

# Chapter 5

## A Behavioral Model of Ethical and Unethical Decision Making

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### Introduction

Well-conceived schematic models are useful devices in understanding behavior, especially in situations where the individual is subjected to multiple forces. The decision-making dynamics of an individual faced with choices involving ethical issues are complex. However, current models of ethical and unethical behavior within organizations are generally not very helpful in understanding and explaining that behavior.

The absence of well-developed models of ethical and unethical behavior in organizations reflects a dearth of research on the factors affecting this behavior and on the ways in which these factors enter into the underlying decision process. Not only is there little relevant research, but what there is does not lend itself to model building. For example, business and professional ethics, a rapidly developing sub-discipline which concerns itself primarily with the social and professional aspects of ethical and unethical behavior in business and professional contexts, has seen little research directed toward uncovering the factors leading to ethical (and unethical) behavior in various situations. Instead, there is a considerable body of descriptive material of two main types: first, accounts of particular cases of actual decisions to act ethically or unethically (study of unethical actions predominates) and, second, surveys of managers about their attitudes toward certain ethical

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dilemmas, their perceptions about the circumstances within which these dilemmas currently must be resolved, and their beliefs about changes in these circumstances which would make resolution of the dilemmas easier. However, case studies do not always indicate why particular decisions were made, let alone indicate general causes behind ethical and unethical behavior. For example, Anderson et al. (1980) concluded in their study of the Bay Area Rapid Transit (BART) case that one could not be sure about what happened, much less that one could know who acted correctly and who incorrectly and why. Moreover, survey studies, like the one conducted by Flores (1982) about safety-related decisions in design and product development, typically stop with an account of what people say they would do in certain situations rather than determine directly which actual unethical and ethical behaviors would occur in those situations. Since this descriptive information does not identify the various environmental and individual factors which influence decisions to act ethically or unethically, it cannot indicate the relative importance of these factors in determining the outcomes of decisions.

The purpose of this paper is to propose and describe a conceptual model of ethical and unethical behavior in organizations. Although this model must be viewed as a first attempt to identify and relate the various factors which influence managers' decisions to act ethically or unethically, we believe that it will increase the understanding of such behavior as related to the many factors which affect the manager's decision-making process. We further believe that this conceptual model of the decision process underlying ethical and unethical actions would be of considerable use to those who are seeking to develop and implement programs which would facilitate ethical behavior on the part of decision makers, as well as to those who desire to turn their research from the descriptive study of ethical and unethical behavior to an investigation of the underlying structure of such behavior and the process leading to it.

A schematic diagram of the model appears as Fig. 5.1. This model groups under several categories a wide range of factors which the literature lists as possible influences on managers' decisions when they are confronted by ethical dilemmas. These categories include a decision-maker's social environment, government and legal environment, professional environment, work environment, personal environment, and individual attributes. The model links these influences with ethical and unethical behavior via the mediating structure of the individual's decision-making process. The decision process in the model functions as a central processing unit with its own internal characteristics, such as the individual's cognitive style, type of information acquisition and processing, and perceived levels of loss and reward, that influence the decision. The model also distinguishes between the degree of influence which the decision maker perceives the various factors to have and the influence they actually have.

Given that the literature is scanty, it is at best suggestive about the influences on managers' ethical (and unethical) behavior, and it most definitely does not afford an exhaustive identification of the relevant factors nor of patterns of possible interaction among these. The categorization adopted for the model should thus be taken as tentative. Moreover, as each of the major categories of the model, along with the decision process function, are described and discussed in turn, the reader should remember both the paucity of relevant research and its inaptness for model building.

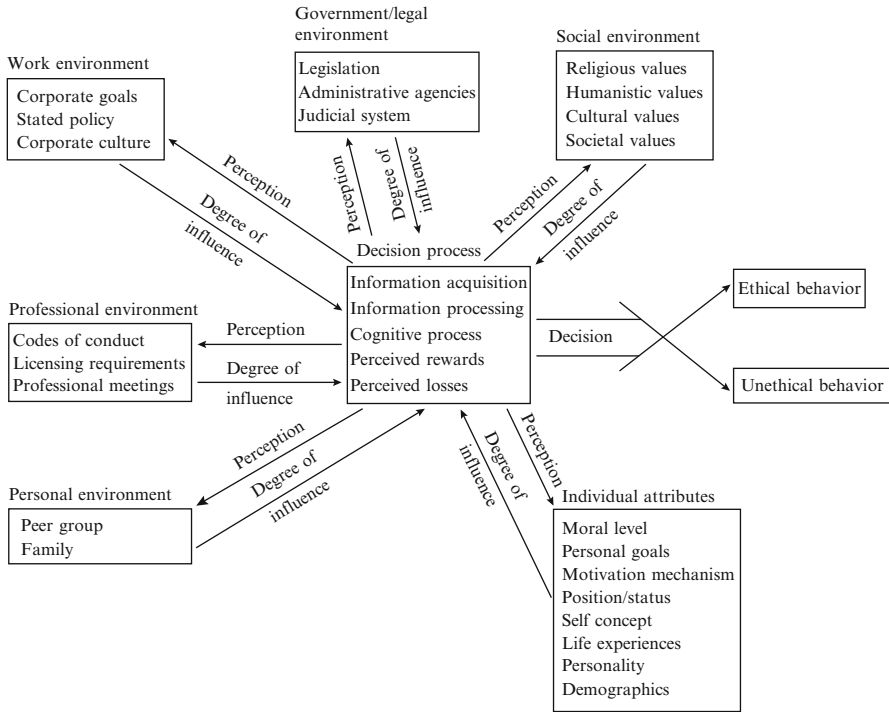


Fig. 5.1 A behavioral model of ethical/unethical decision making

### Concepts and Definitions

This paper is not prescriptive with respect to ethical and unethical behavior, that is, it does not attempt to establish which behaviors are objectively morally correct and incorrect in given situations. However, it does more than merely describe decision makers’ beliefs and attitudes about their actions. It is an epidemiological investigation which aims to identify the factors which influence decision makers to behave in certain situations, either ethically or unethically. Some of these factors enter into the decision makers’ moral reasoning about the situations, whereas others do not. The paper will attempt to identify which factors play a role in decision makers’ moral reasoning about the ethical situations in which they are involved, and it will suggest the nature of the role these factors play.

Clearly the key concepts involved in the paper are “ethical” and “unethical,” and a central conceptual issue is how “ethical behavior” is identified and in what sense it is “ethical.” There is a longstanding tradition in ethics which holds that “ethical behavior” is behavior which is shown to be objectively morally correct via appeal to a theory of morally correct (or permissible, obligatory, desirable, etc.) action, and that it is “ethical” precisely because it is the behavior which is required by the theory.

