titles of the remainder included key words such as "ethical," "perceptions," and "values," but not in an appropriate context.

Library research disclosed many research studies of related interest in the form of abstracts or condensations thereof, and annotated bibliographies of literature in the areas of interest. The topical areas included: Business Ethics, in which literature was found containing chapters on Ethics; Ethics and Religion; Ethics in non-religious contexts; Values; and Ethics in general. The regular Bibliographical section of this thesis contains a complete listing of all references used and literature examined.

There were, however, four research studies found which deal specifically with the topical area of this thesis, and these are described and discussed below:

1. Ethics in Business, by Raymond Baumhart, S.J., 1968 (also to be found as a hard-cover copy under the title, An Honest Profit) appears to be, to date, the outstanding work in this field. It records the findings of a survey in depth of some 1,800 businessmen subscribers to Harvard Business Review, which was made in 1962, as well as interviews made in 1966. Although the respondents can

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be said to be above average in education, income, and position, their responses provide a valuable and much-needed index to ethical perceptions and attitudes in industry. Of particular interest to this researcher are the two, rather brief, chapters titled, "The Long Shadow of the Boss," and "Managerial Level and Occupation," and the findings of the present study are discussed, later on, in the light of the insights provided by Father Baumhart in these, as well as other, chapters. Inasmuch as his study and approach were rather comprehensive and much more externally than internally oriented (with respect to the enterprise, as such) as indicated by the nature of the questions in the questionnaire instrument and as formulated for the interviews, his findings provide more insight with respect to the behavior and attitudes of executives in the firm vis-a-vis outside entities. By contrast, the present research is more concerned with the "inside" view and whether those variables might be identified which serve most to explain managerial behavior in the context of ethical problems.³⁶

2. "An Analysis of Executive Value Structures," by John D. Senger, Ph.D., 1965, an unpublished doctoral thesis, investigated the relationship between executives' values and organizational behavior. The behavior is,

³⁶Baumhart, Ethics in Business, p. vii ff.

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essentially, that of decision-making. Using a somewhat complex statistical approach, Senger concluded that personal values are related to and probably influence executives' policy decisions and operational decisions, that executives in different classifications have different values, and that executives in different classifications might make different decisions with respect to the same, given, circumstance; further, that upper level and general managers are most affected by their personal values in making these decisions.³⁷ Dr. Senger's findings are of interest in the present research because his use of "values" is similar to the "influences" factor being here used to analyze the basis for managerial decision choices in ethical problems, and because his comparison of executives in various classifications is akin to the analysis of the effects of functional orientation in the present study. It is unfortunate that the statistical approach used confined Senger's data to tabulations of factors in such form that they cannot be readily used for comparison with the data of the present study. However, his findings do provide a valuable contribution to knowledge about how executives make decisions.

3. Management Ethics Guide, by Philip W. Van Vlack, 1965, is not a research study of the same type as

³⁷Senger, "Analysis of Structures."

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the three others discussed in this section, but is, rather, a thorough development of an approach to the study of management ethics. Its primary aim is on how to proceed with moral and ethical inquiry--on how to do ethical analysis. Van Vlack sees management ethics as comprised of four problems: the scope of morality, moral standards, ethical principles, and strategies in management ethics. He deals in considerable depth with each of these, devoting a chapter to an intensive treatment of each of the four areas. In addition to describing some methods of ethical inquiry, a set of management "audits" for identifying moral problems inside and outside the firm, and for appraising managerial responsibilities in four areas, and also an "ethical perspectives" audit, have been structured. Some interesting case problems and questions and answers are also provided, as well as a listing of 197 books and articles on the subject of business ethics. No formal test was made of the "audits" in the form of a survey, thus no data is available as to the effectiveness of this approach. However, this does not preclude another researcher from making use of these techniques. The present study draws a comparison with a number of the ethical concepts and of some of the criteria for evaluating the moral/ethical content of problem situations. Dr. Van Vlack has provided a highly useful

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tool for dealing with the problems of managerial ethics through study and education.³⁸

4. "An Exploratory Study of Executives' Perceptions Toward Business Ethics," by Thomas F. Schutte, 1963, is an empirical investigation of the business ethical attitudes of executives in American business firms. Some aspects of Schutte's approach parallel the present study. This researcher did not become aware of Dr. Schutte's work in this area until after the computer print-outs on his own survey had been received. Thus, there was no opportunity to incorporate any specific tests of any of that work into the present study. Nevertheless, some opportunity is provided for comparisons with findings dealing with ethical problems internal to the firm, from among the seventy-four tabulations developed from Dr. Schutte's research, and the related questions. His hypotheses numbered four: 1. Business executives are aware of the various publics' images of business ethics; 2. They have a differential perception toward the theory and practice of business ethics; 3. They have an institutionalized ethical perception toward various business professions; 4. They do express some desire for more guidance and direction for the creation and maintenance of ethical conduct. According to the findings, all

³⁸Van Vlack, Management Ethics Guide.

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four were supported. Of these, the second and third are of some interest in the present study. Schutte structured ten formal findings of a rather general nature and primarily externally oriented. Only two of the ten are such that some comparison can be drawn with the present study. Schutte's questionnaire included sixteen multiple choice attitudinal questions, four forced choice case problems and one related question, and three open-end questions. Of the total of twenty-four, three of the attitudinal questions, and the four case problems will permit some comparisons with the present study. Seven personal profile questions were asked of which six are of the same nature as questions in the present study. Dr. Schutte's work adds considerable insight to the area of business ethics and the attitudes of businessmen toward ethical problems, and in a forty-six page Appendix, offers an excellent examination of the classical ethical schools of thought.³⁹

Conclusion

In the foregoing pages, this researcher has set forth: (1) The purpose of the research--which is, essentially, an investigation of the nature of ethical problems in the managerial sector of large industry; (2) A presentation of the general problem--which is, that the decision

³⁹Schutte, "Study of Perceptions Toward Ethics."

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function of managers invariably involves ethical problems, and that managers below the top level have particular difficulty because of conflicts arising from the pressures to satisfy performance objectives which are often unreasonable, and may require suppression of the manager's own ethical sensitivity; (3) The approach to the study--which identifies the area and groups to be the subjects of the study; (4) The general and seven specific hypotheses--which seek to establish the extent to which organizational orientation and certain influences and perceptions affect the decision making of managers in situations involving ethical considerations, and the limitations, types of assumptions, and general structure of the instrument to be used, as well as certain other questions for which answers are sought; (5) Problems of definitions and application of ethics--which cites a representation of varying definitional concepts, and sets forth (with a minimum of comment) the essential structures of a representation of ethical systems in considerable detail, which are later on extensively referred to as a range of criteria against which are evaluated the responses to the six case problems of the survey; and finally, (6) A review of related research and literature--which describes the steps taken, and makes a brief preliminary analysis of four specific works, which are used for direct comparison with the findings of the present study. In brief, this chapter

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serves, essentially, as background for the later analyses of the survey findings, and in particular, discussion in depth of the applicability of the elements of the ethical systems described above is reserved for later development in connection with analysis of the concrete aspects of the six case problems and the related influence factors identified by the respondents. Thus, the existence of the problem has been recognized--managerial decisions include an ethical dimension; its nature has been discussed--a better comprehension of ethics and ethical practices, and when and how to apply them, is needed; hypotheses and questions are formulated which propose to test conditions under which managerial decision making may or may not lack ethical perceptiveness, and to seek reasons for or causes which contribute to ethical or unethical behavior; an experimental plan has been developed which investigates the personal characteristics of the manager, the influences which may bear on his decisions, and the environment in which he operates, and also which tests his problem solving behavior and evaluates his decisions for ethical content and quality, and attempts to identify personal, influential, or environmental variables which may affect his decision-making. Of special concern are the constraints which conflict, either impelling or preventing ethical behavior. All these are dealt with in the following chapters.

CHAPTER II

DESIGN OF THE RESEARCH

The Population and Samples

After extensive exploration with possible research sites cooperation for the survey was ultimately secured from the director of the management technical center of a university which utilized a large number of middle and lower level managers from nearby industries as its part-time faculty. Its total current and recent mailing list of 403 names was made available, of whom more than 40 per cent were actively teaching in the (then) current semester. These men represented all major industrial functions. The names of all the men on the list who were employed primarily by three large firms in one industry were selected. The total such number was 133, of whom seventy-three cooperating respondents became the Group 1 which is shown on Figure 1--Stratigraphic Pattern, following. The rationale for confining this sample to one industry was to make homogeneous the effects of external variables. This is the major group under study in this research effort.

A second sample was taken, this time from the membership of a cooperating Christian businessmen's group in

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Group 1							Group 2								
Function Level	MFG	MKTG	ENG	P&A	A/F/S	Total	Function Level	MFG	MKTG	ENG	P&A	A/F/S	Total		
L-1	--	--	--	--	--	--	L-1	(1)	(2)	--	(2)	(2)	7		
L-2	--	--	--	--	--	--	L-2	(1)	(3)	--	--	(1)	5		
L-3	(4)	(2)	(5)	(5)	(5)	21	L-3	(2)	(3)	(1)	--	--	6		
L-4	(3)	(3)	(12)	(6)	(9)	33	L-4	--	--	(2)	(2)	(1)	5		
L-5	(3)	(2)	(11)	(1)	(2)	19	L-5	--	(1)	(2)	--	(2)	5		
Total	10	7	28	12	16	73	Total	4	9	5	4	6	28		
Combined							Summary of Questionnaires Sent and Returned								
Function Level	MFG	MKTG	ENG	P&A	A/F/S	Total	Group 1			Group 2		Total			
L-1	(1)	(2)	--	(2)	(2)	7	133			100.0	42	100.0	175	100.0	
L-2	(1)	(3)	--	--	(1)	5	39			29.3	4	9.5	43	24.6	
L-3	(6)	(5)	(6)	(5)	(5)	27	94			70.7	38	90.5	132	75.4	
L-4	(3)	(3)	(14)	(8)	(10)	38	16			12.7	9	21.5	25	14.3	
L-5	(3)	(3)	(13)	(1)	(4)	24	78			58.6	29	69.0	107	61.1	
Total	14	16	33	16	22	101	5			3.7	1	2.3	6	3.4	
							Net Total Used			73	54.9	28	66.7	101	57.7

Figure 1.--Stratigraphic Pattern and Composition of the Survey Sample.

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the area. The names of all members involved in purely industrial activities were used, which excluded those managers or owners in construction firms, professionals, smaller proprietors, service organizations, and the like. These men numbered forty-two, of whom twenty-eight cooperating respondents became Group 2, also shown on Figure 1. The reason for including this group, as previously stated, was to test the relationships between professed religious beliefs and ethics in decision-making. This Christian businessmen's group is affiliated with a total membership in the United States and Canada of more than 12,000 men who represent many Protestant denominations and are conservative and evangelical in their religious views. Their *raison d'être* is to apply in a practical way their religious commitments in their daily business lives and to persuade others to do so. Their motto is "Diligent in business; Serving the Lord," Romans, 12:11. They place the authority of God as revealed in the Scripture above the authority of men but have a very high respect for duly constituted authority, in business as well as in government, as being divinely ordered.

The two samples thus drawn totalled 175, and resulted in a net total of usable questionnaires from 101 respondents--73 in Group 1, and 28 in Group 2. Since the Group 1 respondents are all part-time teachers they may differ to some extent from the average middle and lower level manager, having a higher than average level of education and a stronger than average interest in their fields

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of work. However, the apparent bias thus introduced is not considered detrimental to the purposes of this exploratory survey. It will be taken into account to the extent that it might become evident in any of the data analysis.

There are a number of differences between Groups 1 and 2 which are examined in detail in later chapters, but one should be mentioned at this time. As Figure 1--Stratigraphic Pattern, shows, there is a significant difference in their organizational levels. The highest level in Group 1 is comprised of major department heads or men who report to plant or division general managers; this is Level 3. Group 2 includes a number of men who own or manage smaller industrial enterprises and men who report to them, constituting a top level echelon; therefore, Levels 1 and 2 were established to provide for this. As it happens, there were no respondents at equivalent levels in Group 1.

Although the total number of respondents in each of the "cells" created by combining Functional areas with Organizational levels is shown on Figure 1 (in parenthesis) no data is compiled or analyzed for such cells, for three reasons: the samples are too small to produce meaningful comparisons, it is outside the planned scope of the present program, and the number of computer tabulations which would be created would be far too great to be manageable. Therefore, data compilations and analyses are confined, as will be seen, to provide comparisons between two major groups,

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the five functional areas and five organizational levels for the total population of 101, and the five functional areas and three organizational levels for the seventy-three respondents constituting Group 1, this latter to exclude the strong religious bias in effect when Group 2 is included. Group 2 is not separately examined in this way for most of the variables under study because the numbers are too small to be meaningful in themselves. There are exceptions, chiefly in connection with the six case problems and the related influences, where some of the comparisons are considered valid and useful. The appropriate tables are expanded accordingly.

The Survey Instrument-- General Description

The survey instrument consists of a four-part questionnaire. A full set of the questionnaire forms and the memo of instruction to the respondents are included in one of the Appendices. Part I, Personal Profile, elicits data permitting sub-classification by characteristics such as age, geographic origin, educational level, religious affiliation, importance of religion, parent's background, major life goals, etc. Part II, Influences on Decisions, provides for the respondent to rate on a seven-point scale a list of eighteen "influences" which might enter into his decision making. These are grouped into three broad categories, the comparative totals of which might indicate the extent to which the respondents might exhibit

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tendencies toward authority-organization-self (AOS) orientation. Part III, Environmental Factors, provides for identifying the respondent's position in a stratigraphic pattern internal to the organization, and also for the respondent to indicate how he perceives his interpersonal relationships, the internal ethical climate, his own situation in his Company, and his view of his Company's goals. Part IV, Case Problems, sets up six hypothetical problem situations involving ethical considerations, providing for a variety of decision choices for each. Cases 2 through 4 are structured objectively for half of the respondents and subjectively for the other half (which provides for testing Hypothesis 1). In addition, the respondent was requested to indicate which three of the "Influences" listed (and rated by him) in Part II entered most strongly into his decision choices for the case problems.

Plan for Data Compilation and Statistical Validation

Sidney Siegel's Non-Parametric Statistics for Behavioral Scientists was used as the guide for the statistical procedures applied. The data gathered are essentially non-quantitative, that is, nominal, ordinal, or interval in nature. Thus, the non-parametric techniques were deemed to be the most appropriate. The Applications Programming Department of the University Computer Center was consulted, and they recommended their "modified CISSR

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program" (CISSR = Computer Institute for Social Science Research). A programmer was assigned by the University Computer Center to coordinate. Under his direction the code sheets and data input program were prepared. The data were transferred from the questionnaires to the data input coding forms, and the programmer subsequently coordinated the keypunching and the computer runs. Further details of the statistical procedures are given in the Appendices section. The modified CISSR program provides for appropriate statistical tests, which included the Chi Square and Contingency Coefficient tests used for the data in this study. The program also converted the raw data to percentages for both rows and columns and calculated means and standard deviations. The resultant statistics--Chi Square values, probability percentages, and coefficient factors--are included on all the tabulations to which they pertain. As will be seen, the tables which have been constructed combine, for each variable, the data covering the groups, functional areas, and organizational levels.

Previously mentioned was Figure 1, Stratigraphic Pattern of the Survey. This is a graphic depiction of the strata--broad functional areas and organization levels--into which the survey sample is divided. The data compiled in accordance with this structure form the basis for dealing with Research Hypotheses 2, 3, 4, and 7.

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The Questionnaire and Instructions

(a) It was felt that a clear and relatively complete explanation of the nature and purpose of the survey to the prospective respondents would serve to secure a higher degree of cooperation as well as a more intelligent and appropriate response than one which tried to obscure the issues involved. A copy is included in the Appendices.

(b) Part I - Personal Profile. Along with the usual kinds of information as to the respondents' personal characteristics and background, a number of others were included which it was felt would have a bearing on the respondents' attitudes and perceptions; (1) a record of military service might result in a predisposition toward authority recognition; (2) membership in fraternal and professional organizations might reflect in the respondents' greater self-awareness of personal and professional integrity; (3) whether a respondent has studied subjects such as religion, ethics, logic, or psychology might give him a different perspective of a given situation and perhaps be reflected in the Case Problem decision choices. Inasmuch as the survey is strongly exploratory in nature, data was sought for consideration which would be reflected in response patterns or trends, and if significant, might be amenable to cross correlation with other factors to determine detectable influences in decision situations.

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(c) Part II - Influences on Decisions. This researcher has long been aware of the fact that the manager frequently faces a dilemma in making decision choices because other than purely economic, technical, or broadly situational factors impinge. For example, his judgment, after giving due consideration to all relevant variables, may be influenced by what he feels his immediate supervisor may "prefer," which may not be in consonance with the facts as the decision maker has evaluated them. Many such influences bear on the manager. The Part II list of influences is "representative" but is also designed to determine if the respondent, as he rates them on a seven-point scale, is more sensitive to authoritative factors, the interests of the organization generally, or his own personal interests. This trichotomous structure is analogous to the Jennings' A O S frame concept¹ and to an even more basic physical/mental/spiritual view of the human individual's dimensions, in line with the "whole man" concept, which is being increasingly stressed in behavioral literature. The data compiled under Part II will form the basis for dealing with Research Hypothesis 5.

(d) Part III - Environmental Factors. Similarly to the data for Personal Profile, some of the data gathered under Part III are reviewed for significant trends and patterns which might have a meaningful correlation with the decision choices of the case problems or

¹Jennings, Executive in Crisis, p. 130.

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with the influence ranking under Part II. While the respondents' perceptions of their interpersonal relations are specifically correlated with the case problem decision choices in dealing with Research Hypothesis 7, the respondents' perceptions of the general ethical climate, or of the individual personal situation may be similarly used.

(e) Part IV - Case Problems. The case problems are drawn from actual occurrences observed in various industries by this researcher. Informal review by associates (as well as by personnel executives of an industrial firm in which a management survey was discussed) disclosed no difficulties. One individual even commented that Case 4 accurately described a sales executive in his own experience.

While quite technical in content, they do portray the kinds of situations frequently encountered in the industrial context. They are somewhat ambiguous, and justification may be reasonably made for at least two or more combinations of decision choices in each case problem. Case 1 identifies the respondent only with "your" company, but not with a specific role or function. However, Cases 2 through 4 are so worded as to place half of the respondents in a specific role and the other half as observers of a specific role. The responses to these subjective vs objective modes are compared as a basis for dealing with Research Hypothesis 1.

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In each case problem the respondent was asked to indicate which three of the influences he rated under Part II entered most strongly into his decision choices or opinions. This may have caused him to try to "justify" the choices he made, or to rethink the problems and perhaps alter his choices to better coincide with the influences he may have considered as having greater importance. Alternatively, some respondents might have concluded that the ratings of significance they set up in the Part II were not necessarily applicable to the particular situations they perceive in the case problems. No absolutely right or wrong decisions are represented for the case problems. However the action choices are reviewed and evaluated in accordance with the criteria discussed in Chapter I, a framework having been set up which takes into account whether, and to what extent, such factors as intentions, means used, consequences perceived, technical and prudential considerations, justice, moral imperatives, absolute and relative values, and the like can be given consideration. In addition, and by way of contrast, the presence of a "norm" based on the "consensus" of action choices by the respondents is also considered. Since each respondent chose, usually, two or more action choices for each case problem, these constitute "patterns" and the responses are grouped accordingly. Thus, it is the patterns, rather

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than individual action choices, which are evaluated for "solution content." Each such pattern is given a scale rating from 1 for the most complete solution, to 5 for the least complete solution. The rating scales for all the case problems are shown together on one figure which accompanies the analysis and discussion of the actual cases later on. To explain briefly, all the proposed solutions for each case have been consolidated into nine patterns on a "best fit" basis--many are of course identical--and these patterns are analyzed to determine how completely, relative to each other, they appear to provide a satisfactory solution to the problem. This evaluation is somewhat arbitrary, but it is applied uniformly by way of the rating scale to the solutions of each respondent. The ratings are subsequently compiled by functional areas and organizational levels to determine their "solution perceptiveness" as a test of Hypotheses 2 and 3, which consider if the managers in these areas and levels will have different perceptions of the solution possibilities of ethical problems.

Separately from the tests of overall completeness of the solutions, another evaluation is made based on the extent to which the action choice patterns appear to reflect prudential concern (for self or company) as opposed to justice for others. This is a test of Hypothesis 4, which considers if managers in different functions will reflect a different proportion of prudence vs justice in

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their solutions to ethical problems. The evaluation criteria are also among those mentioned above, and are brought into view in later specific discussions of the case problems in the form of a schematic, previously mentioned. The relative proportions of prudence and justice are expressed as two percentages which equal 100 per cent, and the difference between the two percentages is taken as indicating in which direction and how far the respondents appear to be biased in favor of prudence or justice. A zero score would indicate that the respondents have equally balanced prudential concern and justice for others.

Since this is an exploratory program, it falls upon this researcher to experimentally apply the criteria as objectively as possible and to consider as many alternatives as appear to be reasonable. It is stressed, also, that precisely how correctly the criteria are applied--and individual judgments will differ--is less important than to establish whether or not there are significant differences as between the choices of the groups, areas, or levels. In other words, the Hypotheses to be tested are not whether one or another is more or less ethical, but whether it is possible to determine if their perceptions of solution possibilities for ethical problems differ, based on common criteria.

The question may well be asked, "Why bother with evaluating the choices at all--why not merely determine by

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count whether the choices, as such, of each of the groups, areas, or levels do differ significantly? This, too, is done--in a preliminary analysis of each case problem. However, this does not provide an answer to the dilemma voiced by Mr. Koch, as cited in Chapter I, "how, when, and which-- (rather than) whether to be ethical." He seems to be saying that businessmen know they should be ethical but need some kind of generally accepted standards or guides by which to determine how best to resolve ethical problems in the business context so as to most completely satisfy all concerned. Thus, this study experimentally tests the feasibility of applying such a set of ethical criteria, and the respondents' patterns of action choices provide the vehicle for such a test.

Tables and Tests

Uniform sets of tables were structured for each part of the questionnaire in such a way as to provide a direct comparison of data, in appropriate form, between the groups, areas, and levels. The findings so depicted are analyzed and discussed, in the same sequence of groupings as the related questions appeared in the questionnaire. The applicable tests of statistical significance are incorporated in the tables. The next chapter considers the findings relative to Parts I, II, and III of the questionnaire, covering the personal, influential, and environmental variables associated with the respondents.

CHAPTER III

FINDINGS: PERSONAL, INFLUENTIAL AND ENVIRONMENTAL VARIABLES

Introduction

In this chapter an analytical comparison is made of various characteristics of the respondents. The essential objective is to identify those variables with respect to which the groups, functional areas, and organizational levels may significantly differ from one another, and which may help to explain differences in their orientations within the industrial organization, and provide a basis for determining whether, and perhaps a rough measure of the extent to which, their perceptions differ with respect to problem situations which involve ethical considerations. In view of the disparate sizes of the groups, area, and levels the raw data have been converted to the common denominator of percentages, and in some cases to medians or means. The following three sections each deal with a major group of variables corresponding to the first three parts of the questionnaire. However, only those variables which reflect statistically significant differences among the groups, areas, or levels are discussed in detail; the others are mentioned and then dismissed from further consideration.

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Wherever possible, all data for each variable have been combined into one table. The structure followed is to first compare the two major groups within the total population sample, then the area and levels within this total. Following this, a similar comparison is made of the areas and levels which comprise Group 1. As previously mentioned, Group 2 is too small in itself for similar treatment to be meaningful, although some exceptions are made.

1. Findings: Personal Profile Variables

Sixteen sets of questions consisting of thirty-three items of detail were included in Part I of the questionnaire. There were no statistically significant differences (at $p = .05$ or less) among the groups, areas, and levels with respect to the following:

Sex; all cooperating respondents are males.

Race; all respondents but one are Caucasian.

Nationality; not significant in the present sample.

Birthplace; not significant in the present sample.

Home State; one state named by 83 per cent of the respondents.

Marital Status; all but one respondent are married.

Number of Children; not significant for this sample.

Military Service; not significant for this sample.

Education--High School; completed by all respondents.

Education--College Major, Group 1; not significant.

Parents' Vocation; not significant for this sample.

Parents' Religion; same as respondent's in most cases.

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The following personal profile variables were found to differentiate the groups, functional areas, or organizational levels to a statistically significant degree, and the discussions are supported by accompanying tables:

Age; The median age of the total population is 43.5 years, that of Group 1 is 41.0 years, and Group 2, 49.5 years. Thus the difference between the two groups is 8.5 years. Generally, the older manager is thought of as being more conservative, more experienced, and having more mature judgment. This is taken into account when the case problems are reviewed and a comparison is made between the upper and lower halves of the age range of the sample. There is no statistically significant difference among the functional areas either of the total sample or of Group 1, but it is noted that the Engineers are a bit younger than the rest. In terms of organizational levels the differences are normal in that ages are expected to be higher in higher levels. The details are given on Table 1.

Education--College; The median number of years of college for Group 2 is half that of Group 1, and this carries over into the organizational levels for the total sample, but only because Levels 1 and 2 are entirely from Group 2. The differences are not statistically significant as between the functional areas, but within Group 1 there is a rise in the number of years from level 1 to level 3. This variable appears to have importance in that a higher degree of technical competence usually accompanies a higher level of

[illegible]

TABLE 1.--Age-distribution by major groups, functional areas, and organizational levels
(N=101).

Major Groups				Functional Areas				Organizational Levels					
N=	101	73	28	14	16	33	16	22	7	5	27	38	24
Age	Total	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
(Nearest)	%	%	%	%	%	%	%	%	%	%	%	%	%
25	5.9	8.2			6.3	12.1		4.5				5.3	16.7
30	10.9	15.1			6.3	12.1	25.0	9.1			7.5	15.8	12.3
35	12.9	12.3	14.3	7.1	25.0	12.1	6.3	13.6	14.3	20.0	14.8	13.2	8.3
40	20.8	21.9	17.9	35.7	6.3	24.2	12.5	23.8	14.3	20.0	29.6	23.7	8.3
45	8.9	12.3		14.3	6.3	9.1	12.5	11.1			22.2	7.9	
50	17.8	16.4	21.4	14.3	18.8	15.2	12.5	33.3		40.0	18.5	18.4	16.7
55	13.9	9.6	25.0	14.3	12.5	12.1	18.8	21.4	43.9			13.2	25.0
60	8.9	4.1	21.4	14.3	18.8	3.0	12.5	11.1	28.6	20.0	7.4	2.6	12.3
Median Age:	43.5	41.0	49.5	46.5	45.0	41.0	44.5	43.5	51.0	47.0	43.0	41.5	44.0
Chi Square:	X2=20.76; p=.004			X2=22.92; p=.737				X2=41.22; p=.051					
Age distribution for Group 1 only				Functional Areas				Organizational Levels					
N=	73			10	7	28	12	16	-	-	21	33	19
Age	Group 1			MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
(Nearest)	%			%	%	%	%	%	%	%	%	%	%
25	8.2				14.3	14.3		6.3				6.1	21.1
30	15.1				14.3	14.3	33.3	12.5			9.5	18.2	15.8
35	12.3			10.0	14.3	10.7	8.3	18.8			14.3	12.1	10.5
40	21.9			20.0	14.3	25.0	16.7	25.0			23.8	27.3	10.5
45	12.3			20.0	14.3	10.7	16.7	6.3			28.6	9.1	
50	16.4			20.0	14.3	14.3	8.3	25.0			19.0	18.2	10.5
55	9.6			10.0	14.3	10.7	8.3	6.3				9.1	21.1
60	4.1			20.0			8.3				4.8		10.5
Median Age:	41.0			48.0	40.0	39.5	41.0	41.0			42.5	40.5	41.0
Chi Square:				X2=20.82; p=.833				X2=23.65; p=.051					

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education. This will be considered in analysis of the case problem solutions. The lower educational level of Group 1 respondents may correlate to some extent with their higher age levels, many of them having been of college age during the depression years when a college education was out of reach for many individuals with limited financial means. The details of this variable are shown on Table 2.

Education--Degrees; The data for this variable are, of course, consistent with the above findings with respect to years of college education. Only the comparison between Groups 1 and 2 is statistically significant. In Group 1 only 11 per cent had not completed work on a bachelors degree, while 57 per cent of Group 2 respondents have no degree. At the bachelors level the difference is small--33 per cent to 29 per cent in favor of Group 1, while at the masters level the contrast is much greater--53 per cent to 14 per cent in favor of Group 1. Similar comparisons pertain to Levels 1 and 2 because they are entirely Group 2 respondents. Details are shown on Table 3.

Education--College Major; One of the objectives in this analysis is to determine if there are any incongruencies between the education majors of the respondents and their work in industry, since appropriate technical background is important in solving technical problems. With respect to this variable the difference between Group 1 and 2 is again significant because only 50 per cent of Group 1 have degrees. To offset, Group 2 respondents can be expected to have more

TABLE 2. - Education, college education by major groups, functional areas, and organizational levels (N-101).

Major Groups	Functional Areas	Organizational Levels
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TABLE 2.--Education, college-distribution by major groups, functional areas, and organizational levels (N=101).

N= Years of College	Major Groups				Functional Areas				Organizational Levels					
	101	73	28	2	14	16	33	16	22	7	5	27	38	24
	Total Grp	1	Grp	2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
None	7.9		28.6		14.3	18.8		6.3	9.1	42.8	60.0	3.7	13.2	4.2
Some	14.9	9.6	28.6			12.5	18.2	18.7	18.2	28.6		7.4		25.0
Four Years	23.8	26.0	17.8		21.4	18.7	30.3	18.7	22.7	14.3		29.6	26.3	20.8
Five Years	19.8	23.4	10.7		35.7	12.5	27.3	18.7	4.5			18.5	26.3	20.8
Six or More	33.6	41.0	14.3		28.6	37.5	24.2	37.6	45.5	14.3	40.0	40.8	34.2	29.2
Median Yrs:	4.7	5.1	2.5		4.9	4.5	4.6	4.8	4.5	2.0	1.2	4.8	4.9	4.5
Chi Square:	X ² =32.84; p=.000				X ² =24.83; p=.637				X ² =59.33; p=.001					
Education, college-distribu- tion Group 1 only														
N= Years of College	Group 1				Functional Areas				Organizational Levels					
	73				10	7	28	12	16	-	-	21	33	19
	MFG				MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
None														
Some	9.6						14.3	8.3	12.5			4.8	9.1	15.8
Four Years	26.0				30.0	28.6	28.6	16.7	25.0			33.3	24.2	21.1
Five Years	23.4				30.0	28.6	28.6	25.0	6.3			9.5	30.3	26.3
Six or More	41.0				40.0	42.8	28.5	50.0	54.2			52.4	36.4	36.8
Median Yrs:	5.1				5.2	5.3	4.8	5.5	5.7			5.9	5.1	5.0
Chi Square:					X ² =15.54; p=.904				X ² =15.82; p=.199					

TABLE 1. -- Education, degrees--distribution by major groups, functional areas, and organizational levels (N=101).		
Major Groups	Functional Areas	Organizational Levels

TABLE 3.--Education, degrees-distribution by major groups, functional areas, and organizational levels (N=101).

N=	Major Groups				Functional Areas				Organizational Levels							
	101		73		28		14	16	33	16	22	7	5	27	38	24
	Total Grp 1		Grp 2		MFG	MKTG	ENG	P&A	A/F/S		L-1	L-2	L-3	L-4	L-5	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
College Degrees	23.8	11.0	57.1	14.3	31.3	18.2	25.0	31.8	71.4	60.0	11.1	15.8	29.2			
None	31.7	32.9	28.6	35.7	31.3	42.4	18.8	22.7	14.3	20.0	44.4	34.2	20.8			
Bachelors	42.6	53.4	14.3	50.0	37.5	36.4	56.3	40.9	14.3	20.0	40.7	47.4	50.0			
Masters	2.0	2.7				3.0		4.5			3.7	2.6				
Doctoral																
Chi Square:	X ² =26.33; p=.000				X ² =7.75; p=.805				X ² =19.48; p=.078							
Education, degrees-distribu- tion for Group 1 only																
N=	Group 1				Group 2				Group 3				Group 4			
College Degrees	10	7	28		12	16										
	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5						
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
None	11.0															
Bachelors	32.9															
Masters	53.4															
Doctoral	2.7															
Chi Square:	X ² =8.44; p=.750				X ² =3.96; p=.682											

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years of practical experience. Significant differences exist, as expected, between the functional areas, both in total and in Group 1. These are normal, since most functions require an educational background consistent with the nature of the function--engineers work at engineering, accountants at accounting, etc. Personnel and Marketing tend to make use of specialists, the former for training, and the latter for technical service to the customer, so some mixture in these areas is to be expected. These differences are not visible in the organizational levels. Another aspect of this variable is that acquisition of a purely technical education, if not accompanied by some exposure to the humanities or the behavioral disciplines, might be reflected in a manager's excessively impersonal approach to ethical problems. These educational variables will be discussed when the case problems are reviewed. Details of the distribution of the educational majors are shown on Table 4.

Religion--Denomination; Religious affiliation is one of the most significant differences between Groups 1 and 2, primarily due to the fact that Group 2 are predominantly Baptists--57 per cent, with Presbyterians and non-denominational Protestants making up most of the balance. By contrast, Group 1 includes 44 per cent Roman Catholic, 43 per cent in various Protestant denominations, 7 per cent Judaic and other non-Christian, and 6 per cent non-responsive. However, these differences are not significant as between areas or levels, being fairly evenly dispersed. Group 2

TABLE 4.--Education, major-distribution by major groups, functional areas, and organizational levels (N=101).

N=	Major Groups					Functional Areas					Organizational Levels							
	101		73		28	14		16	33	16	22	7		5	27	38	24	
	Total Grp		1 Grp		2	MFG		MKTG	ENG	P&A	A/F/S	L-1		L-2	L-3	L-4	L-5	
College Major	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
a. Business	29.8	34.1	17.8	40.0	31.2	6.0	25.0	54.6	28.6	44.4	28.9	20.8						
General	8.8	11.0	3.6	14.3	6.2	3.0	6.3	18.3		11.1	7.8	12.5						
Adm. Sci.	3.0	4.1		7.1				9.2		3.7	5.3							
Accounting	5.0	5.5	3.6	14.3				13.6	14.3	7.4	5.3							
Pers/LIR	2.0	2.7								3.7	2.6							
Mktg/Dist	6.0	6.7	3.6		25.0	3.0	6.2			7.4	5.3	8.3						
Management	5.0	4.1	7.0	14.3				13.6	14.3	11.1	2.6							
b. Engineer	30.6	32.7	25.0	28.6	18.8	57.5	12.5	13.6	14.3	33.3	31.6	33.3						
Industrial	5.0	6.7		14.3		6.1		4.6		3.7	2.6	12.5						
Mechanical	15.8	13.7	21.4	14.3	12.5	30.2	12.5			18.5	13.2	16.6						
Electrical	6.8	8.2	3.6			18.2		4.5		7.4	10.5	4.2						
Other Eng.	3.0	4.1			6.3	3.0		4.5		3.7	5.3							
c. All other	21.8	28.7	7.2	7.1	18.8	21.4	43.7	18.2	--	14.8	29.0	25.0						
Geol/Zool	2.0	1.4	3.6			3.1		4.5		3.7		4.2						
Psychology	4.0	5.5				6.1	12.5			3.7	7.9							
Education	6.9	9.6	3.6	7.1	6.3	9.1	12.5				5.3	16.6						
Math	3.0	4.1				3.1		9.2			7.9							
Other	5.9	8.1			12.5		18.7	4.5		7.4	7.9	4.2						
d. No Major																		
(No degree)	17.8	5.5	50.0	14.3	31.2	15.1	18.8	13.6	57.1	60.0	7.5	10.5	20.9					
Chi Square:	X ² =44.19; p=.027					X ² =146.22; p=.017					X ² =103.27; p=.710							

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is at the conservative end of the religious spectrum, as will be evident in the following two associated variables. These characteristics form the basis of differentiation with respect to Hypothesis 6, which considers if the more religious manager is more concerned about the interests of others and less about his own than the less religious manager. Details of the denominational differences are shown on Table 5.

Religion--Position; This is one of the more meaningful items of information, inasmuch as whether a respondent considers himself religiously a conservative, moderate, or liberal may indicate the degree of his commitment to moral imperatives in the ethical context. Eighty-nine per cent of Group 2 respondents identified themselves as conservatives, as compared with 29 per cent in Group 1. These differences are dispersed in the functional areas and organizational levels, except for Level 1 and 2, which are all Group 2 respondents. Details are given on Table 6.

Religion--Importance; The respondent indicated how important his religion was to him by use of a seven-point scale. The difference in overall rating between the two groups is considerable, Group 1 being 4.7, and Group 2 is 6.9. While the differences among the areas and levels are not statistically significant, in part because of the dispersion of Group 2 respondents, an interesting progression

1. *Introduction* 1

[illegible]

TABLE 5.--Religion, denomination-distribution by major groups, functional areas, and organizational levels (N=101).

N= Religion, Denomination	Major Groups					Functional Areas					Organizational Levels				
	101	73	28			14	16	33	16	22	7	5	27	38	24
	Total	Grp 1	Grp 2			MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
	%	%	%			%	%	%	%	%	%	%	%	%	%
Roman Catholic	31.7	43.8				28.6	31.3	36.4	37.5	22.7			29.6	44.7	29.2
Hebrew	3.0	4.1				7.1		3.0		4.5				5.3	4.2
Episcopal	4.9	6.8					6.3	6.1	12.5				11.1	2.6	4.2
Presbyterian	10.9	9.6	14.3			7.1		12.1	6.3	22.7			18.5	10.5	8.3
Methodist	7.9	9.6	3.6			21.4		3.0	6.3	13.6	14.3		7.4	2.6	16.7
Baptist	18.8	4.1	57.1			14.3	37.5	9.1	25.0	18.2	57.1	40.0	22.2	7.9	16.7
Lutheran	5.0	5.5	3.6					12.1		4.5		20.0	3.7	2.6	8.3
Other Protestant	11.9	8.2	21.4			14.3	25.0	9.1	12.5	4.5	28.6	40.0	3.7	13.2	8.3
Non-Christian	2.0	2.7						6.1						2.6	4.2
No Relig/No Response	3.9	5.5				7.1		3.0		9.1			3.7	2.6	
Chi Square:	X ² =52.36; p=.000					X ² =47.37; p=.656					X ² =53.70; p=.409				
Religion, denomination--distribution for Group 1 only															
N= Religion, Denomination	Major Groups					Functional Areas					Organizational Levels				
	73					10	7	28	12	16	-	-	21	33	19
	Group 1					MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
	%					%	%	%	%	%	%	%	%	%	%
Roman Catholic	43.8					40.0	71.4	42.9	50.0	31.3			38.1	51.5	36.8
Hebrew	4.1					10.0		3.6		6.3				6.1	5.3
Episcopal	6.8						14.3	7.1	16.7				14.3	3.0	5.3
Presbyterian	9.6							7.1	8.3	25.0			19.0	6.1	5.3
Methodist	9.6					30.0		3.6	8.3	12.5			9.5	3.0	21.0
Baptist	4.1					10.0		3.6		6.3			4.8	3.0	5.3
Lutheran	5.5							14.3					4.8	3.0	10.5
Other Protestant	8.2						14.3	7.1	16.7	6.3			4.8	12.1	5.3
Non-Christian	2.7							7.1					3.0		5.3
No Relig/No Response	5.5					10.0		3.6		12.5			9.1		
Chi Square:	X ² =43.77; p=.784					X ² =26.90; p=.415									

TABLE 6.--Religion, position-distribution by major group, functional areas, and organizational levels (N=101).

N= Religion, Position	Major Groups				Functional Areas				Organizational Levels					
	101	73	28	Total Grp	14	16	33	16	22	7	5	27	38	24
	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5		
Rk	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Conservative	1	45.6	28.8	89.3	42.9	75.0	39.4	56.3	27.3	85.7	100.0	55.6	26.3	41.7
	2	35.6	46.6	7.1	50.0	18.7	33.3	25.0	50.0			40.7	42.1	37.5
	3	16.8	21.9	3.6	7.1	6.3	24.3	18.7	18.2	14.3		3.7	26.3	20.8
	4	2.0	2.7			3.0			4.5			5.3		
Median:		1.64	1.93	1.06	1.64	1.17	1.82	1.39	1.96	1.08	1.00	1.40	2.04	1.72
Chi Square:		X ² =29.92; p=.000			X ² =14.09; p=.295			X ² =23.64; p=.023						
N= Religion, Position	Religion, position-distribution for Group 1 only				Functional Areas				Organizational Levels					
	73				10	7	28	12	16	-	-	21	33	19
	Group 1				MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Rk	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Conservative	1	28.8	30.0	42.9	28.6	41.7	12.5					47.6	15.1	31.6
	2	46.6	60.0	42.8	39.3	33.3	62.5					47.6	48.5	42.1
	3	21.9	10.0	14.3	28.6	25.0	18.7					4.8	30.3	26.3
	0	2.7			3.5		6.3					6.1		
Median:		1.93	1.83	1.67	2.04	1.75	2.10					1.55	2.22	1.81
Chi Square:		X ² =7.81; p=.800			X ² =11.36; p=.078									

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is visible in the functional areas of Group 1, where the ratings range from a low of 3.9 for Accounting/Finance/Systems, to 4.7 for Personnel & Administration, 4.9 for Engineering, 5.3 for Marketing, and 5.4 for Manufacturing. It appears, from examining the previous tables on denomination and position, that Roman Catholic tendency toward conservatism is modified by Protestant moderates to produce this result. Details of the ratings are shown on Table 7.

Membership in Fraternal Order; Many fraternal orders have strong religious and ethical bases, and members may be more sensitive to ethical issues, which explains why this variable is included. The difference is statistically significant only between Groups 1 and 2, who acknowledge a membership, respectively, of 37 per cent and 7 per cent. It should be explained that most Group 2 respondents heed the Scriptural admonition against oath-taking¹ which is why so few of them belong to secret fraternal orders such as the Masonic order. Table 8 shows details for both fraternal and professional affiliation.

Membership in Professional Group; This variable also has importance as an indicator of the respondents' adherence to a code of professional ethics, such as that of the Certified Public Accountants, or of professional standards,

¹Holy Bible, King James Version (Scofield ed.; New York: Oxford University Press, 1945), Matthew 5:33-7.

TABLE 7.--Religion, importance-distribution by major groups, functional areas, and organizational levels (N=101).