However, many ethicists maintain that the question of which ethical theory is correct is itself answered by appeal to certain ethical behaviors, that is, that some behaviors in certain situations are so clearly morally correct that they provide a moral intuition with which any theory must correspond if it is to be considered correct (see, for example, Bowie 1982). This paper understands “ethical behaviors” to be those behaviors the correctness of which constitutes the moral intuition in business and the professions.

The remaining question is which behaviors the paper understands to be these litmus-test behaviors in the business and professional contexts. They are those which have been identified by experienced managers and professionals as clear and exemplary instances of “ethical behavior.” Such instances are recorded and identified in, for example, the cases published by the Board of Ethical Review of the National Society of Professional Engineers, the awards given for exemplary ethics in engineering by the Institute for Electrical and Electronics Engineers, and the citations for ethics in business given by the Values in Business Management Program at the C. W. Post Center of Long Island University.

A final issue is what exactly is meant by saying environmental and individual factors influence a decision maker’s selection of ethical and unethical behavior. This paper does not presuppose strict behaviorism. First, one of its objectives is to elucidate the patterns of moral reasoning used by decision makers and the way in which various factors enter into their decisions to choose ethical and unethical behavior. Second, although the model postulates that a variety of environmental and individual factors influence decisions, it does not assume that these factors are sufficient conditions for the selection of particular behaviors. On the contrary, the model assumes the factors are – individually and in various combinations – necessary conditions in the sense that were the factors impinging on any given individual to change, that individual’s ethical and unethical behavior would be different. The environmental and individual factors establish a context within which decision makers must choose to act, and from this point of view the primary purpose of the paper should be interpreted as the identification of factors which are such that changing them would facilitate decision makers in choosing ethical over unethical behaviors in given situations.

## **Social Environment**

The social environment of a manager is the set of humanistic, religious, cultural, and societal values generally shared by the members of his or her society, and in particular those values of that society’s sub-groupings to which the manager belongs. Two aspects of the influence of the social environment on managers’ decisions will be discussed in this section. First, although it is a truism that values affect behavior, evidence seems to indicate that with respect to ethical and unethical behavior on the job, many managers will not adhere to general social values unless these are also incorporated within their professional or work environment. Second, some ethicists

have recently argued that some general social values are not necessarily appropriate guides to behavior in certain managerial and business situations. Brady (1985) has recently proposed a model to aid in the understanding of how a society's values and business interplay. Brady argues that often the type of ethical dilemma influences how strongly society's values effect the decision. In some situations (for example, equal employment) often a formalist view is taken where the decision maker does use society's value system in the decision-making process, while in other situations (for example, nuclear power or genetic engineering) individuals tend to be more pragmatic and concrete or do not use society's value systems as a guide.

Case upon case report on managers who make on-the-job decisions that violate general social values. Many critics take this as evidence that business and ethics do not mix, that is, that managers deliberately choose to abandon general social values in the conduct of their managerial duties. However, a manager's failure to follow his or her general social values while on the job is probably more complex than this. Managers do not appear to make on-the-job decisions that they believe are unethical within the job-related context in which the decisions are made, as can be concluded from the analysis of numerous cases of ethical and unethical behavior in the business context (see, for example, Fairweather 1980; Cohan and Whitcover 1980; Vandivier 1980). In these cases, managers who have been accused of unethical on-the-job behavior will say such things as, "I am not that type of person. I am an elder in my church, active in community affairs, a good family man, a Boy Scout leader, and so on. I just thought this was the way you were supposed to act in this business." Such statements imply that managers are ethical segregationists, that is, that they segregate on-the-job ethical behavior from off-the-job ethical behavior and apply different sets of values to each. This implies, in turn, that managerial decisions will correspond more closely to the humanistic, religious, cultural, and societal values of society-at-large only when these values are made part of the job environment. This would occur either by incorporating these general social values into the codes of conduct which are part of managers' professional environment, including them in the corporate culture and policy of their work environment, or both.

Before general social values could be incorporated into managers' professional and work environment, the question of which social values are appropriate to the job context must be answered. The traditional answer from ethicists has been, "All of them." For example, some writers on professional ethics have argued that separate codes of conduct for the professions are unnecessary; all that is needed is the simple statement that generally held social values apply to professional decisions (Pavlovic 1980; Oldenquist and Slowter 1979). Recently this traditional wisdom has been challenged. For example, with respect to the value of truth-telling, some critics have argued that although truth-telling is a value that should have broad application in business, there are certain business and managerial situations to which it should not be applied (Carr 1983; Gravander 1982). They argue that there may be a species of business behavior which is properly labeled "business bluffing," which although it is not the truth, should not be condemned through an application of a truth-telling value. They base their case on an analogy to poker bluffing, which is not the truth, but also is never condemned as a lie. This entire area of inquiry, however, needs

more development before one could decide, first, how much of an exemption from general social values these critics want to give business and, second, whether their position is valid.

## Government and Legal Environment

Laws are values and mores of society that have the force of its formal authority. “Legal” and “ethical” are not necessarily synonymous. Nevertheless, the legal dimension is an important determinant in many ethical decisions. Some individuals are not dissuaded from a course of action by its illegality or the threat of punishment, but they are the exception. Most individuals feel compelled to refrain from an action which is specifically prohibited by law. This effect of legal considerations on managers’ ethical decisions is due not just to the legal consequences which follow from breaking the law, but also to the strong social stigma associated with the label “illegal,” as well as the desire to comply with the moral force behind the law.

In order to be effective, laws need to be actively enforced. However, because of their complexities, business-related crimes by managers are often not rigorously prosecuted. It is frequently difficult for investigating officers, prosecutors, judges, and jurists to understand the intricacies of the offense. Further, since the harm is often of an economic nature rather than physical, and because the crime’s victim may be an insurance company or other corporation that does not elicit sympathy, the cases may be given low priority by prosecutors (McGowan 1983). Thus, the actual enforcement policy may result in low risk of detection, token enforcement and prosecution, and relatively light sentences with only short if any imprisonment in a minimum security institution (Geis and Stotland 1980). In contrast to their relative legal insignificances, crimes by managers hold out the possibility of very large personal or corporate financial rewards. Thus, managers, who refrain from business-related crime may be more motivated by the moral force behind the law and the social stigma of breaking it than by the legal consequences.

Crimes by managers cannot be attributed to ignorance of the law. It is true that from the perspective of the individual decision maker within a large organization, most of the law’s institutions are remote. Consequently, the individual’s perception of what the law requires has likely been obtained informally. For example, notions of what “the law” is come from conversations with other non-professionals, and many of the subtleties and reasons for the law are lost. Further, the individual’s information is often dated. However, ignorance of what is required appears to be a factor in only a very few “white collar” crimes (Meier and Geis 1982), and this finding can probably be extended to the full range of illegal actions open to managers.

Of greater influence on a manager contemplating committing a crime is the probability of detection. This influence stems from two distinct factors. First, expectations about the probability of an event’s detection are more important in determining risk taking than is the magnitude of the expected consequence (Dickson 1978).

Thus, though the punishment for the crime might be small, the certainty of detection is a powerful deterrent. This may be due to the social stigma which is associated with detection, since even when managers escape severe punishment for their business-related crimes, they often become pariahs among their former friends and associates. Second, while the research indicates that there is deterrent effect from rigorous prosecution of crime (Geis and Stotland 1980), the converse undoubtedly is true, also. Lack of vigorous prosecution of certain violations indicates to the decision-maker that the particular conduct is being condoned. That is, low probability of detection due to lackadaisical enforcement robs the law of its moral force.

Of interest in connection with this latter point is the relative effect of governmental agencies. Because of their broad powers, they can change the probability of detection for certain crimes. For example, the FBI's enforcement priorities were shifted by the Reagan administration to reflect less concern with "white collar" crimes such as embezzlement and fraud. There was concern at the time in the justice Department that wrongdoers would tailor their crimes so as to fall short of the amounts that would attract investigation by federal agents and, thus, that "white collar" crime would increase (Taylor 1984).

## **Professional Environment**

The professional environment of a manager is the institutionalized professional context within which a manager practices. This is quite different than the vague and informal identification of a person as "professional," by which is meant the person is competent and responsible. While persons who see themselves as professional in this sense may strive to bring high ethical standards to their decisions, such efforts are best understood as attempts by individuals to adhere to their personal values. Fields of activity are properly designated professions only if they are characterized by (a) professional associations, (b) established licensing procedures, or (c) both.

To say that a licensing procedure is established is to say that at least some aspects of the profession are closed to individuals who are not licensed via a formal licensing process. In a field with an established licensing procedure, individuals cannot identify themselves as members of that profession unless they hold a license. Though the possibility of loss of one's license is a powerful deterrent to unethical behavior, management is not a licensed profession.

Professional associations play an important role in both regulating the professions and controlling entry to them. For example, the American Bar Association and the major engineering professional associations accredit law and engineering degree programs, and it is impossible (in the case of law) or very difficult (in the case of engineering) to practice in these areas without graduating from an accredited program. Not all fields have professional associations which are this dominant, but even in those which do not the relationship between the individual and the professional organization is such that the individual has the self-image and social status of professional by virtue of membership in the association. Professional associations



typically have formal and published standards of professional conduct (Flores 1980; Layton 1981), and recent court rulings have been based on the principle that the public perceives membership in a professional association as a guarantor of members' adherence to these standards (May 1983).

Professional associations typically demand ethical behavior via formal codes of ethics. Some critics argue that these codes should be taken as merely suggestive of what various professions take to be morally important, since attempts to follow these codes forces professionals into unacceptable moral quandries (Leugenbiehl 1983). For example, engineering codes require that engineers be loyal to their clients and employers and also blow the whistle on them, and since it seems impossible to do both simultaneously, engineers are forced to choose between different violations of the code (Gravander 1981). Moreover, it is not always clear what course of action complies with the codes in specific situations. A recent survey of chemical engineers revealed considerable differences of opinion about what was ethically correct when they were asked to apply their professional code of ethics to a set of case studies (Kohn and Hughson 1980).

In spite of these difficulties with codes of ethics, professionals exhibit considerable interest in complying with the ethical standards established by their codes. For example, the National Society of Professional Engineers regularly publishes hypothetical cases in which its Board of Ethical Review applies the NSPE Code to the type of ethical problem encountered in engineering, and there has recently been considerable activity within the engineering community directed toward formulating a clear, "unified" code by which all engineers can easily regulate their professional conduct (Oldenquist and Slowter 1979). Moreover, professional associations, especially in engineering, have increasingly taken to enforcing their codes via expulsion of violators (Martin and Schinzingler 1983; Unger 1982), and this sanction, even though it really involves only loss of status, has been perceived as so extremely undesirable by some members that presumably it has some general effectiveness in forcing compliance (see, for example, Fairweather 1980). In addition to sanctions to force compliance with the codes, professional associations in engineering have begun developing support mechanisms for members who have followed the codes and in so doing have clashed with their employer's or client's wishes. Many advocates argue that such support mechanisms will be the decisive factor in tipping the balance toward ethical behavior (Unger 1982; Broome 1983).

Managers have a professional environment insofar as they are members of a profession. Several of the professional associations which are open to managers have formal codes of ethics and discuss ethics at meetings and in journals of their professional societies. Although it does not have developed enforcement procedures in the way that professional associations in other fields have, the American Assembly of Collegiate Schools of Business will only accredit programs that have significant course work dealing with "ethical considerations and social and political influences as they affect" business organizations (AACSB 1983). Moreover, some managers are members of a second profession by virtue of being lawyers, accountants, engineers, and so on. When enforcing codes of ethics, these professions have not distinguished between managerial behavior on the one hand and legal, accountancy, and engineering



behavior on the other. Therefore, for managers, especially those who are also members of another profession, the factors discussed in this section will be important determinants in their ethical behavior. Moreover, it is likely that this causal effect is not dependent on the individual's awareness of the extent to which he or she is affected by the professional environment, since the standards of the profession are internalized over time and followed implicitly without an explicit awareness of the sanctions which are a force behind compliance.

## Work Environment

Several factors in the work environment strongly influence managers' decisions on whether to act ethically or unethically. These are corporate goals, stated policy, and corporate culture. Unfortunately for the individual managers, these three factors can each support conflicting decisions in a given situation. For example, short-term corporate goals and the corporate culture may point in one direction, and long-term goals and stated policies point in another. Which direction managers turn often depends on which factor is more dominant in their work environment.

Short-term goals for profit and similar measures of performance are often emphasized in companies. When an acceptable rate of return on investment or similar monetary measure is the dominant goal, being ethical will be an important sub-goal only insofar as it does not detract from the primary goal. Yet an emphasis on short-term profitability which leads to unethical actions can have substantial long-term negative effects, to the point of threatening the corporation's very existence. Good examples of this can be found in the insufficient standards concerning the handling of asbestos by Johns-Manville and the operation of the Three Mile Island nuclear power plant (Wheelen and Hunger 1984).

Many business entities have formal policies that prohibit unethical conduct and prescribe punishment for it. Statements of these are typically found in operating and policy manuals and in supervisor's workplace statements, and they are disseminated in training programs and posters in the workplace. What real effect do these have? Would those people who profess that they are affected by these statements have acted ethically anyway? Do the stated policies simply reinforce or restate values that the individuals have already internalized?