N= Religion, Importance	Major Groups				Functional Areas					Organizational Levels				
	101	73	28	Total Grp 1	14	16	33	22	7	5	27	38	24	
	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5				
	%	%	%	%	%	%	%	%	%	%	%	%	%	
Low -0	3.0	4.1					3.0	9.1				7.9		
1	2.0	2.7					6.1					2.6	4.2	
2	3.0	4.1						4.5			7.4	2.6		
3	5.9	8.2					6.1	12.5			7.4	7.9	4.2	
4	18.8	26.0			28.6	12.5	21.2	13.6			22.2	26.3	12.5	
5	14.9	20.5			18.8	18.7	15.2	22.7			7.4	15.8	29.2	
6	11.9	12.3	10.7	28.6	18.2	12.5	18.2				11.1	10.5	16.7	
High-7	40.6	21.9	89.3	42.8	68.7	37.5	30.3	36.4	14.3	85.7	100.0	26.3	33.3	
Av Wgtd Mn:	5.30	4.69	6.89	5.85	6.25	5.06	5.18	4.72	6.85	7.00	5.40	4.63	5.45	
Chi Square:	X ² =41.08; p=.000				X ² =36.92; p=.121				X ² =32.00; p=.275					
N= Religion, Importance	Religion, importance-distribu- tion for Group 1 only				Functional Areas					Organizational Levels				
	73	10	7	28	12	16			-	-	21	33	19	
	Group 1	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5			
	%	%	%	%	%	%	%	%	%	%	%	%	%	
Low -0	4.1			3.6		12.5						9.1		
1	2.7			7.1								3.0	5.3	
2	4.1					6.3					9.5	3.0		
3	8.2			7.1	16.7	18.8					9.5	9.1	5.3	
4	26.0	40.0	28.6	25.0	8.3	18.8					28.6	30.3	15.8	
5	20.5			17.9	25.0	18.8					9.5	18.2	36.8	
6	12.3	40.0	42.9	14.3	16.7	31.2					14.3	9.1	15.8	
High-7	21.9	20.0	28.5	25.0	8.3						28.6	18.2	21.1	
Av Wgtd Mn:	4.69	5.40	5.28	4.78	4.66	3.87					4.95	4.30	5.10	
Chi Square:	X ² =33.60; p=.214				X ² =13.32; p=.502									

TABLE 11. -- External/professional membership distribution by major groups, functional areas, and organizational levels (N=101).

Major Groups	Functional Areas		Organizational Levels	
	Functional Areas	Organizational Levels	Functional Areas	Organizational Levels

TABLE 8.--Fraternal/professional membership-distribution by major groups, functional areas, and organizational levels (N=101).

Major Groups				Functional Areas				Organizational Levels								
N=				101	73	28	14	16	33	16	22	7	5	27	38	24
Memberships				Total	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
N=				%	%	%	%	%	%	%	%	%	%	%	%	%
a. Fraternal																
Yes				28.7	37.0	7.1	35.7	12.5	30.3	18.8	40.9			40.7	28.9	29.2
No				71.3	63.0	92.9	64.3	87.5	69.7	81.2	59.1	100.0	100.0	59.3	71.1	70.8
b. Profess.																
Yes				66.0	70.0	57.0	71.4	56.3	54.5	81.2	77.3	71.4	60.0	81.5	73.7	37.5
No				34.0	30.0	43.0	28.6	43.7	45.5	18.8	22.7	28.6	40.0	18.5	26.3	62.5
Chi Sq. a:				X ² =8.81; p=.003			X ² =4.81; p=.308			X ² =6.75; p=.150						
Chi Sq. b:				X ² =1.47; p=.226			X ² =5.72; p=.221			X ² =12.8; p=.012						
Memberships-distribution for Group 1 only																
N=				Group 1			Functional Areas				Organizational Levels					
Memberships				%	%	%	%	%	%	%	%	%	%	%	%	%
a. Fraternal				37.0			50.0	28.6	32.1	25.0	50.0			52.4	30.3	31.6
Yes				63.0			50.0	71.4	67.9	75.0	50.0			47.6	70.7	68.4
No																
b. Profess.				70.0			80.0	57.1	53.6	91.7	81.3			85.7	72.7	47.4
Yes				30.0			20.0	42.9	46.4	8.3	18.8			14.3	27.3	52.6
No																
Chi Sq. a:				X ² =3.12; p=.537			X ² =3.01; p=.222			X ² =7.20; p=.027						
Chi Sq. b:				X ² =8.25; p=.083			X ² =7.20; p=.027									

such as the Society of Automotive Engineers. Sixty-six per cent of all the respondents belong to a professional group, but the differences in proportionate membership are significant only in the organizational levels, where a higher percentage of membership is evident in higher levels. This is true of both Group 1 and 2. In the functional areas, Marketing and Engineering are somewhat lower than the other three areas. Details are provided on Table 8.

Parents' Education; While the educational level of the fathers of Group 2 respondents is somewhat lower than those of Group 1, the difference is not statistically significant. In contrast, the educational level of the mothers reflects a considerable difference as between the two groups. This carries over into Levels 1 and 2. The lower educational level of Group 2's mothers may be due to the fact that they identify with a generation ten years earlier than that of Group 1, their school years coming before World War I, when there was less stress on education for girls. These variables add weight to those already discussed, and will be further considered when the tests of correlation are examined. Table 9 provides details on the education of the parents.

Personal Activities/Interests/Goals; The respondents were requested to indicate, in rank order, their three most important activities, interests or goals. The results were consolidated into nine categories. There was a

TABLE 9. - Personnel education distribution by major group, functional areas, and organizational levels (N-101)

Major Group	Functional Areas		Organizational Levels

TABLE 9.--Parent's education-distribution by major groups, functional areas, and organizational levels (N=101).

	Major Groups			Functional Areas					Organizational Levels								
	101	73	28	14	16	33	16	22	7	5	27	38	24				
N=																	
Education	Total Grp			1	Grp	2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5	
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
a. Father's																	
Grade Schl	36.6	32.9	46.4	35.7	43.8	33.3	43.8	31.8	57.1	40.0	37.0	34.2	33.3				
High Schl	39.6	42.5	33.1	35.7	37.5	39.4	43.8	40.9	14.3	60.0	29.6	50.0	37.5				
College	23.8	24.6	21.5	28.6	18.7	27.3	12.4	27.3	28.6								
b. Mother's																	
Grade Schl	32.7	24.7	53.6	50.0	43.8	27.3	31.3	22.7	71.4	80.0	25.9	26.3	29.2				
High Schl	50.5	56.2	35.7	35.7	37.5	51.5	56.2	63.6	14.3	20.0	51.9	63.2	45.8				
College	16.8	19.1	10.7	14.3	18.7	21.2	12.5	13.7	14.3								
Chi Sq. a:	$\chi^2=3.72$; $p=.812$			$\chi^2=27.83$; $p=.473$					$\chi^2=22.09$; $p=.777$								
Chi Sq. b:	$\chi^2=11.96$; $p=.035$			$\chi^2=15.23$; $p=.763$					$\chi^2=41.22$; $p=.004$								
Parent's education- distribution for Group 1 only																	
73																	
Group 1																	
N=																	
Education	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
a. Father's																	
Grade Schl	32.9	28.6	32.1	50.0	25.0												
High Schl	42.5	57.1	39.3	33.3	50.0												
College	24.6	14.3	28.6	16.7	25.0												
b. Mother's																	
Grade Schl	24.7	28.6	28.6	25.0	6.2												
High Schl	56.2	57.1	46.4	58.3	81.3												
College	19.1	14.3	25.0	16.7	12.5												
Chi Sq. a:	$\chi^2=30.53$; $p=.339$					$\chi^2=13.74$; $p=.469$											
Chi Sq. b:	$\chi^2=12.46$; $p=.712$					$\chi^2=7.99$; $p=.435$											

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statistically significant set of differences only with respect to the two groups. While both groups place Family, Work, and Self-Improvement high and in the same order, the point of interest is Church and Spiritual Activities, which Group 1 ranks last, and Group 2 first. Also, Group 1 ranks Financial Security fifth, and Group 2 eighth. They are in general agreement for all other interests as far as order of importance is concerned. It is also of interest to note that the percentage totals (as seen on the related tables) for each group for Family and Work are very similar, and that the high percentage of Group 1 for Church and Spiritual activities results in very low percentages in the remaining areas. In other words, Group 2 is as much concerned about Family and Work as Group 1, but gives its primary concern to its spiritual outreach in lieu of most other activities. Although the Chi Square tests indicated significance only at the group level, as seen on Table 10, the five additional tables--11 through 15--have also been included to enable the interested reader to see how the functional areas and organizational levels in both groups ranked the nine categories of activities. For example, after Work and Family, which all but Marketing rank in first or second place, Engineering ranks Hobbies, Personnel and Administration ranks Community Affairs, and the others Self-Improvement. In Group 2 functional areas, Marketing ranks Financial Security in second place and Family fourth. The

TABLE 10. ---Proportional activity/information/goals-distribution by major groups (N=101).

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TABLE 10.--Personal activities/interests/goals-distribution by major groups (N=101).

Major Groups	Choice	Family's Welfare	Own Health	Financial Security	Work, Profession	Hobbies, Avocation	Community Affairs	Friends, Neighbors	Self Improvement	Church, Spiritual	No Response
		1	2	3	4	5	6	7	8	9	0
Group 1 N=73	1st	53.4	1.4	4.1	16.4	5.5	2.7	1.4	5.5	2.7	6.9
	2nd	13.7	1.4	9.6	42.5	4.1	6.8	2.7	6.9	4.1	8.2
	3rd	5.5	4.5	9.6	13.7	19.2	9.6	5.5	19.2	1.3	10.9
	Total	72.6	8.3	23.3	72.6	28.8	19.1	9.6	31.6	8.1	26.0
	Rank	1	8	5	2	4	6	7	3	9	-
Group 2 N=28	1st	25.0			17.1			3.6	3.6	60.7	
	2nd	42.9			14.3	10.7	3.6		7.1	21.4	
	3rd	7.1	3.6	7.2	50.0		3.6	7.1	7.1	10.7	3.6
	Total	75.0	3.6	7.2	71.4	10.7	7.2	10.7	17.8	92.8	3.6
	Rank	2	9	8	3	5	7	6	4	1	-
Total N=101	1st	45.5	1.0	3.0	13.9	4.0	2.0	2.0	4.9	18.8	4.9
	2nd	21.8	1.0	6.9	34.7	5.9	5.9	2.0	6.9	8.9	6.0
	3rd	5.9	5.0	8.9	23.8	13.9	7.9	5.9	15.8	4.0	8.9
	Total	73.2	7.0	18.8	72.4	23.8	14.8	9.9	27.6	31.7	19.8
	Rank	1	9	6	2	5	7	8	4	3	-
Chi Square	1st	X ² =47.41; p=.0000									
	2nd	X ² =27.34; p=.0012									
	3rd	X ² =25.54; p=.0024									

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TABLE 12. Percentage of eggs in different quality categories by development stage (N=101), both groups.

Organi- zational Level	1	2	3	4	5	6	7	8	9	No Response
	Family's Welfare	Own Health	Financial Security	Work, Profession	Hobbies, Avocation	Community Affairs	Friends, Neighbors	Self Improvement	Church, Spiritual	
L-1 N=7	1st 28.6 2nd 14.3 3rd 28.6 Total 71.5 Rank 2	- -	14.3 14.3 6-T	14.3 14.3 57.2 3	28.6 28.6 4-T	- -	14.3 14.3 6-T	28.6 28.6 4-T	57.1 14.3 14.3 85.7 1	- -
L-2 N=5	1st 20.0 2nd 60.0 3rd Total 80.0 Rank 3	- -	- -	20.0 80.0 100.0 2	- -	- -	20.0 20.0 4	- -	80.0 20.0 100.0 1	- -
L-3 N=27	1st 44.4 2nd 37.0 3rd 3.7 Total 85.1 Rank 1	7.4 7.4 9	18.5 18.5 5	22.2 25.9 33.3 81.4 2	3.7 3.7 18.5 25.9 4	3.7 3.7 11.1 18.5 7	3.7 7.4 11.1 8	11.1 11.1 7.4 18.5 6	11.1 11.1 7.4 29.6 3	3.7 3.7 -
L-4 N=38	1st 52.6 2nd 13.2 3rd 7.9 Total 73.7 Rank 1	2.6 2.6 9	2.6 2.6 13.2 18.4 6	10.5 44.7 18.4 73.6 2	5.3 2.6 18.4 26.3 4	2.6 10.5 2.6 15.7 7	2.6 2.6 2.6 8	5.3 5.3 23.7 34.3 3	10.5 7.9 13.2 18.4 5	10.5 10.5 34.2 -
L-5 N=24	1st 45.8 2nd 12.5 3rd Total 58.3 Rank 1	4.2 4.2 8.3 16.7 8-T	8.3 4.2 12.5 25.0 5	12.5 37.5 8.3 58.3 2	4.2 8.3 20.8 7	4.2 16.7 20.9 6	4.2 4.2 16.7 8-T	12.5 20.8 33.3 3	16.7 4.2 4.2 25.1 4	4.2 8.3 12.5 25.0 -
Chi Sq	1st 2nd 3rd									

$\chi^2=40.42$; $p=.281$
 $\chi^2=47.24$; $p=.099$
 $\chi^2=50.53$; $p=.055$

TABLE 13.--Personal activities/interests/goals-distributed by functional areas (N=73), group 1 only.

Functional Area	Choice	Family's Welfare	Own Health	Financial Security	Work, Profession	Hobbies, Avocation	Community Affairs	Friends, Neighbors	Self Improvement	Church, Spiritual	No Response
		1	2	3	4	5	6	7	8	9	0
MFG N=10	1st	50.0		10.0	20.0	10.0				10.0	
	2nd	20.0		10.0	40.0				20.0	10.0	
	3rd				20.0	10.0	30.0	30.0	10.0		
	Total Rank	70.0 2		20.0 6-T	80.0 1	20.0 8	30.0 4-T	30.0 4-T	30.0 3	20.0 6-T	
MKTG N=7	1st	14.3		28.6	28.6				28.6		
	2nd		14.3	14.3	57.1			14.3			
	3rd	14.3		14.3	14.3				28.6	14.3	14.3
	Total Rank	28.6 4	14.3 5-T	57.2 2	90.0 1			14.3 5-T	57.2 3	14.3 7-T	14.3 7-T
ENG N=28	1st	64.3	3.6		14.3	3.6	3.6				10.7
	2nd	14.3		7.1	39.3	7.1	3.6	3.6	3.6	7.1	14.3
	3rd		7.1	14.3	10.7	28.6	3.6			21.4	14.3
	Total Rank	78.6 1	10.7 7	21.4 5	64.3 2	39.3 3	10.8 6	3.6 8-T	3.6 8-T	28.5 4	39.3
P&A N=12	1st	50.0			25.0	8.3	8.3		8.3		
	2nd	16.7			41.7	8.3	33.3				
	3rd	16.7	8.3	8.3	8.3	16.7	16.7	8.3	16.7		
	Total Rank	83.4 1	8.3 6-T	8.3 6-T	75.0 2	33.3 4	58.3 3	8.3 6-T	25.0 5		
A/F/S N=16	1st	56.3			6.3	6.3					12.5
	2nd	12.5		18.7	43.8			6.3	6.2	6.3	12.5
	3rd	6.3	6.3	6.3	18.8	18.7	6.3		12.5		12.5
	Total Rank	75.1 1	6.3 8-T	25.0 4	68.9 2	25.0 5	6.3 8-T	6.3 6-T	37.5 3	6.3 6-T	43.8
Chi Sq	1st	X ² =43.38; p=.186									
	2nd	X ² =48.04; p=.087									
	3rd	X ² =47.99; p=.087									

TABLE 14.--Personal activities/interests/goals-distributed by organizational level (N=73), group 1 only.

Organi- zational Level	Choice	Family's Welfare	Own Health	Financial Security	Work, Profession	Hobbies, Avocation	Community Affairs	Friends, Neighbors	Self Improvement	Church, Spiritual	No Response
L-1 N=0	1st 2nd 3rd Total Rank	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —
L-2 N=0	1st 2nd 3rd Total Rank	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —	— — — — —
L-3 N=21	1st 2nd 3rd Total Rank	52.4 28.6 4.8 85.8 1	— — 9.5 9.5 8	23.8 23.8 23.8 76.2 2	23.8 28.6 23.8 76.2 2	4.8 4.8 23.8 33.4 3	4.8 4.8 14.3 23.9 5	4.8 9.5 14.3 28.5 7	9.5 9.5 28.5 4	4.8 4.8 4.8 9	— — — — —
L-4 N=33	1st 2nd 3rd Total Rank	54.5 9.1 9.1 72.7 2	— — 3.0 3.0 9	3.0 3.0 12.1 18.1 6	12.1 51.5 12.1 75.7 1	6.1 3.0 21.2 30.3 4	3.0 12.1 3.0 18.1 5	3.0 3.0 3.0 8	6.1 6.1 24.2 36.4 3	3.0 — 3.0 7	12.1 12.1 15.2 39.4 —
L-5 N=19	1st 2nd 3rd Total Rank	52.6 5.3 57.9 2	5.3 5.3 15.9 6	10.5 5.3 31.6 4	15.8 42.1 63.2 1	5.3 5.3 21.1 5	15.8 15.8 15.8 8	5.3 10.5 15.8 7	15.8 21.1 36.9 3	5.3 5.3 10.6 9	5.3 10.5 15.8 31.6 —
Chi Sq	1st 2nd 3rd	X ² =15.71; p=.613 X ² =28.64; p=.053 X ² =22.75; p=.201									

functional areas and organizational

TABLE 15.--Personal activities, interests, goals-distributed by functional areas and organizational levels, group 2 only (N=28).

N= Consolidated Activ/Inter/Goals	Functional Areas										Organizational Levels											
	28 Grp 2		4 MFG		9 MKTG		5 ENG		4 P&A		6 A/F/S		7 L-1		5 L-2		6 L-3		5 L-4		5 L-5	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
Family's Welfare	75.0	2	75.0	3	55.6	4	60.0	2	100.0	1	100.0	1	71.4	3	80.0	3	83.3	3	80.0	2	60.0	3
Work, Profession	71.4	3	100.0	1	66.7	3	60.0	3	75.0	3	66.7	3	57.2	4	100.0	2	100.0	1	60.0	3	40.0	4
Church, Spiritual	92.8	1	75.0	2	100.0	1	120.0	1	75.0	2	83.3	2	85.7	1	100.0	1	83.4	2	120.0	1	80.0	2
All Other	60.8	4	50.0	4	77.7	2	60.0	4	50.0	4	50.0	4	85.7	2	20.0	4	33.3	4	40.0	4	120.0	1
Chi Square	$\chi^2=3.67$; $p\approx.989$										$\chi^2=9.50$; $p\approx.650$											

^aR means Rank.

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rankings of these personal activities serve as clues to indicate how the respondents equate personal interests as opposed to interests of (or in) others. This is of interest with respect to Hypotheses 4 and 6.

Study of Religion, Ethics, Logic, Psychology; This is the final set of variables in the Personal Profile section. At the group level, more of Group 2 respondents have studied religion and ethics than Group 1, proportionately speaking, while the reverse is true of logic and psychology. In the functional areas, a statistical significance pertains only to the area of ethics, and the greatest difference is found between Engineering, of whom only 9 per cent had studied ethics, compared with 63 per cent in Marketing. The same degree of difference is seen in Group 1 functional areas alone. With respect to the study of these four important topics, a previous comment was made in discussing the educational levels of the respondents and their major areas of study, that exposure to the humanities and behavioral disciplines might be desirable to counter any tendency on the part of managers to be excessively impersonal, with only a purely technical background. Details are shown on Tables 16 and 17.

Summary of Section 1

The groups, functional areas, and organizational levels are differentiated to a statistically significant degree with respect to the following variables: Age,

TABLE 16. -- Studied religion, ethics, logic, psychology-distribution by major groups, functional areas, and organizational levels (N=101).

TABLE 16.--Studied religion, ethics, logic, psychology-distribution by major groups, functional areas, and organizational levels (N=101).

N= Those Who Studied	Major Groups				Functional Areas					Organizational Levels				
	101	73	28		14	16	33	16	22	7	5	27	38	24
	Total Grp	1 Grp	2 Grp		MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
	%	%	%		%	%	%	%	%	%	%	%	%	%
a. Religion	60.4	53.4	78.6		64.3	81.3	51.5	68.8	50.0	85.7	80.0	51.9	63.2	54.2
Chi Square	X ² =5.35; p=.021				X ² =5.55; p=.236				X ² =4.01; p=.404					
b. Ethics	31.7	28.8	39.3		21.4	62.5	9.1	37.5	45.5	42.9	60.0	37.0	28.9	20.8
Chi Square	X ² =1.03; p=.309				X ² =17.66; p=.0014				X ² =4.05; p=.399					
c. Logic	42.6	49.3	25.0		28.6	50.0	33.3	56.3	50.0	28.6	40.0	40.7	55.3	29.2
Chi Square	X ² =4.89; p=.027				X ² =4.36; p=.360				X ² =4.88; p=.300					
d. Psychology	58.4	65.8	39.3		57.1	68.7	45.5	68.8	63.6	14.3	60.0	63.0	65.8	54.2
Chi Square	X ² =5.84; p=.016				X ² =3.95; p=.414				X ² =6.88; p=.143					
Mean	48.3	49.3	45.3		42.9	65.6	34.9	57.9	52.3	42.9	60.0	48.2	53.3	39.6

TABLE 17.--Studied religion, ethics, logic, psychology-distribution by functional areas and organizational levels, group 1 only (N=73).

N= Those Who Studied	73 Group 1	Functional Areas					Organizational Levels				
		10	7	28	12	16	-	-	21	33	19
		MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
	%	%	%	%	%	%	%	%	%	%	%
a. Religion	53.4	60.0	85.7	46.4	66.7	37.5			47.6	60.6	47.4
Chi Square		$\chi^2=6.13$; $p=.189$							$\chi^2=1.25$; $p=.536$		
b. Ethics	28.8	20.0	71.4	10.7	50.0	31.3			38.1	30.3	15.8
Chi Square		$\chi^2=13.73$; $p=.008$							$\chi^2=2.49$; $p=.288$		
c. Logic	49.3	30.0	71.4	35.7	75.0	56.3			42.9	63.6	31.6
Chi Square		$\chi^2=8.41$; $p=.078$							$\chi^2=5.45$; $p=.066$		
d. Psychology	65.8	70.0	85.7	46.4	83.3	75.0			61.9	69.7	63.2
Chi Square		$\chi^2=8.22$; $p=.084$							$\chi^2=.42$; $p=.809$		
Mean	49.3	45.0	78.6	39.8	68.8	50.0			47.6	56.1	39.5

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College Education (years, degrees, major), Religion (denomination, position, importance), Memberships in Fraternal and Professional Groups, Parents' Education, Personal Activities/Interests/Goals, and Study of Religion, Ethics, Logic, and Psychology. These findings will be drawn into later analyses of the case problems and in connection with discussions of the tests of the research hypotheses.

2. Findings: Influential Variables

In Part II of the questionnaire, the respondent was requested to rate, on a seven-point scale, each of a list of influences which may, under various circumstances, enter into the manager's considerations in making decisions, or which may have a subconscious effect on his judgment or choice of alternatives. These eighteen influences have been differentiated into three categories--those identifiable with some form of authority, those concerned with some aspect of the organization, and those with respect to which the manager's self-interest is paramount. Figure 2 depicts the arrangement. For purposes of this research, these influences are viewed in several ways, which include the following: those with respect to which the groups, areas, or levels differ to a statistically significant degree; those with respect to which they closely agree; and the way they are ranked relative to each other within the groups, areas, and levels. For convenience in comparison and analysis they have been arranged on four sets of tables

(Numbering in Accordance With Questionnaire)

Authority Orientation

- 1. Company Policies/Procedures
 - 2. Top Management Attitude
 - 3. Your Supervisor's Attitude
 - 10. Own Ethical Standards
 - 11. Own Religious Beliefs
 - 12. Legal Constraints
-

Organizational Orientation

- 4. Company Economic Interests
 - 5. Your Peer Group's Attitude
 - 6. Customer/Supplier Welfare
 - 13. Company's Reputation
 - 14. Subordinates' Attitude
 - 15. Society's Interests
-

Self Orientation

- 7. Wife's/Family's Attitudes
 - 8. Own Economic Interests
 - 9. Own Professional Competence
 - 16. Fear of Losing Job
 - 17. Own Personal Integrity
 - 18. Own Career Aspirations
-

Figure 2.--Influences--Classified by A-O-S Orientation.

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according to groups, areas, and levels, including those under Group 2. The level of statistical significance is of minor importance due to the fact that, under the standard computer program used, this deals with the relative frequencies under each of the seven scale positions. Of more significance are the mean ratings and the resulting rank positions. Tables 18 through 21 show the details.

Company Policy: This is an authority-oriented item in terms of its effect on decision-making. Under normal conditions decisions are made in accordance with applicable policy, stated or inferred. Most respondents ranked this influence about mid-range, but Manufacturing ranked it in 6th place and Level 5 ranked it 2nd.

Top Management's Attitude: An authority item, ranked in mid-range by most, but Personnel and Administration ranked it 5th and Level 4 ranked it 7th.

Supervisor's Attitude: Also an authority item, there is disagreement, Group 1 ranking it 7th, but Group 2 ranked it 11th. Engineering ranked it 5th, while Marketing and P & A ranked it 13th. There are quite obviously mixed feelings as to the relative importance of Top Management vs the Supervisor in the manager's decision-making.

Company's Economic Interest: An organization-oriented item, it is ranked high--4th--by most, but surprisingly, P & A ranked it 14th. This may be a clue to the way they perceived the case problem solutions.

TABLE 18.--Influences-ratings in weighted means and medians, rankings, and A-O-S orientations-major groups.

Influence	Orient. Code	N=			73			28			101			73			28		
		Total			Group 1			Group 2			Totals			Group 1			Group 2		
		W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	Med.	Rnk	Med.	Rnk	Med.	Rnk		
Company Policy	Auth.	5.08	11	4.86	11	5.67	9	19.74	.003	5.28	11	5.14	9	5.83	11				
Top Management's Attitude	Auth.	5.14	9	4.94	9	5.67	10	11.69	.069	5.27	12	5.03	11	6.07	9				
Supervisor's Attitude	Auth.	5.19	8	5.10	7	5.42	11	9.50	.148	5.30	9	5.16	8	5.90	10				
Company's Economic Interest	Org.	5.63	4	5.53	4	5.89	6	1.93	.858	5.94	4	5.74	4	6.21	6				
Peer Group's Attitude	Org.	4.18	16	4.13	16	4.32	17	5.21	.634	4.18	16	4.11	16	4.32	17				
Customer/Supplier Welfare	Org.	5.10	10	4.68	12	6.21	4	20.80	.004	4.29	10	4.67	13	6.57	4				
Wife's/Family's Attitudes	Self	4.01	17	3.75	17	4.71	16	9.59	.143	4.00	17	3.45	17	5.07	14				
Own Economic Interest	Self	5.00	12	4.87	10	5.32	12	4.26	.641	5.19	13	5.08	10	5.50	12				
Own Professional Competence	Self	6.14	3	6.19	2	6.03	5	8.72	.069	6.38	3	6.32	2	6.57	3				
Own Ethical Standards	Auth.	6.30	2	6.15	3	6.71	3	9.96	.041	6.51	2	6.28	3	6.83	3				
Own Religious Beliefs	Auth.	4.88	13	4.15	15	6.78	2	42.85	.000	5.36	7	4.18	15	6.89	2				
Legal Constraints	Auth.	5.25	7	5.08	8	5.71	8	13.13	.022	5.39	6	5.25	7	6.17	7				
Company's Reputation	Org.	5.44	5	5.27	6	5.89	7	6.71	.348	5.60	5	5.35	6	6.10	8				
Subordinates' Attitudes	Org.	4.40	15	4.17	14	5.00	13	14.19	.028	4.52	15	4.29	17	5.13	13				
Society's Interests	Org.	4.69	14	4.60	13	4.92	14	2.86	.826	4.80	14	4.74	12	4.83	16				
Fear of Losing Job	Self	2.56	18	2.72	18	2.14	18	12.23	.093	2.36	18	2.60	18	1.50	18				
Own Personal Integrity	Self	6.47	1	6.35	1	6.78	1	6.85	.144	6.70	1	6.59	1	6.89	1				
Own Career Aspirations	Self	5.28	6	5.47	5	4.78	15	11.32	.125	5.31	8	5.41	5	5.00	15				

TABLE 19.--Influences-ratings in weighted means, and rankings-functional areas.

Influence	14		16		33		16		22		x ²	p=
	MFG		MKTG		ENG.		P&A		A/F/S			
	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk		
Company Policy	5.42	6	5.43	10	4.90	9	4.93	12	5.00	11	22.90	.526
Top Management												
Attitude	5.14	9	5.62	8	4.90	10	5.50	5	4.90	12	32.02	.127
Supervisors'												
Attitude	5.28	7	5.12	13	5.30	5	4.93	13	5.22	8	21.05	.636
Company's Eco-												
nomic Interest	5.71	4	5.93	6	5.75	4	4.87	14	5.72	4	22.04	.338
Peer Group's												
Attitude	4.35	15	4.00	17	4.12	16	3.75	16	4.63	14	27.46	.493
Customer/Suppli-												
er Welfare	4.71	12	6.18	3	4.72	11	5.12	10	5.13	10	23.79	.693
Wife's/Family's												
Attitudes	4.14	17	4.18	16	3.72	17	4.00	15	4.27	17	19.60	.719
Own Economic												
Interest	5.14	10	5.25	12	4.69	12	5.00	11	5.18	9	23.28	.503
Own Professional												
Competence	6.14	3	6.00	5	6.09	3	6.37	2	6.18	3	22.74	.121
Own Ethical												
Standards	6.42	1	6.43	2	6.24	2	6.25	3	6.27	2	10.72	.827
Own Religious												
Beliefs	5.07	11	6.06	4	4.21	14	5.50	6	4.45	16	29.94	.367
Legal Con-												
straints	4.71	13	5.31	11	5.30	6	5.31	8	5.45	6	23.61	.260
Company's Rep-												
utation	5.28	8	5.93	7	5.12	8	5.37	7	5.72	5	21.67	.599

	4.57	14	5.12	14	4.18	15	3.43	17	4.81	13	35.50	.094
Subordinates' Attitudes												
Society's Interest	4.28	16	4.93	15	4.54	13	5.18	9	4.63	15	21.29	.622
Fear of Losing Job	2.28	18	2.12	18	2.81	18	2.43	18	2.77	18	22.38	.763
Own Personal Integrity	6.28	2	6.75	1	6.33	1	6.68	1	6.45	1	17.01	.385
Own Career Aspirations	5.50	5	5.47	9	5.15	7	5.68	4	5.36	7	30.35	.347
N=	10		7		28		12		16			
(Excludes Group 2)	MFG		MKTG		ENG.		P&A		A/F/S			

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TABLE 19. -- Continued.

N= (Excludes Group 2) Influence	10	7	28	12	16
	MFG	MKTG	ENG.	P&A	A/F/S

TABLE 19.--Continued.

N= (Excludes Group 2)	10		7		28		12		16			
	MFG		MKTG		ENG.		P&A		A/F/S			
Influence												
Own Professional Competence	6.10	3	5.85	3	6.21	2	6.41	2	6.18	2	14.36	.278
Own Ethical Standards	6.20	1	6.14	2	6.14	3	6.16	3	6.12	3	14.13	.588
Own Religious Beliefs	4.40	12	5.14	11	3.75	16	5.08	10	3.56	16	25.38	.607
Legal Constraints	4.60	10	4.42	16	5.21	6	5.25	7	5.31	7	25.09	.198
Company's Reputation	4.90	7	5.85	5	5.00	8	5.41	5	5.62	5	21.83	.590
Subordinates' Attitudes	4.20	15	5.28	10	4.17	15	3.33	17	4.31	15	33.17	.101
Society's Interest	4.20	13	5.00	14	4.46	13	5.25	8	4.43	13	19.49	.726
Fear of Losing Job	2.60	18	2.71	18	2.85	18	2.50	18	2.75	18	14.49	.805
Own Personal Integrity	6.10	2	6.57	1	6.25	1	6.66	1	6.37	1	17.08	.380
Own Career Aspirations	5.20	5	5.57	7	5.39	5	5.75	4	5.56	6	17.16	.643

TABLE 20.--Influences--ratings in weighted means, and rankings--organizational levels.

(Rating Scale: Low 1-7 High) Influence	N=		7		5		27		38		24		X ²	p=
	L-1		L-2		L-3		L-4		L-5					
	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk				
Company Policy	4.85	14	6.80	2	5.00	9	5.00	12	5.04	9	30.11	.181		
Top Management Attitude	5.57	10	6.00	10	4.88	11	5.31	7	4.87	10	12.55	.973		
Supervisor's Attitude	5.00	13	6.20	8	5.29	7	5.13	10	5.04	8	55.51	.000		
Company's Econ. Interest	6.28	6	5.60	12	5.66	4	5.73	4	5.25	5	20.02	.457		
Peer Group's Attitude	4.42	17	4.20	15	4.29	15	3.89	17	4.45	16	26.05	.571		
Customer/Supplier Welfare	6.57	4	6.60	6	4.85	12	5.23	9	4.45	14	34.05	.199		
Wife's/Family's Attitude	4.85	15	3.60	16	3.62	17	3.94	16	4.41	17	16.70	.861		
Own Economic Interest	6.28	7	5.00	13	4.70	13	5.13	11	4.75	13	32.75	.119		
Own Professional Competence	6.42	5	6.00	9	5.81	3	6.44	2	6.00	3	18.69	.285		
Own Ethical Standards	6.57	3	6.60	3	6.25	2	6.31	3	6.20	2	10.57	.835		
Own Religious Beliefs	6.71	2	6.60	4	5.03	8	4.26	14	4.79	11	23.39	.714		
Legal Constraints	6.00	8	6.20	7	4.92	10	5.28	8	5.16	7	33.48	.030		
Company's Reputation	5.85	9	6.60	5	5.40	6	5.39	6	5.20	6	21.48	.611		
Subordinates' Attitudes	5.57	11	5.80	11	4.11	16	3.97	15	4.79	12	22.75	.535		
Society's Interests	4.71	16	5.00	14	4.51	14	4.92	13	4.45	15	19.19	.742		
Fear of Losing Job	1.85	18	1.60	18	2.25	18	2.57	18	3.29	18	33.93	.203		
Own Personal Integrity	6.85	1	6.80	1	6.51	1	6.47	1	6.25	1	13.46	.639		
Own Career Aspirations	5.00	12	3.20	17	5.48	5	5.42	5	5.37	4	52.64	.003		

(Excludes
Group 2)
Influence

(Excludes Group 2) Influence	N=		L-1		L-2		21 L-3		33 L-4		19 L-5		x ²	p =
	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk		
Company Policy														
Top Management Attitude														
	4.85	8	4.90	12	4.78	9	7.81	.800						
	4.76	10	5.21	8	4.68	12	10.78	.548						

(Excludes Group 2) Influence	N=	L-1		L-2		21 L-3		33 L-4		19 L-5		X ²	p=
		W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk		
Company Policy		4.85	8	4.90	12	4.78	9	7.81	.800				
Top Management Attitude		4.76	10	5.21	8	4.68	12	10.78	.548				
Supervisor's Attitude		5.28	7	5.12	9	4.89	8	17.51	.064				
Company's Econ. Interest		5.52	4	5.78	4	5.10	6	14.75	.141				
Peer Group's Attitude		4.42	15	3.87	16	4.26	14	15.42	.350				
Customer/Supplier Welfare		4.61	12	5.06	11	4.10	16	21.80	.083				
Wife's/Family's Attitude		3.47	17	3.84	17	3.89	17	11.89	.455				
Own Economic Interest		4.71	11	5.06	10	4.73	10	7.00	.858				
Own Professional Competence		5.90	3	6.36	2	6.21	1	6.85	.335				
Own Ethical Standards		6.09	2	6.24	3	6.05	3	8.33	.402				
Own Religious Beliefs		4.52	13	3.87	15	4.21	15	7.61	.909				
Legal Constraints		4.76	9	5.24	7	5.15	5	12.18	.273				
Company's Reputation		5.33	6	5.36	6	5.05	7	6.93	.862				
Subordinate's Attitudes		4.00	16	3.96	14	4.73	11	7.16	.847				
Society's Interests		4.42	14	4.90	13	4.26	13	13.02	.368				
Fear of Losing Job		2.42	18	2.66	18	3.15	18	7.36	.692				
Own Personal Integrity		6.42	1	6.42	1	6.15	2	8.91	.350				
Own Career Aspirations		5.42	5	5.45	5	5.57	4	7.20	.707				

TABLE 21.--Influences--ratings in weighted means, rankings--group 2 by functional area and organizational level.

Influ- ence	N=	28 Group 2	Functional Areas										Organizational Levels											
			Code	W/M Rnk	4		9		5		4		6		7	L-1	5		6		L-3	L-4	5	L-5
					MFG	W/M Rnk	MKTG	W/M Rnk	ENG	W/M Rnk	P&A	W/M Rnk	A/F/S	W/M Rnk										
Company Policy	A	5.67	9	6.25	8	5.78	9	6.40	5	4.75	13	5.17	14	4.85	14	6.80	2	5.50	10	5.60	9	6.00	5	
Top Man- agement Attitude	A	5.67	10	6.50	5	5.78	10	5.60	10	6.00	6	4.83	16	5.57	10	6.00	10	5.33	11	6.00	6	5.60	9	
Supervi- sor's Attitude	A	5.42	11	6.25	9	5.22	11	5.80	9	4.50	15	5.50	12	5.00	12	6.20	8	5.33	12	5.20	12	5.60	10	
Company's Econ In- terest	O	5.89	6	6.50	4	6.00	6	6.40	4	5.00	11	5.50	11	6.28	6	5.60	12	6.17	4	5.40	11	5.80	7	
Peer Group's Attitude	O	4.32	17	4.75	16	3.78	17	3.80	17	4.25	16	5.33	13	4.42	17	4.20	15	3.83	17	4.00	17	5.20	14	
Customer/ Supplier Welfare	O	6.21	4	6.00	11	6.44	4	6.00	6	6.75	3	5.83	8	6.57	4	6.60	5	5.67	5	6.40	5	5.80	6	
Wife's/ Family's Attitude	S	4.71	16	4.75	15	3.89	16	4.20	15	4.75	14	6.33	4	4.85	15	3.60	16	4.17	16	4.60	15	6.40	4	
Own Eco- nomic Interest	S	5.32	12	5.75	12	5.22	12	4.60	13	5.75	7	5.67	10	6.28	7	5.00	13	4.67	14	5.60	10	4.80	16	
Own Pro- fession- al Compt	S	6.03	5	6.25	6	6.11	5	5.40	11	6.25	5	6.17	5	6.42	5	6.00	9	5.50	8	7.00	1	5.20	11	
Own Eth- ical Stndrds	A	6.71	3	7.00	1	6.67	3	6.80	3	6.50	4	6.67	3	6.57	3	6.60	4	6.83	3	6.80	4	6.80	2	

[illegible]

Own Religious Beliefs	A	6.78	2	6.75	3	6.78	2	6.80	2	6.75	2	6.83	1	6.71	2	6.60	3	6.83	2	6.80	3	7.00	1
Legal Constraints	A	5.71	8	5.00	14	6.00	8	5.80	8	5.50	8	5.83	9	6.00	8	6.20	7	5.50	9	5.60	8	5.20	12
Company's Reputation	O	5.89	7	6.25	7	6.00	7	5.80	7	5.25	10	6.00	7	5.85	9	6.60	6	5.67	6	5.60	7	5.80	8
Subordinates' Attitude	O	5.00	13	5.50	13	4.89	13	4.20	14	3.75	17	6.17	6	5.57	11	5.80	11	4.50	15	4.00	16	5.00	15
Society's Interests	O	4.92	14	4.50	17	4.89	14	5.00	12	5.00	12	5.17	15	4.71	16	5.00	14	4.83	13	5.00	14	5.20	13
Fear of Losing Job	S	2.14	18	1.50	18	1.67	18	2.60	18	2.25	18	2.83	18	1.85	18	1.60	18	1.67	18	1.67	18	3.80	18
Own Personal Integrity	S	6.78	1	6.75	2	6.89	1	6.80	1	6.75	1	6.67	2	6.85	1	6.80	1	6.83	1	6.80	2	6.60	3
Own Career Aspirations	S	4.78	15	6.25	10	4.33	15	3.80	16	5.50	9	4.83	17	5.00	13	3.20	17	5.67	7	5.20	13	4.60	17
Orientations																							
Authority		36.03	1	37.75	1	36.23	1	37.20	1	34.00	1	34.83	1	34.60	1	38.40	1	35.32	1	36.00	1	36.20	1
Organization		32.28	2	33.50	2	32.00	2	31.20	2	30.00	3	34.00	2	33.40	2	33.80	2	30.67	2	30.40	3	32.80	2
Self		29.78	3	31.25	3	28.11	3	27.00	3	31.25	2	32.50	3	31.25	3	26.20	3	28.51	3	30.87	2	31.40	3

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Peer Group's Attitude: An organization item, most respondents ranked it very low, 16th or 17th. It is apparent that the managers in the present sample do not give much consideration to the attitudes of their associates in making their decisions. This may explain, in part, why so many respondents chose to "confront" a peer in a case problem dispute.

Customer/Supplier Welfare: Also an organization-oriented item, there is a wide range in the ranking, with Group 1 placing it 12th, but Group 2 ranked it 4th. It is noteworthy that Marketing ranks this influence 3rd, in contrast to about 11th by the other areas. Levels 1 and 2 also rank it about 5th, while the other levels go as low as 16th. These rankings will also be taken into account in the review of case problem solutions.

Wife's/Family's Attitude: Surprisingly, and in strange contrast to the importance given to Family in ranking personal interests under Part I, most respondents ranked this self-oriented influence almost the lowest--16th or 17th. A/F/S and Level 5 in Group 2 rank it 4th, in further contrast to the others.

Own Economic Interests: Another self-oriented item, it is ranked below mid-range by most respondents, except for Group 2's P & A and Level 1, who ranked it 7th. No relationship can be drawn with the case problems.

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Own Professional Competence: Also self-oriented, this influence is ranked 2nd by Group 1 and 5th by Group 2, but the range is from 1st for Level 4, to 11th for Engineering and Level 5. The respondents appeared to be quite aware of this item as identifying with the case problems.

Own Ethical Standards: An authority item, this represents a form of authoritative guide to behavior, quite important for the professional like a CPA oriented accountant. With others it may be less specific but is ranked very high, 3rd by both groups, and even 1st by some of the areas. This influence was cited frequently in connection with the case problems. Since it is ranked so much higher by all respondents than Company Policy, Top Management or Supervisor's Attitudes, it appears that it would take precedence in a conflict situation.

Own Religious Beliefs: Also an authority-oriented influence for purposes of this study, particularly because of the inclusion of the religious sample which constitutes Group 2. Scriptural authority is as much an authoritative guide to the religious manager as codes of professional conduct and company policy manuals, not for technical purposes but in interpersonal relationships--in his conduct as a human individual. On this influence Groups 1 and 2 part company. Group 1 ranks it 15th, while Group 2 ranked it in 2nd place, but actually tied for 1st place. This high ranking is evident in Group 2's functional areas and organizational levels, while the converse is true of Group 1,

although their P & A and Marketing areas ranked it in 10th and 11th place. Thirty per cent of Group 1 respondents did actually rate this influence at 6 or 7, but the remaining 70 per cent had a much lower rating, resulting in an average rating of 4.15 as compared with 6.78 for Group 2. It seems apparent that Group 2 respondents attach a great deal of importance to spiritual guidance in their decision-making, as well as considering the prevailing ethical standards. This characteristic is, of course, taken into account in later analysis of the case problems and in testing Hypothesis 6.

Legal Constraints: This is the sixth and last authority item, and both groups ranked it 8th. There is some difference in Group 1 as Engineering ranked it 6th while Marketing ranked it 16th. Also, the levels ranked it progressively higher--5th, 7th, and 9th, going from fifth to third level. It would appear that the respondents in this sample had not encountered any difficulties with this kind of constraint in their experiences.