There is considerable evidence to support the notion that a company's stated policies do in fact foster and increase the frequency of ethical behavior. For example, in a simulated decision-making exercise, a letter from the fictitious company's president supporting ethical behavior and warning of dismissal for unethical behavior resulted in increased ethical behavior (Hegarty and Sims 1979). Similarly, a significant determinant as to whether purchasing officers accepted gratuities was the existence of a written company policy (Staff 1979).

Several factors affect the efficacy of stated policies in leading managers to make ethical decisions (Mautz et al. 1979). First, the more decentralized the decision-making function, and consequently the less direct the supervision of managers, the

greater the likelihood of inadvertent non-compliance. Some companies, for example those with outside sales forces, are inherently decentralized and run a greater risk of non-compliance with stated company policy. Second, the stated policies can be unclear, with the consequence that there are conflicting or incompatible messages. For example, the policies might set levels of performance and goals that are unattainable without the individual resorting to behavior that is prohibited by the policy. Third, organic changes in a company such as mergers, rapid growth, and the addition of foreign operations can lead to situations which the formulators of the policy did not have in mind. In such cases, the policies can no longer effectively guide action.

While stated policies on ethical behavior are generally voluntary, some are required by law. For example, the Securities and Exchange Commission Rule 17j-1 under the Investment Company Act of 1940 requires that registered companies and other certain closely associated entities must have written codes of ethics in which the companies articulate prohibited practices and implement detection and enforcement procedures (Gillis 1981).

Corporations have their own ‘cultures’, just as societies do. The culture is reflected in the “... attitudes and values, management styles and problem-solving behavior of its people” (Schwartz and Davis 1981). Corporate norms are the products of this culture. It is often contended that in a capitalist system humanistic, compassionate, and egalitarian values tend to be left behind as the business enterprise pursues its profit motive. Within this context the fact that business enterprises generally act only in their self-interest is not surprising. “As one comes across occasional corporate good works, it should not be forgotten that corporations are not eleemosynary (charitable) institutions and cannot be expected to act in ways contrary to their dominant ethos, which is profit” (Hodges 1963).

The conduct of the Board of Directors, CEO and other senior management can signal subordinate managers as to which behaviors are acceptable. An individual’s supervisor has significant power over his or her behavior. There is a great deal of research showing that authority figures can influence others to behave unethically. An individual’s supervisor often has the capacity for rewarding and punishing and, therefore, is an authority figure for the individual in the work environment. Social psychologists (Freedman et al. 1981) have found that one way to maximize compliance to a set of norms is to put an individual in a well-controlled situation and make noncompliance difficult. The well known Milgram studies (1963, 1965) are examples of how authority figures can exert extreme pressure to comply to orders even when compliance is unethical.

Policies that have been suggested as encouraging ethical behavior include the presence of effective procedures for monitoring compliance to company policy and ascertaining what is actually occurring in those areas where policies have been established. These procedures need to be sufficient for determining or detecting when improper acts have taken place, as well as for identifying the transgressor. Since existence of easy opportunities to act unethically facilitates the occurrence of unethical acts, systems and controls need to be implemented that will both decrease the ease and eliminate the opportunities. Screening prospective employees for trust

and responsibility and instituting appropriate limits on access to information and tangible items are also important (Mautz et al. 1979).

There are other organizational characteristics associated with a reduced frequency of unethical activity. The presence of systems to facilitate communication, both vertically and horizontally in the managerial hierarchy, is one. To be effective, such communication needs to be timely, clear, and accurate, as well as open and frank. Such channels of communication apparently help prevent senior management from becoming distant or insulated from wrongdoers at lower levels in the organization. Managers are thus more likely to know who is doing what and by which means. Under such circumstances it is more difficult for managers to ignore unethical behavior within their organizations (DeGeorge 1978).

## Personal Environment

The variables in this segment of the model – the family and peer groups – relate to the individual's personal life outside of the organization. Although the research in this area is very limited, it raises a number of conceptual issues.

Research on the relation between an individual's family and occupational situations has focused almost exclusively on the influence of occupation on the family (Mortimer 1980; Donald and Bradshaw 1981). For example, Donald and Bradshaw (1981) found that work and occupational stress tends to produce family problems whereas there is little or no research on how the family affects on-the-job ethical and unethical behavior. McLean (1978) has taken a different approach to the relationship between the family and ethical and unethical behavior. His theory of reference groups stresses that ethicists have failed to account for the pressure which multiple roles exert on members of modern society when they undertake ethical analyses. He notes that one of the multiple roles not often taken into account is that of family member.

Peer group pressure seems to be a significant variable in predicting deviant behavior (Grasmick and Green 1980; Burkett and Jensen 1975) among adolescent youth. There seems to be a strong relationship between peer group attitude and behavior and the propensity of illegal activity by youthful offenders. Other research indicates that peer group pressure may cause the group to make faulty and often immoral decisions (Janis 1972; Allison 1971; Halberstam 1972).

The individual's home environment also seems to guide moral development. Kagan (1984) has argued for a non-environmental approach. He advances a genetic explanation for the development of moral values, but at the present he seems to be in the minority. The opposing view, supported by a large body of literature within developmental psychology, postulates the theory that the individual's family and peers have a large influence on moral development (Bandura 1971, 1977). The child goes through a complex socialization process which is an important determinant of moral thinking. The family and peer groups are both important in this process (Cohen 1976; Clausen 1968). Although the literature in

the area emphasizes the child's moral actions, the individual's family and peer environment surely also has a continuing influence into adulthood. However, the lack of relevant research on many of the topics limits the conclusions that can be drawn.

## Individual Attributes

The individual component of the model comprises moral level, personal goals, motivation mechanisms, position/status, self concept, life experiences, personality, and demographic variables. The research connecting individual attributes with ethical and unethical behavior is fairly limited and tends to concentrate on moral level, demographics, motivation mechanisms, and self concept.

Kohlberg's influence is found throughout most of the research on the individual and moral development. Kohlberg (1969, 1971) defines six stages of moral development, which he groups into three general categories, two stages per category. The first general category is the pre-conventional (or pre-moral). Individuals in this category do not base judgement of right and wrong on society's standards, but on their own physical needs. Fear of punishment is the main reason rules are followed by people in this category. Kohlberg's second category is the conventional level. Children usually reach this category around the age of ten, and it is also the most prevalent moral category for adults. The basic criteria for right and wrong in this category are the norms and regulations of society. Kohlberg's final category is the post-conventional. An individual in this category does not reject the legitimacy of rules in society, but at times finds society's prescriptions wanting. The post-conventional individual has the capacity for reflection, logical reasoning, responsibility, and an inner source of morality and justice.

Kohlberg has developed an instrument for assessing an individual's level of moral reasoning. Many of the studies relating to the individual attributes in this segment of the model use a Kohlberg-type instrument to determine moral level and then study moral level as a dependent variable influenced by the other individual attributes as independent variables. Kohlberg-type instruments use a series of ethical dilemmas as an ambiguous stimulus for subjects who are then asked to describe how they would behave in the situation. The level of moral reasoning is determined from the rationale used in explaining the hypothetical actions.

Maqsd (1980) for example, studies the effect of the personality characteristic of locus of control on moral level. Locus of control refers to the degree one relies on oneself (internal) vs. others (external) for reinforcement (Rotter 1966). Maqsd found a significant concentration of internal locus of control individuals in the post-conventional (higher order) level of moral reasoning. Others (Adams-Weber 1969; Johnson and Gormly 1972) have reported similar findings. Other studies have used a variety of personality measures and related them to level of moral reasoning. Authoritarianism, neuroticism, and level of anxiety have all been related to differing indices of moral reasoning (Elliott 1976).

Demographic variables, for example, sex, age, and education, have been used to predict moral reasoning in a number of studies. A number of authors (Lyons 1982; Braverman et al. 1972) have studied the effect of sex differences on moral level. They found that females tend not to progress to post-conventional morality as often as males because of differential societal pressures on females, even though at younger ages females tend to be more advanced in terms of moral reasoning (Freeman and Giefink 1979). Age and education level also are related to moral reasoning. Older individuals tend to score lower on moral reasoning scales, while the more educated tend to score higher (Dortzbach 1975; Rest 1976; Crowder 1976; Coder 1975).

Ward and Wilson (1980) have studied the effect of motivational orientation (safety vs. esteem). They found that esteem-motivated individuals do not submit to group pressure, that is, they display a consistent moral posture across situations. Safety-motivated subjects tend to acquiesce to group pressure and exhibit inconsistent moral action. When acting as individuals, there was no difference between the moral actions of the safety and esteem subjects.

There have been many studies in criminology that attempt to identify characteristics that distinguish criminals from non-criminals (Lykken 1957; Frost and Frost 1962; Peterson et al. 1961). For example, Mednick and co-workers (1977) found that criminals exhibited the following characteristics: low intelligence, poorer impulse control, emotional immaturity, lack of ability to learn by experience, poorer work habits, and lower nervous activity. However, crime in corporations does not fit the profile of crime at large. So-called "white collar" crime is committed by people of high social status and, usually, high income level. Many of the other variables which identify criminals at large do not generalize to the corporate criminal, for example, low intelligence or personality disorganization. Different characteristics seems to identify the corporate criminal. For example, Aubert (1952) found that individuals at the corporate level who behave unethically have in general a negative attitude toward legal regulations, although they admit that certain types of law are necessary. Moreover, many who have been convicted of "white collar" crime do not perceive that they have behaved inappropriately (Geis 1973).

Individual attributes do seem to relate to the level of moral reasoning. However, the research reported in this section does have a number of problems. First, the level of moral reasoning is the dependent variable in ethics research, not ethical behavior. This clearly assumes that it is obvious that the post-conventional individual is going to act ethically. But does the capability for ethical reasoning guarantee ethical action or behavior? The real dependent variable should be ethical behavior, not level of moral reasoning. Second, the research is not realistic. Most of the research is done in academia, with little relevance toward ethics in the real world (especially the business world). Designs need to be developed that realistically simulate real world environments, and research needs to be done in more applied settings. Third, the research tends to focus on the isolated individual. However, there is some evidence (Nichols and Day 1982) that individuals interacting in a group produce group decisions at a higher level of moral reasoning than the average of the individual members when acting alone. Since many business decisions relating to ethics are made in the corporate context, this effect needs further study.

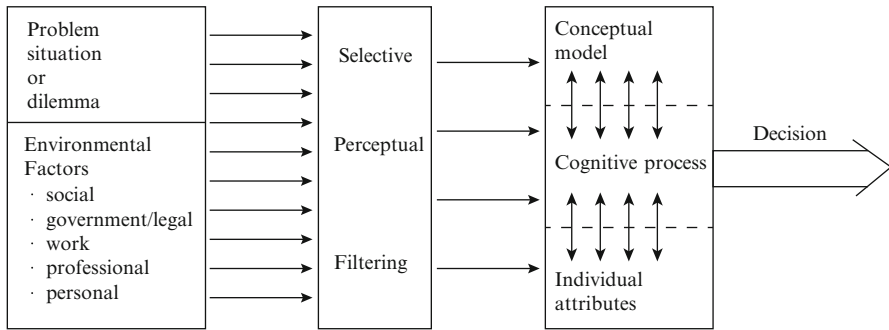
## Decision Process

In recent years a variety of different models have emerged which outline the major steps or functions involved in a rational decision-making process. Rationality here is defined as the best selection of means to achieve an objective consistent with the value system of the decision maker (Steiner et al. 1982). Most of the models encompass the following steps in one form or another: setting managerial objectives; searching for alternatives; evaluating alternatives; choosing an alternative; implementing the decision; and monitoring and controlling the results. Associated with each of these steps is the gathering and processing of information within a value construct and the cognitive limitations of the decision maker.

Ethical issues may arise in any step of the decision-making process. For example, in setting managerial objectives, it is necessary to consider ethical concerns relating to the choice of pursuing various directions. In comparing various alternatives, ethical considerations often arise as part of the valuation process. In the implementation step the potential consequences to resources (human and physical) which will be affected by the decision must be considered from an ethical perspective (Boulding 1966).

In making these types of decisions involving ethical considerations a manager draws upon his/her basic personal values and those acquired values derived from his/her role in the environments previously discussed. In making these decisions value conflicts are inevitable, and the particular resolution of these conflicts depends on the relative degree of influence of the various environments on the decision maker. For example, at any point the values of the decision maker may conflict with the values of the organization. A study of 238 managers revealed that they “experience pressure, real or perceived, to compromise their personal moral standards to satisfy organizational expectations” (Carroll 1975). A study by England (1967) revealed that managers place a great deal of importance on organizational goals and have a strong group orientation. A further study by Senger (1971) found that managers tend to evaluate their subordinates with respect to their degree of acceptance of organizational values. These findings would tend to support a hypothesis that in event of a conflict of values, organizational and group values may assume greater emphasis in comparison to personal values. However, in resolving this conflict between the personal values of the manager and the goals of the organization, Monsen et al. (1966) argue that the manager most frequently resolves this conflict by emphasizing his/her own personal goals. This seems to imply that in the event of a conflict, managers pursue a path that they perceive will enhance their own self interests especially with respect to career advancement.