Company's Reputation: This organization-oriented influence is ranked quite high by most respondents, 6th and 7th by Groups 1 and 2. In Group 1 it was ranked 5th by Marketing, P & A, and A/F/S. There was awareness of this influence in the case problem citations.

Subordinates' Attitudes: Also an organizational influence, the rankings are rather low, 17th by P & A. In Group 1 a progression is seen as the rankings are 11th,

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14th and 16th going up from fifth to third levels. It seems that higher levels have a lower regard for subordinates attitudes than lower levels of management. The converse seems to be evident in Group 2's levels.

Society's Interests: This is also identified as an organization oriented influence, in the context of the business enterprise. Ranking is uniformly low, except in Group 1, where P & A ranked it 8th.

Fear of Losing Job: This self-oriented influence is ranked lowest by far by all respondents--uniformly in 18th place. However it is noted that the values of the ratings progressively increase as the levels go down from first to fifth, and details of the data input clearly show that some Group 1 respondents in lower organizational levels give this influence more significance than most of the others.

Own Personal Integrity: In direct contrast with the last, and almost without exception, the responding managers attach primary significance to this self-oriented influence. It is rated highest and ranked 1st by Group 1, and Group 2 rated and ranked it in a tie for 1st with Religious Beliefs. Clearly, for the respondents in this sample, it is the over-riding influence, at least in the absence of other pressures.

Own Career Aspirations: This is the last of the self-oriented influences and the last in the list of eighteen. In quite strong contrast, Group 1 managers rank this 5th,

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while Group 2 ranked it 15th. This is consistent with the fact, as brought out in later analysis, that Group 2 respondents are less concerned with self-interest than are most Group 1 managers.

Authority/Organization/Self-Orientation: As mentioned earlier, the eighteen influences identify with the pattern of three "orientations" shown in Figure 2. The weighted mean values shown on Tables 18 through 21 were consolidated into the three categories and averaged to a unit level rating in the 1 to 7 range. The resulting ratings were then ranked as 1st, 2nd, or 3rd, for each of the groups, areas, and levels. Table 22 gives the details for the total sample and Group 1, while Group 2 details are on the lower portion of Table 21. Both groups give Authority-oriented influences the highest ranking in the aggregate, but Group 2 much more so, due primarily to their much higher rating of the influence, Own Religious Beliefs. In the case of Organization-oriented influences, Group 1 ranks this category 3rd, while Group 2 ranks it 2nd. In the areas and levels, Marketing, A/F/S, and Levels 1 and 2 rank the category in 2nd place, while all the others give precedence to Self-oriented influences. By contrast, Group 2 areas and levels rank the Organization-oriented category 2nd and Self-oriented influences 3rd, with two exceptions. There are implications that the Organization-oriented manager may exhibit evidences of a higher degree of maturity,

TABLE 22.--Authority/organization/self orientation, by major groups, functional areas, and organizational levels for both (N=101) and (N=73).

Orientation	N= 101		73		28		101		73		28		p=	
	Total		Group 1		Group 2		Total		Group 1		Group 2			
	W/M	Rnk	W/M	Rnk	W/M	Rnk	Med	Rnk	Med	Rnk	Med	Rnk		
Authority	31.92	1	30.34	1	36.03	1	31.44	1	29.94	1	36.50	1	40.32	.007
Organization	29.37	3	28.26	3	32.28	2	29.27	3	28.75	3	32.30	2	30.24	.143
Self	29.50	2	29.39	2	29.78	3	29.71	2	29.08	2	30.50	3	22.57	.368
Functional Areas														
(Includes Group 2) Orientation	N=		14		16		33		16		22		p=	
			MFG		MKTG		ENG		P&A		A/F/S			
	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk		
Authority	32.14	1	34.12	1	30.90	1	32.43	1	31.31	1	76.98		.694	
Organization	28.92	3	32.18	2	28.24	3	27.62	3	30.59	2	105.51		.159	
Self	29.42	2	29.18	3	28.81	2	30.18	2	30.31	3	70.44		.855	
(Excludes Group 2) Orientation	N=		10		7		28		12		16		p=	
			MFG		MKTG		ENG		P&A		A/F/S			
	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk		
Authority	29.80	1	31.42	2	29.78	1	31.91	1	30.00	1	75.47		.496	
Organization	27.10	3	32.28	1	27.71	3	26.75	3	29.31	3	84.01		.358	
Self	28.70	2	30.57	3	29.07	2	29.91	2	29.50	2	78.81		.390	

Organizational Levels

(Includes Group 2) Orientation	N=	7										p=	
		L-1		5		L-2		L-3		L-4			x ²
		W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk		
Authority		34.71	1	38.40	1	31.48	1	31.31	1	31.20	1	88.48	.348
Organization		33.42	2	33.80	2	28.81	2	28.92	3	28.62	3	89.07	.567
Self		31.28	3	26.40	3	28.33	3	30.05	2	30.08	2	81.28	.564

(Excludes Group 2) Orientation	N=	--										p=	
		L-1		L-2		L-3		L-4		L-5			x ²
		W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk	W/M	Rnk		
Authority						30.33	1	30.60	1	29.89	1	41.64	.315
Organization						28.33	2	28.63	3	27.52	3	43.44	.327
Self						28.33	3	29.87	2	29.73	2	34.39	.637

Note:

Corresponding views of Group 2 by function and level are shown on the lower portion of Table 29.

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as has been indicated by Jennings.² It is also possible that individual respondents in the total sample may exhibit what Jennings terms AOS imbalances³--distortions in perception of self, boss, and company--if such managers attach inordinate significance to certain groups of influences and the measurement method used here is valid in the Jennings context. Further research in this direction may be fruitful. The rankings noted are considered in later analysis of the case problems and discussions of the research hypotheses.

Summary of Section 2

The groups, functional areas, and organizational levels are differentiated to a significant degree with respect to the following influence variables: Supervisors' Attitude, Customer/Supplier Welfare, Own Professional Competence, Own Religious Beliefs, and Own Career Aspirations. Individual areas and levels also seem to have special characteristics, and the overall relative ranking of the eighteen influences gives clues as to which would seem to enter most strongly into the decision making process. It is clear that the managers have a high self-image. When the influences are categorized, it also appears that Group 1 managers have stronger self-interest than those in Group 2, consistent with Section 1 findings.

²Eugene E. Jennings, The Executive in Crisis, MSU Business Studies (East Lansing, Mich.: Bureau of Business and Economic Research, 1965), p. 138.

³Ibid., p. 132.

3. Findings: Environmental Variables

This section explores the conditions surrounding the manager in his position in the organizational hierarchy and functional structure, which may also have a bearing on how he approaches work-related problems. Thirteen sets of questions consisting of twenty-seven items of detail were included in Part III of the questionnaire. To the extent possible all data dealing with a single variable have been combined in one table and the item is analyzed at the same time in the three contexts of group, functional area, and organizational level.

Many researchers have investigated the effects of organizational environment on worker motivation and productivity, notably Herzberg¹ who talks in terms of "hygienic factors," and Maslow² with his "hierarchy of needs." Therefore, there is no doubt as to the importance of these variables as they affect managerial decision-making. Decisions are too often thought of in a highly formal sense, and as an activity primarily in the purview of higher levels of management, when in fact almost every conscious and deliberate act is the result of a decision to do it. In the organizational

¹Frederick Herzberg, et al., "Motivation Versus Hygiene," in People and Productivity, ed. by Robert Sutermeister (New York: McGraw-Hill, 1963), pp. 492 ff.

²Abraham Maslow, Eupsychian Management: A Journal (Homewood, Ill.: Richard D. Irwin, Inc., 1965).

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situation it might be something as simple (but significant) as sending a report to a superior, instead of taking it personally, in order to avoid a confrontation, which might be indicative of interpersonal stress.

General Functional Area: This variable is one of the two elements of the stratigraphic pattern shown and explained on Figure 1 in Chapter II. The differences of consequence are in the relative percentages of respondents in Marketing--32.1 per cent for Group 2 vs 9.6 per cent for Group 1, and in Engineering--17.9 per cent for Group 2 vs 38.4 per cent for Group 1. However, most of the data is dealt with in the common denominator of percentage so that absolute sizes of areas and levels are of minor importance. Details are in Table 23.

Specific Functions: Statistically significant differences exist as between the two major groups, the five functional areas, and the five organizational levels. This is normal for the five functional areas, since the specific functions should naturally fall into categories appropriate to the general functional areas, although with some exceptions, as each area may make use of specialists for various reasons, such as technical engineering liaison in Marketing. However, the differences between the groups and Levels is partly due to the fact that there are twenty-five specific functions identified, of which twenty-one are represented in Group 1 and fourteen in Group 2, with fifteen appearing in

TABLE 23.--General functional area and organizational area of respondents by groups.

		Totals	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
No. of Respondents												
Group 1	73	10	7	28	12	16	-	-	-	21	33	19
Group 2	28	4	9	5	4	6	7	5	5	6	5	5
Total	101	14	16	33	16	22	7	5	5	27	38	24
Percentage of Respondents												
Group 1	72.3	13.7	9.6	38.4	16.4	21.9	-	-	-	28.8	45.2	26.0
Group 2	27.7	14.3	32.1	17.9	14.3	21.4	25.0	17.9	17.9	21.4	17.9	17.8
Total	100.0	13.9	15.8	32.7	15.8	21.8	6.9	5.0	5.0	26.7	37.6	23.8
Chi Square:		$\chi^2 = 9.17; p = .057$						$\chi^2 = 36.29; p = .000$				

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either one group or the other and only ten in both. Whether this diversity in technical competencies, for a relatively small total sample, has a detectable bias is outside the scope of the present study. In the present analyses we can deal with them only in terms of the five general functional areas into which they fall. Later analyses will give consideration to the possibility of bias resulting from differences in the technical backgrounds of the respondents in their various functional roles, much as might their educational specialties. Tables 24, 25 and 26 show the details.

Organizational Level: This is the other of the two elements which make up the stratigraphic pattern. Levels 1 and 2 are unique to Group 2, and this is being kept in mind in all analyses. As to the remaining three levels, it is apparent that Group 1 has, proportionately, many more engineers than Group 2, and this is considered in later analyses.

Subordinates Reporting Direct: There are no significant differences between groups or among areas. In the Organizational Levels some differences might be expected, but it appears that 79 per cent of respondents in Level 5 have no subordinates, and in Level 4 approximately 30 per cent. This would indicate that many of our management level respondents are non-supervisory staff people or specialists of one kind or another. This also reflects a rather general tendency in large corporations to classify higher paid, non-supervisory personnel at the managerial level in order to place them in

TABLE 24.--Specific functions of respondents, by major groups, functional areas, and organizational levels for (N=101)

Specific Function	Major Groups					Functional Areas					Organizational Levels				
	101	73	28	14	16	33	16	22	7	5	27	38	24		
N=	Total	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5		
1. Engineering, Product, etc.	11	8	3	-	-	11	-	-	-	-	2	6	3		
2. Engineering, Mfg., Process, etc.	11	9	2	4	-	6	-	1	-	-	2	4	5		
3. Engineering, Research, etc.	5	4	1	-	-	5	-	-	-	-	1	3	1		97
4. Systems, Anal & Research, O.R.	7	7	-	-	-	2	-	5	-	-	1	4	2		
5. Data Processing, etc.	10	10	-	1	-	3	-	6	-	-	4	2	4		
6. Mgt. & Hum. Res., Develop	3	3	-	-	-	-	3	-	-	-	2	1	-		
7. Instruction, Training, Writing	7	7	-	2	1	-	4	-	-	-	1	3	3		
8. Personnel, Ind. Rel.	4	3	1	-	-	-	4	-	-	-	2	2	-		
9. Product Styling	1	1	-	-	1	-	-	-	-	-	-	1	-		
10. Sales, Marketing	6	3	3	-	6	-	-	-	-	1	3	1	1		

11. Prod. Prom., Mkt. Anal.

12. Credit, Finance

13. Financial

11.	Prod. Prom., Mkt. Anal.	2	1	1	-	2	-	-	1	-	-	1	-	-	1	-
12.	Credit, Finance	3	1	2	-	-	-	-	3	1	1	1	1	-	-	-
13.	Financial Analysis	2	2	-	-	-	-	-	2	-	-	-	2	-	-	-
14.	Accounting	1	-	1	-	-	-	-	1	-	-	-	-	-	1	-
15.	Quality Control	4	3	1	3	-	1	-	-	-	-	-	4	-	-	-
16.	Purch., Vendor Performance	5	2	3	2	3	-	-	-	-	1	3	-	-	1	-
17.	Sales, Estim., Quoting	2	-	2	-	2	-	-	-	1	1	-	-	-	-	-
18.	Contract Negotiations	1	-	1	-	-	-	-	1	-	-	-	-	-	1	-
19.	Administrative Mgt.	5	-	5	1	1	-	2	1	4	1	-	-	-	-	-
20.	Value Engineering	1	1	-	-	-	-	-	1	-	-	-	-	-	1	-
21.	Eng. Computer Oper.	3	3	-	-	-	3	-	-	-	-	-	-	-	1	2
22.	Maint. Engineering	1	1	-	-	-	1	-	-	-	-	-	-	-	1	-
23.	Admin., Planning	4	2	2	-	-	-	3	1	-	-	1	3	-	-	-
24.	Techn. Support, Sales	1	1	-	-	-	1	-	-	-	-	-	-	-	1	-
25.	Indus. Traffic Mgt.	1	1	-	1	-	-	-	-	-	-	-	-	-	1	-
Chi Square:																$\chi^2 = 46.18; p = .004$ $\chi^2 = 257.52; p = .000$ $\chi^2 = 144.09; p = .001$

TABLE 25.--Specific functions of respondents, group 1, by functional areas, and organizational levels (N=73)

Specific Function	N=73 Group 1	Functional Areas						Organizational Levels				
		10	7	28	12	16	A/F/S	L-1	L-2	L-3	L-4	L-5
1. Engineering, Product, Etc.	8	-	-	8	-	-	-	-	-	2	4	2
2. Engineering, Mfg., Process, etc.	9	3	-	5	-	1	-	-	1	4	4	4
3. Engineering, Research, etc.	4	-	-	4	-	-	-	-	-	3	1	1
4. Systems, Anal. & Research, O.R.	7	-	-	2	-	5	-	-	1	4	2	2
5. Data Processing, etc.	10	1	-	3	-	6	-	-	4	2	4	4
6. Mgmt. & Hum. Res. Develop.	3	-	-	-	3	-	-	-	2	1	-	-
7. Instruction, Training, Writing	7	2	1	-	4	-	-	-	1	3	3	3
8. Personnel, Indus. Rel.	3	-	-	-	3	-	-	-	2	1	-	-
9. Product Styling	1	-	1	-	-	-	-	-	-	1	-	-
10. Sales, Marketing	3	-	3	-	-	-	-	-	2	1	-	-
11. Prod. Prom., Mkt. Anal.	1	-	1	-	-	-	-	-	-	1	-	-
12. Credit, Finance	1	-	-	-	-	1	-	-	1	-	-	-
13. Financial Analysis	2	-	-	-	-	2	-	-	-	2	-	-
14. Accounting	-	-	-	-	-	-	-	-	-	-	-	-

15. Quality Control
16. Purch., Vendor Performance
17. Sales

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15.	Quality Control	3	2	-	1	-	-	3	-	-
16.	Purch., Vendor Performance	2	1	1	-	-	-	1	-	1
17.	Sales, Estim., Quoting	-	-	-	-	-	-	-	-	-
18.	Contract Negotiation	-	-	-	-	-	-	-	-	-
19.	Administrative Mgmt.	-	-	-	-	-	-	-	-	-
20.	Value Engineering	1	-	-	-	1	-	-	1	-
21.	Eng. Computer Oper.	3	-	-	3	-	-	-	1	2
22.	Maint. Engineering	1	-	-	1	-	-	-	1	-
23.	Admin., Planning	2	-	-	-	2	-	1	1	-
24.	Techn. Support, Sales	1	-	-	1	-	-	-	1	-
25.	Indus. Traffic Mgt.	1	1	-	-	-	-	-	1	-
Chi Square:		$\chi^2 = 189.05; p = .000$			$\chi^2 = 40.88; p = .432$			100		

TABLE 26.--Specific functions of respondents, group 2, by functional areas and organizational levels (N=28).

Specific Function	N=28 Group 2	Functional Areas						Organizational Levels				
		4	9	5	4	6	7	5	6	5	5	5
		MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5	L-5
1. Engineering, Product etc.	3	-	-	3	-	-	-	-	-	2	1	1
2. Engineering, Mfg., Process, etc.	2	1	-	1	-	-	-	-	1	-	1	1
3. Engineering, Research, etc.	1	-	-	1	-	-	-	-	1	-	-	-
8. Personnel, Indus. Rel.	1	-	-	-	1	-	-	-	-	1	-	-
10. Sales, Marketing	3	-	3	-	-	-	-	1	1	-	1	1
11. Product Prom., Mkt. Anal.	1	-	1	-	-	-	1	-	-	-	-	-
12. Credit, Finance	2	-	-	-	-	2	1	1	-	-	-	-
14. Accounting	1	-	-	-	-	1	-	-	-	-	1	-
15. Quality Control	1	1	-	-	-	-	-	-	1	-	-	-
16. Purch., Vendor Perform.	3	1	2	-	-	-	-	1	2	-	-	-
17. Sales, Estim., Quoting	2	-	2	-	-	-	1	1	-	-	-	-
18. Contract Negotiation	1	-	-	-	-	1	-	-	-	-	1	-
19. Administrative Mgmt.	5	1	1	-	2	1	4	1	-	-	-	-
23. Admin., Planning	2	-	-	-	1	1	-	-	-	2	-	-

"exempt" categories because of overtime pay regulations, and also, and perhaps largely, so they can communicate with supervisory managerial personnel on a common organizational level, thus limiting the need to go up and down chains of command. One of the purposes in asking this question was to provide a possible basis for detecting whether there is a difference in the way supervisory and non-supervisory personnel view ethical problems involving subordinate-superior relationships. Perhaps a companion question should also have been asked--one which might disclose whether the non-supervisors had ever had extensive supervisory experience. Of interest is that two, three, or four subordinates is more the mode than a larger number. Table 27 gives the details. The patterns discussed will be considered in future analyses.

Subordinates Reporting Indirectly: There are no significant differences for groups and functional areas. The organizational levels indicate a normal pattern since the higher levels have responsibility for larger numbers of subordinates below them in the chain of command. No table is provided.

Number of Employees in Division or Company: Group 2 respondents identify with smaller organizations. The reason for asking this question is to see whether the usually greater degree of impersonality and "organizational distance" has a detectable effect on decision choices, in terms of "persons" as such, involved. It had been established by this

TABLE 27. -- Subordinates reporting direct to respondent by groups, functional areas, and organizational levels.

	Major Groups						Functional Areas					Organizational Levels				
N=	101	73	28	Total	Grp 1	Grp 2	MFG	P&G	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Reporting																

TABLE 27.--Subordinates reporting direct to respondent by groups, functional areas, and organizational levels.

Major Groups					Functional Areas					Organizational Levels				
N=	101	73	28		14	16	33	16	22	7	5	27	38	24
	Total	Grp 1	Grp 2		MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Reporting Directly	%	%	%		%	%	%	%	%	%	%	%	%	%
None	22.7	35.6	25.0		28.6	31.3	42.4	31.3	32.7	-	20.0	7.4	28.9	79.2
One	7.9	8.2	7.1		14.3	12.5	6.1	6.3	4.5	-	-	11.1	10.5	4.2
Two	11.9	9.6	17.9		7.1	6.3	-	25.0	27.3	14.3	40.0	7.4	18.4	-
Three	12.9	13.7	10.7		21.4	12.5	15.2	6.2	-	28.6	-	18.5	13.2	4.2
Four	8.9	9.6	7.1		7.1	6.3	6.1	6.3	18.2	-	20.0	14.8	5.3	8.3
Five	5.0	5.5	3.6		7.1	6.2	3.0	-	9.1	-	-	11.1	5.3	-
Six	3.0	1.4	7.1		-	6.3	3.0	6.2	-	14.3	20.0	3.7	-	-
Seven	4.0	2.7	7.1		-	6.2	3.0	6.3	4.5	14.3	-	7.4	2.6	-
Eight	2.0	1.4	3.6		7.1	-	-	-	4.5	14.3	-	-	2.6	-
More	11.9	12.3	10.7		7.1	-	21.2	12.5	9.1	14.3	-	18.5	13.2	4.2
Chi Square:	X2 = 6.12; p = .728				X2 = 37.48; p = .401				X2 = 68.04; p = .001					
Major Groups					Functional Areas					Organizational Levels				
N=	73	Group 1			10	7	28	12	16	-	-	21	33	19
					MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Reporting Directly	%	%	%		%	%	%	%	%	%	%	%	%	%
None	35.6				30.0	28.6	42.9	41.7	25.0	-	-	-	30.3	84.2
One	8.2				20.0	14.3	7.1	8.3	-	-	-	9.5	12.1	-
Two	9.6				10.0	-	-	16.7	25.0	-	-	9.5	15.2	-
Three	13.7				30.0	14.3	17.9	8.3	-	-	-	19.0	15.2	5.3
Four	9.6				-	14.3	7.1	8.3	18.8	-	-	19.0	3.0	10.5
Five	5.5				-	14.3	3.6	-	12.5	-	-	9.5	6.1	-
Six	1.4				-	-	3.6	-	-	-	-	4.8	-	-
Seven	2.7				-	14.3	-	8.3	-	-	-	9.5	-	-
Eight	1.4				-	-	-	-	6.3	-	-	-	3.0	-
More	12.3				10.0	-	17.9	8.3	12.5	-	-	19.0	15.2	-
Chi Square:					X2 = 36.99; p = .423				X2 = 44.03; p = .000					

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researcher in a prior study³ that increased organizational distance had a negative effect on the quality of communication as perceived by senders and receivers. Later analysis considers whether the same factor has significance in this study. Details are in Table 28.

Approximate Annual Earnings: Group 2 owner-managers appear to have higher incomes than Group 1 managers. Among the functional areas, the income levels are fairly evenly distributed. The organizational levels show the expected difference--the rise in income level which accompanies the rise in hierarchy. A primary reason for this question is that income level might normally be tied to personal sense of security and to satisfaction or dissatisfaction. Details are shown on Table 29.

Ownership of, or Majority Interest in, Company: No table was structured for this data, since all Group 1 responses were "no" to this question, they being middle and lower level managers in very large corporations. Of Group 2 respondents, 29 per cent responded "yes," most being in Levels 1 and 2, and they were distributed in four of the five functional areas. Some Group 1 respondents indicated that they applied a substantial percentage of their incomes to acquire stock in the corporations which employed them, possibly through "thrift-stock" programs, or the like, but

³R. J. Shuster, "An Experimental Quantification of Communications Quality in an Industrial Organization" (unpublished paper, Wayne State University, March, 1966).

TABLE 28.--Number of employees in respondents' company or division, by groups, functional areas, and organizational levels.

N=	Major Groups				Functional Areas				Organizational Levels					
	101	73	28		14	16	33	16	22	7	5	27	38	24
	Total	Grp 1	Grp 2		MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Employees in Company or Division	%	%	%	%	%	%	%	%	%	%	%	%	%	%
100	27.7	13.7	64.3	28.6	56.3	12.1	18.8	36.4	100.0	80.0	14.8	15.8	29.2	
500	14.9	17.8	7.1	14.3	12.5	15.2	18.8	13.6	-	-	25.9	15.8	8.3	
1,000	14.9	16.4	10.7	21.4	6.3	18.2	18.8	9.1	-	-	11.1	18.4	20.8	
5,000	16.8	20.5	7.1	14.3	12.5	27.3	12.5	9.1	-	-	14.8	26.3	12.5	
10,000	6.9	9.6	-	7.1	-	9.1	12.5	4.5	-	-	3.7	10.5	8.3	
More	18.8	21.9	10.7	14.3	12.5	18.2	18.8	27.3	-	20.0	29.6	13.2	20.8	
Chi Square:	x ² = 26.87; p = .000				x ² = 17.91; p = .594				x ² = 39.47; p = .006					
N=	Group 1				Functional Areas				Organizational Levels					
	73				10	7	28	12	16	-	-	21	33	19
					MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Employees in Company or Division	%	%	%	%	%	%	%	%	%	%	%	%	%	%
100	13.7	20.0	28.6	10.7	-	18.8	23.8	15.2	15.8					
500	17.8	20.0	14.3	14.3	25.0	18.8	23.8	18.2	10.5					
1,000	16.4	20.0	14.3	21.4	16.7	6.3	9.5	15.2	26.3					
5,000	20.5	10.0	28.6	28.6	16.7	12.5	14.3	27.3	15.8					
10,000	9.6	10.0	-	10.7	16.7	6.3	4.8	12.1	10.5					
More	21.9	20.0	14.3	14.3	25.0	37.5	38.1	12.1	21.1					
Chi Square:	x ² = 12.23; p = .908				x ² = 9.19; p = .514									

TABLE 29.--Earnings of respondents, by groups, functional areas, organizational levels.

Major Groups				Functional Areas				Organizational Levels					
N=	101	73	28	14	16	33	16	22	7	5	27	38	24
	Total	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Average Annual Earnings	%	%	%	%	%	%	%	%	%	%	%	%	%
\$ 10,000	5.0	2.7	10.7	7.1	6.3	3.0	6.3	4.5	14.3	-	-	-	16.7
15,000	33.7	37.0	25.0	28.6	31.3	42.4	43.8	18.2	-	-	11.1	36.8	70.8
20,000	40.6	47.9	21.4	28.6	31.3	51.5	37.5	40.9	14.3	40.0	55.6	52.6	12.5
25,000	10.9	8.2	17.9	21.4	12.5	3.0	6.3	18.2	28.6	-	18.5	10.5	-
30,000	2.0	1.4	3.6	7.1	-	-	-	4.5	-	-	7.4	-	-
More	7.9	2.7	21.4	7.1	18.8	-	6.2	13.6	42.9	60.0	7.4	-	-
Chi Square:	X ² = 18.11; p = .003			X ² = 19.87; p = .466				X ² = 83.06; p = .000					
Major Groups				Functional Areas				Organizational Levels					
N=	73	Group 1	10	7	28	12	16	16	-	-	21	33	19
	Total	Grp 1	MFG	MKTG	ENG	P&A	A/F/S	A/F/S	L-1	L-2	L-3	L-4	L-5
Average Annual Earnings	%	%	%	%	%	%	%	%	%	%	%	%	%
\$ 10,000	2.7	2.7	10.0	-	3.6	-	-	-	-	-	-	-	-
15,000	37.0	37.0	40.0	71.4	35.7	41.7	18.8	-	-	-	14.3	30.3	10.5
20,000	47.9	47.9	30.0	28.6	57.1	50.0	50.0	50.0	-	-	61.9	57.6	73.7
25,000	8.2	8.2	20.0	-	3.6	-	18.8	18.8	-	-	9.5	12.1	15.8
30,000	1.4	1.4	-	-	-	-	6.3	6.3	-	-	4.8	-	-
More	2.7	2.7	-	-	-	8.3	6.2	6.2	-	-	9.5	-	-
Chi Square:	X ² = 21.51; p = .368			X ² = 31.16; p = .001									

none could be construed as having a major ownership. A positive answer to this question would indicate that the respondent would normally not be subject to economic sanctions as a possible influence on his decisions in cases where ethics were a strong factor, although he might suffer economic consequences which might result from his free choice of a given alternative. Such a respondent might be expected to be more independent in his decision-making and in the policies by which he operates his business. This variable will be considered in later analyses.

Years Employed with Company: There are no significant differences among groups, areas, or levels. By and large, the entire sample population exhibits a fair degree of stability in employment, which was one of the questions behind the question itself. No table is provided.

Years in Present Position: Almost 36 per cent of Group 2 respondents have held their present positions more than eight years, as compared with 9.6 per cent in Group 1, and for Group 2 this might include most of the owner/managers. Differences among areas and levels were not statistically significant. No table is provided.

Perceived Inter-personal Relationships: Reported relationships were predominantly Very Good, about 50 per cent, or Good, about 40 per cent. The balance reported Fair, or No Subordinates. None reported Poor. Manufacturing and

Marketing respondents reported a lower percentage of Very Good and Group 2 respondents showed a higher percentage of Very Good. No table is provided.

Perceived Attitudes Toward Ethical Problems: Tables 30 and 31 were so constructed as to provide visibility in sequence of the four segments of this question, and for averaged totals for each component. Some respondents reported No Superior and some No Peers or Subordinates. Of interest are evidences of trends. In the cases of the Groups, Positive has the highest percentage for perceived ethical attitude of the Company, a lower percentage for that of the Superiors, lower still for Peers and Subordinates. For the Levels, it can be seen that percentages for Positive are higher in the higher levels, and progressively lower in the lower levels for Company and Superiors, and somewhat mixed for the rest. This is also true of the averaged totals for Levels 3, 4, and 5. In the Functional areas, the Engineers seem to perceive less positive and more indifferent attitudes throughout. It is apparent, in examining these data, that statistical significance as such cannot be the sole determinant of their value to this study. Patterns and trends are, in themselves, clues which may indicate characteristics of significance for the purpose of the study. In fact, Siegel⁴ indicates that arbitrary levels of significance

⁴Sidney Siegel, Non-Parametric Statistics for the Behavioral Sciences (New York: McGraw-Hill, 1956), p. 9.

TABLE 30.--Perceived attitudes toward ethical problems, by groups, functional areas, organizational levels, for (N=101).

N=	Major Groups			Functional Areas					Organizational Levels				
	101 Total	73 Grp 1	28 Grp 2	14 MFG	16 MKTG	33 ENG	16 P&A	22 A/F/S	7 L-1	5 L-2	27 L-3	38 L-4	24 L-5
Perceived Attitudes Toward Ethical Problems	%	%	%	%	%	%	%	%	%	%	%	%	%
Of Company													
Positive	68.3	63.0	82.1	64.3	87.5	54.5	81.3	68.2	100.0	80.0	77.8	65.8	50.0
Uncertain	22.8	27.4	10.7	21.4	-	36.4	18.8	22.7	-	20.0	14.8	21.0	41.2
Indifferent	8.9	9.6	7.1	14.3	12.5	9.1	-	9.1	-	-	7.4	13.2	8.3
Chi Square:	$\chi^2 = 3.69; p = .158$			$\chi^2 = 10.76; p = .216$					$\chi^2 = 10.79; p = .214$				
Of Superiors													
Positive	56.4	57.5	53.6	42.9	75.0	51.5	56.3	59.1	57.1	60.0	66.7	50.0	54.2
Uncertain	33.7	34.2	32.1	50.0	12.5	36.4	37.5	31.8	14.3	20.0	33.3	39.5	33.3
Indifferent	6.9	8.2	3.6	-	6.3	12.1	-	9.1	-	-	-	10.5	12.5
No Superiors	3.0	-	10.7	7.1	6.2	-	6.2	-	28.6	20.0	-	-	-
Chi Square:	$\chi^2 = 8.54; p = .036$			$\chi^2 = 12.14; p = .435$					$\chi^2 = 29.71; p = .003$				
Of Peers													
Positive	50.5	54.8	39.3	50.0	50.0	42.4	75.0	45.5	42.9	60.0	63.0	39.5	54.2
Uncertain	38.6	32.9	53.6	35.7	43.8	42.4	12.5	50.0	28.6	40.0	37.0	44.7	33.3
Indifferent	7.9	11.0	-	7.1	6.2	12.2	6.3	4.5	-	-	-	13.2	12.5
No Peers	3.0	1.4	7.1	7.1	-	3.0	6.2	-	28.6	-	-	2.6	-
Chi Square:	$\chi^2 = 8.55; p = .036$			$\chi^2 = 9.97; p = .618$					$\chi^2 = 24.89; p = .015$				
Of Subordinates													
Positive	44.6	46.6	39.3	42.9	43.8	30.3	62.5	54.5	57.1	60.0	51.9	39.5	37.5
Uncertain	41.6	35.6	57.1	50.0	50.0	36.4	31.2	45.5	28.6	40.0	48.1	42.1	37.5
Indifferent	6.9	9.6	-	-	-	18.2	6.3	-	-	-	-	10.5	12.5
No Subordinates	6.9	8.2	3.6	7.1	6.2	15.1	-	-	14.3	-	-	7.9	12.5
Chi Square:	$\chi^2 = 5.81; p = .121$			$\chi^2 = 19.89; p = .069$					$\chi^2 = 10.37; p = .584$				
Averaged Totals													
Positive	55.0	55.5	53.6	50.0	64.1	44.7	68.8	56.8	64.3	65.0	64.9	48.7	49.0
Uncertain	34.1	32.5	38.4	39.3	26.6	37.9	25.0	37.5	17.9	30.0	33.3	36.8	36.4
Indifferent	7.7	9.6	2.7	5.4	6.2	12.9	3.1	5.7	-	-	1.8	11.9	11.5
No Superiors/ Peer/Subordinates	3.2	2.4	5.3	5.3	3.1	4.5	3.1	-	17.8	5.0	-	2.6	3.1

TABLE 31.--Perceived attitudes toward ethical problems, by functional areas, organizational levels, for group 1 (N=73).

		Functional Areas					Organizational Levels					
N=		73	10	7	28	12	16	-	-	21	33	19
		Group 1	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Perceived Attitudes Toward Ethical Problems		%	%	%	%	%	%	%	%	%	%	%
Of Company												
Positive	63.0	60.0	85.7	53.6	75.0	62.5		80.9	66.7	36.9		110
Uncertain	27.4	20.0	-	35.7	25.0	31.3		14.3	21.2	52.6		
Indifferent	9.6	20.0	14.3	10.7	-	6.2		4.8	12.1	10.5		
Chi Square:			$\chi^2 = 6.86; p = .552$					$\chi^2 = 10.15; p = .038$				
Of Superiors												
Positive	57.5	60.0	71.4	50.0	66.7	56.3		71.4	57.6	42.1		
Uncertain	34.2	40.0	14.3	35.7	33.3	37.5		28.6	33.3	42.1		
Indifferent	8.2	-	14.3	14.3	-	6.2		-	9.1	15.8		
No Superior	-	-	-	-	-	-		-	-	-		
Chi Square:			$\chi^2 = 5.13; p = .743$					$\chi^2 = 5.12; p = .275$				
Of Peers												
Positive	54.8	70.0	57.1	42.8	83.3	43.8		71.4	42.4	57.9		
Uncertain	32.9	20.0	28.6	39.3	8.3	50.0		28.6	39.4	26.3		
Indifferent	11.0	10.0	14.3	14.3	8.4	6.2		-	15.2	15.8		

No Peers	1.4	-	-	3.6	-	-	3.0	-
Chi Square:						$\chi^2 = 7.26; p = .298$		
Of Subordinates								
Positive	46.6	60.0	57.1	28.6	66.7	50.0	61.9	42.4
Uncertain	35.6	40.0	28.6	32.1	25.0	50.0	38.1	36.4
Indifferent	9.6	-	-	21.4	8.3	-	-	12.1
No Subordinates	8.2	-	14.3	17.9	-	-	-	9.1
Chi Square:							$\chi^2 = 7.77; p = .255$	
Averaged Totals								
Positive	55.5	62.5	67.8	43.7	72.9	53.2	71.4	52.3
Uncertain	32.5	30.0	17.9	35.7	22.9	42.2	27.4	32.6
Indifferent	9.6	7.5	10.7	15.2	4.2	4.6	1.2	12.1
No Superiors/ Peer/Subordi- nates	2.4	-	3.6	5.4	-	-	-	3.0
								3.9

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need not be rigidly adhered to when higher levels may serve a useful purpose.

Perception of Own Situation in Company: The five segments of this question are shown, for the groups, functional areas, and organizational levels, on Tables 32 and 33. In the first segment it is apparent that all respondents perceive their positions as secure. The second segment concerns the possibility of advancement in the respondents' companies, and here, the situation is almost the reverse of that in the first segment, about 28 per cent consider advancement as uncertain. One reason for this might be that Group 2 owner/managers are in Levels 1 and 2 and neither have nor seek advancement opportunities. Fifty seven per cent of the Manufacturing respondents under Group 1 see advancement possibilities as uncertain. For the remaining three segments, there appears to be a uniformity of agreement across the five entities, with one exception; the Groups differ as to liking their work environment. As to the averaged totals, the Manufacturing respondents seem less assured as to total situation, and Marketing more assured than the average.

Perception of Company Goals: The same procedure is followed here as in Section 1 for the question dealing with personal goals. Five tables--Tables 34 through 38--have been constructed to present the data, one for each of the entities. On Table 34 there is strong agreement between the groups on the ranking of the first three items--Profit,

TABLE 32.--Perceived situation in company, by groups, functional areas, organizational levels, for (N=101).

N=	Major Groups			Functional Areas					Organizational Levels				
	101 Total	73 Grp 1	28 Grp 2	14 MFG	16 MKTG	33 ENG	16 P&A	22 A/F/S	7 L-1	5 L-2	27 L-3	38 L-4	24 L-5
Perceived Own Situation In Company	1	1	1	1	1	1	1	1	1	1	1	1	1
Position Secure													
Yes	90.0	87.7	96.4	85.7	100.0	93.9	87.5	81.8	100.0	100.0	92.6	81.6	95.8
Uncertain	5.0	6.8	-	7.1	-	3.0	6.3	9.1	-	-	3.7	7.9	4.2
No	5.0	5.5	3.6	7.2	-	3.1	6.2	9.1	-	-	3.7	10.5	-
Chi Square:	$\chi^2 = 2.24; p = .327$			$\chi^2 = .442; p = .818$					$\chi^2 = 6.17; p = .628$				
Advancement Possible													
Yes	57.4	61.6	46.4	28.6	68.8	63.6	62.5	54.5	28.6	40.0	66.7	57.9	58.3
Uncertain	27.7	32.9	14.3	57.1	18.7	33.3	12.5	18.2	14.3	-	33.3	28.9	29.2
No	14.9	5.5	39.3	14.3	12.5	3.1	25.0	27.3	57.1	60.0	-	13.2	12.5
Chi Square	$\chi^2 = 19.29; p = .000$			$\chi^2 = 21.24; p = .047$					$\chi^2 = 33.01; p = .001$				
Salary Equi- table													
Yes	72.3	69.9	78.6	64.3	87.5	75.8	56.3	72.7	85.7	100.0	77.8	65.8	66.7
Uncertain	16.8	19.2	10.7	28.6	6.3	12.1	25.0	18.2	-	-	14.8	18.4	25.0
No	10.9	10.9	10.7	7.1	6.2	12.1	18.7	9.1	14.3	-	7.4	15.8	8.3
Chi Square:	$\chi^2 = 1.08; p = .584$			$\chi^2 = 6.08; p = .638$					$\chi^2 = 6.14; p = .632$				
Like Your Work													
Yes	87.1	84.9	92.8	92.9	93.8	81.8	81.3	90.9	100.0	100.0	77.8	89.5	87.5
Uncertain	6.9	8.2	3.6	7.1	-	9.1	6.2	9.1	-	-	14.8	7.9	-
No	6.0	6.9	3.6	-	6.2	9.1	12.5	-	-	-	7.4	2.6	12.5
Chi Square:	$\chi^2 = 1.14; p = .565$			$\chi^2 = 5.68; p = .683$					$\chi^2 = 8.74; p = .365$				
Like Environ- ment													
Yes	63.4	56.2	82.1	71.4	75.0	51.5	68.8	63.6	85.7	80.0	55.6	63.2	62.5
Uncertain	21.8	24.6	14.3	21.4	25.0	30.3	6.2	18.2	14.3	20.0	25.9	15.8	29.2
No	14.8	19.2	3.6	7.2	-	18.2	25.0	18.2	-	-	18.5	21.0	8.3
Chi Square	$\chi^2 = 6.47; p = .039$			$\chi^2 = 8.83; p = .357$					$\chi^2 = 6.36; p = .607$				
Averaged Totals													
Yes	74.0	72.1	79.3	68.6	85.0	73.3	71.3	72.7	80.0	84.0	74.1	71.6	74.2
Uncertain	15.7	18.3	8.6	24.3	10.0	17.6	11.2	14.6	5.7	4.0	18.5	15.8	17.5
No	10.3	9.6	12.1	7.1	5.0	9.1	17.5	12.7	14.3	12.0	7.4	12.6	8.3

TABLE 33.--Perceived situation in company, by functional areas, organizational levels,
for group 1 (N=73).

		Functional Areas						Organizational Levels				
N=		Group 1						-				
		10	7	28	12	16		L-1	L-2	L-3	L-4	L-5
		MFG	MKTG	ENG	P&A	A/F/S						
Perceived Own Situation In Company		%	%	%	%	%		%	%	%	%	%
Position Secure	Yes	87.7	80.0	100.0	92.8	83.3	81.2		90.5	81.8	94.7	114
	Uncertain	6.8	10.0	-	3.6	8.4	12.5		4.7	9.1	5.3	
	No	5.5	10.0	-	3.6	8.3	6.3		4.8	9.1	-	
Chi Square:		$\chi^2 = 3.36; p = .910$						$\chi^2 = 2.55; p = .636$				
Advancement Possible	Yes	61.6	20.0	71.4	64.3	75.0	68.8		66.7	60.6	57.9	
	Uncertain	32.9	80.0	28.6	32.1	16.7	18.7		33.3	33.3	31.6	
	No	5.5	-	-	3.6	8.3	12.5		-	6.1	10.5	
Chi Square:		$\chi^2 = 14.90; p = .061$						$\chi^2 = 2.20; p = .699$				
Salary Equitable	Yes	69.9	50.0	85.7	71.4	66.7	75.0		71.4	69.7	68.4	
	Uncertain	19.2	40.0	14.3	14.3	25.0	12.5		19.1	15.2	26.3	
	No	10.9	10.0	-	14.3	8.3	12.5		9.5	15.1	5.3	
Chi Square:		$\chi^2 = 5.35; p = .719$						$\chi^2 = 1.93; p = .749$				

Like Your Work

Yes	84.9	100.0	85.7	78.6	83.3	87.5	76.2	90.9	84.2
Uncertain	8.2	-	-	10.7	8.4	12.5	14.3	9.1	-
No	6.9	-	14.3	10.7	8.3	-	9.5	-	15.8

Chi Square: $\chi^2 = 5.38$; $p = .716$ $\chi^2 = 7.56$; $p = .109$

Like Environment

Yes	56.2	70.0	85.7	42.9	66.7	50.0	52.4	60.6	52.6
Uncertain	24.6	20.0	14.3	35.7	8.3	25.0	23.8	18.2	36.9
No	19.2	10.0	-	21.4	25.0	25.0	23.8	21.2	10.5

Chi Square: $\chi^2 = 8.09$; $p = .425$ $\chi^2 = 2.97$; $p = .563$

Averaged Totals

Yes	72.1	64.0	85.7	70.0	75.0	72.5	71.4	72.7	71.6
Uncertain	18.3	30.0	11.4	19.3	13.3	16.2	19.1	17.0	20.0
No	9.6	6.0	2.9	10.7	11.7	11.3	9.5	10.3	8.4

TABLE 34.--Perceived company goals, by major groups (N=101).