In making various decisions at each step in the decision-making process the manager acquires and processes a myriad of information. Some of this information is problem specific whereas other information relates to the previously discussed environmental factors. This information ranges from hard data, such as laws and stated corporate policies, to soft data, such as an individual’s self concept and peer group with a range of information in between these states. The manager must then



**Fig. 5.2** The decision process

synthesize and analyze this information to determine a rational decision to the problem situation. A simplified model of the more important elements in this process are depicted as Fig. 5.2. The two information inputs – the parameters of the problem situation and the environmental factors impinging on the decision maker – are filtered by the manager in a selective perception process. The manager then builds a conceptual model, which goes through an iterative process affected by the individual attributes and mediated by the individual’s unique cognitive process. Since environmental factors and individual attributes have been discussed in previous sections of this article, this section will focus on the remaining aspects of the decision process.

Hogarth (1980) notes that people have limited information-processing capacity. The consequence of this limitation affects the manager’s (1) perception of information, (2) style of information processing, and (3) memory as follows:

1. Perception of information is selective. The decision maker, influenced by a number of different forces, may or may not select the information which is most relevant to the problem situation.
2. Since people cannot simultaneously integrate a great deal of information, processing is mainly done in a sequential manner. The sequence in which information is processed may bias a person’s judgement and limit the evaluation of interrelated elements.
3. Finally, people have limited memory capacity. This limits the access to information which might be relevant to the problem.

Given this limited information-processing capacity, managers tend to select information and process it in a sequential manner. What we select depends on the information stimulus and on our internal representation of the problem situation.

As a way of dealing with the complexity of the situation, managers appear to form a conceptual model of the problem. Simon (1976) notes that decision makers cannot comprehend all alternatives, probabilities, consequences, values, and the evaluation of these and so construct an internal representation or model of the situation.



The model may be simplistic or complex, depending on the cognitive capabilities and capacity of the manager. New information modifies our internal representation model which, in turn, directs our activities to further sample information from the environment, which further modifies our internal representation, which directs exploration, etc., in a cyclical fashion. Only that information that fits is incorporated into the model. Features that fit well into the model are more readily selected and more likely to be incorporated than those that do not fit easily. In any case, the model is never a complete representation of the real world problem situation, which limits the manager's ability to make a truly rational decision (bounded rationality). Consequently, judgments or choices made reflect not only the structure of the problem situation but also the capabilities and limitations of the decision maker.

In the past few years a number of conceptual and empirical articles have appeared in the literature regarding the effect of a manager's cognitive style of problem solving and decision making (see, for example, Benbasat and Taylor 1978; Blaylock and Rees 1984; Henderson and Nutt 1979; Kilman and Mitroff 1976; and Taggart and Robey 1981). Simon (1960, p. 72) defines cognitive style as "the characteristic, self consistent mode of functioning which individuals show in their perception and intellectual activities." There are many dimensions of cognitive style (Goldstein and Blackman 1978) just as there are many dimensions of an individual's personality. The difference between the personality and cognitive style of an individual is "a distinction between what an individual thinks (personality) and the way the individual thinks (cognitive style)" (Pratt 1980, p. 502). Although there is general acknowledgement that the construct of cognitive style is multidimensional, the number and identity of such dimensions and the relationship between these dimensions are not clear (Zmud 1979).

In recent years there has been a surge of interest about the impact of cognitive style on managerial problem solving and decision making. Some of the most cited cognitive measures which would seem to affect ethical and unethical decision making include: Myers-Briggs Type Indicator (Myers 1962); Witkin's Embedded Figures Test (Witkin et al. 1971); Cognitive Complexity (Bieri et al. 1966) and Tolerance of Ambiguity (Budner 1962). The Myers-Briggs Indicator, which is based on Carl Jung's theory of type, purports to assess differences in behavior as to how an individual uses perception and judgement. Witkin's Embedded Figures test assesses whether one is more field dependent (relies more on external referents for behavior) or field independent (relies more on internal referents for behavior). Cognitive complexity is a measure of one's ability to evaluate multiple dimensions or aspects of a problem situation. Budner's Scale for Tolerance-Intolerance of Ambiguity assesses one's degree of tolerance for dealing with ambiguous, uncertain situations. Such factors as personality traits, psychological needs, self concept, demographic factors, value systems, as well as one's memory of experiences shape the selection process and internal representation of the problem situation. Actions become consistent with the internal cognitive process of an individual which is shaped by these many forces rather than by the reality of the problem situation.

In deciding whether or not to pursue a given course of action, the rational decision maker is further influenced by both the perceived consequences and the perceived risks involved. Many times an individual's perception of a consequence or risk differs significantly from the actual consequence or risk as a result of a minimization or exaggeration process. Few individuals have the luxury of perfect information when making a decision or even knowing the degree of information to which they are knowledgeable. The decision is further influenced by the subjective weights applied to the consequences according to the individual's unique value system or utility function.

Finally, in making a final choice or decision for the problem situation, the manager may or may not resort to using a decision tool or aid. In recent years a number of decision tools and aids have been developed ranging in complexity from highly structured computer-based models to simple rules of thumb. These aids provide the opportunity of extending the limited information processing and cognitive capabilities of the managers.

The ultimate decision of choice (ethical or unethical) to a problem situation is dependent on a number of factors affecting the decision process. These factors include the available information (hard and soft), the individual attributes and cognitive capabilities of the managers, the perceived consequences and risks of a decision, the value or utility assigned to these consequences, as well as the degree of reliance on structured models by the manager.

## Conclusions

The model developed in this article must be recognized as a first attempt to identify and relate the environmental factors and influences in decision making, where an individual is faced with a choice that has ethical implications. We expect this model to evolve as further research expands the body of knowledge relating to this field.

While substantial research has been done concerning ethical issues, clearly much more needs to be done. Most urgently needed is a series of empirical studies of specific decision-making situations involving ethical issues. The behaviors of individuals and their interaction with their environments should be systematically observed so as to determine which factors lead to a particular decision. Components of the model could be manipulated in order to ascertain the importance of each component. Undoubtedly such a complex undertaking would require substantial time and resources. The results of such a series of experiments would allow further refinement and understanding of the model and its components.

While this representation and description is preliminary, it can still provide valuable assistance in the understanding, development and evaluation of intervention and awareness programs in industry. Likewise it can be useful in academic settings, in courses that deal with ethical issues in business and industry, by providing a multidimensional framework to assist in the comprehension of the variety and magnitude of the factors that need to be considered.

## References

- Adams-Weber, J.R. 1969. Generalized expectancies concerning locus of control reinforcements and the perception of moral sanctions. *The British Journal of Social and Clinical Psychology* 8: 340–343.
- Allison, G.T. 1971. *Essence of decision: Explaining the Cuban missile crisis*. Boston: Little, Brown & Company.
- American Assembly of Collegiate Schools of Business Accreditation. 1983. Council Procedures and Standards. 1983. AACSB, St. Louis, MO.
- Anderson, R., R. Petrucci, D. Schendel, and L.E. Trachman. 1980. *Divided loyalties: Whistle blowing at BART*. West LaFayette: Purdue University Press.
- Aubert, U. 1952. White-collar crime and social structure. *The American Journal of Sociology* 58: 263–271.
- Bandura, A. 1971. Analysis of modeling process. In *Psychological modeling*, ed. A. Bandura. Chicago: Atherton, Aldine.
- Bandura, A. 1977. *Social learning theory*. Englewood Cliffs: Prentice-Hall.
- Benbasat, I., and R.N. Taylor. 1978. The impact of cognitive styles on information systems design. *Management Information Systems Quarterly* 2: 43–54.
- Bieri, J., A.L. Atkins, S. Briar, R.L. Leaman, H. Miller, and T. Tripodi. 1966. *Clinical and social judgement*. New York: Wiley.
- Blaylock, B.K., and L.P. Rees. 1984. Cognitive style and the usefulness of information. *Decision Sciences* 15: 74–91.
- Boulding, K. 1966. The ethics of rational decision. *Management Science* 12: 161–169.
- Bowie, N. 1982. *Business ethics*. Englewood Cliffs: Prentice-Hall.
- Brady, F.N. 1985. A Janus-Head model of ethical theory: Looking two ways at business/society issues. *Academy of Management Review* 10(3): 568–576.
- Braverman, I., S. Vogel, D. Braverman, F. Clarkson, and P. Rosenkrantz. 1972. Sex-role stereotypes: A current appraisal. *Journal of Social Issues* 28: 58–78.
- Broome, T.H. 1983. New developments in engineering ethics: The AAES plan. In *Beyond whistle-blowing*, ed. V. Weil, 228–242. Chicago: Illinois Institute of Technology.
- Budner, S. 1962. Intolerance of ambiguity as a personality variable. *Journal of Personality* 30: 29–50.
- Burkett, S.R., and E. Jensen. 1975. Conventional ties, peer influence, and the fear of apprehension: A study of adolescent marijuana use. *The Sociological Quarterly* 16: 523–553.
- Carr, A.Z. 1983. Is business bluffing ethical? In *Moral issues in business*, ed. B. Vincent, 17–24. Belmont: Wadsworth.
- Carroll, A.B. 1975. Managerial ethics: A post-Watergate view. *Business Horizons* 18: 75–80.
- Clausen, J.A. 1968. Perspectives on childhood socialization. In *Socialization and society*, ed. J. Clausen. Boston: Little, Brown & Company.
- Coder, R. 1975. Moral judgement in adults. Unpublished doctoral dissertation, University of Minnesota.
- Cohan, R.M., and J. Whitcover. 1980. A heartbeat away. In *Ethical problems in engineering: Cases*, pp. vol. 2, 2nd ed, ed. R. Baum, 52–57. Troy: Rensselaer Polytechnic Institute.
- Cohen, S.E. 1976. *Social and personality development in childhood*. New York: Macmillan.
- Crowder, J.W. 1976. The defining issues test and correlates of moral judgment. Unpublished master's thesis, University of Maryland.
- DeGeorge, R.T. 1978. *Ethics, free enterprise and public policy*. New York: Oxford Press.
- Dickson, J.W. 1978. Perceptions of risk as related to choice in a two-dimensional risk situation. *Psychological Reports* 44: 1059–1062.
- Donald, J., and P. Bradshaw. 1981. Occupational and life stress and the family. *Small Group Behavior* 12: 329–375.
- Dortzbach, J.R. 1975. Moral judgment and perceived locus of control: A cross-sectional developmental study of adults, aged 25–74. Unpublished doctoral dissertation, University of Oregon.

- Elliott, A. 1976. Fakers: A study of managers: Responses on a personality test. *Personnel Review* 5: 33–37.
- England, G.W. 1967. Personal value systems of American managers. *Academy of Management Journal* 10: 53–68.
- Fairweather, V. 1980. \$80,000 in payoffs. In *Ethical problems in engineering: Cases*, pp. vol. 2, 2nd ed, ed. R.J. Baum, 50–51. Troy: Rensselaer Polytechnic Institute.
- Flores, A. 1980. The problem of professionalism: A code of ethics'. In *Ethical problems in engineering: Readings*, vol. 1, 2nd ed, ed. A. Flores, 1–6. Troy: Rensselaer Polytechnic Institute.
- Flores, A. (ed.). 1982. *Designing for safety: Engineering ethics in organizational contents*. Troy: Center for the Study of the Human Dimensions of Science and Technology, Rensselaer Polytechnic Institute.
- Freedman, J.L., D.O. Sears, and J.M. Carlsmith. 1981. *Social psychology*. Englewood Cliffs: Prentice Hall.
- Freeman, S.J.M., and J.W. Giefink. 1979. Moral judgment as a function of age, sex, and stimulus. *Journal of Psychology* 102: 43–47.
- Frost, B.P., and R.K. Frost. 1962. The pattern of WISC scores in a group of juvenile sociopaths. *Journal of Clinical Psychology* 18: 354–355.
- Geis, G. 1973. Deterring corporate crime. In *Deterring corporate crime*, ed. R. Nader and M.J. Green, 182–197. New York: Grossman.
- Geis, G., and E. Stotland. 1980. *White-collar crime theory and research*. Beverly Hills: Sage.
- Gillis, J.G. 1981. Securities law and regulation. *Financial Analysts Journal* 37: 14.
- Goldstein, K.M., and S. Blackman. 1978. *Cognitive style: Five approaches and relevant research*. New York: Wiley-Interscience.
- Grasmick, H., and E. Green. 1980. Legal punishment, social disapproval, and internalization as inhibitors of illegal behavior. *The Journal of Criminal Law and Criminology* 71: 325–335.
- Gravander, J.W. 1981. The origin and implications of engineers' obligations to the public welfare. In *PSA 1980*, vol. 2, ed. P.D. Asquith and R.N. Giere, 443–455. East Lansing: The Philosophy of Science Association.
- Gravander, J.W. 1982. When in Rome, do as who? *The Liberal Studies Educator* 4: 23–28.
- Halberstam, D. 1972. *The best and the brightest*. New York: Random House.
- Hegarty, W.H., and H. Sims. 1979. Organizational philosophy, policies, and objectives related to unethical decision behavior: A laboratory experiment. *Journal of Applied Psychology* 64: 331–338.
- Henderson, J.C., and P.C. Nutt. 1979. The influence of decision style on decision making behavior. *Management Science* 26: 371–386.
- Hodges, L. 1963. *The business conscience*. Englewood Cliffs: Prentice-Hall.
- Hogarth, R. 1980. *Judgement and choice: The psychology of decision*. New York: Wiley.
- Janis, I. 1972. *Victims of groupthink*. Boston: Houghton Mifflin.
- Johnson, C.K., and J. Gormly. 1972. Academic cheating: The contribution of sex, personality, and situational variables. *Developmental Psychology* 6: 320–325.
- Kagan, J. 1984. *The nature of the child*. New York: Basic.
- Kilman, R.H., and I.I. Mitroff. 1976. Qualitative versus quantitative analysis for management science: Different forms for different psychological types'. *Management Science* 22: 19–32.
- Kohlberg, L. 1969. Stage and sequence: The cognitive-developmental approach to socialization. In *Handbook of socialization theory and research*, ed. D. Goslin, 347–480. Chicago: Rand McNally.
- Kohlberg, L. 1971. From is to ought (How to commit the naturalistic fallacy and get away with it in the study of moral development). In *Cognitive development and epistemology*, ed. T. Mischel, 151–235. New York: Academic.
- Kohn, P.M., and R.V. Hughson. 1980. Perplexing problems in engineering ethics. *Chemical Engineering* 75: 132–147.
- Layton, E.T. 1981. *The revolt of the engineers*. Cleveland: Case Western Reserve University.
- Leugenbiehl, H.C. 1983. Moral education and the codes of ethics. In *Beyond whistleblowing: Defining engineers' responsibilities*, ed. V. Weil, 284–299. Chicago: Illinois Institute of Technology.