Major Groups	Choice	1	2	3	4	5	6	7	8	9	0
		Profit	Better Product	Please Customer	Expand Market	Provide Employment	Benefit Community	Growth of Corporation	Financial Stability	Other	No Response
Group 1 N=73	1st	60.3	5.5	2.7	9.6			10.9	2.7		8.2
	2nd	15.1	21.9	8.2	9.6	4.1	5.5	19.2	5.5	1.4	9.6
	3rd	6.8	12.3	2.7	1.4	12.3	23.3	19.2	1.4	5.5	15.1
	Total	82.2	39.7	13.6	20.6	16.4	28.8	49.3	9.6	6.9	32.9
	Rank	1	3	7	5	6	4	2	8	9	--
Group 2 N=28	1st	67.9	7.1	7.1	7.1			3.6		3.5	3.6
	2nd	10.7	25.0	14.3	3.6	14.3	3.6	17.9	7.1		3.6
	3rd	7.1	10.7	10.7	7.1	17.9	7.2	14.3	3.6	7.1	14.3
	Total	85.7	42.8	32.1	17.8	32.2	10.8	35.8	10.7	10.6	21.6
	Rank	1	2	5	6	4	7	3	8	9	--
Total N=101	1st	62.4	5.9	4.0	8.9			8.9	2.0	1.0	6.9
	2nd	13.9	22.8	9.9	7.9	6.9	5.0	18.8	5.9	1.0	7.9
	3rd	6.9	11.9	5.0	3.0	13.9	18.8	17.8	2.0	5.9	14.9
	Total	83.2	40.6	18.9	19.8	19.8	23.8	45.5	9.9	7.9	29.7
	Rank	1	3	7	5	6	4	2	8	9	--
Chi Square	1st	X ² =6.65; p=.466									
	2nd	X ² =6.63; p=.675									
	3rd	X ² =9.04; p=.434									

Product, and Growth. The next four--Please Customer, Expand Market, Provide Employment, and Better Community--are ranked somewhere between fourth and seventh by both groups, and they agree on the ranking of the last two--Financial Stability and Other. Of interest is the fact that Group 2 ranks Employment and Customer ahead of Market and Community, in contrast to the converse for Group 1.

On Table 35 for Functional areas, almost the same pattern prevails as for the Groups. Profit, Product, and Growth are the three highest in rank for all but Marketing, which placed Market Expansion ahead of Product--a form of "functional bias."

Table 36 for Organizational levels reflects Group 2's greater concern for employee and customer, as can be seen in the rank ordering of Levels 1 and 2. Levels 3, 4, and 5 are in closer agreement.

Tables 37 and 38 for functional areas and organizational levels under Group 1 show some diversity in ranking, but Profit is always first, throughout, Growth is second or third, and the rest scatter somewhat. Engineering and Accounting/Finance/Systems on both Tables 35 and 37 have the largest percentages of No response, and this is also true of Level 4 on Tables 36 and 38. These findings indicate that most respondents agree on the relative importance of primary business goals--Profit, Growth, and Product, but have a diversity of opinions as to the rest,

TABLE 38.--Perceived company goals, by organizational levels, for (N=73) group 1 only.

[illegible]

notably that Group 2 places employees and customers right behind the primary three goals.

Perceived Status of Businessmen's Ethics: This is the last of the Environmental Factors. On Table 39, Groups 1 and 2 differ. It is apparent that Group 1 has a more favorable and Group 2 a less favorable view of the trend in business ethics. There is sharp contrast with respect to the three "opinions" in the functional areas for Group 1, with Manufacturing and Engineering at one end, Accounting/Finance/Systems at a mid-point, and Marketing and Personal & Administration at the other end. The organizational levels are much more uniform. Therefore it would appear that there is some relationship between functional orientation and opinion and this might have to do with the extent of exposure to ethical problems. Later analysis will consider this possibility.

Summary of Section 3

The groups, functional areas, and organizational levels are differentiated to some degree by most of the thirteen sets of environmental variables, but few are significant. Group 2 respondents appear to have greater stability and security in terms of income, ownership of the firm, years in the firm, and as to perceiving their own situation in the firm, than do Group 1 respondents. Group 1 appears to have greater technical competence in terms of the diversity of special functions. Both agree

TABLE 39.--Perceived status of businessmen's ethics, by group, functional areas, organizational levels.

Major Groups				Functional Areas				Organizational Levels							
N=	101	73	28	14	16	33	16	22	7	5	27	38	24		
	Total	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5		
Perceived Status of Businessmen's Ethics															
1. Improving	36.6	41.1	25.0	35.7	50.0	21.2	56.3	36.4	14.3	20.0	44.4	36.9	37.5		
2. Not Changing	43.6	43.8	39.3	57.1	31.3	57.6	18.7	36.4	42.9	60.0	44.5	36.8	45.8		
3. Worsening	20.8	15.1	35.7	7.1	18.7	21.2	25.0	27.2	42.8	20.0	11.1	26.3	16.7		
Chi Square:	$\chi^2 = 5.68; p = .059$			$\chi^2 = 11.73; p = .64$				$\chi^2 = 6.13; p = .633$							
Major Groups				Functional Areas				Organizational Levels							
N=	73			10	7	28	12	16	-	-	21	33	19		
	Group 1			MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5		
Perceived Status of Businessmen's Ethics															
1. Improving	41.1			30.0	71.4	21.4	75.0	43.8	42.8					42.4	36.9
2. Not Changing	43.8			60.0	14.3	60.7	16.7	37.5	42.9					39.4	52.6
3. Worsening	15.1			10.0	14.3	17.9	8.3	18.7	14.3					18.2	10.5
Chi Square:				$\chi^2 = 14.69; p = .066$				$\chi^2 = 1.08; p = .897$							

as to primary business goals, but Group 2 reflects more concern with the welfare of employees and customers than Group 1. The functional areas exhibit some functional bias in their perception of company goals. No respondents reported poor interpersonal relationships, but Marketing and Engineering were less positive than the other areas. Marketing also perceived their situation in the company as being more favorable than did Manufacturing. Marketing and P & A had a more positive opinion of businessmen's ethics, and Group 2 a less favorable opinion. Engineering perceived the firms attitude toward ethical problems as being less favorable, and this was evident in Group 1 levels in the form of a trend negatively downward. These variables will be referred to in discussing the findings on the case problems and the tests of hypotheses.

CHAPTER IV

FINDINGS: CASE PROBLEMS AND RELATED INFLUENCES

Introduction

The previous chapter provided a view of the respondents in terms of their personal characteristics, their perception of the relative significance of various external and internalized influences in a decision-making situation, and their work environment. In this chapter their behavior is examined with respect to deciding upon a pattern of action choices to be taken to resolve four case problems, and also their reaction to two additional situations involving questions of ethics. As before, the analyses will deal with the two major groups and total population, then with the components comprising the functional areas and organizational levels with which the respondents have been identified. An additional analysis differentiates the respondents according to two groups in three of the first four problem situations. One half of the respondents viewed the problems "objectively," being asked to indicate how, in their opinion, the case subject would behave; the other half were requested to place themselves in the case role and respond "subjectively" to the problem situation.

The respondents were requested to read through the brief cases, and then to circle the one or more of seven suggested actions they deemed the most appropriate. An eighth "open-end" option was provided, in which the respondent could briefly propose another action in addition to, or even in place of, those formulated.

Each of the case problems is set forth on a separate Exhibit which precedes the initial analysis and discussion. Next, the tabulated responses are reviewed. These are expressed as "action choice patterns," which are explained farther along. Following these initial reviews, the cases are examined in terms of "solution ratings" which have been applied to each of the action choice patterns to determine how completely they appear to solve the problems. Next, an evaluation is made of the ethical content and quality of these action choice patterns in terms of the proportion of "prudence" and "justice" they reflect. Together, these provide a more meaningful basis for comparing the ethical perceptions of the groups, functional areas, and organizational levels.

The criteria for the ratings are explained and discussed in light of the citations of the several authorities set forth in Chapter I from which they are derived, and they are presented in a figure in schematic form. The rating scales and action choice patterns for all six problem situations are combined on another figure. The

procedure for determining the ethical content and quality is also shown on one figure. These follow in the next sections immediately after the close of this discussion.

In addition to circling the action choices, the respondents were asked to indicate which three of the "influences" they had rated in Part II of the questionnaire entered most strongly into their decisions with respect to the case problems. These have been tabulated, and they are reviewed and discussed following the case problem analyses.

Since this is an exploratory study it is, in a sense, a test of the feasibility of making logical analyses of the ethical content of the problem situations and of a rational means of comparing the decision choices of various organizational components (and individuals) in the industrial context with respect to the same or similar situations. Such shortcomings as may become evident are given due recognition. Value judgments and opinions are avoided as much as possible, but the area of inquiry is a highly subjective one, while truths--realities--must be sought objectively. Yet, as Roubiczek indicates¹ both the objective and subjective methods of inquiry must be utilized for a more complete understanding of the implications of ethical problems.

¹Roubiczek, Values in the Age of Science, pp. 268-74.

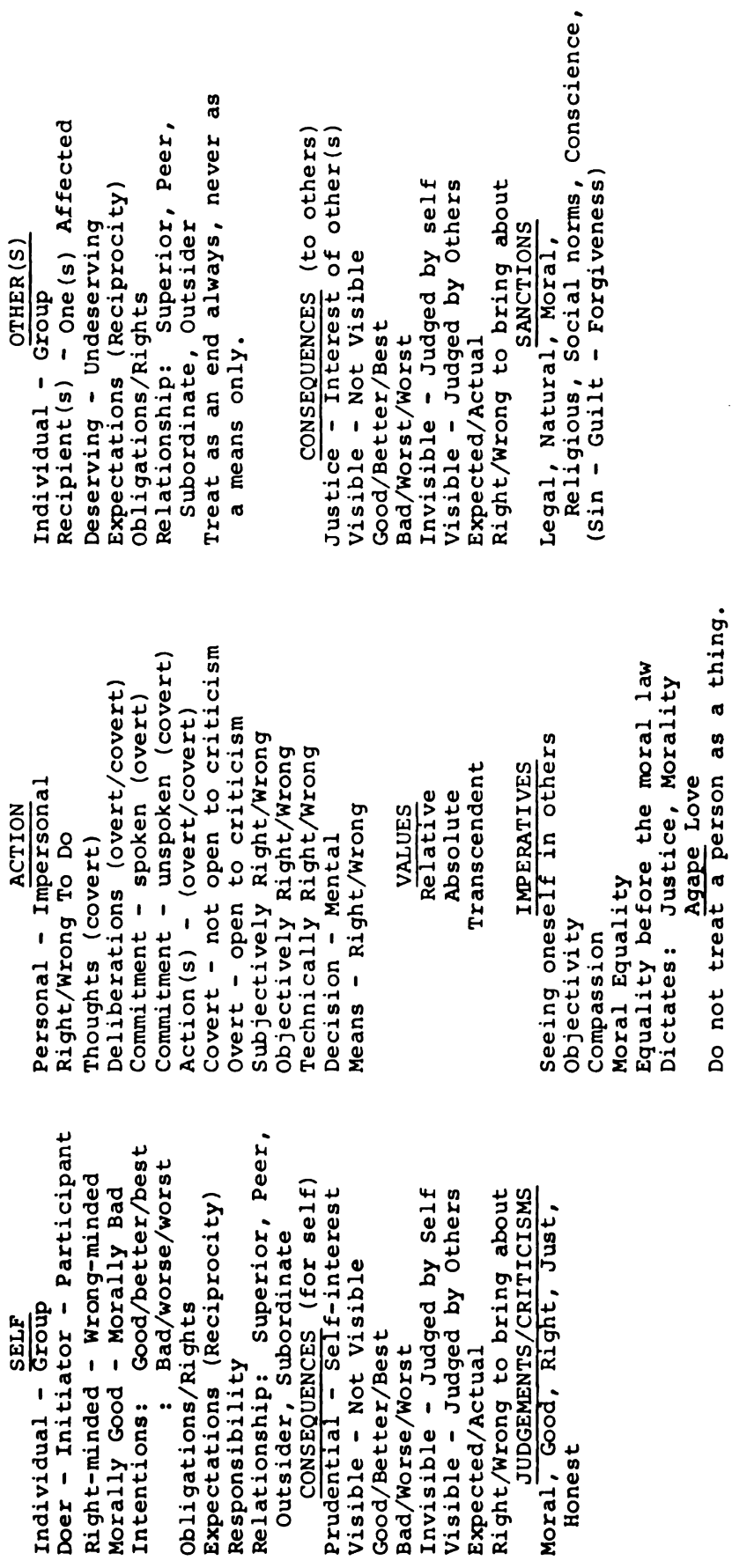
A number of correlations have also been attempted, within the limits of the computer program made available for this study, and these will be discussed in the final portion of the chapter.

Framework of Ethical Criteria

For the sake of convenience many of the key concepts, words, and phrases which are to be found in that portion of Chapter I setting forth the citations from the writings of authorities on ethics have been excerpted and organized in the form of the schematic in Figure 3. It is not complete, but is reasonably comprehensive and will be referred to from time to time instead of reverting to specific citations--unless that should be the more desirable procedure in a given circumstance.

The Solution Rating Scale

During the process of considering the statistical procedures to be used in this study, it was recognized that while analysis of the responses might indicate whether the various components of the functional areas and organizational levels differed in their selection of action choices for the first four case problems it would be helpful to find some appropriate means of objectively evaluating them for ethical content. It appeared that a valuation scale uniformly applied to the responses could be workable. Applying some sort of value to each individual action choice was



Primary concern of ethic: Moral integrity of doer and his final responsibility = Right-mindedness.

Solution of central problem of ethics: Determine what character of consequences of action make it right or wrong.

What ought to be done--What is the meaning of 'good'--Is there freedom to do what ought to be done?

Morality: Property of an action by which it conforms to a norm of human conduct.

Reason is the supreme argument in ethics. --Authority (divine) is the supreme guide in theology.

Rightness of action determined by rule or directive of right doing. Judgement of goodness found in consequences of an act.

Figure 3.---Schematic of ethical criteria (ref. Chapter I, pp. 13-22).

impractical, because it became obvious that as these were combined the effect changed, and also that most of the individual actions viewed separately were inadequate and not complete as a possible solution of the total problem to which they related. In addition, the open-end responses were unknowns. As became obvious, the number of unique patterns of responses were too diversified to be manageable for analysis, and it became necessary to group them in some logical fashion, which was done after the data had been gathered and the response patterns became evident. There was little point in attempting to anticipate all the possibilities which might reasonably occur. The question might be asked as to why some such limitation was not imposed directly on the respondents in the first place. In answer--one of the key points in the research approach was that the respondent should have as much freedom to choose among alternatives as possible, but that a completely open, essay-type answer was impractical. The seven action choices suggested for each case problem inevitably came out of this researcher's background and experience, and his direct knowledge of the real-life counterparts of the problems formulated as hypothetical cases for the purpose of the present research study. It can be seen that each of the four cases represents a situation which requires resolution, and that the situation as presented has ethical and/or moral implications of one kind or another, both in how the case

came about in the first place, and in the potential solutions indicated by the suggested action choices, which deliberately provided for a degree of ambiguity, and the possible open-end eighth choice.

To repeat a portion of an earlier citation, that of Roubiczek, "The subject matter of ethics is traditionally circumscribed by the following three questions: 1. What ought we to do? 2. What is the meaning of 'good?' 3. Are we able to do what we ought to do?"² It seems obvious that within the limits of the seven action choices and an eighth option an attempt is made to deal with at least the first and third of the above three questions, and that the second is at least implied by the extent to which the action choice patterns serve to most completely provide a solution to the problem in question. Thus, the essential determination here involved is how to "rate" the various patterns among the nine admitted for each case, in order to measure the relative perceptions of the groups, functional areas, and organizational levels into which the respondents have been stratified, in terms of how adequately or completely their response patterns serve to resolve the given problem. Therefore, the rationale for applying the simple five-point scale is to see what has been left undone of what ought to be and can be done within the limits of the means provided by the seven choices plus an option of the decision-maker's

²Roubiczek, Values in the Age of Science, pp. 5-6.

own formulation. In simple terms, the solution rating scale provides for a "penalty" for "errors of omission"--low rating being better than high. Thus, the action patterns are rated in terms of how completely they appear to provide a solution for the problem in question. The actual scale developed and applied to the action patterns for all the cases appears in a consolidated figure in a later section just before the rating process begins.

Evaluation of Ethical Content and Quality

A further question was raised, "Does the rating applied also fairly represent the ethical content of the solution?" In other words, are the most complete solutions the most ethical? To determine this, yet another analysis was made using the basis ethical criteria of C. I. Lewis, who was cited in Chapter I, and which is included in Figure 3, Framework of Ethical Criteria. He holds that the ethical content of an action should be considered in terms of how it serves to satisfy the prudential concern of the doer, provide justice for those affected by the doer's action, and also be technically right.³ In the industrial context, actions involve individuals and groups both internally and externally to the firm. Thus, seven considerations come into view. Internally there are, (1) the prudential concern of the individual for his own interests, (2) justice

³Lewis, Ground and Nature of the Right, p. 80.

to the company resulting from the individual's actions, (3) justice to other persons within the firm resulting from the individual's actions. Externally, there are, (4) prudential concern by the company's representatives for its interests, (5) justice to other persons outside the firm resulting from actions of the firm's representatives, (6) justice to other companies resulting from actions of the firm's representatives. Finally, there is, (7) the technical rightness of the actions in achieving the common purposes of those concerned. For convenience, the seven considerations were designated: Internal--P/S, J/C, J/OP; External--P/C, J/OP, J/OC; and T/R.

The respondents had been given case problems worded both objectively and subjectively, therefore, each mode was separately analyzed, individual by individual, and each action choice within each pattern was identified with the one of the above considerations to which it most closely related. The results were compiled by simple count and converted to percentages representing the relative proportions of "prudence" and "justice" contained in the action choice patterns. The (T/R) technical rightness count was excluded as being neutral. Thus, the total of P/S and P/C represented Prudence, while the total of J/C, two J/OP's, and J/OC represented Justice. Both together became proportions of 100 per cent. The difference between the two percentages became a "bias factor." If the difference is

zero, Prudence and Justice are considered to have been equally satisfied. If, for example, Prudence is 46 per cent and Justice 54 per cent, the bias factor is 8 per cent in the direction of Justice. The scheme is, of course, arbitrary, and the individual action choices are not weighted. However, the criteria are uniformly and impartially applied and make it possible to draw reasonable comparisons between groups and areas (the levels were excluded) as to the ethical content and quality of their action choices in the aggregate. The procedure is depicted in a figure in a later section immediately preceding the evaluation of the case problems. This evaluation also becomes the test for Hypothesis 4.

The process of analysis of the case problems now begins, and in the following sequence.

1. Preliminary analysis of all cases for explanation of content and development of the action choice patterns.
2. Rating of all cases using the (S/R) solution rating scale, also comparing results of objective and subjective modes, and in total by groups, areas, and levels.
3. Evaluation of four cases for ethical content and quality in terms of Prudence and Justice.

Case Problem 1, Preliminary Analysis

Exhibit 1 presents Case 1 as it appeared in the questionnaire. As can be seen, the respondents were to take an objective view of the situation, there being no specific role for them to consider. The question at

Case 1

Out of town firm supplies your company with new component, unit value \$5 each. The B/P, Specs and P.O. show critical dimension of $\pm .0010$. First delivery of 200 units is invoiced at \$1,000. Q.C. finds 50 units under-size by up to .0005 and not repairable, sets them aside for return, and notifies the Buyer. He phones supplier who promises prompt replacement and requests the rejects be scrapped here to save cost of return. Immediately afterward (1) Production finds that such a close tolerance ($\pm .0010$) is not really needed, (2) Engineering agrees that the tolerance could be $\pm .0015$.

Which (one or more) of the following actions do you recommend:

1. Debit supplier \$250 for the rejects;
2. Scrap the rejected parts;
3. Advise supplier the rejects have been accepted;
4. Do nothing;
5. Request Engineering issue B/P and Spec revisions;
6. Request Purchasing send supplier new B/P, Specs, and P.O. revision;
7. Request Q.C. to accept the rejected parts for use in production;
8. Any other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your decision?
 Strongest, # _____ Next, # _____ Third Strongest, # _____

Exhibit 1.--Case Problem 1, Objective Mode Only.

issue, and the primary ethical problem, is whether the supplier should be compensated for parts which, after rejection for failure to meet specified tolerances, were found to be useful, but only because it was agreed, internally, that the critical tolerance could be opened up to the extent that all 50 initially rejected parts could be used. The seven action choices can all be justified, each alone or in some logical combination, on some rational basis. For example, Choice 4--Do nothing, can be justified on the basis that a safety margin is desired and that tighter tolerances should assure higher quality and less possibility of early failure due to more rapid wear. This, of course, requires some assumptions as to the kind of application and company policies, neither of which are stated. By contrast, it could be stated that whatever the application, it should be adequately served, since both Production and Engineering agree on the acceptability of more open tolerances for the given dimension. This should result in greater efficiency and lower costs in the inspection process at least. Some of the respondents recognized the possibility of greater cost saving by suggesting that a lower price be negotiated in exchange for the more open tolerance offered. Choices 1 and 2 could logically be selected as following through on the agreed upon terms of the purchase order if the safety margin is desired, and this would be a more appropriate

answer than Choice 4, alone. A completely different kind of solution might be to select Choices 1 and 7, in combination, on the basis that the purchase order terms are satisfied, and there is no purely legal bar to salvage and use the parts, since the supplier delegated responsibility for disposing of the parts to the buyer. The question of ethics turns on the question of equitable consideration of the interests of all claimants--in both the short and long range, recognizing that "First delivery" implies an on-going relationship with the supplier. The above are here suggested as examples of the range of possibilities. No respondent raised the question of why the supplier shipped such a high proportion of rejectable parts in the first place, and especially on a first shipment when close inspection is to be expected. It is also pointed out that this case involves a group-to-group relationship, and that no individual's interests are involved.

In this initial examination, no evaluations are made, only comparisons between the frequency of selection of various "patterns" of action choices by the groups, functional areas, and organizational levels. It is pointed out, however, that the next series of Tables show a range of only nine such patterns, the original, much wider, range having been reclassified into a more manageable range, statistically. The original selections are shown on a set of three tables in the Appendices, in terms of the

original raw data. The introductory explanations for the balance of the cases will be more brief. Comments and analyses of the related Influences cited by the respondents are reserved for a later section.

Table 40 presents the consolidated action choice Patterns for Case 1 for all entities in terms of percentages. The chi square significance levels for all five entities are higher than the "standard" .05, and from the standpoint of frequency distribution only it would appear that the null hypotheses should be accepted and that in terms of this variable, the characteristics of all components and entities are such that they identify with the same or equivalent populations. However, the relatively low p's for the major groups and functional areas under (N=101) are noted. In addition, after application of a rating scale later on, the cases will be re-examined. On Table 40 itself, the most noticable deviations from the general pattern of selections are those of Marketing and of Levels 1 and 2. These will be highlighted when the rating scales are applied.

Case Problem 2, Preliminary Analysis

As can be seen on Exhibit 2, this case problem was presented to the respondents in both the objective and subjective modes. This is a rather typical case of non-factual reporting, and involves individuals. Whereas Case 1 had elicited only 15 original "patterns" and 13

TABLE 40.--Case problem 1, action choices, by groups, functional areas, organizational levels, for (N=101) and (N=73)

Major Groups															Functional Areas										Organizational Levels									
N=		101		73		28		14		16		33		16		22		7		5		27		38		24								
Action Choice		Total		Grp 1		Grp 2		MFG		MKTG		ENG		P&A		A/F/S		L-1		L-2		L-3		L-4		L-5								
Patterns		%		%		%		%		%		%		%		%		%		%		%		%		%								
1 (3-5-6-7)		46.5	50.7	35.7	50.0	18.8	51.5	50.0	54.5	28.6	40.0	48.1	47.4	50.0	42.2	45.5	48.1	47.4	50.0	42.2	45.5	48.1	47.4	50.0	42.2	45.5	48.1	47.4						
2 (5-6-7)		11.9	11.0	14.3	35.7	12.5	12.1		4.5	14.3	40.0	11.1	13.2	4.2			11.1	13.2	4.2			11.1	13.2	4.2										
3 (3-6-7)		8.9	9.6	7.1		6.3	18.2	12.5		14.3		3.7	10.5	12.5			3.7	10.5	12.5			3.7	10.5	12.5										
4 (3-7)		7.9	4.1	17.9	7.1	12.5		12.5	13.6	28.6		14.8	8.3				14.8	8.3			14.8	8.3												
5 (3-5-6)		7.9	11.0	-		12.5	9.1		13.6			11.1	7.9	8.3			11.1	7.9	8.3			11.1	7.9	8.3										
6 (3-5-6-7-8)		5.9	5.5	7.1	7.1	6.2	3.0	6.3	9.1				10.5	8.3				10.5	8.3				10.5	8.3										
7 (3-7-8)		4.0	4.1	3.6		12.5	3.0	6.2				7.4	5.3				7.4	5.3				7.4	5.3											
8 (3-5-7)		4.0	2.7	7.1		12.5	3.0	6.3					5.3	4.2				5.3	4.2				5.3	4.2										
9 (1-3-5-6-7)		3.0	1.4	7.1		6.3		6.2	4.5	14.3		3.7	4.2				3.7	4.2				3.7	4.2											
Chi Square for Freq. Distrib.:		$\chi^2=12.56$; $p=.128$										$\chi^2=40.63$; $p=.141$										$\chi^2=32.81$; $p=.427$												
N=		73		Group 1		10		7		28		12		16		-		-		21		33		19										
Action Choice		Total		MFG		MKTG		ENG		P&A		A/F/S		L-1		L-2		L-3		L-4		L-5												
Patterns		%		%		%		%		%		%		%		%		%		%		%												
1 (3-5-6-7)		50.7	60.0	14.3	46.4	58.3	62.5					52.4	48.5	52.6																				
2 (5-6-7)		11.0	20.0	14.3	14.3		6.3					9.5	15.2	5.3																				
3 (3-6-7)		9.6		14.3	17.9	8.3						4.8	9.1	15.8																				
4 (3-7)		4.1	10.0			8.3	6.2					9.5		5.3																				
5 (3-5-6)		11.0		28.6	10.7		18.8					14.3	9.1	10.5																				
6 (3-5-6-7-8)		5.5	10.0		3.6	8.3	6.3						9.1	5.3																				
7 (3-7-8)		4.1		14.3	3.6	8.3						4.8	6.1																					
8 (3-5-7)		2.7		14.3	3.6							3.0	5.3																					
9 (1-3-5-6-7)		1.4				8.3						4.8																						
Chi Square for Freq. Distrib.:		$\chi^2=32.46$; $p=.444$										$\chi^2=12.26$; $p=.726$										$\chi^2=32.81$; $p=.427$												

Case 2

Profit Center D is currently working on four programs. The current month-end Performance Report submitted for Profit Center Manager's review shows the following:

(\$000's)	Planned Cost	Cost to Date	Budget Balance	F'cast To Complete	Est. Cost at Completion	Projected Variance
Program 1	\$ 180	\$ 150	\$ 30	\$ 37	\$ 187	\$ (7)
2	110	90	20	23	113	(3)
3	250	160	90	115	275	*(25)
4	260	130	130	110	240	20
Total	\$ 800	\$ 530	\$ 270	\$ 285	\$ 815	\$ (15)

*Original estimate \$10,000 too low; costs to date held very close; all foremen agree forecast is as tight as possible; projected cost overrun appears inevitable.

(Objective Mode)

Consider an average Financial Analyst reporting to the Profit Center Manager. His staff compiles the data and prepares the report, which the P.C. Manager reviews, signs, and submits to the General Manager. The P.C. Manager does not want to submit such a bad report for Program 3. He states the data may be inaccurate and suggests that a "temporary adjustment" of \$15,000 in forecasts between Programs 3 and 4 "for just this report" would forestall higher level inquiry and give him time to "try to work things out." He is responsible for explaining the variances. The Financial Analyst reluctantly complies on the basis that the P.C. Manager still has control over what has not yet happened. The following month's report shows that things have not improved, but have gotten worse. The P.C. Manager fumes and again suggests that the Financial Analyst "adjust the forecast."

Which (one or more) of the following actions, in your opinion, would the average Financial Analyst take?

(Subjective Mode)

You are Financial Analyst reporting to the Profit Center Manager. Your staff compiles the data and prepares the report, which the P.C. Manager reviews, signs, and submits to the General Manager. The P.C. Manager does not want to submit such a bad report for Program 3. He states the data may be inaccurate and suggests that a "temporary adjustment" of \$15,000 in forecasts between Programs 3 and 4 "for just this report" would forestall higher level inquiry and give him time to "try to work things out." He is responsible for explaining the variances. You reluctantly comply, on the basis that the P.C. Manager still has control over what has not yet happened. The following month's report shows that things have not improved, but have gotten worse. The P.C. Manager fumes and again suggests that you "adjust the forecast."

Which (one or more) of the following actions would you take?

1. Again comply;
2. Refuse to comply;
3. Delay action;
4. Discuss the problem with the foremen;
5. Privately call the company Controller;
6. Ask Personnel for a transfer;
7. Resign;
8. Other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your decision? Strongest, # _____ Next, # _____ Third Strongest, # _____

Choice 8 written-in responses, this case brought out 31 original patterns of action choices and 38 Choice 8 additional proposals and comments from among the 101 respondents. This is indicative of much deeper involvement on the part of the respondents. Among the questions raised are divided loyalty, cooperation in misrepresentation, violation of standards of professional competence and "generally accepted accounting principles," and others, not to overlook risk of being fired. The Harvard Business Review presentation of the "Crisis in Conscience at Quasar" case, mentioned in an earlier citation⁴ discussed in considerable depth the problems involved in this kind of situation, and the rather remarkable division of opinion among executive readers, nationally, as to the acceptability of this kind of behavior on the part of responsible managers. Among the seven suggested action choices, three are basic--comply, refuse, or delay, as indicated by the parenthetical groupings opposite the "pattern" numbers on Table 41. Here, at the Group level there is strong agreement, and also among the Levels, except for Level 2 (for which N=5 only). For these, p = well over .05, and H_0 is accepted. However, for the functional areas under both (N=101) and (N=73) the p 's = well below .05, and H_0 is rejected. As can be seen there

⁴Fendrock, Harvard Business Review, March-April, 1968, pp. 112 ff.; Sept.-October, 1968, pp. 14 ff.

is a wide divergence among all five components as to the actions on which their pattern selections concentrate, particularly Marketing, Engineering, and Accounting/Finance/Systems. These differences are emphasized when the ethical rating scale is applied, in a later section, and also bring into view the difference in "solution perception" as between objective and subjective respondents, which is used to test Hypothesis 1 (the manager views himself as more ethical than the other managers).

Case Problem 3, Preliminary Analysis

This is also in both the objective and subjective modes. As Exhibit 3 shows, this is also a not uncommon case of apparent injustice to a deserving employee due to rigidity and impersonality of budgetary constraints. This problem can be considered in the light of Gouldner's concept of reciprocity and expectations.⁵ For this case problem there were 31 initial patterns which were consolidated to 9, and 24 respondents had additional action choices or suggestions. According to Table 42 the response frequencies indicated no statistically significant differences for all five entities, all p's are well above .05, and H_0 is accepted. Nevertheless, there are noticeable differences in response patterns in the

⁵Paul R. Lawrence, et al., Organizational Behavior and Administration (Homewood, Ill.: Richard D. Irwin, Inc., 1961), pp. 556-57.

Case 3(Objective Mode)

Consider an average Senior Buyer. One of his junior buyers rates an overdue salary increase but things are tight and there is no allowance for this in the departmental budget for at least 6 months. The Junior has unexpected financial problems, is discouraged, unhappy, and talks of leaving. Neither Personnel nor the Senior's superior has any suggestions. The Senior Buyer has reason to believe a new supplier the Junior handles may be "getting too friendly" with him, knowing his circumstances.

Which (one or more) of the following actions, in your opinion, would the average Senior Buyer take?

(Subjective Mode)

You are the Senior Buyer. One of your junior buyers rates an overdue salary increase but things are tight and there is no allowance for this in the departmental budget for at least 6 months. The Junior has unexpected financial problems, is discouraged, unhappy, and talks of leaving. Neither Personnel nor your superior has any suggestions. You have reason to believe a new supplier the Junior handles may be "getting too friendly" with him, knowing his circumstances.

Which (one or more) of the following actions would you take?

1. Do nothing;
2. Tell the Junior Buyer the budget situation and promise action in 6 months;
3. Wait to see what happens;
4. Warn the Junior not to get involved with the Supplier;
5. Talk to the Supplier;
6. Offer to loan the Junior money;
7. Insist your superior request a budget adjustment;
8. Other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your decision?
Strongest, # _____ Next, # _____ Third Strongest, # _____

Exhibit 3.--Case Problem 3, Objective and Subjective Modes.

TABLE 42.--Case problem 3, action choices, by groups, functional areas, organizational levels, for (N=101) and (N=73).

Major Groups														
Functional Areas										Organizational Levels				
N=	101	73	28	14	16	33	16	22	7	5	27	38	24	
Action Choice	Total	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5	
Patterns	%	%	%	%	%	%	%	%	%	%	%	%	%	
1 (2-3-4-5-7-8)	21.8	21.9	21.4	42.9	12.5	24.2	6.3	22.7	28.6		14.8	23.7	29.2	
2 (8)	6.9	8.2	3.6	7.1	6.3	3.0	12.5	9.1			7.4	10.5	4.2	
3 (2-3)	12.9	13.7	10.7	18.8	12.1	12.5	18.2			20.0	18.5	5.3	20.8	
4 (2-4-5)	10.9	11.0	10.7	28.6	12.5	12.1	6.3			14.3	20.0	7.4	10.5	
5 (2-6)	5.9	5.5	7.1			6.1	12.5	9.1	14.3		3.7		16.7	
6 (4-5-7-8)	8.9	8.2	10.7	12.5	12.1	6.3	9.1				11.1	10.5	8.3	
7 (2-6-7)	5.9	2.7	14.3	6.3	6.1		13.6		28.6	20.0	7.4	2.6		
8 (2-3-4-5-8)	8.9	11.0	3.6	7.1	12.5	12.1	6.2	4.5		20.0	7.4	15.8		
9 (1-3-4-5-6-8)	17.8	17.8	17.9	14.3	18.8	12.1	37.5	13.6	14.3	20.0	22.2	21.0	8.3	
Chi Square for Freq. Distrib.:	$\chi^2=6.86$; $p=.652$			$\chi^2=33.11$; $p=.607$					$\chi^2=37.45$; $p=.402$					
Functional Areas														
N=	73	Group 1		10	7	28	12	16						
Action Choice				MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5	
Pattern	%	%	%	%	%	%	%	%	%	%	%	%	%	
1 (2-3-4-5-7-8)	21.9	40.0	14.3	25.0	8.3	18.8					14.3	24.2	26.3	
2 (8)	8.2	10.0		3.6	16.7	12.5					4.8	12.1	5.3	
3 (2-3)	13.7		14.3	14.3	16.7	18.8					19.0	6.1	21.1	
4 (2-4-5)	11.0	20.0	28.6	14.3							4.8	12.1	15.8	
5 (2-6)	5.5			7.1	8.3	6.3					4.8		15.8	
6 (4-5-7-8)	8.2		14.3	7.1	8.3	12.5					9.5	9.1	5.3	
7 (2-6-7)	2.7			3.6		6.3								
8 (2-3-4-5-8)	11.0	10.0	14.3	14.3	8.3	6.3					9.5			
9 (1-3-4-5-6-8)	12.8	20.0	14.3	10.7	33.3	18.8					23.8	18.2	10.5	
Chi Square for Freq. Distrib.:				$\chi^2=22.36$; $p=.963$					$\chi^2=21.54$; $p=.253$					

functional areas for Manufacturing and Personnel and Administration which use of the rating scale brings into better view later on, at which time, also, the subjective vs objective analysis is under examination. This case contrasts with the previous two in that it equates the interests of individual against group and the superior-subordinate relationship, and considers the extent to which the manager may be willing to press higher levels on behalf of his subordinate.

Case Problem 4, Preliminary Analysis

This case, set forth on Exhibit 4, involves conflict between peers, and also self-interest vs company interests. It also questions the consideration due another organization whose employee has been induced to partially relax the restrictions of scheduled releases. Economic consequences are also a part of the problem. There were 33 original action choice patterns before consolidation to 9, but only 8 written-in options. About 90 per cent of the respondents opt for a show-down with the erring Sales Manager, some resting almost entirely on this issue. Others give varying degrees of consideration to the other aspects, which will be elaborated upon during the course of applying the rating scale later on. As regards statistical level of significance, all p's are well over .05, as Table 43 shows, but Marketing and Personnel and Administration differ noticeably from the

Case 4(Objective Mode)

Consider an average Manufacturing Manager. The Sales Manager (who seems likely to be the next General Manager) has befriended one of the buyers of a major account to which 3 types of special fabricated components are sold under blanket P.O.'s with monthly but somewhat flexible delivery schedules. (The Sales Manager has sent flowers to the buyer's sick wife, bought toys for his children, etc.) Production is programmed for early delivery of each month's schedule plus holding a 50% reserve against next month. Volume has been dropping. This month the Sales Manager requests the 50% reserve be increased to 100% and the 3 components shipped 4 weeks, 3 weeks, and 2 weeks early, stating a revised release is coming. Instead, the customer's buyer calls the Production Control Office to complain about the first early shipment. He is told that the Sales Manager made the arrangement. The buyer subsidizes, saying he only agreed to a 50% advance on one item to "relieve your inventory problem." A week later he frantically calls again, requesting that shipments be stopped.

Which (one or more) of the following actions, in your opinion, would the average Manufacturing Manager take?

(Subjective Mode)

You are the Manufacturing Manager. The Sales Manager (who seems likely to be the next General Manager) has befriended one of the buyers of a major account to which 3 types of special fabricated components are sold under blanket P.O.'s with monthly but somewhat flexible delivery schedules. (The Sales Manager has sent flowers to the buyer's sick wife, bought toys for his children, etc.) Production is programmed for early delivery of each month's schedule plus holding a 50% reserve against next month. Volume has been dropping. This month the Sales Manager requests the 50% reserve be increased to 100% and the 3 components shipped 4 weeks, 3 weeks, and 2 weeks early, stating a revised release is coming. Instead, the buyer calls your Production Control office to complain about the first early shipment. He is told that the Sales Manager made the arrangement. The buyer subsidizes, saying he only agreed to a 50% advance on one item to "relieve your inventory problem." A week later he frantically calls again, requesting that shipments be stopped.

Which (one or more) of the following actions would you take?

1. Ignore the buyer;
2. Confront the Sales Manager for an explanation;
3. Revert to authorized scheduled releases;
4. Request that the Sales Manager obtain the revised releases;
5. Take the matter up with the General Manager;
6. Request that billing be delayed on the advance shipments;
7. Authorize return of the advance shipments;
8. Other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your decision? Strongest, # _____ Next, # _____ Third Strongest, # _____

Exhibit 4.--Case Problem 4, Objective and Subjective Modes.

TABLE 43.--Case problem 4, action choices, by groups, functional areas, organizational levels, for (N=101) and (N=73).

N=	Major Groups			Functional Areas						Organizational Levels					
	101			16						7					
	Total	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S		L-1	L-2	L-3	L-4	L-5	
Action Choice Patterns	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1 (2-4)	11.9	13.7	7.1	7.1	12.5	18.2	12.5	4.5	14.3			3.7	10.5	25.0	
2 (1 thru 8)	40.6	35.6	53.6	21.4	75.0	33.3	37.5	40.9	14.3	80.0	59.3	28.9	37.5		
3 (2-3-4)	11.9	13.7	7.1	14.3	6.3	15.1	18.8	4.5			14.8	13.2	12.5		
4 (2-4-6)	5.9	5.5	7.1	14.3		6.1	6.3	4.5	14.3		3.7	7.9	4.2		
5 (2-3-5-6)	5.9	5.5	7.1	7.1		3.0	12.5	9.1	14.3			13.2			
6 (2-5)	5.9	6.9	3.6	7.1	6.2	6.1		9.1			7.4	7.9	4.2		
7 (3-4-5-6)	7.9	8.2	7.1	7.1		6.1	6.2	18.2	28.6			10.5	8.3		
8 (3-4-6-7)	6.9	6.9	7.1	21.4		9.1		4.5	14.3	20.0	7.4	2.6	8.3		
9 (4-7-8)	3.0	4.1				3.0	6.3	4.5			3.7	5.3			
Chi Square for Freq. Distrib.:	$\chi^2=5.36$; $p=.802$			$\chi^2=32.49$; $p=.636$						$\chi^2=35.98$; $p=.470$					

N=	Major Groups			Functional Areas						Organizational Levels					
	73			16						7					
	Total	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S		L-1	L-2	L-3	L-4	L-5	
Action Choice Patterns	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1 (2-4)	13.7			10.0	14.3	21.4	16.7			4.8	12.1	26.3			
2 (1 thru 8)	35.6			20.0	71.4	28.6	41.7	37.5		57.1	27.3	26.3			
3 (2-3-4)	13.7			20.0	14.3	10.7	25.0	6.3		19.0	9.1	15.8			
4 (2-4-6)	5.5			10.0		7.1		6.2				9.1	5.3		
5 (2-3-5-6)	5.5			10.0		3.6	8.3	6.3				12.1			
6 (2-5)	6.9			10.0		7.1		12.5		4.8	9.1	5.3			
7 (3-4-5-6)	8.2			10.0		7.1		18.8				12.1	10.5		
8 (3-4-6-7)	6.9			10.0		10.7		6.3							
9 (4-7-8)	4.1					3.6	8.3	6.2		9.5	3.0	10.5			
Chi Square for Freq. Distrib.:	$\chi^2=23.00$; $p=.954$			$\chi^2=20.53$; $p=.304$											

other functional areas in their selection of action choices. H_0 is necessarily accepted. The objective vs subjective analysis is also considered in the later section.

Case Problem 5, Preliminary Analysis

This case and Case 6 differ from the preceding four in that an expression of opinion rather than a selection of action choices was requested. The respondent is requested to indicate the statements which best express his opinion as to whether the requirement for a stipulated political contribution imposed on the new executive is ethical or unethical. Some respondents chose statements from both sides of the question. There were four choices for each side, and no open-end options were provided for. In retrospect, it is felt that this would have been valuable additional information. As Exhibit 5 shows, the primary question here is whether the employee is being coerced, or whether he cooperatively and willingly joins in efforts to maintain a political climate under which it appears that a free enterprise system can exist and hence his own interests best served in the long run. This is not exactly so stated in the language of the problems itself, but is implied. The large number of the respondents who split their selection of appropriate statements in varying degrees is indicative of their recognizing good and bad aspects in the situation. It might have been interesting to find out how many of the

Case 5

The Engineering Supervisor had been recently promoted to Project Manager and had achieved accession to the Executive level, which meant, among other things, that he shared in the annual executive bonus, was entitled to lease two cars, etc. A few months later his supervisor handed him a slip on which was pencilled the amount \$65, and the name of a central office executive. "This," he said, "is your political contribution for this year. Make out your check to the party of your choice, put it in an envelope addressed to Mr. (the central office executive) and give it to me to forward."

Which of the following (one or more) express your feelings best?

- A. This requirement is not unethical because:
 - 1. Executive level personnel should have a sense of social responsibility and support our democratic political system.
 - 2. It takes a little pressure to induce one to make a political contribution.
 - 3. If political parties are not financially supported our democratic system may fail.
 - 4. The executive has free choice as to which party he can support.
- B. This requirement is unethical because:
 - 5. The executive is being required to make a political contribution whether he wants to or not.
 - 6. The amount of his contribution is being stipulated; he has no choice as to how much.
 - 7. The Company uses this device to evade the Federal laws prohibiting political contributions by business corporations.
 - 8. The executive can be "rated" by higher management according to which party they can see he supports.

Which three of the "Influences you ranked in Part II entered most strongly into your opinion?
 Strongest, # _____ Next, # _____ Third Strongest, # _____

Exhibit 5.--Case Situation 5.

respondents actually faced such a requirement in their own companies; however, the question was not asked, because it was felt it might produce a negative attitude toward the purposes of this study. There is no rating scale applied to this case and Case 6, of the same sort as for the prior four cases, rather, a simple percentage is established based on whether the responses are entirely or predominantly on one side or the other, or split. This is demonstrated in the later section. Table 44 shows that for this case, p = well over .05 for four of the entities, indicating that the frequency distributions tend to be well dispersed for all components, and for these, H_0 is accepted. However, in the case of the two major groups, p = over .05 but is much closer than the rest, nevertheless H_0 is provisionally accepted.

Case Problem 6, Preliminary Analysis

The structure, although not the content, of this case is similar to that of the previous case, in that four opinions for either side of an ethical question are presented for the respondent's consideration and selection. The details are given in Exhibit 6, and this time the point at issue is in a much broader context, to provide contrast with the previous case, and to see if the pattern structures differed in any marked degree. It is obvious that they did, as a comparison of the Tables shows, and in addition the significance levels for the

TABLE 44.--Case problem 5, opinion choices, by groups, functional areas, organizational levels, for (N=101) and (N=73).

Opinion Choice Patterns	N=	Major Groups						Functional Areas						Organizational Levels													
		101		73		28		14		16		33		22		7		5		24							
		Total		Grp 1		Grp 2		MFG		MKTG		ENG		P&A		A/F/S		L-1		L-2		L-3		L-4		L-5	
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1	(5-6)	21.8	27.4	7.1	7.1	14.3	12.5	27.3	25.0	22.7						29.6	15.8	33.3									
2	(5)	8.9	11.0	3.6	3.6		18.8	3.0	6.3	18.2						11.1	13.2	4.2									
3	(5-6-7-8)	7.9	4.1	17.9		7.1	12.5	6.1		13.6						28.6	20.0										
4	(5-6-8)	7.9	9.6	3.6	3.6	7.1	12.5	9.1	12.5									7.4	10.5	8.3							
5	(1-3-4)	4.0	2.7	7.1	7.1	14.3			6.3	4.5	14.3					14.3			7.4	2.6							
6	(4)	4.0	4.1	3.6			12.5	3.0		4.5								5.3									
7	(1-2-3-4)	18.8	19.2	17.9		21.4	12.5	24.2	18.8	13.6						14.3	20.0	25.9	13.2	20.8							
8	(4)	18.8	13.7	32.1		21.4	18.8	24.2	18.8	9.1						14.3	60.0	11.1	26.3	8.3							
9	(1-3-4)	7.9	8.2	7.1		14.2	3.0	12.5	13.6							28.6		7.4	5.3	8.3							
Chi Square for Freq. Distrib.:		$\chi^2=15.52$; $p=.078$						$\chi^2=34.95$; $p=.519$						$\chi^2=37.06$; $p=.420$													
Opinion Choice Patterns	N=	Major Groups						Functional Areas						Organizational Levels													
		73		28		12		16		A/F/S		L-1		L-2		L-3		L-4		L-5							
		Group 1		Group 2		Group 3		Group 4		Group 5		Group 6		Group 7		Group 8		Group 9		Group 10							
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
1	(5-6)	27.4				20.0	28.6	32.1	33.3	31.3						28.6	18.2	42.1									
2	(5)	11.0				10.0	28.6	3.6	8.3	25.0						9.5	15.2	5.3									
3	(5-6-7-8)	4.1				10.0	3.6			6.3							6.1	5.3									
4	(5-6-8)	9.6				10.0	28.6	7.1	16.7							9.5	9.1	10.5									
5	(1-3-4)	2.7				10.0				6.2						9.5											
6	(4)	4.1				20.0	28.6	3.6										6.1	5.3								
7	(1-2-3-4)	19.2				20.0	25.0	25.0	25.0	12.5						28.6	15.1	15.8									
8	(4)	13.7				10.0	21.4	8.3	6.3							4.8	24.2	5.3									
9	(1-3-4)	8.2				20.0	3.6	8.3	12.5							9.5	6.1	10.5									
Chi Square for Freq. Distrib.:		$\chi^2=41.96$; $p=.228$						$\chi^2=17.71$; $p=.475$																			

Case 6

The government is considered by many to be a "price buyer," and in the case of many requirements such as defense, space, atomic development, etc., is the ultimate "only" customer. Thus, the government's bargaining position is generally deemed to be stronger than that of any supplier unless the supplier has a proprietary item (or service) for which there is no acceptable substitute and is therefore a "sole source."

Consider a situation where there are many suppliers and the government buys an electro-mechanical assembly periodically in lots such that the available requirements are divided among the three lowest bidders under a Fixed Price arrangement. Because business is generally falling off more suppliers come in, competition is keener, and the price keeps dropping as each new periodic bidding opportunity is opened. In fact, some bidders stay in only to try to get volume to help absorb fixed overhead.

Which of the following (one or more) express your feelings best?

- A. The government's buying policy is not unethical because:
 - 1. They must buy at the lowest possible price in the interest of the taxpayer.
 - 2. No supplier (in this case) is forced to participate by making his capacity available.
 - 3. Suppliers should not expect to make much profit at the taxpayers' expense.
 - 4. This is the only way businesses can operate in a free economic system.
- B. The government's buying policy is unethical because:
 - 5. The buyer is unmercifully using whipsawing tactics to force the price below a profitable level.
 - 6. Suppliers require a reasonable profit to remain healthy and grow, (an accepted principle in commercial industry).
 - 7. The employees of such suppliers are denied opportunities for advancement and normal wage increases.
 - 8. The suppliers may be forced into price collusion practices in order to survive.

Which three of the "Influences" you ranked in Part II entered most strongly into your opinion?
 Strongest, # _____ Next, # _____ Third Strongest, # _____

five entities also changed considerably. This time, as Table 45 shows, the major groups are much more alike, whereas greater differences are evident among the components of the functional areas and organizational levels. The question at issue involves the total competitive environment within which the companies of the respondents function when they engage in government contract work. There is no consideration of, or identification with, individuals. There is a possibility that the nature of the responses may reflect the relative stability of the industry and organizations to which most of the respondents belong. It would be interesting to see what kind of response to the question might come from managers in the aerospace/defense industries, but that was not possible for purposes of the present study.

As described in the previous case analysis, no scale rating is used for this case, but again a simple percentage relationship is developed between the responses grouped on either side of the question. The significance levels for the frequency distributions in all components is above .05, but the organizational levels for both (N=101) and (N=73) seem to indicate a trend from low to high which may be of interest. This is re-examined in a later section.

TABLE 45.--Case problem 6, opinion choices, by groups, functional areas, organizational levels, for (N=101) and (N=73).

Opinion Choice Patterns	N=	Major Groups					Functional Areas					Organizational Levels				
		101					14					7				
		Total	73	28	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
1 (1-2)	12.9	15.1	7.1	14.3	12.5	6.1	18.8	18.2	14.3	18.5	15.8	4.2				
2 (1-2-4)	15.8	17.8	10.7	28.6	6.3	15.2	25.0	9.1	14.3	30.0	10.5	12.5				
3 (2-4)	8.9	9.6	7.1	7.1		12.1	6.3	13.6		14.8	10.5	4.2				
4 (2)	7.9	9.6	3.6	12.5	6.1	12.5	9.1	9.1	14.3	15.8	8.3					
5 (5-6-8)	6.9	5.5	10.7	12.5	9.1	12.5	9.1	9.1	20.0	3.7	2.6	12.5				
6 (1)	5.0	4.1	7.1	18.8	6.1	18.8	6.1		20.0	3.7	5.3	4.2				
7 (1-2-3-4) (6-8)	15.8	15.1	17.9	7.1	12.5	21.2	12.5	18.2	42.9	7.4	10.5	25.0				
8 (1-2) (5-6-7-8)	12.9	11.0	17.9	28.6	18.8	9.1	13.6		20.0	14.8	15.8	8.3				
9 (1-2) (6-8)	13.9	12.3	17.9	14.3	6.3	15.2	25.0	9.1	14.3	7.4	13.2	20.8				
Chi Square for Freq. Distrib.:		$X^2=5.52$; $p=.787$					$X^2=43.50$; $p=.182$					$X^2=46.63$; $p=.110$				
Opinion Choice Patterns	N=	73					10					-				
		Group 1					MFG					L-1				
		Total	73	28	Grp 1	Grp 2	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
1 (1-2)	15.1	15.1	7.1	14.3	12.5	6.1	18.8	18.2	14.3	18.5	15.8	4.2				
2 (1-2-4)	17.8	17.8	10.7	28.6	6.3	15.2	25.0	9.1	14.3	30.0	10.5	12.5				
3 (2-4)	9.6	9.6	7.1	7.1		12.1	6.3	13.6		14.8	10.5	4.2				
4 (2)	9.6	9.6	3.6	12.5	6.1	12.5	9.1	9.1	20.0	3.7	2.6	12.5				
5 (5-6-8)	5.5	5.5	10.7	12.5	9.1	12.5	9.1	9.1	20.0	3.7	5.3	4.2				
6 (1)	4.1	4.1	7.1	18.8	6.1	18.8	6.1		20.0	3.7	5.3	4.2				
7 (1-2-3-4) (6-8)	15.1	15.1	17.9	7.1	12.5	21.2	12.5	18.2	42.9	7.4	10.5	25.0				
8 (1-2) (5-6-7-8)	11.0	11.0	17.9	28.6	18.8	9.1	13.6		20.0	14.8	15.8	8.3				
9 (1-2) (6-8)	12.3	12.3	17.9	14.3	6.3	15.2	25.0	9.1	14.3	7.4	13.2	20.8				
Chi Square for Freq. Distrib.:		$X^2=37.24$; $p=.412$					$X^2=27.59$; $p=.069$					$X^2=27.59$; $p=.069$				

Rating the Action Choice Patterns
for Each Case

In this section each of the case problems will again be considered in turn, this time to explain the rationale for the "solution rating" (S/R) which has been assigned to each of the nine action choice patterns identified with each case problem. Figure 4 provides a consolidated view of the S/R scales for the four sets of action choice patterns and the two "opinion choice" patterns of Cases 5 and 6. In addition, the number of frequencies of responses associated with each action choice (or opinion choice) is shown, both for the individual patterns and in total, and also the total of all frequencies for each pattern. The S/R rating scale is shown opposite each pattern for Cases 1 through 4, and a simple "U," "E," or "U/E" designation is identified with each opinion choice in Cases 5 and 6. In these two cases the "U" and "E" indicates that the respondents identified their opinions totally or predominantly with one side of the question of the other, whereas the "U/E" indicates a split set, 50/50, of opinions as to the ethical implications of the given problem situations.

The reader is reminded that the following ratings refer to the relative degree of completeness of the proposed solutions, as explained early in the chapter, and that another evaluation will follow which will consider the proportional content of Prudence and Justice.

Case Problem #1										Case Problem #2									
Pattern	Action Choices								S/R	Freq.	Action Choices								S/R
	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8	
1			47		47	47	47		2	47		12							2
2					12	12	12		3	12		17		17				4	1
3			8			9	9		4	9		7						7	1
4			8					5	5	8								8	1
5			7		8	7			3	8									5
6			5		6	6	6	6	1	6			2	9	3	1	1	9	5
7			4		4	4	4	4	5	4			9	4	5	5	3	9	2
8			4		4	4	4	4	4	4			13	11	5		1	4	3
9			3		3	3	3	3	2	3			2	2	2	6	4		2
Fre- quency	3	--	86	--	80	82	90	10		101		23	47	19	44	15	7	6	101
Case Problem #3										Case Problem #4									
Pattern	Action Choices								S/R	Freq.	Action Choices								S/R
	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8	
1		22	1	19	3		20	5	1	22		12		12				1	4
2								7	4	7		1	41	14	17	14	10	8	2
3			13	6					3	13		9	9	9				1	3
4			11		9	2			3	11		6		6		6		1	2
5							6		3	6		6	6		6	6		1	2
6								3	2	9		6							4
7							1	6	1	6									1
8			8	3	6	5		1	3	9				5	4	8	1	2	1
9			5	4	12	2	1	5	5	18				7	4		2	2	1
Fre- quency	5	66	14	49	14	8	35	21		101		1	80	41	55	34	24	12	101

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Case Problem #5										Case Problem #6											
Pattern	(E) Opinion Choices (U)								Freq.	S/R	Pattern	(E) Opinion Choices (U)								Freq.	S/R
	1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8		
1					22	22	2	2	22	U	1	13	13							13	E
2					9				9	U	2	16	16		16					16	E
3					8	8	8	8	8	U	3	9			9					9	E
4					8	8		8	8	U	4	8								8	E
5				4	4				4	E	5					7	7	7		7	U
6				4	4				4	U/E	6	5								5	E
7				14	6	10	13	4	5	1	7	13	8	4	13	4		5		16	E
8				7	2			6	17	14	8	4	3			9	10	7	13	13	U
9				3	2	1		1	2	2	1	3	3		2	5		3		14	E/U
Fre- quency	28	8	16	28	74	59	23	29	101		Fre- quency	54	60	4	40	16	26	7	28	101	

Figure 4.--Case Problem Action Choice Patterns, Frequencies, and Assigned Solution Rating Scales (as Consolidated).

Case Problem 1

In this group-to-group situation the economic interests of supplier and customer are the primary concerns, but individual interests are also involved in terms of the professional competencies of the managers in each of the functional areas whose decisions are to be considered. As the action choices and case narrative indicate, Production, Quality Control, Purchasing, Engineering, and Accounting are all involved to some degree. The recommendations and potential actions of each are brought into view, and the respondent is requested to select that course of action (combination of action choices) which in his judgement will best resolve the total problem.

Referring to Figure 4, Case Problem 1, it will be seen that none of the respondents selected Actions 2 or 4--"Scrap the rejects," or "Do nothing." This leaves only six actions to consider and substantially reduces the problem of rating. None selected the combination of actions 1 and 7--"debit supplier," but "use the initially rejected parts"; probably legal, prudential of course, but questionable as to justice. The least complete solution is Pattern 4, "notifying the supplier" and "requesting Q.C. to accept the rejects," since it ignores the potential improved efficiency and cost saving through opening up the tolerance via actions 5 and 6. This pattern would be considered both technically

and morally deficient, because it is wasteful and would result in economic injustice to both companies--it is rated 5. Pattern 3 ignores Engineering's functional responsibility and authority to officially revise the tolerances and follow through with notifications to Production and Q.C., which could result in a repeat performance on the next shipment from the supplier. This is more a technical rather than moral error, and would have temporary unfavorable economic consequences--it is rated 4. Pattern 7 is similar to pattern 5 but is modified by written-in options to keep the tolerance tight and pay for parts actually used. This is less efficient and more costly than to follow through with confidence on the judgement of Engineering and Production that the tolerance could be opened up for future shipments. Thus, a degree of both technical and moral (wastefulness) error is indicated--it is rated 4. Pattern 8 fails to follow through and provide an opportunity to make a more favorable arrangement with the supplier, to the possible mutual advantage of both, and is therefore also deemed an incomplete resolution--it is rated 4. Pattern 5 overlooks Q.C.'s responsibility to approve acceptance of the rejects in accordance with revised specifications, mainly a technical error with some possibly small cost consequences because of delay--this is rated 3. Pattern 2 fails to give the supplier more timely notification and leaves him

working to unnecessarily closer tolerances until the revised P.O. and specs. reach him, and delays a possible price renegotiation. This is primarily a technical deficiency, but could be considered a moral error if carelessness is the problem--it is rated 3. Pattern 1 covers almost all aspects but fails to consider a possible price adjustment to benefit the buying company; justice to the supplier is more than served, but the solution is prudentially deficient--this is rated 2. Pattern 9 is almost identical to pattern 1, but has the peculiarity of debiting the supplier for the rejects while notifying him that the rejects were accepted. This can be merely following through on the paper-work initiated by the original rejection, which would be offset by a subsequent correction or a re-billing by the supplier, or some respondents cannot distinguish between a debit and a credit. They are given the benefit of the doubt. There is no suggestion to seek a price adjustment--like pattern 1, it is rated 2. The most complete resolution is reflected in pattern 6, which follows through on all aspects internally to the organization, and requests that the price be renegotiated, by Action 8 write-in, which would result in maximum satisfaction to supplier and buyer, and leave all functions in proper control of their responsibilities. It appears to be both technically and morally correct and serves prudence and justice--the

actions appear to be right, the expected consequences good--the most complete solution within the limits of the action choices available, and in accordance with the criteria in the framework on Figure 3. It is rated 1.

The foregoing is somewhat lengthy, but serves to demonstrate the analytical and rating process. Greater brevity will be attempted for the balance of the cases to be so treated.

The next procedure for Case 1 is to apply the ratings to patterns and determine what resulted in terms of the groups, areas, and levels. Before this is done, an additional explanation is necessary. As previously indicated, Cases 2, 3, and 4 were presented to the respondents in both the objective and subjective modes, while Case 1 was not. However, while rating the three cases according to the two modes it occurred to the researcher to re-examine Case 1 in the same fashion to see whether the responses tended to be neutral or to reflect the same biases as the others. It was found, as is evident in Table 46, that there was a definite indication of bias in the case of Group 1, all functions but P & A, and two of the three levels having a higher mean solution rating for those respondents who identify with the objective mode. Group 2 has five of the functions and levels going in one direction and five in the other. It appears, therefore, that a measurable number of Group 1 respondents

TABLE 46.--Case Problem 1--Analysis per objective/subjective modes, for groups, areas, and levels.

* (S/R = Solution Rating)													
		Functional Areas					Organizational Levels						
		Totals	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5	
Total N=101	Objective Mode	S/R Total N=	139	19	35	34	24	27	9	12	53	28	37
		Mean S/R	48	7	10	12	9	10	3	4	17	12	12
			2.90	2.71	3.50	2.85	2.67	2.70	3.00	3.00	3.12	2.33	3.08
	Subjective Mode	S/R Total N=	139	16	18	55	22	28	14	2	27	70	26
		Mean S/R	53	7	6	21	7	12	4	1	10	26	12
Totals		Mean S/R	2.62	2.29	3.00	2.62	3.14	2.33	3.50	2.00	2.70	2.69	2.17
		S/R Total N=	278	35	53	89	46	55	23	14	80	98	63
		Mean S/R	101	14	16	33	16	22	7	5	27	28	24
			2.76	2.50	3.31	2.70	2.88	2.50	3.29	2.80	2.96	2.58	2.63
Group 2 N=28	Objective Mode	S/R Total N=	50	5	27	2	7	9	9	12	17	2	10
		Mean S/R	16	2	8	1	2	3	3	4	4	1	4
			3.12	2.50	3.38	2.00	3.50	3.00	3.00	3.00	4.25	2.00	2.50
	Subjective Mode	S/R Total N=	34	6	2	10	8	8	14	2	5	11	2
		Mean S/R	12	2	1	4	2	3	4	1	2	4	1
Total		Mean S/R	2.83	3.00	2.00	2.50	4.00	2.67	3.50	2.00	2.50	2.75	2.00
		S/R Total N=	84	11	29	12	15	17	23	14	22	13	12
		Mean S/R	28	4	9	5	4	6	7	5	6	5	5
			2.96	2.75	3.22	2.40	3.75	2.83	3.29	2.80	3.67	2.60	2.40
Group 1 N=73	Objective Mode	S/R Total N=	89	14	8	32	17	18	36	26	36	26	27
		Mean S/R	32	5	2	11	7	7	13	11	13	11	8
			2.78	2.80	4.00	2.91	2.43	2.57	2.77	2.36	2.77	2.36	3.38
	Subjective Mode	S/R Total N=	105	10	16	45	14	20	22	59	22	59	24
		Mean S/R	41	5	5	17	5	9	8	22	8	22	11
Total		Mean S/R	2.51	2.00	3.20	2.71	2.80	2.22	2.75	2.68	2.75	2.68	2.18
		S/R Total N=	194	24	24	77	31	38	58	85	58	85	51
		Mean S/R	73	10	7	28	12	16	21	33	21	33	19
			2.66	2.40	3.43	2.75	2.58	2.38	2.76	2.58	2.76	2.58	2.68

had adopted a consistently objective or subjective "set" for all four case problems. However, in the aggregate, both Groups have a total mean average solution rating that is higher for the objective mode than for the subjective mode. (This is the first concrete evidence for testing Hypothesis 1; the individual manager will tend to view himself as more ethical than other managers). Under the circumstances, the structure of Table 46 is held to reflect the objective/subjective mode comparison, and the findings consolidated with the next three cases before undertaking a comparative analysis of the individual functional areas and organizational levels. At that time, the mean solution ratings are "equalized" (as will be explained) to remove the effects of over or under-weighting caused by disparities of distribution of subjective-objective respondents among the areas and levels. The present early indication is that Marketing is the least perceptive of the solution implications in Case Problem 1, in both Groups, and this seems to carry over into Level 1, irrespective of the differences as to the objective and subjective modes.

Case Problem 2

This situation involves individual vs individual in a superior/subordinate relationship, and also individual vs group in an employee/company relationship. Professional competence and conduct, objectivity, loyalty, full

disclosure and other accounting concepts, are under consideration. Disobedience and risk of firing or resignation complicate the issue. The scene was set because of a previous deviation from rational behavior on the part of the Profit Center Manager, who involved his Financial Analyst. There is implied a strained relationship between the P.C. manager and his superiors, inasmuch as he is unwilling to have them know that a cost over-run is imminent. In failure to alert them to the situation he also precludes them from possibly assisting in getting at causes and finding a solution as well as in making other adjustments (budgetary, etc.) which might be required. These are questions outside the immediate issue, which is what course of action the Financial Analyst should take, but they point up the consequences of the original deviation from norms of responsible reporting. Disclosure of the actual state of Project 3 is inevitable as there appears to be no hope of reducing costs by \$25 M with only \$90 M left to spend, unless mischarging of actual costs should commence. Other members of the P.C. manager's organization might also become involved, although less directly, as the Financial Analyst casts about trying to find an answer for his dilemma.

Figure 4, Case 2 indicates a considerable diversity of choice patterns, unlike Case 1, where almost half chose pattern 1. In this situation patterns 2, 6, and 8

draw an almost equal number of respondents, pattern 1 somewhat less, and the remaining five, again an almost equal number. The responses tend to be keyed to three basic courses--comply, refuse to comply, or delay.

Pattern 5 indicates unquestioning compliance with the P.C. manager's request to continue falsifying the report and is deemed the least desirable, since the Financial Analyst either places his own short range interests ahead of that of his employer--the company, or is unaware of the seriousness of such behavior and could be considered a professional incompetent. Certainly, the problem remains--it is rated 5. Pattern 6 is little better, as some of the respondents suggest the Financial Analyst document his file in self-protection, while others variously suggest other accompanying actions which do not alter the fact of compliance. The problem remains, the company's interests are placed in jeopardy through its being kept in ignorance, an obvious injustice inasmuch as the Financial Analyst is failing to properly do the work for which he is being paid--referring again to the concepts of reciprocity/obligations/expectations. This, as was pattern 5, would be considered a moral failure--it is also rated 5. Pattern 8 suggests delaying tactics while counseling with the foremen, and privately with the comptroller. In this case, resolution is delayed, but not for long, as the report is due in reasonable time and the issue of compliance or noncompliance must still be faced. In this situation,

prudence seems to take precedence over justice to the company, and would constitute a degree of moral failure--it is rated 3. Pattern 7 is a refusal to comply, which places the problem back in the hands of the P.C. manager, and there is some attempt to seek a solution by counseling with others, but not with the P.C. Manager himself. The Financial Analyst is being prudent, and tries to assure justice to the company, but is deficient in support of, and justice to, his immediate superior; the solution is less complete than another--it is rated 2. Pattern 8 has the Analyst resigning or asking for a transfer, in protest against the request to falsify the report. This also returns the problem to the P.C. Manager, while calling the attention of others to the seriousness of it, perhaps thereby precipitating an investigation which might lead to getting at causes. The Analyst is willing to sacrifice his job, an action lacking in prudence, and is trying to be just to his company by refusal to falsify the report--this is rated 2. Pattern 1 is simply refusal to cooperate with the P.C. manager's request, returning the problem to him for resolution. The analyst is exercising prudence, though risking his job through disobedience, and he is being just to his company, but he lacks in supporting his superior, a deficiency in justice--this is rated 2. Patterns 2, 3, and 4 are similar in calling for non-compliance with the request to again falsify the report, but are accompanied by a direct effort to assist

in trying to find a solution. It places the responsibility back with the P.C. manager, and the written comments under action 8 generally suggest a diplomatic and sympathetic relationship, firm refusal but strong support. This would appear to serve best in resolving both the immediate problem of the Analyst's own dilemma, and work toward getting at basic causes to help solve the P.C. manager's problem. This approach appears to be technically correct, prudent as to the Analyst's interests, and just both to the company and the superior. These three patterns are rated 1.

Remembering that this case problem was presented to the respondents in both the objective and subjective mode, the ratings were compiled accordingly, and the results are shown in the top third of three successive tables, one each for the total population by area and level, for Group 1 by area and level, and for Group 2 by area and level. As Tables 47, 48, and 49 show, the objective mean ratings are clearly and conclusively higher than the subjective mean ratings almost without exception for all components of all three entities. Marketing again goes counter to the trend, with a small deviation in Level 5 and Level 1. However, as mentioned in connection with Case 1 analysis, the comparative analysis between areas and levels is reserved for later considerations. Figure 3 was again referred to for criteria to be considered

TABLE 47.--Case problems--objective vs subjective mode, total, by functional areas and organizational levels.

* (S/R = Solution Rating)		N=101		Functional Areas					Organizational Levels				
		Totals		MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Case 2	Objective Mode	*S/R Total N=	140	26	32	29	27	26	7	18	58	32	25
		Mean S/R	48	7	10	12	9	10	3	4	17	12	12
			2.92	3.71	3.20	2.42	3.00	2.60	2.33	4.50	3.41	2.67	2.08
	Subjective Mode	S/R Total N=	116	17	23	36	17	23	12	3	22	53	26
		Mean S/R	53	7	6	21	7	12	4	1	10	26	12
			2.19	2.43	3.83	1.71	2.43	1.92	3.00	3.00	2.20	2.04	2.17
Totals		S/R Total N=	256	43	55	65	44	49	19	21	80	85	51
		Mean S/R	101	14	16	33	16	22	7	5	27	38	24
			2.54	3.07	3.44	1.97	2.75	2.23	2.71	4.20	2.96	2.24	2.13
Case 3	Objective Mode	S/R Total N=	147	17	34	32	33	31	9	14	55	43	26
		Mean S/R	48	7	10	12	9	10	3	4	17	12	12
			3.06	2.43	3.40	2.67	3.67	3.10	3.00	3.50	3.24	2.58	2.17
	Subjective Mode	S/R Total N=	134	18	13	52	26	25	6	1	25	67	35
		Mean S/R	53	7	6	21	7	12	4	1	10	26	12
			2.53	2.57	2.17	2.48	3.71	2.08	1.50	1.00	2.50	2.58	2.92
Totals		S/R Total N=	281	35	47	84	59	56	15	15	80	110	61
		Mean S/R	101	14	16	33	16	22	7	5	27	38	24
			2.78	2.50	2.94	2.55	3.69	2.55	2.14	3.00	2.96	2.89	2.54
Case 4	Objective Mode	S/R Total N=	113	15	25	31	20	22	6	7	42	28	30
		Mean S/R	48	7	10	12	9	10	3	4	17	12	12
			2.35	2.14	2.50	2.58	2.22	2.20	2.00	1.75	2.47	2.33	2.50
	Subjective Mode	S/R Total N=	119	15	14	50	17	23	7	2	19	60	31
		Mean S/R	53	7	6	21	7	12	4	1	10	26	12
			2.25	2.14	2.33	2.38	2.43	1.92	1.75	2.00	1.90	2.31	2.58
Total		S/R Total N=	232	30	39	81	37	45	13	9	61	88	61
		Mean S/R	101	14	16	33	16	22	7	5	27	38	24
			2.30	2.14	2.44	2.45	2.31	2.05	1.86	1.80	2.26	2.32	2.54

TABLE 48.--Case problems--objective vs subjective mode, group 1, by functional areas and organizational levels.

		N=73 Group 1 Totals		Functional Areas					Organizational Levels				
				MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Case 2	Objective Mode	*S/R Total N=	89	18	4	24	21	22	47	27	15		
		Mean S/R	32	5	2	11	7	7	13	11	8		
			2.78	3.60	2.00	2.18	3.00	3.14	3.62	2.45	1.88		
	Subjective Mode	S/R Total N=	89	13	18	29	12	17	20	45	24		
		Mean S/R	41	5	5	17	5	9	8	22	11		
			2.17	2.60	3.60	1.71	2.40	1.89	2.50	2.05	2.18		
	Totals	S/R Total N=	178	31	22	53	33	39	67	72	39		
		Mean S/R	73	10	7	28	12	16	21	33	19		
			2.44	3.10	3.14	1.89	2.75	2.44	3.19	2.18	2.05		
Case 3	Objective Mode	S/R Total N=	98	11	8	30	25	24	43	38	17		
		Mean S/R	32	5	2	11	7	7	13	11	8		
			3.06	2.20	4.00	2.73	3.57	3.43	3.31	3.45	2.13		
	Subjective Mode	S/R Total N=	111	16	12	43	18	22	19	58	34		
		Mean S/R	41	5	5	17	5	9	8	22	11		
			2.71	3.20	2.40	2.53	3.60	2.44	2.38	2.64	3.09		
	Totals	S/R Total N=	209	27	20	73	43	46	62	96	51		
		Mean S/R	73	10	7	28	12	16	21	33	19		
			2.86	2.70	2.86	2.61	3.58	2.88	2.95	2.91	2.68		
Case 4	Objective Mode	S/R Total N=	78	12	5	29	17	15	32	26	20		
		Mean S/R	32	5	2	11	7	7	13	11	8		
			2.44	2.40	2.50	2.64	2.43	2.14	2.46	2.36	2.50		
	Subjective Mode	S/R Total N=	94	12	12	40	13	17	15	50	29		
		Mean S/R	41	5	5	17	5	9	8	22	11		
			2.29	2.40	2.40	2.35	2.60	1.69	1.88	2.27	2.64		
	Total	S/R Total N=	172	24	17	69	30	32	47	76	49		
		Mean S/R	73	10	7	28	12	16	21	33	19		
			2.36	2.40	2.43	2.46	2.50	2.00	2.24	2.30	2.58		

* (S/R = Solution Rating)

TABLE 49.--Case problems--objective vs subjective mode, group 2, by functional areas and organizational levels.

		N=28 Group 2 Total	Functional Areas					Organizational Levels				
			MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Case 2	Objective Mode	*S/R Total N=	8	28	5	6	4	7	18	11	5	10
		Mean S/R	4.00	3.50	5.00	3.00	1.33	2.33	4.50	3.75	5.00	2.50
	Subjective Mode	S/R Total N=	4	5	7	5	6	12	3	2	8	2
		Mean S/R	2.00	5.00	1.75	2.50	2.00	3.00	3.00	1.00	2.00	2.00
	Totals	S/R Total N=	12	33	12	11	10	19	21	13	13	12
		Mean S/R	3.00	3.67	2.40	2.75	1.67	2.71	4.20	2.17	2.60	2.40
Case 3	Objective Mode	S/R Total N=	6	26	2	8	7	9	14	12	5	9
		Mean S/R	3.00	3.25	2.00	4.00	2.33	3.00	3.50	3.00	5.00	2.25
	Subjective Mode	S/R Total N=	2	1	9	8	3	6	1	6	9	1
		Mean S/R	1.00	1.00	2.25	4.00	1.00	1.50	1.00	3.00	2.25	1.00
	Totals	S/R Total N=	8	27	11	16	10	15	15	18	14	10
		Mean S/R	2.00	3.00	2.20	4.00	1.67	2.14	3.00	3.00	2.80	2.00
Case 4	Objective Mode	S/R Total N=	3	20	2	3	7	6	7	10	2	10
		Mean S/R	1.50	2.50	2.00	1.50	2.33	2.00	1.75	2.50	2.00	2.50
	Subjective Mode	S/R Total N=	3	2	10	4	6	7	2	4	10	2
		Mean S/R	1.50	2.00	2.50	2.00	2.00	1.75	2.00	2.00	2.50	2.00
	Total	S/R Total N=	6	22	12	7	13	13	9	14	12	12
		Mean S/R	1.50	2.44	2.40	1.75	2.17	1.86	1.80	2.33	2.40	2.40

* (S/R = Solution Rating)

in rating the patterns of action choices in this case. Hypothesis 1 is additionally supported by the evidence on Tables 47, 48, and 49.

Case Problem 3

Here again, is an individual vs individual in a superior/subordinate relationship with employee's and company's interests being equated, as well as a question of support, this time of the subordinate by his superior. As the case shows, there is a question of justice to the employee whose deserved raise in salary is being set aside because of budgetary constraints. A budget is, of course, a guide which is intended as an aid in controlling expenditures; it is based on expectations and usually reflects past experience. Occasionally it is held to be a rigid ceiling, which seems to be what is happening in the present case, where it is stated that there is no provision for the employee's overdue salary increase for at least six months, things being tight. Possible bad consequences are brought into view--the Junior buyer under financial stress might be wrongly influenced by a supplier, or he might be forced to seek other employment--a rather familiar pattern in which the employee's bargaining position is not strong, since his normal expectations were not provided for in the budget. The sequence of analysis again begins with the least desirable solution, pattern 9 does nothing for the employee but is

concerned for the company, as these respondents would warn the Junior not to get involved with the supplier, which indicates a recognition of the risk but likewise lack of confidence in the employee's good judgement. There is some prudential concern for the company but none in justice for the employee--this morally deficient pattern is rated 5. Pattern 2 respondents offered suggestions which could be considered as evading the issue. The situation is not clarified for the employee, no promises are made, he is merely exhorted to be patient, but is not assumed to be susceptible to the supplier's "friendliness." This does little toward solving the problem, and is rated 4.

Patterns 3, 4, and 5 all provide for informing the Junior Buyer about the budget limitations, and indicate some concern about his situation in cautioning him about the supplier's approach, and even offering a loan, but the situation is otherwise being accepted. Justice is being recognized to the extent that the employee is told where he stands, which enables him to at least evaluate his position, and some prudential concern is indicated as to the company's interests, but solution is delayed--these three patterns are rated 3. Pattern 8 is very similar to the previous 3, but here the superior moves to protect his subordinate by himself speaking to the supplier--this also does not provide a solution--it is rated 3.

Pattern 6 moves closer to a solution as his superior makes a firm attempt to secure justice for his subordinate by

requesting an adjustment in the budget, which could consist of increasing it or giving lesser priority to other needs. For a company of any size--and here there are at least two in the Purchasing department, the economic impact of one minor employee's salary increase should not be unbearable. This does not indicate whether there are similar problems with respect to other deserving employees. This pattern does not, however, provide for informing the employee of the true situation, thus keeping him in a state of anxiety--it is rated 2. Pattern 7 both informs the employee as to his status and also provides for positive action toward securing justice for him, although it does not indicate that there is risk of the supplier's undue influence, perhaps demonstrating confidence in the employee's good judgement. It moves about as far as possible toward a solution, but without any optional suggestions, and it is rated 1. Pattern 1 takes in all three affirmative actions, as it notifies the employee about the budget, moves to try for an adjustment in the budget, and is concerned both about the employee and the company in the relationship with the supplier. Thus the elements of technical correctness, prudence, and justice are all present in considering the interests of all entities, with a supportive attitude on the part of the employee's direct superior--it is rated 1.

Returning again to Tables 47, 48, and 49, it can be seen in the center sections of all three, that the compilation of ratings in accordance with the objective/subjective modes again supports Hypothesis 1, but not quite as strongly as in the prior case, Manufacturing and P & A this time going contrary to the others, and also Level 5. It is possible that many of these respondents consider a budgetary limit inviolate, or strong action by a superior in his employee's interests unusual--which may be the more general situation in the larger corporations. This will be re-examined later on.

Case Problem 4

This case involves individual vs individual in a peer relationship, the interests of the company, and the interests of an employee of a customer. It depicts an aggressive and opportunistic Sales Manager who appears to be making an effort to maintain a monthly sales volume level in the face of a downturn in business. It appears he induced a buyer to relax a release schedule to permit an extra shipment to "relieve an inventory problem," and then took advantage of the opportunity by shipping and planning to ship much more. It would appear to be rather short-sighted on his part, since the buying company's consumption is limited by its own production schedule, although it could also be an attempt to freeze out competition by strategically placing his stock on the

buying company's premises and forcing a backup in any competitor's shipments. However, it does place the company's buyer in an awkward and defensive position, and even a compromising one, if he is required to explain to his superiors how and why he permitted such a situation to develop. He has, of course, reacted by calling the supplier company's Production Control office to attempt to stop the flow of material. In some companies the Sales department is permitted rather rigid control over scheduling changes on the basis that they are more immediately sensitive to the buyer's needs. It might be the case here. However, a problem has been created for the Manufacturing Manager. He would be concerned about his own responsibilities and is answerable to the General Manager; he should be concerned about his own company's economic interests and reputation; he might be concerned about the buyer's predicament; he might also be concerned about his own relationship with his peer--who might become his superior in the near future. It is also conceivable that the Sales Manager has some undisclosed but legitimate strategy in mind, such as reason to anticipate an upturn on the basis of leads from his counterpart in the buying company. Figure 4, Case Problem 4, shows the patterns of action choices and indicates a heavy concentration for pattern 2, due in part to having to combine patterns with elements of similarity. It is of interest that, in the aggregate,

80 of 101 respondents call for a confrontation with the Sales Manager. Pattern 1 adds to the confrontation a request to obtain the promised revised releases. This indicates a concern on the part of the Manufacturing Manager primarily for his own interests, although the releases would be a basis for assuring acceptance of billings for the advance shipments, while ignoring the buyer's immediate problem. The solution has some elements of technical correctness and prudence but falls far short of resolving the problem--it is rated 4. A similar situation pertains in the case of pattern 6, which confronts the Sales Manager and takes up the matter with the General Manager. This approach may bring matters quickly to a head, but may have other consequences in the nature of strained relationships among the three managers. It also ignores the predicament of the buyer. It does place the problem before the Sales Manager, but implies thereby that there is no other way to deal with it. It is technically correct in using channels, prudent as far as the Manufacturing Manager is concerned, and appears to be indifferent to the interests of anyone else--it is also rated 4. Pattern 3 also primarily reflects the concern of the Manufacturing Manager only for his own area of responsibility. It does shut off advance shipments to the buying company and seeks authorization for what has already been shipped, and in this way acts in the

interests of the producing company. This pattern has elements of technical correctness, prudence, and some degree of justice for the company, but it fails to resolve the problem and leaves untended the problem faced by the buyer--it is rated 3. Patterns 2, 4, and 5 represent solutions in which the issues are faced and attempts made to rectify the damage. All three call for a face-off with the Sales Manager, but concern extends to the producing and buying companies' interests. These three patterns come closer to resolving the problem, but leave undetermined the consequences stemming from a show-down--they are rated 2. The remaining three patterns represent a more low-keyed approach, by-passing a show-down situation but dealing with the interests of both companies, the buyer, and the Manufacturing Manager's own area, and also enable the General Manager to be informed without provoking a negative approach. Thus, there are elements of technical correctness, prudence, and justice--the means are right and the expected consequences appear to be good--all this, of course, within the limits of the action choices offered or written in--all three remaining patterns are rated 1.

Returning to the lower third portion of Tables 47, 48, and 49, we find the objective/subjective variance still in effect, but not nearly to the same degree as in the previous cases. There is mixed reaction among the areas

and levels, but analysis is undertaken later on. These results add to the support for Hypothesis 1.

The above completes the analysis of the four case problems which are rated in accordance with the five point scales on Figure 4 and the solution criteria on Figure 3. Evaluation of Cases 5 and 6 will be taken up following the next two sections.

Consolidated Case Problems--Objective/Subjective Modes.--The summation of the data appears on Table 50, which covers the total population, Groups 1 and 2, and the components of the areas and levels of all three. As can be seen, the composite mean solution ratings for the objective mode are higher for all components in all three sections with the following exceptions: Level 5 is, in total and in Group 1, definitely contrary to the trend, whereas in Group 2's segment they are not. With respect to Group 1, this is true for all three Case Problems (2, 3, and 4), but is strongest in Case 3. It is not true for Case 1 on Table 64. Re-examining the frequency distribution for Case 3 on Table 60 it is found that the distribution was fairly scattered among Level 5 respondents and happened to fall in such a way that more low rated patterns identify with the objective than subjective modes. It can only be concluded, without making a detailed examination of the data for each respondent, that Level 5

TABLE 50.--Consolidated case problems--Objective vs subjective mode, by groups, functional areas, organizational levels.