- Lykken, D.T. 1957. A study of anxiety in the sociopathic personality. *Journal of Abnormal and Social Psychology* 55: 6–10.
- Lyons, N. 1982. Conceptions of self and morality and modes of moral choice. Unpublished doctoral dissertation, Harvard University.
- Maqsud, M. 1980. Locus of control and stages of moral reasoning. *Psychological Reports* 46: 1243–1248.
- Martin, M., and R. Schinzinger. 1983. *Ethics in engineering*. New York: McGraw-Hill.
- Mautz, R., R. Reilly, and M. Maher. 1979. Personnel failure: The weak link in internal control. *Financial Executive* 47: 22–25.
- May, L. 1983. Professional action and professional liability. In *Beyond whistleblowing: Defining engineers' responsibilities*, ed. V. Weil, 211–227. Chicago: Illinois Institute of Technology.
- McGowan, W. 1983. The great white-collar crime coverup. *Business and Society Review* Spring 1983: 25–31.
- McLean, S.D. 1978. Ethics, reference group theory, and the root metaphor analysis. *Andover Newton Quarterly* 14: 211–221.
- Mednick, S.A., L. Kirkegaard-Sorensen, B. Hutchings, J. Knop, R. Rosenburg, and F. Schulsinger. 1977. The interplay of socioenvironmental and individual factors in the etiology of criminal behavior. In *Biosocial bases of criminal behavior*, ed. S. Mednick and K.O. Christiansen. New York: Gardner Press.
- Meier, R.F., and G. Geis. 1982. The psychology of the white-collar offender. In *On white-collar crime*, ed. G. Geis. Lexington: Lexington.
- Milgram, S. 1963. Behavioral study of obedience. *Journal of Abnormal and Social Psychology* 67: 317–378.
- Milgram, S. 1965. Some conditions of obedience and disobedience to authority. *Human Relations* 18: 57–76.
- Monsen, R.J., B.O. Saxberg, and R.A. Sutermeister. 1966. The modern manager: What makes him run? *Business Horizons* 9: 23–24.
- Mortimer, J.T. 1980. Occupational-family linkages as perceived by men in the early stages of professional and managerial careers. *Research in the Interweave of Social Roles* 1: 99–117.
- Myers, I.B. 1962. *Manual for the Myers-Briggs type indicator*. Princeton: Educational Testing Service.
- Nichols, M.L., and V.E. Day. 1982. A comparison of moral reasoning of groups and individuals on the “defining issues test”. *Academy of Management Journal* 25: 201–208.
- Oldenquist, A.G., and E.E. Slowter. 1979. Proposed: A single code of ethics for all engineers. *Professional Engineer* 49: 8–11.
- Pavlovic, K.R. 1980. Autonomy and obligation: Is there an engineering ethics? In *Ethical problems in engineering: Readings*, vol. 1, 2nd ed, ed. A. Flores, 89–93. Troy: Rensselaer Polytechnic Institute.
- Peterson, D.R., H.C. Quay, and T.L. Tiffany. 1961. Personality factors related to juvenile delinquency. *Child Development* 32: 355–372.
- Pratt, J. 1980. The effects of personality on a subject's information process: A comment. *The Accounting Review* 55: 501–506.
- Rest, J.R. 1976. *Moral judgment related to sample characteristics* (Final report to NIMH), Minneapolis: University of Minnesota.
- Rotter, J.B. 1966. Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs* 80 (Whole no. 609).
- Schwartz, H., and S.M. Davis. 1981. Matching corporate culture and business strategy. *Organizational Dynamics* 10: 36.
- Senger, J. 1971. Managers' perceptions of subordinates' competence as a function of personal value orientations. *Academy of Management Journal* 14: 415–423.
- Simon, H. 1960. *The new science of management*. New York: Harper and Row.
- Simon, H. 1976. *Administrative behavior: A study of decision making processes in administrative organization*. New York: Free Press.

- Staff. 1979. Gifts to buyers. *Purchasing*, April 11, 19.
- Steiner, G., J. Miner, and E. Gray. 1982. *Management policy and strategy*. New York: MacMillan.
- Taggart, W., and D. Robey. 1981. Mind and managers: On the dual nature of human information processing and management. *Academy of Management Review* 6: 187–195.
- Taylor, R.E. 1984. White collar crime getting less attention. *The Wall Street Journal* 203(23): 27.
- Unger, S.H. 1982. *Controlling technology: Ethics and the responsible engineer*. New York: Holt, Rinehart and Winston.
- Vandivier, K. 1980. Engineers, ethics, and economics. In *Ethical problems in engineering: Cases*, vol. 2, 2nd ed, ed. R. Baum, 136–138. Troy: Rensselaer Polytechnic Institute.
- Ward, L., and J.P. Wilson. 1980. Motivation and moral development as determinants of behavioral acquiescence and moral action. *Journal of Social Psychology* 112: 271–286.
- Wheelen, L., and J.D. Hunger. 1984. *Strategy management*. Reading: Addison-Wesley.
- Witkin, H.A., P.K. Oltman, R.K. Ruskin, and S.A. Karp. 1971. *The embedded figures test*. Palo Alto: Consulting Psychologist Press.
- Zmud, R.W. 1979. Individual differences in MIS success: A review of the empirical literature. *Management Science* 25: 966–979.