(In terms of Mean Solution Rating)													
Functional Areas							Organizational Levels						
		Total	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5	
Group 1 N=101	Objective Mode	Case 2	2.92	3.71	3.20	2.42	3.00	2.60	2.33	4.50	3.41	2.67	2.08
		Case 3	3.06	2.43	3.40	2.67	3.67	3.10	3.00	3.50	3.24	2.58	
		Case 4	2.35	2.14	2.50	2.58	2.22	2.20	2.00	1.75	2.47	2.33	
		Total	8.33	8.28	9.10	7.67	8.89	7.90	7.33	9.75	9.12	7.58	
		Average	2.78	2.76	3.03	2.56	2.96	2.63	2.44	3.25	3.04	2.53	
	Subjective Mode	Rank		3	5	1	4	2	2	5	4	3	1
		Case 2	2.19	2.43	3.83	1.71	2.43	1.92	3.00	3.00	2.20	2.04	2.17
		Case 3	2.53	2.57	2.17	2.48	3.71	2.08	1.50	1.00	2.50	2.58	2.92
		Case 4	2.25	2.14	2.33	2.38	2.43	1.92	1.75	2.00	1.90	2.31	2.58
		Total	6.97	8.14	8.33	6.57	8.57	5.92	6.25	6.00	6.60	6.93	7.67
Group 2 N=28	Objective Mode	Average	2.32	2.71	2.78	2.19	2.86	1.97	2.08	2.00	2.20	2.31	2.56
		Rank		3	4	2	5	1	2	1	3	4	5
		Case 2	3.19	4.00	3.50	5.00	3.00	1.33	2.33	4.50	3.75	5.00	2.50
		Case 3	3.06	3.00	3.25	2.00	4.00	2.33	3.00	3.50	3.00	5.00	2.25
		Case 4	2.19	1.50	2.50	2.00	1.50	2.33	2.00	1.75	2.50	2.00	2.50
	Subjective Mode	Total	8.44	8.50	9.25	9.00	8.50	6.99	7.33	9.75	9.25	12.00	7.25
		Average	2.81	2.83	3.08	3.00	2.83	2.33	2.44	3.25	3.08	4.00	2.41
		Rank		2	5	4	2	1	2	4	3	5	1
		Case 2	2.25	2.00	5.00	1.75	2.50	2.00	3.00	3.00	1.00	2.00	2.00
		Case 3	1.92	1.00	1.00	2.25	4.00	1.00	1.50	1.00	3.00	2.25	1.00
Group 1 N=73	Objective Mode	Case 4	2.08	1.50	2.00	2.50	2.00	2.00	1.75	2.00	2.00	2.50	2.00
		Total	6.25	4.50	8.00	6.50	8.50	5.00	6.25	6.00	6.00	6.75	5.00
		Average	2.08	1.50	2.67	2.17	2.83	1.67	2.08	2.00	2.00	2.25	1.67
		Rank		1	4	3	5	2	4	2	2	5	1
		Case 2	2.78	3.60	2.00	2.18	3.00	3.14	3.62	2.45	3.62	2.45	1.88
	Subjective Mode	Case 3	3.06	2.20	4.00	2.73	3.57	3.43	3.31	3.45	3.31	3.45	2.13
		Case 4	2.44	2.40	2.50	2.64	2.43	2.14	2.46	2.36	2.46	2.36	2.50
		Total	8.28	8.20	8.50	7.55	9.00	8.71	9.39	8.26	9.39	8.26	6.51
		Average	2.76	2.73	2.83	2.52	3.00	2.90	3.13	2.75	3.13	2.75	2.17
		Rank		2	3	1	5	4	3	2	3	2	1
Group 2 N=28	Objective Mode	Case 2	2.17	2.60	3.60	1.71	2.40	1.89	2.50	2.05	2.05	2.18	2.05
		Case 3	2.71	3.20	2.40	2.53	3.60	2.44	2.38	2.64	2.38	2.64	3.09
		Case 4	2.29	2.40	2.40	2.35	2.60	1.69	1.88	2.27	1.88	2.27	2.64
		Total	7.17	8.20	8.40	6.59	8.60	6.02	6.76	6.86	6.76	6.86	7.91
		Average	2.39	2.73	2.80	2.30	2.87	2.01	2.25	2.29	2.25	2.29	2.64
	Subjective Mode	Rank		3	4	2	5	1	1	2	1	2	3
		Case 2	2.78	3.60	2.00	2.18	3.00	3.14	3.62	2.45	3.62	2.45	1.88
		Case 3	3.06	2.20	4.00	2.73	3.57	3.43	3.31	3.45	3.31	3.45	2.13
		Case 4	2.44	2.40	2.50	2.64	2.43	2.14	2.46	2.36	2.46	2.36	2.50
		Total	8.28	8.20	8.50	7.55	9.00	8.71	9.39	8.26	9.39	8.26	6.51

respondents do not appear to consider themselves more ethical, as individuals, than other managers. Elsewhere in Group 1, the Manufacturing area is evenly divided, again in the aggregate, with Case 3 choices accounting for the offset. In this case, pattern 1--which was rated 1, was selected by more of the objective respondents than otherwise. Marketing also tends to be almost even in the aggregate because Case 2 offsets, more of the respondents in the subjective mode having selected high rated patterns. For Group 2, the only deviation from the trend is in the P & A area, where an offset is caused by Case 4, just enough to cause the solution means to agree for both modes. However, these are the only exceptions, the balance of the evidence is so strong as to definitely support Hypothesis 1--The individual manager tends to view himself as being more ethical than other managers, and it is so concluded.

Comparative Summary of Solution Ratings by Areas and Levels.--During the discussion about applying the solution rating scale to the pattern choices for Case problem 1, earlier in this chapter, it was mentioned that the mean solution ratings resulting from applying the solution rating scale to the objectively and subjectively selected action choice patterns would require "equalization." Reference to Tables 46 through 49 will disclose that the numbers of objective and subjective respondents

is by no means equally distributed among the functional areas and organizational levels. The result of this was that any average of the composite total of subjectives and objectives for any area or level would be heavily weighted in one direction or the other whenever the number of respondents for each was significantly disproportionate. To counteract this effect, it was decided to accept the mean solution rating for the subjective and objective segment of each area and level for each case as representing an equal number in each, and to then take a simple average of the two ratings to represent the average combined solution rating for each area and level for each case. For (N=101) the proportions of objective and subjective responses was 48 and 53; for (N=73) it was 32 and 41 and for (N=28) it was 16 and 12. However, for the areas and levels the count was as low as 1 in some cases, and there are ratios of 1 to 4 and even one of 8 to 1. Therefore, it was felt that an equalized average would offset the excessive biases otherwise evident for many of the components. The two mean averages resulting from each method were compared, and in many cases little difference resulted, but the extremes were dampened and were thereby deemed to be more representative of a balanced proportion of objectively and subjectively oriented respondents for each component of the areas and levels.

Table 51 summarizes the average mean solution ratings for all components for all four of the case problems so rated, and provides data to test hypotheses:

2. Managers engaged in some business functions will, as a whole, have significantly different perceptions of the solution possibilities of ethical problems from managers in certain other functions.
3. There will be significant differences in the perceptions of the solution possibilities of ethical problems between managers from one organizational level and those from certain other organizational levels--the higher the level, the more complete the solution.

The equalized mean solution ratings of each of the four case problems are shown for each functional area and level, and then a simple average of the four case problems. It must be kept in mind that the ratings were developed by use of a relatively tight, five-point scale, and that the data presented are averages of averages. These ratings are a device for setting up a somewhat arbitrary but uniformly applied system of solution scoring and have no purpose but to determine if there are differences when the scale "values" are applied to the action choice patterns which were selected by the respondents in each area and level. It should be remembered, also, that the original selections of the individual respondents were compressed into a maximum of nine patterns per case on a "best fit" basis. The net effect of all this has been to level out and greatly compress the range of differences which existed in the data in their original form. Under the

TABLE 51.--Comparative summary of case problems 1 - 4 by solution rating, by groups, functional areas, and organizational levels.

(In terms of Equalized Solution Ratings)			Functional Areas					Organizational Levels				
			Totals	MFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4
Group 1 & 2 N=101	Case 1	2.76	2.50	3.25	2.74	2.91	2.52	3.25	2.50	2.91	2.51	2.63
	2	2.56	3.07	3.02	2.07	2.72	2.26	2.67	3.75	2.81	2.36	2.13
	3	2.80	2.50	2.79	2.58	3.69	2.59	2.25	2.25	2.87	2.58	2.55
	4	2.30	2.14	2.42	2.48	2.33	2.06	1.88	1.88	2.19	2.32	2.54
	Total	10.42	10.21	11.48	9.87	11.65	9.43	10.05	10.38	10.78	9.77	9.85
	Average	2.61	2.55	2.87	2.47	2.91	2.36	2.51	2.60	2.70	2.44	2.46
	Rank		3	4	2	5	1	3	4	5	1	2
	Range		2.91-2.36=.55÷2.61=21%					2.70-2.44=.26÷2.61=10%				
Group 2 N=28	Case 1	2.98	2.75	2.69	2.25	3.75	2.84			3.38	2.38	2.25
	2	2.72	3.00	4.25	3.38	2.75	1.67	(L-1 & L-2 as above)				
	3	2.49	2.00	2.13	2.13	4.00	1.67			3.00	3.63	1.63
	4	2.14	1.50	2.25	2.25	1.75	2.17			2.25	2.25	2.25
	Total	10.43	9.25	11.32	10.01	12.25	8.35	10.05	10.38	11.01	11.76	8.38
	Average	2.61	2.31	2.83	2.50	3.06	2.09	2.51	2.60	2.75	2.94	2.10
	Rank		2	4	3	5	1	2	3	4	5	1
	Range		3.06-2.09=.97÷2.61=37%					2.94-2.10=.84÷2.61=32%				
Group 1 N=73	Case 1	2.65	2.40	3.60	2.81	2.62	2.40			2.76	2.52	2.78
	2	2.48	3.10	2.80	2.00	2.70	2.52			3.06	2.25	2.03
	3	2.89	2.70	3.20	2.63	3.59	2.94			2.85	3.10	2.61
	4	2.37	2.40	2.45	2.50	2.52	1.92			2.17	2.32	2.57
	Total	10.39	10.60	12.05	9.94	11.43	9.78			10.84	10.19	9.99
	Average	2.60	2.65	3.01	2.49	2.86	2.45			2.71	2.55	2.50
	Rank		3	5	2	4	1			3	2	1
	Range		3.01-2.45=.56÷2.60=22%					2.71-2.50=.21÷2.60=8%				

circumstances, this researcher feels that it would be inappropriate to apply conventional tests of statistical significance to the data in such form; in fact, the χ^2 test so applied produced probability values far above anything which might normally be termed significant. For that reason, it is proposed to examine and discuss the averages in their present form, using only a simple "range" scale to indicate how far the high and low mean ratings depart from the average mean for each section. This researcher feels that patterns and trends are also informative, in addition to the range of differences.

It had been previously noted that Marketing and Personnel and Administration areas had exhibited differences in frequency percentages from those of the others, and the mean solution averages now reflect this, since they rank 4th and 5th in "solution perception" while Accounting/Finance/Systems ranks 1st. When the individual ratings for each case are similarly ranked and the rankings are added up, Marketing and P & A are consistently above the others. By way of explanation, this researcher suggests that Marketing and Personnel and Administration appear to be less perceptive of the solution content of problem situations because they are less technically oriented and may not recognize all the steps or actions necessary to effect optimum solution of many problems. This might indicate that functional "distance" from the "locale" of a problem

situation in the industrial context tends to impair the perception of the manager as to its solution content. By contrast Accounting/Finance/Systems, who rank first in the total population, in Group 1, and in Group 2, tend to have a more comprehensive view of the totality of business problems (other than those which are purely technical in nature) because of their strategic position in the communications network, and in receiving and processing data and preparing reports. Comparison of the functional areas in Groups 1 and 2 show a basic consistency, with A/F/S ranked 1st, Engineering and Manufacturing either 2nd or 3rd, and Marketing and P & A either 4th or 5th. It seems quite clear that, according to the measuring techniques used, and setting aside conventional tests of statistical significance, noticeable differences in perception of solution implications exist as between the managers in the five functional areas under examination, in both Groups 1 and 2, and it therefore appears that the manager's functional orientation will tend to affect his decision choices in ethical problems.

Returning to Table 51, the sections presenting the Organizational Levels can be examined in the same manner. For (N=101) where all respondents are consolidated, there is no strong trend from low to higher levels, or vice versa, and the range of difference in average rating is much less than in the case of the functional

levels. Levels 4 and 5 appear to have slightly lower mean average scores, but this is not evident when the individual case scores are ranked across the levels. Examining the three levels under Group 1, there is a slight trend upward, but the differences in ratings are so small as to be negligible. When the individual case scores are ranked across the levels, they add up to exactly eight for each level. For Group 2 the range of differences is much wider, but the number of respondents under each is small. Level 5 has a much lower score than the other four levels, which is why the total range of difference is so much larger than for the total population. Thus, the evidence on Table 51 does not support hypothesis:

3. There will be significant differences in the perceptions of the solution possibilities of ethical problems between managers from one organizational level and those from certain other organizational levels--the higher the level, the more complete the solution.

Two case problem situations remain to be examined, those for which the respondents were requested to express an opinion, rather than select a course of action.

Case Problem 5

In this situation a manager newly promoted to executive rank finds that one of the characteristics of the rank is a requirement to make an annual political contribution to the party of his choice, in a specified amount, and through a company representative. The

respondents were requested to indicate which one or more of eight statements best expressed their feelings about such a requirement. The patterns of selections were many, but these were also consolidated to nine. These are shown on Figure 4, Case Problem 5. Each pattern is designated as "U" for unethical, "E" for ethical, or "U/E" when the statements divide evenly on either side of the question. When the data were compiled, a simple percentage relationship was developed to indicate what proportion of the respondents considered the practice unethical, or not unethical. The results are shown on Table 52 in each of the three segments into which the table is divided. The divisions represent the total, and Groups 1 and 2. In addition to the percentages of response for each side of the question, a rank is shown for the components within the areas and levels, and a "range" is developed to measure the departure of high and low percentage from the average. In the aggregate, a far greater percentage of the respondents consider the practice unethical, and among the functional areas, Marketing has the strongest such opinion, while Manufacturing objects the least. There is, of course, no technical aspect to the question. It involves purely a relationship between a higher level employee (executive) and still higher level members of the group to which he has been admitted who perpetuate the practice. The company,

TABLE 52.--Comparative summary of case problems 5 and 6, by ethical rating, by groups, functional areas, and organizational levels.

(In terms of opinion ratios)													
		Functional Areas						Organizational Levels					
		Opinion	Totals	IFG	MKTG	ENG	P&A	A/F/S	L-1	L-2	L-3	L-4	L-5
Group 1 1 & 2 N=101	Case 5	Ethical	28.7	42.9	18.7	27.3	31.4	27.3	42.9	20.0	37.0	20.5	29.2
		Rank		1	5	3	2	3	1	5	2	4	3
		Range		42.9-18.7=24.2÷28.7=84%					42.9-20.0=22.9÷28.7=80%				
		Unethical	71.3	57.1	81.3	72.7	68.6	72.7	57.1	80.0	63.0	79.5	70.8
		Rank		5	1	2	4	2	5	1	4	2	3
	Case 6	Range		81.3-57.1=24.2÷71.3=34%					80.0-57.1=22.9÷71.3=31%				
		Ethical	73.3	64.3	65.6	74.2	87.5	72.7	78.6	50.0	77.8	75.0	68.8
		Rank		5	4	2	1	3	1	5	2	3	4
		Range		87.5-64.3=23.2÷73.3=32%					78.6-50.0=28.6÷73.3=39%				
		Unethical	26.7	35.7	34.4	25.8	12.5	27.3	21.4	50.0	22.2	25.0	31.2
		Rank		1	2	4	5	3	5	1	4	3	2
		Range		35.7-12.5=23.2÷26.7=87%					50.0-21.4=28.6÷26.7=107%				
Group 2 N=28	Case 5	Ethical	30.4	50.0	22.2	20.0	37.5	33.3	42.9	20.0	16.7	20.0	50.0
		Rank		1	4	5	2	3	2	3	5	3	1
		Range		50.0-20.0=30.0÷30.4=99%					50.0-16.7=33.3÷30.4=110%				
		Unethical	69.6	50.0	77.8	80.0	62.5	66.7	57.1	80.0	83.3	80.0	50.0
		Rank		5	2	1	4	3	4	2	1	2	5
	Case 6	Range		80.0-50.0=30.0÷69.6=43%					83.3-50.0=33.3÷69.6=48%				
		Ethical	62.5	62.5	55.6	80.0	75.0	50.0	78.6	50.0	66.7	50.0	60.0
		Rank		3	4	1	2	5	1	4	2	4	3
		Range		80.0-50.0=30.0÷62.5=48%					78.6-50.0=28.6÷62.5=46%				
		Unethical	37.5	37.5	44.4	20.0	25.0	50.0	21.4	50.0	33.3	50.0	40.0
		Rank		3	2	5	4	1	5	1	4	1	3
		Range		50.0-20.0=30.0÷37.5=80%					50.0-21.4=28.6÷37.5=76%				
Group 1 N=73	Case 5	Ethical	28.1	33.3	14.3	28.6	29.2	25.0	42.9	21.2	21.2	23.4	
		Rank		1	5	3	2	4	1	3	1	2	
		Range		33.3-14.3=19.0÷28.1=68%					42.9-21.2=21.7÷28.1=77%				
		Unethical	71.9	66.7	85.7	71.4	70.8	75.0	57.1	78.8	76.3		
		Rank		5	1	3	4	2	3	1	2		
	Case 6	Range		85.7-66.7=19.0÷71.9=26%					78.8-57.1=21.7÷71.9=30%				
		Ethical	77.4	65.0	78.6	73.2	91.7	81.3	81.0	78.8	71.1		
		Rank		5	3	4	1	2	1	2	3		
		Range		91.7-65.0=26.7÷77.4=34%					81.0-71.1=9.9÷77.4=13%				
		Unethical	22.6	35.0	21.4	26.8	8.3	18.7	19.0	21.2	28.9		
		Rank		1	3	2	5	4	3	2	1		
		Range		35.0-8.3=26.7÷22.6=118%					28.9-19.0=9.9÷22.6=44%				

as such, can take no official position in the matter, except to comply with the law which bars political contributions by corporations. There is no economic burden placed upon the executive in view of the nominal amount, at least at his present level. Thus the question is whether the executive is being coerced, or is a willing participant who accepts this as a social responsibility. The Marketing--Manufacturing extremes carry through both Groups, and in Group 2 Manufacturing is actually evenly divided on the question. The other three areas agree at about 30 per cent for and 70 per cent against.

With respect to the Levels there is also a mixed pattern, with Level 1 objecting the least and Level 2 the most, which is unusual inasmuch as both levels are in Group 2 only. Under Group 1, Level 3 has the least objection, and this might indicate participation in, and support of, such a program by some of the managers at this level. It seems clear that the areas and levels differ in their perceptions of the ethical implications in this situation, but the reasons are not indicated, except perhaps that there are participants in such programs scattered among the areas and levels. It does not appear, therefore, that functional or organizational orientations have any bearing on the way the respondents view this situation, and it may be concluded that these findings do not indicate support for either Hypothesis 2 or 3. Other than that, the consensus among the respondents

is that the practice is more unethical than ethical. According to the language of the case problem itself, the executive's participation is "assumed" or taken for granted, and the individual himself quite likely feels that it is prudent for him to conform, and that his interests are best served (and that of the corporation) in a political climate which made it possible for him to achieve executive status.

Case Problem 6

This situation differs from the others in that it considers a total environmental situation as well as a philosophy. Here, again, the ethical/unethical implications are suggested for the respondent's consideration and selection in the form of eight statements arrayed half on either side of the question, which involves the government's buying practices and the possible bad consequences. The issues are broad and involve the rightness or wrongness of means used, prudential considerations from the government's standpoint and its responsibilities to the taxpayers, and also justice to entire industries and their many employees. There is no question as to the impact on industry and the national economy of large increases or decreases in the government's buying in connection with any given program.

Figure 4, Case Problem 6 shows the action choice patterns and the designations which form the basis for

compiling the respondents' selections as they deem the government's buying practices, as described, ethical or unethical. The results of the compilations are also shown on Table 52, where it is clear that the large majority, 73 per cent, consider the situation ethical. Group 1 is stronger in its opinion than Group 2, wherein one functional area and two levels are actually split on the question. In the case of Group 1, there is an indicated trend among the three levels, with the percentage increasing (in favor) from level 5 to 4 to 3. Among the functional areas, the P & A area is especially strong, with the Manufacturing area lowest. It is possible that among the respondents are some who have experienced lay-off and termination as a result of government contract completions or cut-backs. There seems to be no consistency as between the responses of the areas and levels under Groups 1 and 2. Neither of Group 2's functional areas or levels, in their responses, appear to provide a basis of support for Hypotheses 2 and 3, although there are substantial differences indicated in their relative perceptions of the ethical content of the situation. As for Group 1's levels, the trend might indicate that the higher levels are more adjusted to and supportive of the kind of free enterprise system under which we operate, and this might explain the responses of P & A, and A/F/S, and possible Marketing, whereas Manufacturing and

Engineering might be more aware of technical complications involved in doing business with government agencies. The question of support for the two hypotheses must remain open, with respect to Case 6, for later consideration.

Evaluating the Case Problems for
Ethical Content and Quality

A complete explanation of the evaluation basis and process was made in the early portion of the chapter. The procedure is depicted on Figure 5. The objective is to determine the relative proportions of Prudence and Justice in the solutions--the action choice patterns--by individual respondents to the case problems, and to compile the results in order to compare groups and functions (levels are excluded) and to test Hypothesis 4. These results are shown on Table 53.

As Figure 5 shows, the basis for comparison is the difference between two percentages representing the relative proportions of Prudence and Justice in the consolidated totals of the groups and functions. For convenience, this difference is termed the "bias factor," and it indicates how far in the direction of Prudence or Justice the case problem solutions tend. This indicates whether the groups or functions perceive differently the ethical aspects of case problems, and to what extent they may have a tendency to depart from balancing self-interest and the interests of others in their decisions. The comparisons are relative, rather than

Area: Engineering, N = 17

<u>Totals of Cases # 1 through 4</u>							
<u>Action Choice</u>	<u>Internal</u>			<u>External</u>			<u>T/R</u>
	<u>P/S</u>	<u>J/C</u>	<u>J/OP</u>	<u>P/C</u>	<u>J/OP</u>	<u>J/OC</u>	
1.							
2.							
3.							
4.							(V A R I O U S)
5.							
6.							
7.							
8.							
Totals	53/17	15/17	43/17	44/17	-	33/17	64/17
<u>Factors</u>							
Prudence	3.12			2.59			
Justice		.88	2.53		-	1.94	
Technical Rightness							3.77
Total Prudence		5.71	$= \frac{51.5}{\%}$				
Total Justice		<u>5.35</u>	$= \underline{48.5}$				
Total		11.06	$= 100.0$				
Bias Factor: 51.5% - 48.5% = 3.0% toward Prudence							
<hr/>							
Terms: P = Prudence; J = Justice; T/R = Technical Rightness							
S = Self; C = Company;							
OP = Other Person; OC = Other Company							
<hr/>							

Figure 5.--Basis of Evaluation of Case Problems for Ethical Content and Quality.

TABLE 53.--Ethical Quality of Case Problem Action Choices - Prudence vs Justice.

Subjective Mode	Total						Group 1			Group 2			
	Function	N=	Prudence	Justice	N=	Prudence	Justice	N=	Prudence	Justice	N=	Prudence	Justice
Mfg.	7		1.8		5		4.8	2		4.0			
Mktg.	6		9.8		5		8.0	1				16.6	
Eng.	21	1.6			17	2.2		4				4.1	
P&A	7		1.4		5	3.4		2				12.0	
A/F/S	12		1.4		9	5.4		3				17.0	
Total	53		1.0		41	1.6		12				8.6	
Objective Mode	Total						Group 1			Group 2			
Function	N=	Prudence	Justice	N=	Prudence	Justice	N=	Prudence	Justice	N=	Prudence	Justice	
Mfg.	7	9.4		5	9.4		2	8.8					
Mktg.	10		-O-	2	9.0		8					2.6	
Eng.	12		4.2	11		6.2	1	14.2					
P&A	9	20.0		7	21.6		2	14.2					
A/F/S	10	4.6		7	2.6		3	7.6					
Total	41	5.2		32	5.6		16	4.6					
Grand Total	Total						Group 1			Group 2			
Function	N=	Prudence	Justice	N=	Prudence	Justice	N=	Prudence	Justice	N=	Prudence	Justice	
Mfg.	14	4.0		10	4.2		4	6.4					
Mktg.	16		3.8	7		2.8	9					4.6	
Eng.	33		.6	28		.8	5	-O-					
P&A	16	11.2		12	15.2		4	-O-				4.8	
A/F/S	22	1.2		16	4.2		6						
Total	101	2.0		73	3.6		28	1.6					

EXPLANATION: The value shown is the difference between two percentages which total 100.0%. If the aggregate of action choices reflecting prudence and justice are exactly equal, 50.0% each, the difference is zero; e.g., 52.0% vs 48.0% = 4.0% in the direction of the greater of prudence or justice. For convenience, this difference is termed the "bias factor."

absolute; that is, no judgment is made of the ethics, per se, of the groups or functional areas. The comparison is made of their perception and treatment of ethical problems relative to each other.

Referring to Table 53: The most meaningful comparison is that under the subjective mode. This isolated all the responses of those who had placed themselves as subjects in the problem roles. In total, Group 1 tends slightly in the direction of Prudence--1.6 per cent, while Group 2 tends rather strongly in the direction of Justice--8.6 per cent. The conclusion is that Group 2 is less self-interested than Group 1, and since Group 2 is comprised of the more religious managers, this provides the test for, and therefore supports, Hypothesis 6: The more religious manager will be more concerned about the interests of others and less concerned with self-interest than the less religious manager. Previously mentioned findings as to personal, influential, and environmental variables relating to Group 2 had already indicated this, and now serve to bolster the evidence in this case problem.

Looking at the functional areas (still in the subjective mode), differences among the areas are clearly evident in Groups 1 and 2, although in opposite directions, except for Marketing. This area leans quite strongly in the direction of Justice to others--8 per cent in Group 1. Manufacturing area in Group 1 also tends firmly toward

Justice, but the opposite is true in Group 2. However, the numbers of Group 2 respondents in these areas is too small to consider these findings valid. In Group 1, Engineering, P & A, and A/F/S tend firmly in the direction of Prudence, but the underlying data show that this is more strongly directed toward self than for the firm's interests. In the objective mode the results clearly support the findings relative to Hypothesis 1:

The individual manager will tend to view himself as more ethical than other managers.

The overall direction for both Groups, as Table 53 shows, is strongly opposite to that in the subjective mode--toward Prudence, and more so in the case of Group 1. The functional areas in the objective mode are generally much stronger in the direction of Prudence, except for Engineering in Group 1 which went opposite--toward Justice; no explanation has been found for this. In Group 2, Marketing is also opposite to the trend, leaning toward Justice.

According to Hypothesis 4:

Managers engaged in some business functions will, as a whole, reflect different proportions of prudence vs justice in their ethical problem solutions from managers in certain other functions.

The evidence represented by the data on Table 53 seems clearly to support this, although somewhat less in the objective than in the subjective mode; but in this there is a built-in negative bias, since the managers were

requested to "consider an average (manager)" in the case problem role, and their tendency was to ascribe self-interest to such managers.

In general, it appears that Personnel & Administration, and Accounting/Finance/Systems tend to have stronger concern for company interests, perhaps from having a broader overall view of the business; Engineering tends to be more self-interested, perhaps due, in part, to having a more limited view. By contrast, Manufacturing appears to have concern for others, possibly due to being product oriented; and Marketing exhibits strong concern for others--which would be the customers, but this may also combine self-interest--their view may be that what benefits the customer also benefits them.

In the aggregate, most respondents tend toward self-interest, although Group 2 has two areas, Engineering and P & A, which seem to have balanced prudence and justice, their bias factors being zero.

Preliminary Summary of Case Problems

The research hypotheses dealing with the sample in total, in groups, and in functional areas appear to be well supported by the case problem findings, while that dealing with organizational levels does not. These findings also seem to be bolstered by findings relating to personal, influential, and environmental variables. A good deal of additional information comes into view, both negative and

positive, much of it in underlying detail, which may be of value in further research. The case problem findings will be combined with those in the previous chapter, and will be further interpreted and discussed in the concluding chapter.

Influences Perceived in Subjective/Objective Mode

Case Problems.--The respondents were requested to indicate, in connection with each case problem, which three of the Influences they had rated under Part II of the questionnaire now appeared to have a bearing on the problem in question. Because of the division of Case Problems into the two modes, objective and subjective, the influences designated by the respondents for Case Problems 2, 3, and 4 were so classified and then ranked in accordance with their relative frequencies of selection. The results--rank positions only--are shown on Table 54. As can be seen, all respondents agreed upon "own Ethical Standards" as being the most significant, which is not surprising, considering the nature of the questionnaire. Next in order was "Company's Economic Interest," following which the objectives and subjectives begin to divide. Three of the influences are not cited at all in connection with the three cases--"Wife's/Family's attitude," "Legal Constraints," and "Society's Interests." The influence which had been rated by far the lowest in Part II, "Fear of Losing Job," comes strongly into view in 6th rank by the objectives for Case 2, indicating that they considered

this a major concern of the Financial Analyst in that situation. There was practically no difference between the two classifications as to the relative frequency of citing influences identified with the A-O-S trichotomy. But there is, in the strength of the rankings when averaged, a noticable difference, as the subjectives' responses place Self-Oriented influences first, Authority second, and Organization third; while the objectives place Authority and Organization oriented influences in a tie for first place, and Self third, which indicates that the subjectives were more conscious--in these cases--of their own professional competence and personal integrity. This helps to explain the basis on which they perceive themselves as being more ethical in their roles in the case problems. The comparative ranking of these two influences is 3.5 by the subjectives, and 7 by the objectives. There are differences in the ranking of any given influence as among the cases. For example, "Company Economic Interest" is ranked 1st in Case 4, and 4th in Cases 2 and 3; "Own Ethical Standards" is 1st in Case 3, 2nd in Case 2, and 4th in Case 4--and so on. This indicates that the nature of the ethical content in the individual cases elicits perceptions of different influences at work in each situation.

Influences Perceived in All Case Problems

Setting aside the objective/subjective classifications and viewing all influences in the aggregate for all the case problems, the comparative frequencies of citations are given on Table 55 for Groups 1 and 2 and in total. The first, second, third choices have been consolidated with no weights assigned. Approximately 28 per cent of the respondents in each group had misinterpreted the instructions and had cited action choice numbers instead of influence numbers, or had intentionally omitted citations, and these omissions are also noted. Groups 1 and 2 perceived the same influences among those ranked 1st through 4th--Own Ethical Standards, Own Personal Integrity, Company Economic Interests, and Customer/Supplier Welfare. For the 5th, Group 1 perceived Company Policies, which Group 2 ranked 6th, while for the 5th, Group 2 perceived Own Religious Beliefs, which Group 1 ranked 16th. Both Groups agreed on Company's Reputation as 7th. Group 1's 6th ranking Own Professional Competence was ranked 11th by Group 2. There is little difference in the way each Group ranks the remaining Influences perceived as bearing on the case problem situations. It is noted that all eighteen influences received some consideration, the lowest being Wife's/Family's Attitude and Fear of Losing Job, which were cited a total of 15 times

TABLE 55.--Influences perceived for case problems, major groups, and totals.

Influences	Group 2 (N=28)						Group 1 (N=73)						(N=101)					
	Case Problem Ranking						Case Problem Ranking							Combined				
	1	2	3	4	5	6	Freq.	Rnk	1	2	3	4			5	6	Freq.	Rnk
Authority Oriented																		
1 Company Policies	7	7	4	4	5	9	27	6	7	7	2	5	7	6	71	5	98	5
2 Top Management Attitude	9	9	5	8	5	10	17	8	9	6	10	9	4	11	39	9	56	9
3 Supervisor's Attitude	3	3	9	9	10		14	10	9	5	9	10	7	12	35	10	49	10
10 Own Ethical Standards	1	1	1	2	1	1	74	1	2	4	1	4	1	2	164	1	238	1
11 Own Religious Beliefs	4	4	9	5	3	3	32	5*	9	11	10	10	12	12	14	16*	46	11
12 Legal Constraints			12			7	5	14	12	12	15	12	9	6	16	15	21	16
Totals							169	1							339	2	508	1
							33.5%								25.8%		27.9%	
Organization Oriented																		
4 Company Economic Interests	4	4	2	1	3		42	2	4	3	4	1	16	3	107	3	149	3
5 Peer Groups Attitude		13					1	18*		10	13	8	10	12	21	14*	22	15
6 Customer/Supplier Welfare	2	13	5	2	6		35	4	1	11	7	2		4	82	4	117	4
13 Company's Reputation	6	13	5	5	7		18	7	5	15	6	3	10	10	57	7	75	6
14 Subordinates' Attitudes		9	2				11	11	13	3	14				25	12	36	13
15 Society's Interests				3	1		17	8	15			3	1		50	8	67	8
Totals							124	2							342	1	466	2
							24.6%								26.0%		25.6%	
Self Oriented																		
7 Wife's/Family's Attitude		9	12	9			4	15*	12	13	12		10	12	11	18*	15	17
8 Own Economic Interests	10	9	12	9	8		11	11	8	9	15	12	5	5	31	11	42	12
9 Own Professional Competence	7	6	11				11	11*	6	2	7	7	14	8	63	6*	74	7
16 Fear of Losing Job		7					3	17			15	14	16		12	17	15	17
17 Own Personal Integrity	3	2	5	5	2	3	40	3	3	1	5	5	2	9	118	2	158	2
18 Own Career Aspirations				9	8		4	15*		8	13	11	6		23	13*	27	14
Totals							73	3							258	3	331	3
							14.5%								19.6%		18.2%	
No Response	19	21	21	22	26	29	138		46	64	51	60	72	82	375		513	
							27.4%								28.3%		28.3%	
Totals							504								1,314		1,818	
Percentage							100.0%								100.0%		100.0%	
* Greatest differences																		

each. The comparison by Functional areas is shown on Table 56, and for the Organizational Levels on Table 57.

On Table 56 are shown the frequencies and rankings of the influences perceived in the case problems by the functional areas under both Group 2 and Group 1. The data for the six cases have been consolidated, and no compilation was made for the areas under total population (N=101). Instead, a single column designated as "Mode rank" is shown at the extreme right of the Table for purposes of general comparison. A single asterisk has been placed by each rank which deviates either from the modal column or from the other rankings in the line by 3 rank positions or more, for convenience in identifying the more apparent differences. These indicate the extent to which the functional areas differ from one another in their perceptions of the influences which appear to have some degree of application in the case problems. The greatest differences involve the following influences: Top Management Attitude, Own Religious Beliefs, Own Economic Interest, and Own Professional Competence, cited 4 or 5 times, while those cited 3 times are, Supervisor's Attitude, Company's Reputation, Subordinates' Attitudes, and Own Personal Integrity. With respect to the remaining ten influences, the areas are in fair agreement, under both Groups. Looking at the number of citations by individual areas, P & A area under Group 2 has seven and ENG

has five; under Group 1 MKTG and MFG both have seven, while ENG has four. The areas with the least number are MKTG under Group 2 and A/F/S under Group 1. These findings are taken into account in testing Hypotheses 2 and 3, and on later Tables for Hypothesis 5. Of interest, also, is the percentage of "No response" frequencies and related percentages. In the case of MFG under Group 2 this percentage is so high as to tend to invalidate the remaining data in that column as being insufficient to be meaningful. In Group 1, P & A and A/F/S have the lowest percentages of no response and this appears to have an implication that they analyzed the case problems more thoroughly and were more involved in following through. It can also be seen that the areas differ with respect to the way the weight of influences cause a variance in the way they rank the A-O-S groupings. In both groups Marketing places Organization oriented influences third, and in Group 1, Marketing places Self-oriented influences first.

Proceeding to Table 57, this shows the comparison by organizational levels. It has already become obvious that many variables with respect to which differences appear when viewed in the functional context seem to have those differences dispersed in the organizational levels context. In the present case only Own Religious Beliefs is noticeably different, with six citations. None of the others have more than two except Company Policies, with

TABLE 57.--Influences perceived for case problems, consolidated, by organizational levels.

Influences	N=	Group 2 (N=28)					Group 1 (N=73)					Rk					
		7		5		6	L-1		L-2		L-3		L-4		L-5		
		L-1	L-2	L-3	L-4	L-5	L-1	L-2	L-3	L-4	L-5		L-1	L-2	L-3	L-4	L-5
Authority Oriented																	
1 Company Policies		2	12*	10	2*	2	10*	6	4	7	3						
2 Top Management Attitude		5	8		5	5*		2	9	5	5*						
3 Supervisor's Attitude		3	10		2	10		2	9	6	4*						
10 Own Ethical Standards		16	1	12	1	17	1	15	1	14	1						
11 Own Religious Beliefs		9	5*	8	3*	9	3*	1	13	4	7*						
12 Legal Constraints				1	10	2	10*	1	13								
Totals		35	2*	31	1	37	1	27	1	36	1						
		27.8%	34.4%		34.3%		34.3%	30.0%		40.0%							
Organization Oriented																	
4 Company Economic Interests		14	3	2	6*	7	4	7	3	13	2						
5 Peer Group's Attitude						1	13										
6 Customer/Supplier Welfare		10	4	5	5	4	6	11	2	5	5						
13 Company's Reputation		6	6	7	4	2	10*	2	9	3	9						
14 Subordinates' Attitudes		2	12	1	10	3	7*	3	7*	2	11						
15 Society's Interests		6	6	2	6	3	7	3	7	3	9						
Totals		38	1*	17	2	19	2	27	1*	26	2						
		30.2%	18.9%		17.6%		17.6%	30.0%		28.9%							
Self Oriented																	
7 Wife's/Family's Attitude		1	14					2	9*	1	14						
8 Own Economic Interests		5	8*	1	10	2	10	1	13	2	11						
9 Own Professional Competence		3	10	1	10	1	15*	4	6	2	11*						
16 Fear of Losing Job		1	14	2	6*	1	15										
17 Own Personal Integrity		15	2	2	6*	12	2	6	4	4	7*						
18 Own Career Aspirations		1	14			3	7*										
Totals		26	3	6	3	19	2*	13	3	9	3						
		20.6%	6.7%		17.6%		17.6%	14.4%		10.0%							
No Response		27		36		33		23		19							
		21.4%	40.0%		30.5%		30.5%	25.6%		21.1%							
Totals		126		90		108		90		90							
Percentage		100.0		100.0		100.0		100.0		100.0							
* Major Deviations from mode																	

★ Major Deviations from mode

three asterisks, which denote differences of three or more rankings. With respect to individual levels, there is greater variance in Group 2, where Level 3 has eight and Levels 2 and 5 have five citations each, as also has Level 5 in Group 1. It would appear that the manager's organizational level is less closely identified with perception of influences present in problem situations than his function in the organization. In terms of A-O-S groupings, Levels 1 and 4 in Group 1 were more strongly perceptive of Organization oriented influences, which are ranked first--in the case of Level 4 it is really a tie with the Authority oriented group. Only Level 3 in Group 2 places Self-oriented influences above third place in the group rankings.

The next series of three Tables provides a comparison between the influences for which a ranking was established under Part II of the questionnaire through use of the rating scale, and the influences for which ranking was established according to the frequency with which they were perceived to be operative in the case problem situations. Since the previously considered differences with respect to the subjective/objective mode analysis on Table 54 involved only three of the six cases, the possible effects of such differences are being ignored in the present comparisons of influences rated with influences perceived. Table 58 compares the rankings for

TABLE 58.--Influences perceived for case problems compared with influences ranked in Part II, by groups.

Influences	Group 2 (N=28)			Group 1 (N=73)			Combined (N=101)		
	Case Citations II		Part II	Case Citations II		Part II	Case Citations II		Part II
	Freq.	Rnk	Rnk	Freq.	Rnk	Rnk	Freq.	Rnk	Rnk
Authority Oriented									
1 Company Policies	27	6 *	9	71	5 *	11	98	5 *	11
2 Top Management Attitude	17	8	10	39	9	9	56	9	9
3 Supervisor's Attitude	14	10	11	35	10 *	7	49	10	8
10 Own Ethical Standards	74	1	3	164	1	3	238	1	2
11 Own Religious Beliefs	32	5 *	2	14	16	15	46	11	13
12 Legal Constraints	5	14 *	8	16	15 *	8	21	16 *	7
Totals	169	1	1	339	2	1	508	1	1
Organization Oriented									
4 Company Economic Interests	42	2 *	6	107	3	4	149	3	4
5 Peer Group's Attitude	1	18	17	21	14	16	22	15	16
6 Customer/Supplier Welfare	35	4	4	82	4 *	12	117	4 *	10
13 Company's Reputation	18	7	7	57	7	6	75	6	5
14 Subordinates' Attitudes	11	11	13	25	12	14	36	13	15
15 Society's Interests	17	8 *	14	50	8 *	13	57	8 *	14
Totals	124	2	2	342	1	3	466	2	3
Self Oriented									
7 Wife's/Family's Attitude	4	15	16	11	18	17	15	17	17
8 Own Economic Interests	11	11	12	31	11	10	22	12	12
9 Own Professional Competence	11	11 *	5	63	6 *	2	74	7 *	3
16 Fear of Losing Job	3	17	18	12	17	18	15	17	18
17 Own Personal Integrity	40	3	1	118	2	1	158	2	1
18 Own Career Aspirations	4	15	15	23	13 *	5	27	14 *	6
Totals	73	3	3	258	3	2	331	3	2

* Major differences between rankings

Groups 1 and 2, also providing the total frequencies of selections under the case problems to enable better understanding of their relative importance, which rankings alone tend to obscure. An asterisk between two rankings denotes those which differ three or more places in relative rank. Group 2 has six, and Group 1 has seven such citations. There are four as to which both groups reflect the same kind of differences between rated significance in general and perceived influence in specific situations, and these go in the same direction. They are: Company Policies and Society's Interests, which were more prominent in the cases than in the general ratings, and Legal Constraints and Own Professional Competence which were less in evidence in the case problems than in the general ratings. Of the remainder, Group 2 saw Religious Beliefs as less apparent and Company Economic Interests as more involved in the case situations than in their general ratings. Group 2 perceived Supervisor's Attitude and Own Career Aspirations as less important, and Customer/Supplier Welfare as more important in the cases than in a general view of their significance in their decision-making. Differences are to be expected, since the case problems situations cannot be considered as being sufficiently comprehensive in the aggregate to involve all eighteen influences in substantial degree. But it is rather remarkable, under the circumstances, that there is

such close conformity between the two sets of rankings. This would indicate that the initial ratings wherein the eighteen influences were rated in direct comparison with each other are a quite accurate indicator of the manager's perception of their relative significance on his decision-making, which application in even a hypothetical problem situation tends to confirm. This concerns Hypothesis 5:

Managers engaged in some business functions will, as a whole, have significantly different perceptions of the relative importance of non-technical influences which may affect their decisions in ethical problems from managers in certain other functions.

Table 59 compares the relative rankings of the functional areas. Looking across all ten components comprising both Groups, those Influences which, denoted by asterisk, have differences for six or more of the areas are: Company Policies, Own Religious Beliefs, Legal Constraints, Customer/Supplier Welfare, Subordinates' Attitudes, Society's Interests, Own Professional Competence and Own Career Aspirations--or eight out of eighteen. In most cases they are in the same direction fairly consistently across the areas, perceived to be either more apparent or less apparent in the case situation than in the general ratings. Those that run counter to the trend on any line, and are not split, are denoted by an asterisk in parenthesis. Looking at individual areas, the count of major deviations--differences of three ranks or more--

is shown in a parenthetic figure at the bottom of the pair of columns for each area. In Group 1, Marketing has the highest such number, indicating that their perception of influences in the case problems differs most from their general rating of those influences under Part II. In Group 2, P & A has the highest such score. The counts for the rest tend to fall between 8 and 10, indicating that with respect to about half of the influences the functional areas tend to perceive them in varying degrees of significance in concrete vs abstract contexts.

A similar kind of comparison is made on Table 60 for the organizational levels. The comments made with respect to the differences in rankings of each influence as viewed across the ten functional components of the two groups can be made almost without exception with regard to the eight component levels of the two groups. These same differences are evident except that they come to fewer numbers because there are only eight instead of ten columns. Looking at the individual levels, Level 4 for Group 2 has the highest number of differences--14, while in Group 1 it is Level 5 with 11. The balance of the areas have between six and nine differences. As before, the differences tend to run in the same direction, those that are contrary being denoted with an asterisk enclosed in parentheses.

TABLE 60.--Influences perceived for case problems compared with influences ranked in Part II, by organizational levels.

(Rank Order)		Group 2 (N=28)										Group 1 (N=73)														
N=		L-1					L-2					L-3					L-4					L-5				
Influences		A	B	A	B	A	A	B	A	B	A	A	B	A	B	A	A	B	A	B	A	B				
Authority Oriented																										
1	Company Policies	12	14	2	2	10	10	4	* 9	3	5		5	* 8	5	* 12	4	* 9								
2	Top Management Attitude	8	10		* 10	5	* 11	9	(*) 6	5	* 9		11	10	9	8	9	* 12								
3	Supervisor's Attitude	10	12		* 8	10	12	9	* 12	4	* 10		7	7	10	9	9	8								
0	Own Ethical Standards	1	3	1	4	1	3	1	* 4	1	2		1	2	1	3	2	3								
1	Own Religious Beliefs	5	* 2	3	3	3	2	13	* 3	7	* 1		17	* 13	16	15	11	(*) 15								
2	Legal Constraints		* 8	10	* 7	10	9	13	* 8		12		16	* 9	14	* 7	5	5								
Totals		2	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1								
Organization Oriented																										
4	Company Economic Interests	3	* 6	6	* 12	4	4	3	* 11	2	* 7		3	4	3	4	15	(*) 6								
5	Peer Group's Attitude	17		15		17	13	* 17		14			15	15	15	16	12	14								
6	Customer/Supplier Welfare	4	4	5	5	6	5	2	* 5	5	6		4	* 12	4	* 11	6	* 16								
3	Company's Reputation	6	* 9	4	6	10	(*) 6	9	7	9	8		5	6	7	6	1	* 7								
4	Subordinates' Attitudes	12	11	10	11	7	* 15	7	* 16	11	* 15		12	* 16	12	14	14	(*) 11								
5	Society's Interests	6	* 16	6	* 14	7	* 13	7	* 14	9	* 13		7	* 14	8	* 13	7	* 13								
Totals		1	2	2	2	2	2	1	* 3	2	2		2	2	2	3	2	3								
Self Oriented																										
7	Wife's/Family's Attitude	14	15	16		16		9	* 15	14	(*) 4		18	17	17	17	6	* 17								
8	Own Economic Interests	8	7	10	* 13	10	* 14	13	(*) 10	11	* 16		10	11	11	10	12	10								
9	Own Professional Competence	10	* 5	10	9	15	* 8	6	* 1	11			7	* 3	6	* 2	8	* 1								
6	Fear of Losing Job	14	* 18	6	* 18	15	* 18		18	18			12	* 18	18	18	17	18								
7	Own Personal Integrity	2	1	6	* 1	2	1	4	2	7	* 3		2	1	2	1	3	2								
8	Own Career Aspirations	14	13		17	7	7		13		17		12	* 5	12	* 5	15	* 4								
Totals		3	3	3	3	3	2	(*) 3	3	2	3		3	3	3	2	3	2								
* Major Deviations		(7)		(8)		(7)		(14)		(9)			(9)		(6)		(11)									

(A) = Influences cited in case problems

(B) = Influences ranked in Part II

(A) = Influences cited in case problems

(B) = Influences ranked in Part II

The following sums up the data and also considers the evidence for testing Hypothesis 5, which states:

Managers engaged in some business functions will, as a whole, have significantly different perceptions of the relative importance of non-technical influences which may affect their decisions in ethical problems from managers in certain other functions.

It appears that (a) the differences in the citations dealing with the case problems objectively and subjectively on Table 54 show that the managers differentiate their applicability; (b) the variances in the rankings by the respondents in the six different case problems on Table 55 is evidence that the managers perceive them as being more or less significant in differing situations; (c) the differences in their rankings by the functional areas and organizational levels on Tables 56 and 57 for the consolidated citations of the case problems indicate that functional perceptions of their relative significance vary; (d) the differences and directional trends when the case problem influences are compared with the rankings resulting from the general and abstract ratings under Part II, as seen on Tables 58, 59, and 60, indicate that the managers are sensitive to their having different importance in varying situations--all these would tend to support the hypothesis. It is, of course, quite obvious that certain "basic" influences have a somewhat general kind of application, such as: Own Ethical Standards, Own Personal Integrity, and Own Religious Beliefs, which many

of the respondents have cited throughout. However, most of the other influences have a more specific application, and the evidence seems quite clear that the majority of the respondents have a fairly accurate perception of their applicability in specific situations. It would appear to follow, therefore, that having a conscious awareness, and recognizing that often that awareness may not be oriented to as highly structured a list as that under analysis, the manager is responsive--within whatever his limitations may be--to such influences, and that they tend to affect his decision making in varying degrees. This is to say that purely technical and economic variables are not the only factors which enter into a business decision where ethical considerations are involved. The manager is aware of and may be, in varying degrees, responsive to non-technical and non-economic influences of the kind under discussion.

Correlation of Case Problems with Certain Variables.--The computer program provided for running a number of correlations to determine if the action choice selections would reflect the influence of any of the other variables under study. The results were disappointing and occurred for primarily two reasons. A number of runs were made using the original action choice patterns. It turned out that there were too many variations, resulting in a spread of frequency distributions such that any which gave rise to significance levels of interest turned

out to be isolated cases of little importance. Secondly, the inclusion of non-response frequencies had a distorting effect, being in themselves the basis for false significance levels within the range of interest. Nevertheless, all such readings were checked out in the hope of identifying useful relationships. None of these contributed anything of value.

One of the correlations was to have been the basis for testing Hypothesis 7:

The perceptions of organizational climate held by managers in one function will differ significantly from those held by managers in certain other functions.

A related reason for the ineffectiveness of this test attempt was that the data on the relationships themselves produced no significance levels within the range of interest. In those instances where significant differences seemed to be indicated, they were caused by frequencies for Level 1 respondents who had no superiors, or for staff managerial personnel who had no subordinates. In addition, only three positions on the four-place scales were utilized, all respondents reporting, for example, their relationships with superiors, peers, and subordinates as being very good, good, or fair, none reporting poor relationships.

In those cases where correlations were attempted with case problem action choices which had been consolidated, the results were equally fruitless. For example

the influences frequencies were those identified with the valuation scale used for Part II, which was ordinal, and the case problem patterns also gave an illusion of ordinality because the patterns were numbered from 1 to 9, but the numbers, as such, had no significance other than identification.

Summary of Findings--Case Problems and Related Influences

The findings in this chapter provide the data for testing all of the research hypotheses of this study. The outcome has already been indicated in most cases, and will be formalized and further elaborated upon in the next chapter. The findings of this chapter will be combined with those of the previous chapters to furnish answers to other questions in addition to providing information relative to the tests of hypotheses. Examination and manipulation of the data also provided other information of value to the area of interest of this study. This will also be brought into view in the next and final one of the five chapters comprising this thesis.

The reader is reminded that there are some limitations on the reliability of the data developed by this study due to the size of the sample, specifically the disparate numbers of respondents in the various functional areas and organizational levels as shown in prior Table 23: e.g., 7 (9.6 per cent) in Marketing; 12 (16.4 per cent) in Personnel and Administration; vs 28 (38.4 per cent in Engineering--in Group 1.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

This study has undertaken an investigation of the internal and external forces impinging on the decision-making process of managerial personnel when ethical considerations are involved. In the view of some writers all deliberation, and thus most decisions, have ethical and/or moral implications. The first chapter introduced the general problem and related hypotheses and questions and also brought into focus the viewpoints of a number of writers on general and business ethics from which certain criteria were derived by means of which the ethical content and quality of action choices might be evaluated. The second chapter described the methodology, research procedures, and the means by which the data were gathered from the 101 respondents who comprised the survey population. The third chapter presented, discussed, and summarized the findings relating to the personal, influential, and environmental variables according to which the components of the survey sample were compared and among which were sought those which might help to explain

the decision-making behavior of managers in situations involving ethical problems. The fourth chapter analyzed and evaluated the ethical content and quality of the decisions of the managers with respect to a series of hypothetical problem situations involving ethical considerations and also the influences which they perceived as being operative in these case problems. The survey sample had been stratified into two groups, five functional areas, and five organizational levels, and all data were compiled and the findings discussed and analyzed in terms of this pattern. This chapter sets forth the outcome of the hypotheses tested, also bringing into view the related variables, and discusses other questions for which answers may or may not have been found. The conclusions and recommendations derivable from the aggregated findings then follow.

Summary of Findings

Hypothesis 1: The individual manager will tend to view himself as more ethical than other managers.

This is supported by the findings derived from the analysis and evaluation of the action choice patterns for the case problems which had been presented in both the objective and subjective modes. In terms of both completeness and ethical content and quality, the subjective mode responses showed higher ratings and less bias in the direction of self-interest than did those in the subjective mode. It is clear that the majority of the responses

in the objective mode attributed to the case problem subjects a less favorable pattern of behavior than when the respondents subjectively assumed the role of the subject. The groups, functional areas and organizational levels all responded in the same manner, that is, in the same direction, although to varying degrees. A related finding is that the respondents tended to rate two of the eighteen influence variables quite low--Peer Group's Attitude, and Subordinates' Attitudes, and also, among the environmental variables, perceived the attitudes of peers and subordinates toward ethical problems as somewhat less positive than those of higher levels.

Hypothesis 2: Managers engaged in some business functions will, as a whole, have significantly different perceptions of the solution possibilities of ethical problems from managers in certain other functions.

This is also supported by analysis and evaluation of the action choice patterns for the case problems, after adjustment for the objective/subjective bias. There is a consistency in the differences as among the functional areas, both in the mean average solution ratings for each case, in the totals, and in the rankings. Analysis of the "technical rightness" content of the case problems also supports this finding; Engineering and Accounting/Finance/Systems scored highest, and Personnel & Administration and Marketing lowest in this characteristic. It would appear that functional "distance" from the locale of the problem

situation, perception of technical factors, sensitivity to consequences, and knowledge of the proper means of resolution may be among the reasons for the differences in ratings. In the case of Accounting/Finance/Systems, their strategic position in the communications network, preparation and analysis of data and reports, and the like, may aid in their perceiving the issues more clearly. A related finding--Perception of Company Goals, also gives evidence of a form of "functional bias."

Hypothesis 3: There will be significant differences in the perceptions of the solution possibilities of ethical problems between managers from one organizational level and those from certain other organizational levels--the higher the level, the more complete the solution.

This hypothesis is not supported by the evidence derived from this sample. The same testing procedures were applied as for Hypothesis 2, but the ratings and evaluations were mixed, and there was but very small indication of a trend in Group 1 levels. Very few of the variables investigated appeared to have a direct relationship with organizational level, per se, and none of these could be identified as having a general bearing on decision problems, with the possible exception of perception of subordinates' attitudes. This influence variable was ranked lower by higher levels.

Hypothesis 4: Managers engaged in some business functions will, as a whole, reflect different proportions of prudence vs justice in their ethical problem solutions from managers in certain other functions.

This hypothesis is supported by evaluation of the action choices selected by respondents for case problems in the subjective mode, in terms of the relative content of prudence and justice reflected in these selections. Group 1 managers in Marketing had a strong bias in the direction of justice--concern for the interests of others. The Manufacturing area also tended in the same direction, but not to the same degree. By contrast, Engineering, Personnel & Administration, and Accounting/Finance/Systems were, progressively, more strongly oriented toward prudence--concern with self-interest as opposed to that of others. An important distinction is made, in that prudence has two aspects, (1) the individual's own prudential self-interest as opposed to the interests of all others including his firm, (2) the individual's prudential concern--as a managerial employee--for the interests of his firm as opposed to that of all others. In the case of all three of the last mentioned functional areas, prudential concern for own personal self-interest was more heavily weighted than prudential concern for the firm's interests--as components in the prudence vs justice (in)equation, while the opposite was true for Manufacturing and Marketing. Justice is also multi-faceted, (1) justice which the individual owes to his firm and other persons, (2) justice which the firm owes its employees, other persons, and other firms or groups. It would appear that role and

function underlie the biases which are evident in such relationships in the business context, and that managers may not be aware of them as such.

This test is also supported by the way these functional areas perceived the relative importance of nine categories of company goals, Marketing being customer oriented, Manufacturing being product oriented, Personnel & Administration having a social consciousness, while Engineering and Accounting/Finance/Systems were more expansion minded. All had placed profit first. A test of respondents in the objective mode placed most more strongly in the direction of prudence, but because of personal self-interest attributed to the case subjects by their objective observers.

Hypothesis 5: Managers engaged in some business functions will, as a whole, have significantly different perceptions of the relative importance of non-technical influences which may affect their decisions in ethical problems from managers in certain other functions.

This hypothesis is supported by the respondents' citations of the specific influences they perceived as being operative in the individual case problems, each case giving higher or lower ranking to the selected influences. Added support was provided by the comparison of the relative rankings of the eighteen influences which were rated and ranked under Part II of the questionnaire in the abstract, that is, without reference to concrete situations such as the case problems. There is strong

agreement on certain "basic" influences, such as, Own Personal Integrity, and Own Ethical Standards, and Company's Economic Interests--in both the abstract and concrete. Setting aside the one influence which so strongly differentiates the two groups--Own Religious Beliefs, the functional areas perceive in varying degrees of importance such influences as Customer/Supplier Welfare, Own Career Aspirations, Company's Reputation, Top Management Attitude, and Own Professional Competence. Although these are identified as influences which impinge on the individual there is clear indication of a role relationship, that is, the individual manager may tend to perceive certain influences rather than others in a given situation because of his particular role or function. Such a relationship was not so evident with respect to the organizational levels.

Hypothesis 6: The more religious manager will be more concerned about the interests of others and less concerned with self-interest than the less religious manager.

This hypothesis is supported by the findings of the case problem evaluations in connection with Hypothesis 4. The Group 2 managers had a much stronger bias in the direction of Justice (in the subjective mode) than did the Group 1 managers. This tendency is further supported by the relative rankings of influences, wherein Group 2 managers ranked Customer/Supplier Welfare higher than did Group 1, and also in their perception of Company

Goals, where they showed a stronger awareness for the interests of Customers and Employees, than did Group 1 managers. In the aggregate ranking of self-oriented influences vs Organization-oriented influences, Group 1 managers ranked Self before Organization, while the reverse was true of Group 2 managers. Inasmuch as the influences are related to the individual, the interpretation is that Group 2 managers are less concerned with their own personal interests as opposed to the interests of other individuals, and would not imply that Group 2 managers neglect the interests of the companies which employ them.

Hypothesis 7: The perceptions of organizational climate held by managers in one function will differ significantly from those held by managers in certain other functions.

Due to the ineffectiveness of attempted tests of correlation, as well as to the fact that the majority of respondents reported a generally favorable situation, there was no valid basis, with the present sample, to test this hypothesis. It is felt that this would be an important indicator, in the setting of a single industrial firm, of the presence and effects of high level pressures and problems with hygienic factors.

To sum up, it appears that the organizational orientation of the manager measureably influences his decision choices in problems involving ethical considerations.

It is believed that the weight of the above evidence, even in the absence of support for two of the hypotheses, supports the above statement. The evidence indicates that many variables must be considered, some having positive implications and some negative, and that the effects vary in each unique situation. Therefore, the manager's perception and evaluation of the elements of a given decision situation should not be limited to the purely technical and economic factors, but he should be aware of the probability that many other variables require consideration to improve his decision-making.

Other Findings

Besides the findings brought into view in testing the hypotheses and the descriptive variables which differentiate the groups, functional areas, and organizational levels, a number of others merit attention.

With respect to Group 1 managers:

1. Managers in the upper half of the sample age range differentiated less sharply between the ethical and unethical aspects of the problem situations in Cases 5 and 6. The younger managers divided on a basis of 21 per cent to 79 per cent, while the older managers disagreed on a basis of 32 per cent to 68 per cent. This might indicate a higher tolerance level on the part of the older manager,

or dulled sensitivity to the ethical aspects of problems due to greater cumulative exposure over time. (A separate analysis had been made.)

2. Although 34 per cent of these managers indicated that religion was very important to them, by a rating of 6 or 7 on the seven-point scale, only 8 per cent identified church/spiritual activities among the nine categories of personal interests. This low interest is more consistent with the ranking of 15th given for Own Religious Beliefs among the eighteen influences. This might be indicative of a greater tendency on their part to compartmentalize their interests than the Group 2 managers.

3. More than 44 per cent reported the ethical attitudes in their work environment as being uncertain or negative. This may be a clue as to the marked difference in the objective/subjective modes of action choice selections. In other words, their lower opinion of the "average manager's" case problem behavior may reflect their real life experiences in their work place. Of course, each is, in a sense, pointing his finger at the other.

4. Of nine categories of company goals, these managers perceived "Pleasing the Customer" in 7th place, which would seem to be a rather negative commentary with respect to the general climate in their respective companies.

With respect to Group 2 managers:

1. The distinguishing feature of this religiously oriented businessmen's group is that they do not compartmentalize their activities, carrying their professed religious beliefs into their business lives. They are, of course, more conservative in their views than the managers in Group 2.

2. The more religious manager ranks the influence of his Own Religious Beliefs highest among the eighteen, together with Own Personal Integrity.

3. He is more consistent in this respect, inasmuch as he had also designated the importance of his religion to him at the high end of the seven-point scale, and he also ranked Church/Spiritual activities highest among the nine categories of personal interests, with Family next, and Work following.

4. The median age of the more religious manager is higher, and he seems to prefer the smaller organization as a place of work, often operating his own business. This may be an indication that he finds the large organization climate less compatible with his religious views and prefers a situation with less conflict.

5. The lower level of educational achievements of the sample drawn may be reflected in a less comprehensive perception of the technical aspects of problem situations. The sample included only those members of

the businessmen's group who were in industry; a large number of the others are in the professions where the educational requirements are correspondingly higher.

6. The more religious manager appears to be more perceptive of the interests of people, in that he indicates a higher concern with Customers and Employees, among the nine categories of company goals.

With respect to the Functional areas, (limited to Group 1 as being more characteristic of managers in the general case than those in Group 2):

1. Manufacturing managers were older; rated religious importance highest; were least interested in hobbies; were more interested in personal social relationships; rated Company Policy higher as an influence on decisions; were second lowest in annual earnings; perceived their own situation in the company as least favorable; had the least difference in solution rating as between subjective and objective modes; had a subjective bias in the direction of justice, but a strong objective bias in the direction of prudence; perceived organization-oriented influences more strongly in the case problems.

2. Marketing managers ranked personal financial security highest and family interests lowest; had studied religion, ethics, logic, and psychology more; ranked Customer/Supplier Welfare and Subordinates' Attitudes highest; had ranked Own Religious Beliefs, Legal Constraints, and

Own Career Aspirations lowest; had ranked organization-oriented influences first, authority second, and self third--in complete contrast to the others; had reported the lowest annual earnings; perceived own situation in the company as most favorable; after profit and growth, perceived market expansion as most important and community interests least important; had a more favorable perception of businessmen's ethics in general; were least perceptive of the solution possibilities in the problem situations; were strongest, subjectively, in bias in the direction of justice; perceived strongest the self-oriented influences in ranking of the influences in the abstract as compared to those seen in the case problems, and the greatest contrast in the authority-organization-self orientations in the abstract ratings vs those in the case problems.

3. The Engineering managers had the least amount of graduate education; the lowest percentage of membership in professional organizations; among personal activities, ranked hobbies highest, and self-improvement and personal social activities lowest; had studied least the four subjects--religion, ethics (especially), logic and psychology; were at neither extreme in the rankings of the eighteen influences; perceived company ethical attitudes as least favorable; perceived market expansion as least important of company goals; had the least favorable perception of businessmen's ethics in general; were second

highest in earnings; had the best perception of problem solutions in the objective mode, and second best in the subjective mode; were closest to balancing, in total, prudence vs justice in the case problems--but in this they were opposite to the trend of the others, being subjectively biased in the direction of prudence and objectively in the direction of justice.

4. The Personnel & Administration managers had the highest percentage of graduate degrees; were second lowest in rating religious importance; were highest in membership in professional organizations; had the highest ranking for community affairs among personal interests; had the highest rankings of Top Management Attitudes and Society's Interests, and the lowest for Company's and Own economic interests among the eighteen influences on decisions; perceived company ethical attitudes highest; perceived Product Improvement and Employee's Interests lowest among company goals; had the most favorable perception of businessmen's ethics in general; had the least favorable solution ratings in both the objective and subjective modes, and were least perceptive, after Marketing, of the solution possibilities of the case problems in the aggregate; had the strongest bias, by far, in the direction of prudence in the ethical evaluations of the case problems, and also the strongest in total; perceived authority oriented influences as the strongest in the case problems;

and with A/F/S, had the least range of differences in rankings of the eighteen influences in the abstract vs those perceived in the case problems.

5. Accounting/Finance/Systems managers had expressed lowest rating of the importance of religion; ranked community affairs lowest among personal interests; ranked religion lowest, with Marketing, among the eighteen influences; were highest in earnings; perceived Product Improvement as the 2nd most important company goal; had the widest range of difference in solution ratings in the objective vs subjective modes, including the highest subjective and second lowest objective solution ratings; had the best solution rating of case problems in the aggregate; had the strongest bias in the direction of justice in the subjective mode problems; and with P & A had the least range of differences of rankings of the eighteen influences in the abstract vs those perceived in the case problems.

With respect to the Organizational Levels (those of Group 1 only): Certain variables had a directional trend; the following increased going up the levels: Business Administration degrees, professional membership, ranking of Top Management Attitude, interest in hobbies, perceived positive attitude of company toward ethics, improved rating of solutions in the objective mode. The following decreased going up the levels: ranking of the following influences--

Legal Constraints, Subordinates' Attitudes, Professional Competence; rating of solutions to case problems in the objective mode; aggregate solution ratings of case problems; of the influences perceived in the case problems, Level 3 ranked self-oriented influences highest, Level 4 the organization-oriented influences, and Level 5 the authority-oriented influences.

It is evident that few variables have a strong relationship to organizational level in the present sample, and a number of the trends indicated above have a rather limited range of difference.

Conclusions

The major conclusion was stated in summing up the hypotheses above--the organizational orientation of the manager measurably influences his decision choices in problems involving ethical considerations. This is to say that the manager's perception of the ethical content of problem situations is affected by his functional role, his technical comprehension of the issues involved, the influences he perceives as being operative in each unique situation, and also by his perception of himself and his inter-relationships in the organizational context. In addition, he brings into the problem situation his own attitudes, beliefs, and values. All of these influences bear in varying degrees on the individual manager. He responds in varying degrees to influences identified with

authority--both internal and external to the firm, with his organization, and with his own self-interest. His responses indicate whether he is more strongly oriented to authority, organization, or self. His responses vary as he identifies more or less strongly with a given situation--in the objective or subjective sense, and the difference in response can be considered a tendency toward bias.

The problem situation which involves ethics is, by its nature, a situation which involves a conflict of interests. The problem of the manager is to accurately perceive and evaluate the extent of conflict and to select a course of action which most equitably balances and resolves the conflicting interests. He must be able to see what he ought to do, and he must be able to do what he ought to do, and the outcome must be as good as possible for all concerned. It has been seen that managers in different functions respond differently to the same situations, thus a functional bias may be present, which may be due in part to differences in technical comprehension, and in varying ability to see all aspects and solution possibilities which merit consideration. It can also be seen that the manager is subject to various constraints on his behavior, some of which may be preventive and some compelling in their effects. He may not always feel free to do what he ought to do. Subjectively he may perceive

and prefer one course of action, but objectively he may perceive and incline toward another. Managers also vary in the degree to which they balance self-interest with the interests of others, both as individuals and in their functional roles. In the industrial context there are personal and impersonal aspects to ethical problems, as individuals deal with individuals as such, and also as individuals representing groups with other individuals representing groups. Differences in functional bias may be due, in part, to differences in such relationships.

In the general case, that is, with respect to the managers in Group 1, the influence of professed religious beliefs was not as evident as in the special group of managers comprising Group 2. Comparison of the responses of the two groups with respect to a number of variables clearly indicates that the more religious manager is less inclined toward self-interest than the less religious manager, and that he appears to be more concerned with individuals as such. It would appear that the degree of religious commitment of the manager is reflected in a stronger bias in the direction of justice--concern with the interests of others, than towards prudential concern for self.

Manufacturing managers appear to be about mid-range among the five areas in their perceptiveness of solution possibilities of ethical problems and have a

definite bias in the direction of prudential concern for company interests, combining the objective and subjective responses.

Marketing managers appear to be least perceptive of the solution possibilities of ethical problems, have a bias in the direction of justice in the aggregate, and the widest range of difference between objective and subjective content--prudence vs justice, in the ethical evaluation.

Engineering managers have a comparatively high perception of solution possibilities of the ethical problems, and were closest, in total, to balancing prudence and justice. However, this conclusion is somewhat qualified because of an unexplained bias in the direction of justice, contrary to trend, in the objective mode cases.

Personnel and Administration managers appear to have a comparatively low perception of the solution possibilities of ethical problems and have a very strong bias in the direction of prudential concern, but directed toward self rather than company.

Accounting/Finance/Systems managers appear to have the best perception, among the five functions, of the solution possibilities of ethical problems and have a definite bias in the direction of prudential concern, but for self more than for company, and in both the objective and subjective modes.

Group 1 and Group 2 managers both have, in the aggregate, a bias in the direction of prudential concern, but that of Group 1 is, comparatively, twice as strong, Group 2 having a relatively greater content of justice. The total solution rating of both groups was almost identical, but the technical perception of Group 1 appears to be superior.

In view of the above evidence it seems clear that ethical problems in the industrial context have a high degree of complexity and require consideration of a large number of significant variables in addition to the purely technical and economic factors which may be involved.

It would appear that the ethical continuum in the business environment is less broad than in the general case. The larger the organization and the more impersonal the relationships, particularly group-to-group, the less likely it is that the manager's ethical sensitivity will be involved with that end of the continuum tending toward personal self-sacrifice in the sense of Christian ethics. It would appear that his obligation to be concerned about the interests of others within the business context would be limited by his specific role. However, the higher he rises, the greater is his span of responsibility, and the stronger are the consequences of his decisions on the interests of others. Adequate criteria and guidelines are available for the right-minded manager by which to

evaluate his own intentions, the rightness of his actions, and the goodness of the expected consequences. The moral imperatives to treat other persons as ends always and never as means only; to see oneself in others; to be truly objective in balancing prudence and justice--would appear to be adequate for most business situations.

Recommendations

The practical answer to the question posed by Walter Koch, as cited in the first chapter--how and when to apply ethics in a business situation--would appear to be, not simple, but realizable. The manager has been seen as being sensitive to the ethical implications in problem situations, although his perception of solution possibilities may be limited or impaired by functional bias, technical inadequacies, impersonality, excessive bias in the direction of prudence or justice, and other personal and environmental influences and constraints. It would appear that, if he could be made aware of and remain sensitive to the variables which merit consideration, he could also be assisted by a practical framework of ethical criteria, such as shown in the schematic representation shown in Figure 3, and explained by writers such as those cited in the first chapter. In addition, and perhaps of paramount importance, he needs the positive support and encouragement of top management in maintaining the highest possible standard of ethics in his business decisions.

Such support would be predicated on the conviction that good ethics are not only possible, but absolutely necessary in the business environment. Top policies should clearly and unequivocally state that no employee, no matter what his level in the organization, has the right to require another employee to lie, cheat, or steal for the benefit of the company or any other individual employee in it. Fundamental is the concept that in the large modern corporation, the one characteristic which all members have in common is that they are all, first of all, employees--from chairman of the board to sweeper, and that exploitation of fellow employees begins when that concept is abandoned.

The specific recommendation is made that the possibilities indicated by this exploratory research be further investigated. It is believed that the research instrument here used can be refined into a reliable descriptive/diagnostic/predictive device for analyzing the ethical content and quality of managerial decisions, and that the techniques experimentally tested in this study--of making logical analyses of the ethical content of problem situations--can be further developed, together with a rational means of comparing the decision choices of organizational components and individuals dealing with problem situations. The framework of ethical criteria, the solution rating scale, and the method of determining

to what degree prudence and justice are in balance--are specifically referred to for this purpose. A replication within one large organization would be an effective test of the validity of the approach attempted in this study, and could result in a good measurement of ethical climate in that organization.

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APPENDICES

APPENDIX A

**COMPOSITION OF ETHICAL CONTENT AND QUALITY
OF CASE PROBLEM ACTION CHOICES**

TABLE A-1.--Summary--ethical content and quality--percentage of prudence and justice in case problem action choices, by functional areas.

Grand Totals						
	Total		Group 1		Group 2	
	P	J	P	J	P	J
MFG	52.0	48.0	52.1	47.9	53.2	46.8
MKTG	48.1	51.9	48.6	51.4	47.7	52.3
ENG	49.7	50.3	49.6	50.4	50.0	50.0
P & A	55.6	44.4	57.6	42.4	50.0	50.0
A/F/S	50.6	49.4	52.1	47.9	47.6	52.4
Totals	51.0	49.0	51.8	48.2	50.8	49.2

Subjective Totals						
	Total		Group 1		Group 2	
	P	J	P	J	P	J
MFG	49.1	50.9	47.6	52.4	52.0	48.0
MKTG	45.1	54.9	46.0	54.0	41.7	58.3
ENG	50.8	49.2	51.1	48.9	47.7	52.2
P & A	49.3	50.7	51.7	48.3	44.0	56.0
A/F/S	49.3	50.7	52.7	47.3	41.5	58.5
Totals	49.5	50.5	50.8	49.2	45.7	54.3

Objective Totals						
	Total		Group 1		Group 2	
	P	J	P	J	P	J
MFG	54.7	45.3	54.7	45.3	54.4	45.6
MKTG	50.0	50.0	54.5	45.5	48.7	51.3
ENG	47.9	52.1	46.9	53.1	57.1	42.9
P & A	60.0	40.0	60.8	39.2	57.1	43.9
A/F/S	52.3	47.7	51.3	48.7	53.8	46.2
Totals	52.6	47.4	52.8	47.2	52.3	47.7

TERMS: P = Prudence; J = Justice

TABLE A-2.--Subjective mode--ethical content and quality of case problem action choices.

N=	41	12		53	7	6	21	7	12
Summary-Subjectives				Total					
	Grp 1	Grp 2	Total	Mfg	Mktg	Eng	P&A	A/F/S	
Int-P/S	2.99	3.00	2.99	2.62	2.33	3.01	3.40	3.25	
J/C	.80	1.00	.85	.81	.67	.86	1.14	.75	
J/OP	2.39	3.50	2.65	2.57	3.00	2.75	2.29	2.58	
Ext-P/C	2.42	2.67	2.48	2.81	2.33	2.70	1.95	2.25	
J/OP	.08	.08	.08	.33	.17	-o-	.17	-o-	
J/OC	1.97	2.17	2.01	1.93	1.83	1.95	1.90	2.33	
T/R	3.46	3.08	3.37	2.98	2.83	3.68	2.88	3.50	
Total P	5.41	5.67	5.47	5.43	4.66	5.71	5.35	5.50	
Total J	5.24	6.75	5.59	5.64	5.67	5.56	5.50	5.66	
T/P %	50.8	45.7	49.5	49.1	45.1	50.8	49.3	49.3	
T/J %	49.2	54.3	50.5	50.9	54.9	49.2	50.7	50.7	

N=	5	5	17	5	9	2	1	4	2	3
Group 1					Group 2					
	Mfg	Mktg	Eng	P&A	A/F/S	Mfg	Mktg	Eng	P&A	A/F/S
Int-P/S	2.25	2.20	3.12	3.35	3.33	3.50	3.00	2.50	3.50	3.00
J/C	.95	.60	.88	1.00	.56	.50	1.00	.75	1.50	1.33
J/OP	2.40	2.80	2.64	1.80	2.11	3.00	4.00	3.25	3.50	4.00
Ext-P/C	2.70	2.40	2.59	1.90	2.11	3.00	2.00	3.00	2.00	2.67
J/OP	.25	.20	-o-	.25	-o-	.50	-o-	-o-	-o-	-o-
J/OC	1.85	1.80	1.94	1.85	2.22	2.00	2.00	2.00	2.00	2.67
T/R	3.20	2.80	3.78	3.05	3.56	2.50	3.00	3.25	2.50	3.33
Total P	4.95	4.60	5.71	5.25	5.44	6.50	5.00	5.50	5.50	5.67
Total J	5.45	5.40	5.46	4.90	4.89	6.00	7.00	6.00	7.00	8.00
T/P %	47.6	46.0	51.1	51.7	52.7	52.0	41.7	47.7	44.0	41.5
T/J %	52.4	54.0	48.9	48.3	47.3	48.0	58.3	52.2	56.0	58.5

TERMS: P = prudence; J = justice; T/R = technical rightness
 S = self; C = company; OP = other person
 OC = other company

TABLE A-3.--Objective mode--ethical content and quality of case problem action choices.

N=	32	16	48	7	10	12	9	10
Summary-Objectives				Total				
	Grp 1	Grp 2	Total	Mfg	Mktg	Eng	P&A	A/F/S
Int-P/S	3.40	3.19	3.33	3.29	3.10	2.89	4.11	3.40
J/C	.66	.63	.65	.43	.80	.67	.44	.80
J/OP	2.68	2.50	2.62	3.14	2.30	3.16	2.11	2.40
Ext-P/C	2.69	2.44	2.60	3.43	1.80	2.74	2.89	2.40
J/OP	-o-	.06	.02	-o-	.10	-o-	-o-	-o-
J/OC	2.10	1.94	2.05	2.00	1.70	2.30	2.11	2.10
T/R	3.00	2.94	2.98	3.00	2.90	3.09	2.67	3.20
Total P	6.09	5.63	5.93	6.72	4.90	5.63	7.00	5.80
Total J	5.44	5.13	5.34	5.57	4.90	6.13	4.66	5.30
T/P %	52.8	52.3	52.6	54.7	50.0	47.9	60.0	52.3
T/J %	47.2	47.7	47.4	45.3	50.0	52.1	40.0	47.7

N=	5	2	11	7	7	2	8	1	2	3
Group 1					Group 2					
	Mfg	Mktg	Eng	P&A	A/F/S	Mfg	Mktg	Eng	P&A	A/F/S
Int-P/S	3.40	3.50	2.78	4.29	3.43	3.00	3.00	4.00	3.50	3.33
J/C	.60	1.50	.73	.43	.59	-o-	.63	-o-	.50	1.33
J/OP	3.20	2.00	3.17	2.14	2.29	3.00	2.37	3.00	2.00	2.67
Ext-P/C	3.60	2.50	2.63	3.00	1.86	3.00	1.63	4.00	2.50	3.67
J/OP	-o-	-o-	-o-	-o-	-o-	-o-	.13	-o-	-o-	-o-
J/OC	2.00	1.50	2.23	2.14	2.14	2.00	1.75	3.00	2.00	2.00
T/R	3.00	3.00	3.19	2.71	3.00	3.00	2.88	2.00	2.50	3.67
Total P	7.00	6.00	5.41	7.29	5.29	6.00	4.63	8.00	6.00	7.00
Total J	5.80	5.00	6.13	4.71	5.02	5.00	4.88	6.00	4.50	6.00
T/P %	54.7	54.5	46.9	60.8	51.3	54.4	48.7	57.1	57.1	53.8
T/J %	45.3	45.5	53.1	39.2	48.7	45.6	51.3	42.9	43.9	46.2

TERMS: P = prudence; J = justice; T/R = technical rightness
 S = self; C = company; OP = other person
 OC = other company

TABLE A-4.--Total summary--ethical content and quality of case problem action choices.

N=	73	28	101	14	16	33	16	22
Total Summary				Total				
	Grp 1	Grp 2	Total	Mfg	Mktg	Eng	P&A	A/F/S
Int-P/S	3.17	3.11	3.15	2.91	2.81	2.97	3.80	3.32
J/C	.73	.79	.75	.61	.75	.79	.75	.77
J/OP	2.52	2.93	2.64	2.86	2.56	2.90	2.18	2.50
Ext-P/C	2.54	2.54	2.54	3.14	2.00	2.72	2.49	2.32
J/OP	.04	.07	.05	.15	.13	-o-	.07	-o-
J/OC	2.03	2.04	2.03	1.96	1.75	2.07	2.02	2.23
T/R	3.26	3.00	3.22	2.99	2.88	3.47	2.76	3.36
Total P	5.71	5.65	5.69	6.05	4.81	5.69	6.29	5.64
Total J	5.32	5.83	5.47	5.58	5.19	5.76	5.02	5.50
T/P %	51.8	50.8	51.0	52.0	48.1	49.7	55.6	50.6
T/J %	48.2	49.2	49.0	48.0	51.9	50.3	44.4	49.4

N=	10	7	28	12	16	4	9	5	4	6
Group 1					Group 2					
	Mfg	Mktg	Eng	P&A	A/F/S	Mfg	Mktg	Eng	P&A	A/F/S
Int-P/S	2.89	2.57	3.00	3.90	3.38	3.25	3.00	2.80	3.50	3.17
J/C	.77	.86	.82	.67	.56	.25	.67	.60	1.00	1.33
J/OP	2.80	2.57	2.84	1.99	2.19	3.00	2.56	3.20	2.75	3.33
Ext-P/C	3.20	2.43	2.63	2.57	2.00	3.00	1.67	3.20	2.25	3.17
J/OP	.11	.14	-o-	.09	-o-	.25	.11	-o-	-o-	-o-
J/OC	1.92	1.71	2.05	2.02	2.19	2.00	1.78	2.20	2.00	2.33
T/R	3.09	2.86	3.55	2.85	3.31	2.75	2.89	3.00	2.50	3.50
Total P	6.09	5.00	5.63	6.47	5.38	6.25	4.67	6.00	5.75	6.34
Total J	5.60	5.28	5.71	4.77	4.94	5.50	5.12	6.00	5.75	6.99
T/P %	52.1	48.6	49.6	57.6	52.1	53.2	47.7	50.0	50.0	47.6
T/J %	47.9	51.4	50.4	42.4	47.9	46.8	52.3	50.0	50.0	52.4

TERMS: P = prudence; J = justice; T/R = technical rightness
 S = self; C = company; OP = other person
 OC = other company

APPENDIX B

DESCRIPTION AND HISTORY OF GROUP 2

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DESCRIPTION AND HISTORY OF GROUP 2

The survey managers who comprise Group 2 were drawn from the membership of a religiously oriented organization in the same large metropolitan area in which the Group 1 respondents were found. The information about these men which follows was taken entirely from a small pamphlet issued by the international office of the organization. The pamphlet is titled, "CBMC--What It Is, What It Does," and the international office of CBMCI, Christian Business Men's Committee International, is maintained in one of Chicago's suburbs. The metropolitan area of Group 2 is not Chicago.

What is CBMC? CBMC is its members. And behind every member there is a story . . . (three short examples are given) . . . Three stories. Three men who faced the claims of Christ, received Him as their personal Saviour and found reality. And this is CBMC. Men finding Christ--and then sharing this reality with other businessmen. Multiply the three stories by thousands and the scope and influence of CBMC begins to jell. As an organization of Christian businessmen, CBMC is not meant to be a social club. It does not try to fill the role of a church.

Active in their respective churches, CBMCers recognize a further need for this unique organization to help them grapple with the problems that are common to Christians seeking to live their faith in the business world. Pastors express appreciation for the maturing effect that CBMC has in the lives of their

members--men who are strengthened through the exercise of their faith in the business world. There are many ways that CBMC helps its members realize their role in life, through prayer sessions, mealtime evangelism, training sessions and national conventions--the sharing of mutual problems and answers. . . .

What It Does. Encourages the Christian businessman to make God a vital part of his vocational life. Teaches how to share through conversation the reality and love of God, the relief of forgiveness, the peace and the purpose that comes from genuinely relating to Christ. Brings men together regularly for fellowship in prayer, in the Word of God, and in personal sharing of experience. Studies and develops contemporary methods of exposing business friends to the plan of God through Jesus Christ. Encourages Christian business men to support financially Christian activities, as God has profited them. Publishes CBMC CONTACT, CBMCI REPORT to provide news, special personal experience testimonies of businessmen, and other challenging articles.

The CBMC Movement and Its Development. The first CBMC started in 1930 in Chicago. It was intended to spark men to their privilege and obligation to teach and preach Jesus Christ by their lives and words wherever they happened to be. Other cities formed similar committees. In 1938 CBMC International was incorporated.

Men from varied vocations and denominations have seen CBMC as a plus effort in their lives, different from the responsibilities they accept in their own churches. Because of this response on the part of Christian men in business, CBMCs have sprung up in nearly 700 communities throughout 40 countries, bringing 15,000 men into this international movement. Annually delegates and visitors from all over the world attend the CBMC International Convention. Many regional conferences and retreats are held throughout the year, to further interest and enlist men in business to find the stability and satisfaction that Jesus Christ can give.

CBMC Statement of Doctrine. 1. We believe in the Scripture of the Old and New Testaments as verbally inspired by God, and inerrant in the original writings and that they are of supreme and final authority in faith and life. 2. We believe in one God, eternally existing in three persons: Father, Son, and Holy Spirit. 3. We believe that Jesus Christ was begotten by the Holy Spirit, and born of the Virgin Mary and is true God and true Man. 4. We believe that man was created in the image of God; that he sinned, and thereby incurred, not only physical death, but also

spiritual death which is separation from God; and that all human beings are born with a sinful nature, and in the case of those who reach moral responsibility become sinners in thought, word and deed. 5. We believe that the Lord Jesus Christ died for our sins according to the scriptures, as a representative and substitutionary sacrifice; and that all that believe in Him are justified on the ground of His shed blood. 6. We believe in the resurrection of the crucified body of our Lord, in his ascension into Heaven, and in His present life there for us, as High Priest and Advocate. 7. We believe in "that blessed hope," the personal, premillennial and imminent return of our Lord and Saviour, Jesus Christ. 8. We believe that all who receive, by faith, the Lord Jesus Christ are born again of the Holy Spirit and thereby become children of God. 9. We believe in the bodily resurrection of the just and unjust, the everlasting blessedness of the saved, and the everlasting conscious punishment of the lost.

The first article of the above doctrinal statement explains why the respondents of Group 2 rated, Own Religious Beliefs, so much higher than the respondents in Group 1. They are conscious of the authority of God, made known to them in the scriptures, as being higher than the authority of men.

The practical application of such beliefs is sometimes recognized, as becomes evident in the following excerpts from a statement by Andrew W. Hughes, Vice President & Treasurer of Rheem Manufacturing Co., on the occasion of the retirement of G. Tom Willey from the Vice Presidency of Martin Company, one of the nation's largest aerospace firms, in May 1967:

We of industry could, without exaggeration or qualification, extol the massive contributions you have made in the industrial areas of production, efficiency, Zero Defects, manpower utilization, development of people in peacetime and in war.

These are tremendous accomplishments. . . . You knew your basics in business and were confident that they could apply to most all industrial situations. However, in this respect you join perhaps hundreds of others who could boast of duplicate records. You and I know many of these men and women and some have passed into retirement, soon to be forgotten--not even their names easily remembered. However, Tom, you have left a stamp of recognition on the American industrial scene that will continue, because for almost 40 years you have provided us an answer to the questions that disturb every honest thinker. Can religion and business mix? Is faith in God related to one's daily occupation?

We of industry acknowledge with appreciation that you have exhibited convictions for life, not just for Sunday but seven days a week. . . . These hectic days of tension, nationally and internationally, demand a loud, clear call to the basic virtues and resources of the convictions for life which you have demonstrated. . . . We've observed that you have a right perspective, and I believe you have quoted it from the Bible--the Book we have come to know as the source of your convictions. The quotation is, "Seek ye first the kingdom of God, and His righteousness, and all these things shall be added unto you" (Matt. 6:33).

We of industry have noted that you didn't just depend exclusively on education, training, friendship, experience, influence, and other "tools" to accomplish results, but you put God first regardless of the cost and fully expected Him to provide answers and results. We acknowledge He did. . . . Because of your perspective, purity of life, peaceableness, and purpose, you have had something to say with an experience of reality to illustrate and support your talk. Your walk supports your talk. Thank you, Tom, for showing us in American industry that faith in God is related to our daily work and that we need conviction for life in order to attain true, lasting success. . . .¹

Mr. Willey is a past international chairman and a continuing director of CBMCI. The monthly issue, Contact, of this organization regularly carries the personal testimonies of many men at various levels in American business

¹CBMC Contact, XXV, No. 7 (July, 1967), 14-15.

and industry, and elsewhere, as to the importance of their religious beliefs in their daily lives, in and out of business. Few are so publicly acknowledged. In addition to the statements of activities quoted from the pamphlet, CBMC members serve on the boards of, and contribute financially to the support of rescue missions for down-and-outers, youth groups such as VCY, after school Bible clubs for youngsters, Bible institutes and colleges, jail visitation--wherever their spiritual outreach can help someone in need of spiritual help.

APPENDIX C

DESCRIPTION OF THE PILOT STUDY

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DESCRIPTION OF THE PILOT STUDY

After the original structure of the questionnaire had been formulated, a pilot study was made using fifteen graduate students (doctoral) at the University who were approximately evenly divided among the departments of management, marketing, accounting and finance, and labor and industrial relations. Ten of these had had some industrial experience, three rather extensive. After follow-up there were fourteen replies. Of these, two declined, one had been out of the country and was received too late, and one was incomplete. Thus, there were ten usable replies.

Inasmuch as these test respondents were not, at the time, employed in industry, they were not requested to fill out Part I--Personal Profile, or Part III--Environmental Factors, but to merely review and evaluate the questions and furnish written comments. They were asked to rank the twenty Influences in Part II, to select appropriate action choices for the (then) seven case problems, and to indicate which three influences they identified

most strongly with these case problems. A summary of their responses and recommendations follows.

Part I--Personal Profile. Most respondents found the questions in this section satisfactory. A few suggested greater elaboration or clarification. As a result, a scale was adopted for, Age ____; Ethnic Origin ____, was divided into, Race ____, and Nationality ____; the question as to Religion ____, was changed to specify, Denomination; more space was allowed to relieve crowding. The adoption of these suggestions in the final form of question resulted in an almost problem-free response from the industrial respondents. Only one area presented difficulty, in that some respondents stated, Protestant, in answer to the question on religious denomination, for which a category was therefore provided.

Part II--Influences. Many pilot respondents complained that twenty were too many to rank, some were too general, or too similar to others, and some had equal importance. Two respondents suggested a scale. Accordingly, the number of influences was reduced to eighteen, and rather than ranking, a seven-point scale was adopted. The final result was highly satisfactory. The eighteen influences were identified, six each, in three categories-- authority-oriented, organization-oriented, and self-oriented--and the scale weights, rather than the ranking positions, were used to determine the strongest orientation of the respondents as members of the groups, functional

areas, or organizational levels into which the final sample was stratified.

The pilot respondents had gone through the process of ranking the original twenty influences, with the following results:

Based on simply averaging the rank positions--in total, the respondents ranked organization strongest (lowest in average rank numbers, 1 thru 20), then self, and authority last. With the marketing majors, the order was self-authority-organization; the management majors, organization-self-authority; the accounting majors, self-organization-authority; the LIR majors, authority-organization-self. There were, of course, variances as to the individuals within these groups. By contrast, their industrial counterparts in Group 1, in total, rank them, authority-self-organization; and marketing was, organization-authority-self; personnel was authority-self-organization; accounting also was authority-self-organization.

In the general ranking, the pilot group ranked the first six influences: personal integrity, professional competence, ethical standards, society's interests, peer groups's attitude, and customer's interests. For the case problems, the first six influences were: personal integrity, company's economic interests, ethical standards, professional competence, religious views, and customer's

interests. To a smaller degree, this indicates that the pilot group also differentiated between general and specific applications.

Part III--Environmental Factors. The evaluations were all favorable, with one or two suggestions to clarify or be a bit more specific with the wording to assure understanding. One respondent was concerned about the confidentiality of questions on income, but anonymity was assured, and in the study sample there was no reluctance to give any information.

The Case Problems. The pilot questionnaire included seven problems, and a number of the respondents complained about the time it took to complete the questionnaire. It is believed that tedium, rather than time, may have been a factor. In any case, one of the cases was eliminated. In the study sample only one case had a refusal, the last, which the respondent stated was too unrealistic to warrant an answer. (His comment was that the government had never been so logical as to let contracts on the basis of the lowest three bids.)

The rating technique had not been developed when the pilot sample replies were reviewed, therefore, only a simple comparison was made between the action choices of these respondents. Four of the ten had selected only one action for each problem, even though the instructions said that one or more could be used in combination. This

was rarely the case in the industrial sample, and this might indicate that the pilot test respondents had a more restricted view of the solution possibilities for each case, three of the four having had no industrial experience at all. Within the limits of the ten responses, there was evidence of a diversity of response patterns, which became much more evident in the industrial study, and became the basis for supporting two of the research hypotheses.

Aside from the time factor, almost all respondents enjoyed the challenge of the case problems, although some obviously had technical limitations.

Summary. The pilot study served a good purpose, in that it provided for an objective criticism of the form and structure of each part of the questionnaire, identified flaws and problems, and enabled restructuring which resulted in a minimum of problems in the industrial survey. The single most serious problem resulted from the fact that approximately 28 per cent of the respondents misinterpreted the request to identify the three most significant influences which they perceived as operative in each case problem. Some inserted the numbers of the action choices in order of importance, and some simply did not complete the requirement for all case problems. In a future replication, this will be made more clear.

APPENDIX D

FINAL FORM OF THE QUESTIONNAIRE

APPENDIX D

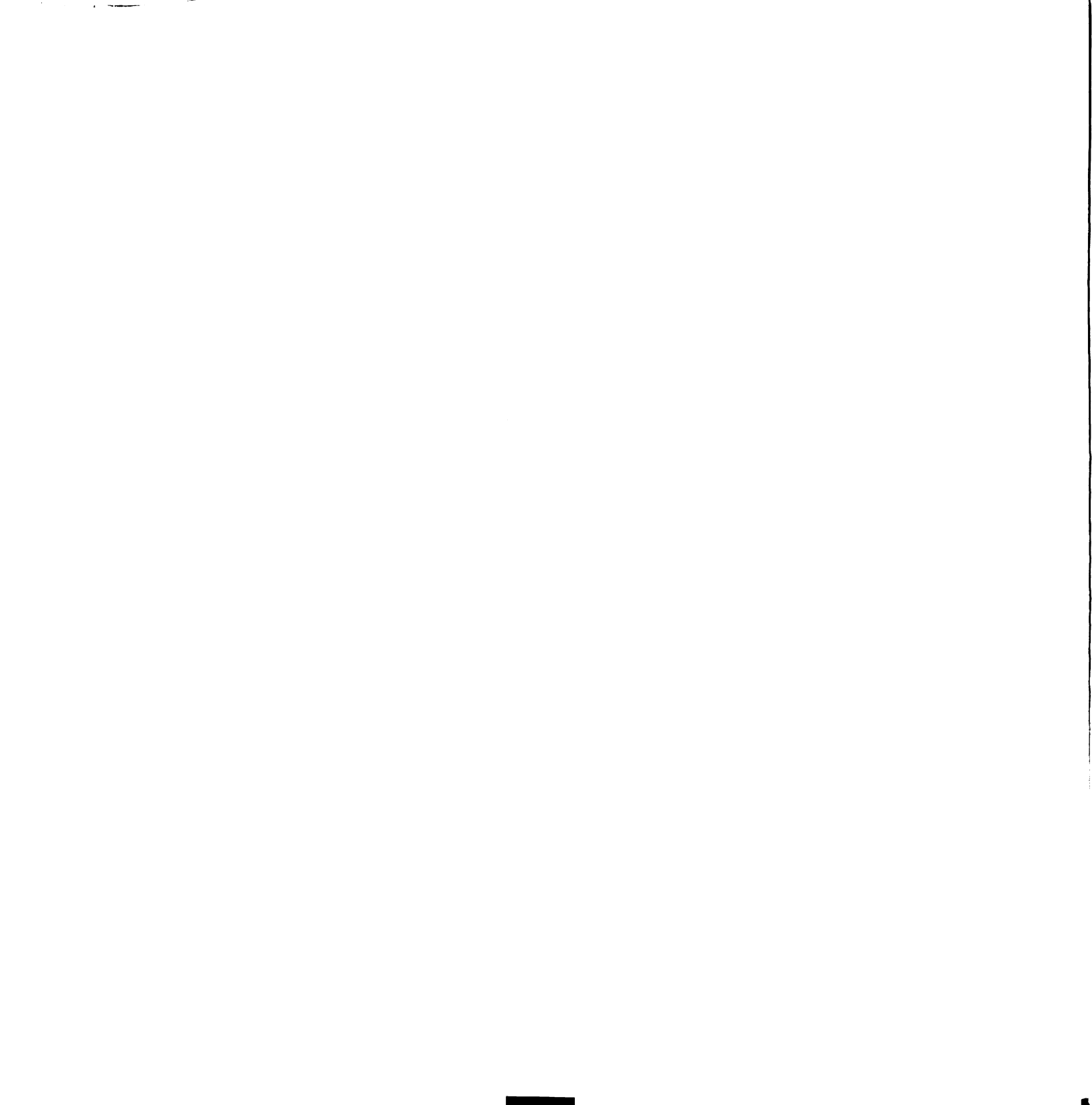
FINAL FORM OF THE QUESTIONNAIRE

Copies of the final form of the questionnaire (photographically reduced) are shown on the following pages. These differ from the original which was used in the pilot test in that the Influences first were twenty in number, and the respondent was asked to rank them in order of their importance to him, from one to twenty. The test and comments indicated that there was difficulty in ranking the lower half, some items were of a nature not readily comparable, and there were too many. It was decided to reduce the number to eighteen, and to have the respondent rate each influence individually on a seven-point scale. This proved much more satisfactory. Many correspondents wished to give equal weight to some influences, and the rating procedure made this easily possible. Then the ratings were added up in accordance with the three categories into which each influence was placed--authority, organization, or self-orientation--and the totals were also used in the analysis of the respondents by groups, functional areas, and organizational levels.

There were originally five case problems. Two more were added, but it became obvious that the completion took more time than the respondents were willing to devote, therefore, one was eliminated. As can be seen, three of the cases are worded in two ways, one set objectively, the other subjectively. Half the respondents received one mode, and half the other mode, in testing for Hypothesis 1.

Twenty-eight per cent of the respondents misinterpreted the instructions to indicate which three of the influences they had rated in Part II entered most into their decision choices for the case problems. Some inserted the action choice numbers, others ignored the item--which seemed to indicate that they thought it too burdensome.

A number of respondents commented favorably on the form and structure of the questionnaire.



MICHIGAN STATE UNIVERSITY - MANAGEMENT SURVEY QUESTIONNAIRE

September 1970

To the Respondent:

You are respectfully and earnestly requested to cooperate in a special program of research into the problems of managerial decision choices in the industrial context. This program is being conducted under the direction of the Department of Management, Graduate School of Business, Michigan State University, by the undersigned doctoral candidate.

The increasing complexity, interdependencies, and accelerated pace of changes in the industrial sector are making rational decision choices progressively more difficult. Much more than purely economic considerations exert a strong influence. The purpose of this study is to identify some of these variables - chief of which are the "influences" impacting directly on the manager - to measure their relative significance, determine how they inter-relate in the decision process and how they are perceived by the managers themselves.

As a member of your name has randomly been selected within one of five functional groups to be sampled in this study, and you are urged to extend your cooperation in helping to further this important work. You will remain completely anonymous and your reply is to be mailed by you directly to the MSU Research Project designated on the addressed stamped envelope provided herein. Your response will be mechanically compiled with others into a systematically structured stratigraphic pattern, the segments of which will then be analysed. Please answer all questions factually, realistically, and in terms of your actual perceptions. The aggregate of all responses will become patterns and trends to be treated as variables for study. The Questionnaire consists of:

Part I - Personal Profile

Some questions, such as on Religion, are somewhat personal, but you will appreciate that this inseparable dimension of the individual (under the "whole man on the job" concept) must be given due consideration, as well as other similar characteristics, in understanding more clearly the manager's frame of reference and how he functions.

Part II - Influences on Decisions

This representative list of influences is not arranged in any particular order. Rate each one on its own scale according to its significance to you in your work as a member of management, and feel free to change until you are satisfied.

Part III - Environmental Factors

These also include confidential data which will be compiled only into group characteristics. Among them are important factors which can profoundly affect the managerial decision processes, whether consciously or subconsciously. The research is designed to see if there is a measurable correlation with various aspects of decision choices.

Part IV - Case Problems

You will find quite interesting these brief hypothetical cases (drawn from actual occurrences). There are no absolutely correct solutions. Justification might be found for almost any pattern of answers. The intent here is to get your reaction as a member of a particular functional group to see how each such group responds to the same problem. You should choose your answers from among those suggested in the way that feels most natural and appropriate to you.

Your cooperation in this research program is considered invaluable and will be very deeply appreciated. Completing the questions and case problems should be a helpful experience and may give you a fresh perspective on managerial decision making. Because of the relatively small number of respondents your participation is essential to the success of this study. If you have any questions or comments, write them on the reverse side of the page in question. Return the entire questionnaire, please (except this sheet) even if you feel you cannot fully respond in all areas. Please be as prompt as possible, since the work of compiling the data cannot commence until all return envelopes are received.

(If necessary you may reach me
in phone
number .)


R. J. Shuster (Ph.D Candidate)

MICHIGAN STATE UNIVERSITY - MANAGEMENT SURVEY QUESTIONNAIRE

SAMPLE GROUP: _____

Part I - Personal Profile

1. Age (circle nearest): 20 25 30 35 40 45 50 55 60 65 2. Sex: M ___ F ___
3. Ethnic Origin: Race _____ Nationality _____ 4. Birthplace: _____
5. "Home" State _____ 6. Marital Status _____ 7. No. of Children _____
8. Military Service: (a) Years _____ (b) Rank _____ (c) Combat? Yes ___ No ___
9. Education: (a) Years: H.S. _____ College _____ (b) Degrees _____ (c) Major _____
10. Religion: (a) Denomination _____ (b) Conservative ___ Moderate ___ Liberal ___
(c) How important is your religion to you? (Check Scale) HIGH. 7 • 6 • 5 • 4 • 3 • 2 • 1 • 0. LOW
11. Member of Fraternal Order? Yes ___ No ___ 12. Member of Professional Group? Yes ___ No ___
13. Father's: (a) Education _____ (b) Vocation _____ (c) Religion _____
14. Mother's: (a) Education _____ (b) Vocation _____ (c) Religion _____
15. What are your three most important Activities/Interests/Goals in Life (in rank order):
(a) _____
(b) _____
(c) _____
16. Have you studied (check): (a) Religion ___ (b) Ethics ___ (c) Logic ___ (d) Psychology ___

Part II - Influences on Decisions

Listed below are a representative number of "influences" which may affect one's perception and decisions about work problems. Rate each one on its scale in accordance with its degree of significance to you as a manager or supervisor, from 7 for High to 1 for Low significance.

<u>No.</u> <u>Influence</u>	<u>High-Significance-Low</u>	<u>No.</u> <u>Influence</u>	<u>High-Significance-Low</u>
1. Company Policies/Procedures	7 6 5 4 3 2 1	10. Own Ethical Standards	7 6 5 4 3 2 1
2. Top Management Attitude	7 6 5 4 3 2 1	11. Own Religious Beliefs	7 6 5 4 3 2 1
3. Your Supervisor's Attitude	7 6 5 4 3 2 1	12. Legal Constraints	7 6 5 4 3 2 1
4. Company Economic Interests	7 6 5 4 3 2 1	13. Company's Reputation	7 6 5 4 3 2 1
5. Your Peer Group's Attitude	7 6 5 4 3 2 1	14. Subordinates' Attitude	7 6 5 4 3 2 1
6. Customer/Supplier Welfare	7 6 5 4 3 2 1	15. Society's Interests	7 6 5 4 3 2 1
7. Wife's/Family's Attitudes	7 6 5 4 3 2 1	16. Fear of Losing Job	7 6 5 4 3 2 1
8. Own Economic Interests	7 6 5 4 3 2 1	17. Own Personal Integrity	7 6 5 4 3 2 1
9. Own Professional Competence	7 6 5 4 3 2 1	18. Own Career Aspirations	7 6 5 4 3 2 1

(Continue to Part III)

MICHIGAN STATE UNIVERSITY - MANAGEMENT SURVEY QUESTIONNAIRE

SAMPLE GROUP: _____

Part III - Environmental Factors

1. General Functional Area in which you work: (check one) (a) Manufacturing _____
 (b) Marketing _____ (c) Engineering _____ (d) Personnel & Administration _____
 (e) Accounting, Finance, Systems _____
2. Your Specific Functional Area (Purchasing, Cost Accounting, Training, etc.) (Do not give your title): _____
3. Your Organizational Level (assuming President is 1st level): _____
4. Approx. no. of subordinates reporting to you: (a) Directly _____ (b) Indirectly _____
5. No. of employees in your Division (circle nearest): 100 500 1000 5000 10M More
6. Your approx. annual earnings (circle nearest): \$10M \$15M \$20M \$25M \$30M More
7. Do you own, or are you a major investor in, your company? (a) Yes _____ (b) No _____
8. Number of Years you have been: (a) With Company _____ (b) In Present Position _____
9. How do you feel your relationships are with your:

(a) Superiors:	Very Good _____	Good _____	Fair _____	Poor _____
(b) Peers:	Very Good _____	Good _____	Fair _____	Poor _____
(c) Subordinates:	Very Good _____	Good _____	Fair _____	Poor _____
10. What do you think are the attitudes toward ethical problems, of your:

(a) Company:	Positive _____	Uncertain _____	Indifferent _____
(b) Superiors:	Positive _____	Uncertain _____	Indifferent _____
(c) Peers:	Positive _____	Uncertain _____	Indifferent _____
(d) Subordinates:	Positive _____	Uncertain _____	Indifferent _____
11. How do you see your own situation in the Company:

(a) Position Secure?	Yes _____	Uncertain _____	No _____
(b) Advancement Possible?	Yes _____	Uncertain _____	No _____
(c) Salary Equitable?	Yes _____	Uncertain _____	No _____
(d) Do You Like Your Work?	Yes _____	Uncertain _____	No _____
(e) Like the Environment?	Yes _____	Uncertain _____	No _____
12. What do you think are your Company's Three Major Goals or Objectives (rank order)?

(a)	_____
(b)	_____
(c)	_____
13. Are the ethics of businessmen in general: Improving _____ Worsening _____ Not Changing _____

MICHIGAN STATE UNIVERSITY - MANAGEMENT SURVEY QUESTIONNAIRE

SAMPLE GROUP: _____

PART IV - CASE PROBLEMS INVOLVING ETHICAL CONSIDERATIONS

Read through each case, then decide which of the one or more actions are most appropriate for each - circle each of the numbers chosen.

Case #1

Out of town firm supplies your company with new component, unit value \$5. each. The B/P, Specs and P.O. show critical dimension of $\pm .0010$. First delivery of 200 units is invoiced at \$1000. Q.C. finds 50 units undersize by up to .0005 and not repairable, sets them aside for return, and notifies the Buyer. He phones supplier who promises prompt replacement and requests the rejects be scrapped here to save cost of return. Immediately afterward (1) Production finds that such a close tolerance ($\pm .0010$) is not really needed, (2) Engineering agrees that the tolerance could be $\pm .0015$.

Which (one or more) of the following actions do you recommend:

1. Debit supplier \$250. for the rejects;
2. Scrap the rejected parts;
3. Advise supplier the rejects have been accepted;
4. Do nothing;
5. Request Engineering issue B/P and Spec revisions;
6. Request Purchasing send supplier new B/P, Specs, and P.O. revision;
7. Request Q.C. to accept the rejected parts for use in production;
8. Any other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your decision? Strongest, # _____ Next, # _____ Third Strongest, # _____

Case #2

Profit Center D is currently working on four programs. The current month-end Performance Report submitted for Profit Center Manager's review shows the following:

(\$000's)	Planned Cost	Cost to Date	Budget Balance	F'cast To Complete	Est. Cost at Completion	Projected Variance
Program #1	\$ 180	\$ 150	\$ 30	\$ 37	\$ 187	\$ (7)
#2	110	90	20	23	113	(3)
#3	250	160	90	115	275	*(25)
#4	260	130	130	110	240	20
Total	\$ 800	\$ 530	\$ 270	\$ 285	\$ 815	\$ (15)

*Original estimate \$10,000. too low; costs to date held very close; all foremen agree forecast is as tight as possible; projected cost overrun appears inevitable.

Consider an average Financial Analyst reporting to the Profit Center Manager. His staff compiles the data and prepares the report, which the P.C. Manager reviews, signs, and submits to the General Manager. The P.C. Manager does not want to submit such a bad report for Program #3. He states the data may be inaccurate and suggests that a "temporary adjustment" of \$15,000. in forecasts between Programs 3 and 4 "for just this report" would forestall higher level inquiry and give him time to "try to work things out." He is responsible for explaining the variances. The Financial Analyst reluctantly complies on the basis that the P.C. Manager still has control over what has not yet happened. The following month's report shows that things have not improved, but have gotten worse. The P.C. Manager fumes and again suggests that the Financial Analyst "adjust the forecast."

Which (one or more) of the following actions, in your opinion, would the average Financial Analyst take?

1. Again comply;
2. Refuse to comply;
3. Delay action;
4. Discuss the problem with the foremen;

(continued next page)

5. Privately call the Company Controller;
6. Ask Personnel for a transfer;
7. Resign;
8. Other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your opinion? Strongest, # _____ Next, # _____ Third Strongest, # _____

Case #3

Consider an average Senior Buyer. One of his junior buyers rates an overdue salary increase but things are tight and there is no allowance for this in the departmental budget for at least 6 months. The Junior has unexpected financial problems, is discouraged, unhappy, and talks of leaving. Neither Personnel nor the Senior's superior has any suggestions. The Senior Buyer has reason to believe a new supplier the Junior handles may be "getting too friendly" with him, knowing his circumstances.

Which (one or more) of the following actions, in your opinion, would the average Senior Buyer take?

1. Do nothing;
2. Tell the Junior Buyer the budget situation and promise action in 6 months;
3. Wait to see what happens;
4. Warn the Junior not to get involved with the Supplier;
5. Talk to the Supplier;
6. Offer to loan the Junior money;
7. Insist his superior request a budget adjustment;
8. Other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your opinion? Strongest, # _____ Next, # _____ Third Strongest, # _____

Case #4

Consider an average Manufacturing Manager. The Sales Manager (who seems likely to be the next General Manager) has befriended one of the buyers of a major account to which 3 types of special fabricated components are sold under blanket P.O.s with monthly but somewhat flexible delivery schedules. (The Sales Manager has sent flowers to the buyer's sick wife, bought toys for his children, etc.) Production is programmed for early delivery of each month's schedule plus holding a 50% reserve against next month. Volume has been dropping. This month the Sales Manager requests the 50% reserve be increased to 100% and the 3 components shipped 4 weeks, 3 weeks, and 2 weeks early, stating a revised release is coming. Instead, the customer's buyer calls the Production Control Office to complain about the first early shipment. He is told that the Sales Manager made the arrangement. The buyer subsides, saying he only agreed to a 50% advance on one item to "relieve your inventory problem." A week later he frantically calls again, requesting that shipments be stopped.

Which (one or more) of the following actions, in your opinion, would the average Manufacturing Manager take?

1. Ignore the buyer;
2. Confront the Sales Manager for an explanation;
3. Revert to authorized scheduled releases;
4. Request that the Sales Manager obtain the revised releases.
5. Take the matter up with the General Manager;
6. Request that billing be delayed on the advance shipments;
7. Authorize return of the advance shipments;
8. Other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your opinion? Strongest, # _____ Next, # _____ Third Strongest, # _____

Case #5

The Engineering Supervisor had been recently promoted to Project Manager and had achieved accession to the Executive level, which meant, among other things, that he shared in the annual executive bonus, was entitled to lease two cars, etc. A few months later his supervisor handed him a slip on which was pencilled the amount \$65, and the name of a central office executive. "This," he said, "is your political contribution for this year. Make out your check to the party of your choice, put it in an envelope addressed to Mr. (the central office executive) and give it to me to forward."

Which of the following (one or more) express your feelings best?

- A. This requirement is not unethical because:
 - 1. Executive level personnel should have a sense of social responsibility and support our democratic political system.
 - 2. It takes a little pressure to induce one to make a political contribution.
 - 3. If political parties are not financially supported our democratic system may fail.
 - 4. The executive has free choice as to which party he can support.
- B. This requirement is unethical because:
 - 5. The executive is being required to make a political contribution whether he wants to or not.
 - 6. The amount of his contribution is being stipulated; he has no choice as to how much.
 - 7. The Company uses this device to evade the Federal laws prohibiting political contributions by business corporations.
 - 8. The executive can be "rated" by higher management according to which party they can see he supports.

Which three of the "Influences" you ranked in Part II entered most strongly into your opinion? Strongest, # _____ Next, # _____ Third Strongest, # _____

Case #6

The government is considered by many to be a "price buyer", and in the case of many requirements such as defense, space, atomic development, etc., is the ultimate "only" customer. Thus, the government's bargaining position is generally deemed to be stronger than that of any supplier unless the supplier has a proprietary item (or service) for which there is no acceptable substitute and is therefore a "sole source."

Consider a situation where there are many suppliers and the government buys an electro-mechanical assembly periodically in lots such that the available requirements are divided among the three lowest bidders under a Fixed Price arrangement. Because business is generally falling off more suppliers come in, competition is keener, and the price keeps dropping as each new periodic bidding opportunity is opened. In fact, some bidders stay in only to try to get volume to help absorb fixed overhead.

Which of the following (one or more) express your feelings best?

- A. The government's buying policy is not unethical because:
 - 1. They must buy at the lowest possible price in the interest of the taxpayer.
 - 2. No supplier (in this case) is forced to participate by making his capacity available.
 - 3. Suppliers should not expect to make much profit at the taxpayers' expense.
 - 4. This is the only way businesses can operate in a free economic system.
- B. The government's buying policy is unethical because:
 - 5. The buyer is unmercifully using whipsawing tactics to force the price below a profitable level.
 - 6. Suppliers require a reasonable profit to remain healthy and grow, (an accepted principle in commercial industry).
 - 7. The employees of such suppliers are denied opportunities for advancement and normal wage increases.
 - 8. The suppliers may be forced into price collusion practices in order to survive.

Which three of the "Influences" you ranked in Part II entered most strongly into your opinion? Strongest, # _____ Next, # _____ Third Strongest, # _____

MICHIGAN STATE UNIVERSITY - MANAGEMENT SURVEY QUESTIONNAIRE

SAMPLE GROUP: _____

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Which (one or more) of the following actions do you recommend:

1. Debit supplier \$250. for the rejects;
2. Scrap the rejected parts;
3. Advise supplier the rejects have been accepted;
4. Do nothing;
5. Request Engineering issue B/P and Spec revisions;
6. Request Purchasing send supplier new B/P, Specs, and P.O. revision;
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8. Any other (briefly) _____

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Which (one or more) of the following actions would you take?

1. Again comply;
2. Refuse to comply;
3. Delay action;
4. Discuss the problem with the foremen;

(continued next page)

5. Privately call the company Controller;
6. Ask Personnel for a transfer;
7. Resign;
8. Other (briefly) _____

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Case #3

You are the Senior Buyer. One of your junior buyers rates an overdue salary increase but things are tight and there is no allowance for this in the departmental budget for at least 6 months. The Junior has unexpected financial problems, is discouraged, unhappy, and talks of leaving. Neither Personnel nor your superior has any suggestions. You have reason to believe a new supplier the Junior handles may be "getting too friendly" with him, knowing his circumstances.

Which (one or more) of the following actions would you take?

1. Do nothing;
2. Tell the Junior Buyer the budget situation and promise action in 6 months;
3. Wait to see what happens;
4. Warn the Junior not to get involved with the Supplier;
5. Talk to the Supplier;
6. Offer to loan the Junior money;
7. Insist your superior request a budget adjustment;
8. Other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your decision? Strongest, #_____ Next, #_____ Third Strongest, #_____

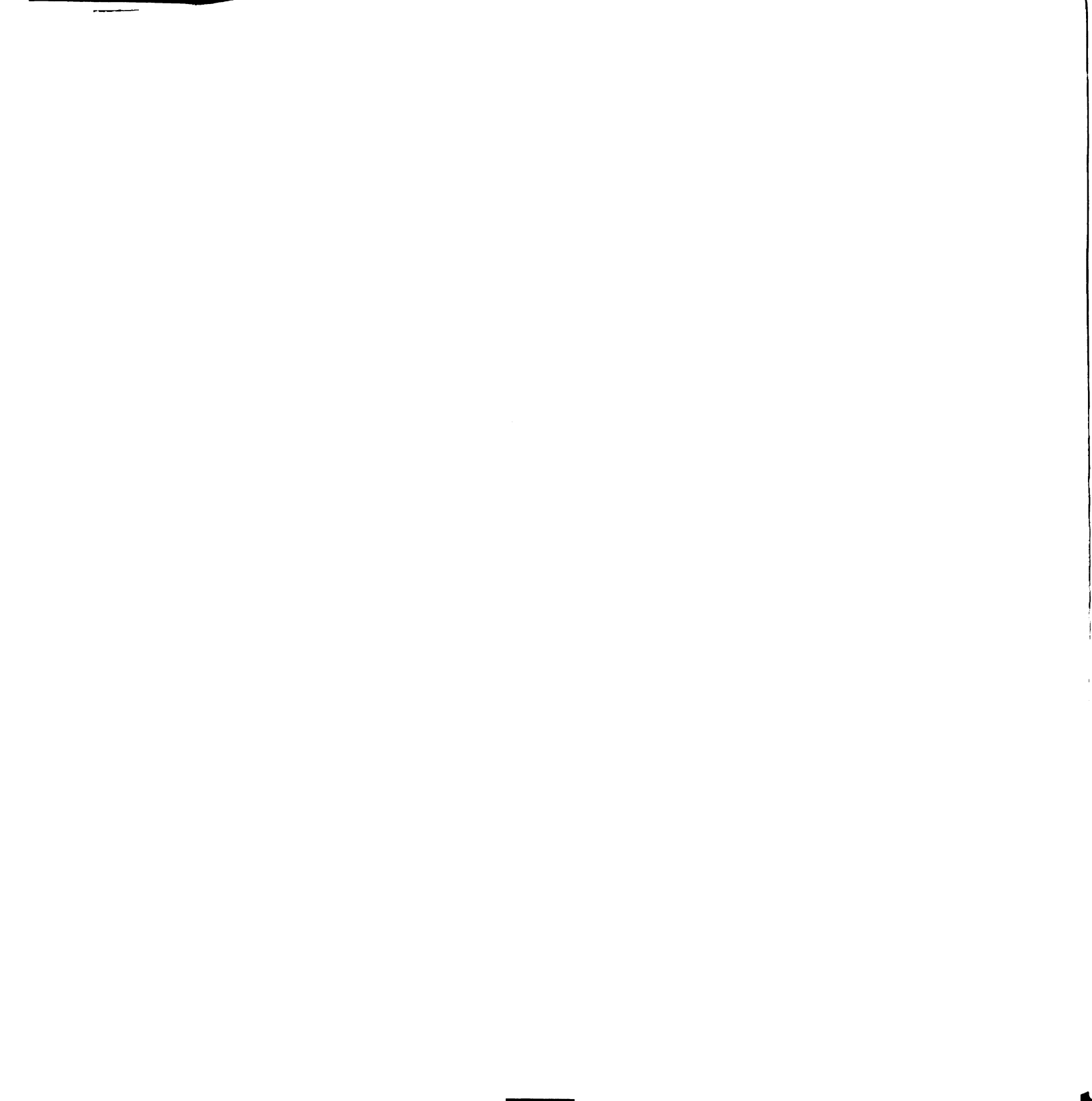
Case #4

You are the Manufacturing Manager. The Sales Manager (who seems likely to be the next General Manager) has befriended one of the buyers of a major account to which 3 types of special fabricated components are sold under blanket P.O.s with monthly but somewhat flexible delivery schedules. (The Sales Manager has sent flowers to the buyer's sick wife, bought toys for his children, etc.) Production is programmed for early delivery of each month's schedule plus holding a 50% reserve against next month. Volume has been dropping. This month the Sales Manager requests the 50% reserve be increased to 100% and the 3 components shipped 4 weeks, 3 weeks, and 2 weeks early, stating a revised release is coming. Instead, the buyer calls your Production Control office to complain about the first early shipment. He is told that the Sales Manager made the arrangement. The buyer subsidizes, saying he only agreed to a 50% advance on one item to "relieve your inventory problem." A week later he frantically calls again, requesting that shipments be stopped.

Which (one or more) of the following actions would you take?

1. Ignore the buyer;
2. Confront the Sales Manager for an explanation;
3. Revert to authorized scheduled releases;
4. Request that the Sales Manager obtain the revised releases;
5. Take the matter up with the General Manager;
6. Request that billing be delayed on the advance shipments;
7. Authorize return of the advance shipments;
8. Other (briefly) _____

Which three of the "Influences" you ranked in Part II entered most strongly into your decision? Strongest, #_____ Next, #_____ Third Strongest, #_____



APPENDIX E

STATISTICAL PROCEDURES

APPENDIX E

STATISTICAL PROCEDURES

The nature of the data derived from the survey responses was such that the non-parametric techniques for testing the level of significance were used throughout. Two such tests were used in this study--the Chi-Square test for k independent samples, and the contingency coefficient test. The computer program was such that these (and other) tests were included, and the print-outs of the tabulations provided the statistical readings also.

The χ^2 test for k independent samples enables data to be examined for significance which are inherently only classificatory (nominal) or in ranks (ordinal). In applying the test the frequencies are first arranged in a k x r table. The null hypothesis is that the sample frequencies have come from the same or identical populations and is tested by applying the formula (shown on Figure E.1, following). In this formula O_{ij} = observed number of cases categorized in the ith row of jth column, and E_{ij} = number of cases expected under H_0 to be categorized in the ith row of jth column. The summation signs direct

Interests Areas		Family	Work	Religion	Other	Totals
MFG	Expected	3.00	2.86	3.71	2.43	12
	Observed	3.00	4.00	3.00	2.00	
MKTG	Expected	6.80	6.43	8.12	5.46	27
	Observed	5.00	6.00	9.00	7.00	
ENG	Expected	3.75	3.57	4.64	3.04	15
	Observed	3.00	3.00	6.00	3.00	
P&A	Expected	3.00	2.86	3.71	2.43	12
	Observed	4.00	3.00	3.00	2.00	
A/F/S	Expected	4.50	4.27	5.57	3.64	18
	Observed	6.00	4.00	5.00	3.00	
Totals		21	20	26	17	84

Formula:

$$X^2 = \sum_{i=1}^r \sum_{j=1}^k \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

.00	.45	.14	.07
.48	.03	.10	.43
.15	.09	.40	.00
.33	.01	.14	.07
<u>.50</u>	<u>.02</u>	<u>.06</u>	<u>.11</u>

$$\text{Chi Square} = 1.55 + .60 + .84 + .68 = 3.67$$

df = 12; p \approx .989, H_0 is rejected.

Figure E.1.--Example of Chi-Square test for k independent samples.

one to sum over all the cells. Under H_0 the sampling distribution of χ^2 as computed from the given formula can be shown to be approximated by a chi-square distribution with $df = (k - 1)(r - 1)$, where k = the number of columns and r = the number of rows. The probability associated with the occurrence of values as large as an observed χ^2 can be found in standard tables of the percentage points of the χ^2 distribution (at the back of most texts on statistics). If an observed value of χ^2 is equal to or larger than that given in the tables for a particular level of significance and for $df = (k - 1)(r - 1)$, then H_0 may be rejected at that level of significance.¹ Figure E.1 shows an example of the calculations.

The contingency coefficient C is a measure of the extent of association or relation between two sets of attributes and is useful when only categorical (nominal scale) information about one or both sets of attributes is available. The contingency coefficient, as computed from a contingency table, will have the same value regardless of how the categories are arranged in the rows and columns. To compute the contingency coefficient between scores on two sets of categories the frequencies are first arranged in a contingency table (similar to that shown in Figure E.1). (The expected frequencies are calculated in the same manner as for the χ^2 test.) The larger is the discrepancy between the expected values and the observed cell values, the larger is the degree of

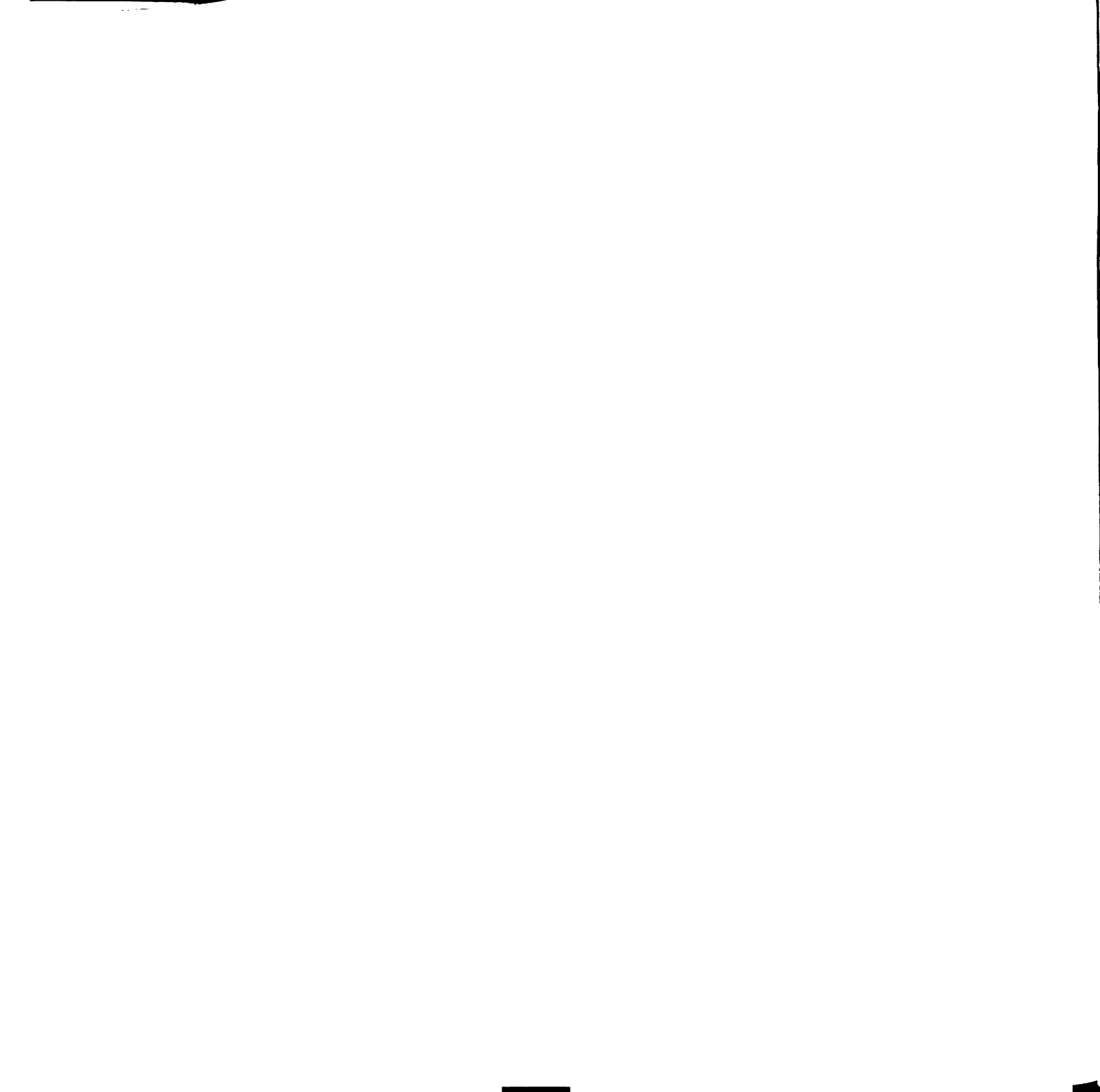
association between the variables, and thus the higher is the value of \underline{C} . The degree of association may be found from a contingency table of the frequencies by

$$C = \sqrt{\frac{x^2}{N + x^2}}$$

where x^2 is computed by the method presented earlier. Briefly, to compute \underline{C} , one first computes the value of x^2 and then inserts that value into the above formula to get \underline{C} . In testing the significance of a measure of association, we are testing the null hypothesis that there is no correlation in the population--that the observed value of the measure of association in the sample could have arisen by chance in a random sample from the population in which the two variables were not correlated. In computing the value of \underline{C} a statistic is computed which itself provides a simple and adequate indication of the significance of \underline{C} , this being x^2 . We may test whether an observed value of \underline{C} differs significantly from chance simply by determining whether the x^2 for the data is significant. Referring to a standard table of the percentage points of the x^2 distribution, if that probability is equal to or less than the "alpha" level--.05, .001, or whatever--the null hypothesis is rejected.²

¹Sidney Siegel, *Nonparametric Statistics for the Behavioral Sciences* (New York: McGraw-Hill Book Company, 1956), pp. 174-75.

²Ibid., pp. 196-99.



APPENDIX F

DETAIL OF CASE PROBLEM ACTION
CHOICES BEFORE CONSOLIDATION

TABLE F-3.--Case problem opinion choices selected before consolidation.

Case 5		(E) Opinion Choices								(U) Opinion Choices								Group		Group							
Pattern	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2									
1		2	2	2					2	2							1										
2	4		4	4					2	2							2	2									
3	2		2		2				2	2							3										
4	1			1		1			1	1							4										
5	2		2	2		2											5										
6		1		1			1		1	1							6										
7				4					2								7										
8					20	20			18	2							8										
9		1		1	10	10	10	10	5	5							9										
10									1	1							10										
11					8	8		8	7	1							11										
12	1		1		1				1	1							12										
13	1		1			1			1	1							13										
14					9				8	1							14										
15	2		2	2	2				2	2							15										
16	1			1					1	1							16										
17						1		1	1	1							17										
18	1					1		1	1	1							18										
19	3			3	3	3	3	3	1	1							19										
20	2			2	2	2			2	2							20										
21	2			2					1	1							21										
22				2	2	2		2	1	1							22										
23				1	1		1										23										
24					1			1		1							24										
25	2									2							25										
26					2	2	2	2	1	1							26										
27						1	1	1		1							27										
28	1	1	1	1													28										
29	1	1		1		1		1		1							29										
30																	30										
31					1			1		1							31										
32	1				1	1			1								32										
33	1					1											33										
34		2			2	2		2									34										
35					2		2										35										
0																	0										
Totals	28	8	16	28	74	59	23	29	73	28							Totals	52	58	4	40	16	26	7	28	73	28
																		Chi Square: $\chi^2=25.38$; $p=.607$									

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